TeamForge 6.2 Administration Guide

Contents

TeamForge system administrator how-tos

A system administrator provides the infrastructure that lets site administrators, project managers and members collaborate effectively.

Install CollabNet TeamForge 6.2

When you finish this sequence of tasks, you will have a working TeamForge 6.2 site tailored to the specific requirements of your user base and environment.

Installing TeamForge is not difficult, but it can be complex. To succeed, you should be familiar with essential Linux commands and terminology. Most commands are given explicitly, but you will sometimes have to substitute values corresponding to your own specific environment.

Note: For the hardware and software required to run TeamForge, see *Hardware and software requirements for CollabNet TeamForge on a virtual machine*.

Plan your CollabNet TeamForge 6.2 installation

Before you install TeamForge 6.2, let's take a look at the product from a system administrator's perspective, so that you know exactly what you are getting into.

Overview

A TeamForge site consists of a core TeamForge application and several tightly integrated services that support it.

- The core TeamForge application provides the Web interface that users see, and the API that other applications can interact with. It also includes the file system where some user content is stored, such as wiki pages.
- The site database is where most of the user-created content is stored and accessed. Documents, discussion posts, tracker artifacts, project administration settings: all that sort of thing lives in the database.
- The source control server ties any number of Subversion, CVS or Perforce repositories into the TeamForge site.
- The Extract transform and load (ETL) server pulls data from the site database and populates the datamart to generate charts and graphs about how people are using the site.
- The datamart is an abstraction of the site database, optimized to support the reporting functionality.

Install sequence

TeamForge supports multiple options for customizing and expanding your site to fit your organization's unique use patterns.

In the default setup, all services run on the same box as the main TeamForge application. But in practice, only the TeamForge application *needs* to run on the TeamForge application box. The other services can share that box or run on other boxes, in almost any combination. When you spread your services around to multiple boxes, you must do some configuration to handle communication among the services.

You should assess your own site's particular use patterns and resources to decide how to distribute your services, if at all. For example, if you anticipate heavy use of your site, you will want to consider running the site database, the source control service, or the reporting engine on separate hardware to help balance the load.

PostgreSQL or Oracle?

PostgreSQL 9.0 is installed automatically when you install TeamForge 6.2. Oracle 11 (R1 and R2) is also supported. If you intend to use Oracle, CollabNet recommends that you let the installer run its course, make sure things work normally, and then set up your Oracle database and switch over to it.

Choose your hardware

TeamForge can run on a wide range of hardware configurations.

- For a small team, you can install it on any laptop that can run VMware Player.
- In a large organization, you may need multi-processor hardware with NFS storage and multiple layers of redundancy.

Most sites will need something in between. For the minimal requirements, see *Hardware requirements for CollabNet TeamForge 6.2* on page 337.

Set up networking for your TeamForge box

After installing the operating system, prepare the networking connections and configuration that your TeamForge 6.2 site will require.

Note: You must have root access to all the hosts you will be setting for your site.

1. Open the appropriate ports, and close all other ports.

   Note: Expose only the JBOSS and Tomcat ports that are required for integration with another application, and open them only to that specific host IP address, even within your internal network.

   For detailed port requirements, see *What are the minimum ports to keep open for a TeamForge site?* on page 305
2. Use the `hostname` command to verify that the machine name is resolvable on the network.

   ```
   hostname
   bigbox.supervillain.org
   ```
3. Use the `nslookup` command to verify that your hostname maps to the right IP address.

   ```
   nslookup bigbox.supervillain.org
   Server: 204.16.107.137
   Address: 204.16.107.137#53
   ```

   Tip: If there is any doubt about what the system's real IP address is, use the `/sbin/ifconfig` command.
4. If you are installing behind a proxy, specify your proxy settings.

   ```
   export
   http_proxy=http://<PROXY_USERNAME>:<PROXY_PASSWD>@<PROXY_HOST>:<PROXY_PORT>
   export no_proxy=localhost,127.0.0.0/8,<hostname>
   ```
5. If any mail service is running on port 25, stop it and make sure it won't restart.

   For example:

   ```
   /sbin/service sendmail stop
   /sbin/chkconfig sendmail off
   ```
6. Use a tool such as Nessus to scan your server for potential vulnerabilities.

   (See *What are the minimum ports to keep open for a TeamForge site?* on page 305 for detailed security recommendations.)

Install CollabNet TeamForge 6.2 on Red Hat

Install TeamForge 6.2 the easy way

The easiest way to install TeamForge is to install on a single box, dedicated to TeamForge only, taking the default configuration settings. We call this a "dedicated" install.

In the "dedicated" install, Black Duck Code Sight is installed on the same box as TeamForge.

Important: It is *critical* that you start with a fresh machine, with no software installed apart from the boot loader. You must have root access to the server.

1. Install Red Hat Enterprise Linux 6.1 and log in as root.
   - The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
   - See *the Red Hat installation guide* for help.

   Important: Don't customize your installation. Select only the default packages list.
2. Check your basic networking setup.

   See *Set up networking for your TeamForge box* on page 8 for details.
3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
4. Install the TeamForge application.

   ```
   yum install teamforge
   ```
5. Installing Black Duck Code Sight is optional. If you want to install Black Duck Code Sight, run the following command:

   ```
   yum install teamforge-codesearch
   ```
6. Set up your site's master configuration file.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
   ```

   Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

   At this stage, we'll make the minimal modifications required to set up a usable TeamForge site.

   a) Edit the *DOMAIN_localhost* variable to point the site's URL to the server where the site is running.

      Use this format:

      ```
      DOMAIN_localhost=<domain_name>
      ```

      For example, suppose SuperVillain Inc. wants its development site to have the URL `https://worlddomination.supervillain.org`. The *DOMAIN_localhost* variable will look like this:

      ```
      DOMAIN_localhost=worlddomination.supervillain.org
      ```

   b) Review the *DATABASE* variables.

      You may want to substitute your own values for the default database names, user names and passwords.

   c) Turn on the site-wide reporting functionality by adding the *REPORTS_** variables.

      See *Turn on site-wide reporting* on page 263 for details.

   d) By default, the site wide reports are not commented. To turn on the site wide reports, set the values. Else, comment out the following reports.

- REPORTS_DATABASE_NAME=
- REPORTS_DATABASE_PASSWORD=
- REPORTS_DATABASE_USERNAME=
- REPORTS_DATABASE_READ_ONLY_USER=
- REPORTS_DATABASE_READ_ONLY_PASSWORD=

e) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use the same key in the external SCM integration server also.

f) If you're installing Black Duck Code Sight, configure the following settings:

```
HOST_my.host.name=app etl database datamart subversion cvs codesearch
```

Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

```
BDCS_HOST=<my.host.name or my.domain.name>

To enable SSL for Black Duck Code Sight, include this token:
BDCS_SSL=on
```

Note: If you have Black Duck Code Sight on SSL and the following external certificate tokens are not provided, the installer will generate a self-signed certificate.

```
For valid SSL certificates, configure the following tokens:
BDCS_SSL_CERT_FILE=
BDCS_SSL_KEY_FILE=

The ca.crt and chain files are optional -- leave out the tokens if you don't
 use the files.
BDCS_SSL_CA_CERT_FILE=
BDCS_SSL_CHAIN_FILE=

```

```
To change the default Black Duck Code Sight admin password, add these tokens:
BDCS_ADMIN_USERNAME=<username>
BDCS_ADMIN_PASSWORD=<password>

To configure the port number for the Code Search Tomcat server, set this
token:
BDCS_TOMCAT_PORT=9180

To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

You also have the following settings for advanced Black Duck Code Sight configuration:

Note: You can only configure the following tokens once, at the time you install Black Duck Code Sight.

```
Configuration that contains the path where the repositories enabled for
codesearch are checked out:
BDCS_SCAN_SOURCE_DIR_ROOT=/opt/collabnet/blackduck/scan

Configuration that contains the path where the codesearch software is
installed:
BDCS_INSTALL_PATH=/opt/collabnet/blackduck

Configuration that contains the path where codesearch database is installed:
BDCS_PGSQL_HOME_DIR_ROOT=/opt/collabnet/blackduck/postgres
```

```
Configuration that specifies the port number for codesearch db server
BDCS_PGSQL_PORT=55435

Configuration that specifies the tomcat maximum heap memory size in
megabytes.
BDCS_TOMCAT_MX_IN_MB=1024

Configuration that specifies the shutdown port number for codesearch tomcat
 server
BDCS_TOMCAT_SHUTDOWN_PORT=9189
```

7. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

8. Set up the initial site data.

```
./bootstrap-data.sh
```

9. Start TeamForge.

```
/etc/init.d/collabnet start
```

Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

10. Install the license for Black Duck Code Sight. For more information, see *Install the Black Duck Code Sight license* on page 276.

11. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

12. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

```
sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
```

13. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

```
./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
```

Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

14. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`

b) `./trust-cert.sh`

c) Restart the `collabnet` services.

```
/etc/init.d/collabnet restart
```

15. Apply some finishing touches and make sure everything is running smoothly.

a) Turn on SSL for your site by editing the relevant variables in the `site-options.conf` file.

See *Set up SSL for your TeamForge site*.

b) Reboot the server and make sure all services come up automatically at startup.

c) Log into your site as the administrator.

The value of the *DOMAIN* variable in the `site-options.conf` file is the URL to log into.

d) Create a sample project.

See *Create a TeamForge project*.

e) Write a welcome message to your site's users.

See *Create a site-wide broadcast*.

Install TeamForge the advanced way

With TeamForge advance way of installation, you can split the TeamForge services to run in multiple boxes.

Your TeamForge site consists of a collection of services that work together. You can host these services on one box or on different boxes, in whatever combination works best for your conditions.

In an "advanced" install, you'll identify the hosts on which the various components of your TeamForge site will run. For each machine that's part of your site, you'll set up the needed services and define how and where each service runs, and how they communicate with each other.

In principle, a multi-box 6.2 site can have its services running in a wide variety of combinations on an undefined number of boxes. However, real-world sites tend to follow one of the following patterns, depending on the specific needs of the community of site users.

TeamForge 6.2 supports Black Duck Code Sight. "Option 7" explains how you would install TeamForge with Black Duck Code Sight on a separate server. If your setup involves some other "advanced" installation scenario, and you want to set up Black Duck Code Sight on a separate server, take a look at "Option 7" to see how that's done.

Option 1: Install all TeamForge 6.2 services on a single box

In Option 1, we install the database, the reporting service, source control, and the datamart (reporting database) on the main application box.

This is not the same as a dedicated install, even though it uses a single box. See *Do I need an advanced TeamForge installation?* on page 303

Note: In this example, we will use a separate port for the reporting database. This can help improve the perceived speed of a site when database utilization is high. If you want the reporting database to share port 5432 with the site database, omit the *REPORTS_DATABASE_PORT* variable. See *Option 2: Install TeamForge 6.2 with source control on a separate box* for an example.

1. Install Red Hat Enterprise Linux 6.1 and log in as root.

   - The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
   - See *the Red Hat installation guide* for help.

   Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

   See *Set up networking for your TeamForge box* on page 8 for details.
3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
4. Install the TeamForge application.

   ```
   yum install teamforge-app teamforge-scm teamforge-database teamforge-etl
   ```

   Tip: If the yum installer balks, you may have duplicate rpm packages.

   1. Get the `yum-utils` package, if it isn't already installed.

      ```
      yum install yum-utils
      ```

   2. Check for duplicate packages.

      ```
      package-cleanup --dupes
      ```

   3. Clean up the older packages, if any.

      ```
      package-cleanup --cleandupes
      ```

   4. Rerun the yum installer.

      ```
      yum install teamforge-app teamforge-scm teamforge-database
      teamforge-etl
      ```

5. Rename the sample site configuration file from the installation package.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   cp conf/site-options-advanced.conf conf/site-options.conf
   ```

   Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

6. Configure the site-options.conf file.

   ```
   vi conf/site-options.conf
   ```

   a) Identify the box and the services running on it.

   ```
   HOST_localhost=app etl database datamart subversion cvs
   DOMAIN_localhost=<myappbox.domain.com>
   ```

   b) Configure the database and the datamart, substituting your own values for the defaults where appropriate.

Tip: For more information about configuring variables, see *site-options.conf* on page 359.

```
DATABASE_TYPE=postgresql
DATABASE_USERNAME=ctfuser
DATABASE_PASSWORD=ctfpwd
DATABASE_NAME=ctfdb
DATABASE_MAX_POOL_SIZE=220
REPORTS_DATABASE_USERNAME=ctfrptuser
REPORTS_DATABASE_PASSWORD=ctfrptpwd
REPORTS_DATABASE_NAME=ctfrptdb
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

Tip: The database name and user name values are arbitrary alphanumeric strings.

```
REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
ETL_SOAP_SHARED_SECRET=<arbitrary_string>
SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
REPORTS_DATABASE_PORT=5632
```

Note:

- If ETL is configured, ETL_SOAP_SHARED_SECRET and SOAP_ANONYMOUS_SHARED_SECRET are required; if not, they are optional.
- We also recommend the following:
  - For small dataset customers: use the same instance as that of `ctfdb`; do not specify REPORTS_DATABASE_PORT.
  - For medium to large dataset customers: use a separate instance; specify REPORTS_DATABASE_PORT.

c) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use that same key in the external SCM integration server also.

d) Don't forget to save the file.

7. Recreate the runtime environment.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

8. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/data
vi /var/lib/pgsql/9.0/data/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of database box>'
```

b) Configure database access for the site database.

```
vi /var/lib/pgsql/9.0/data/pg_hba.conf
```

```

local   all                  all
          trust
# IPv4 local connections:
host    all                  all                         127.0.0.1/32
```

```
          trust
# IPv6 local connections:
#host   all                 all                       ::1/128
          trust
host    <DATABASE_NAME>  <DATABASE_USERNAME     <IP address of app box>/32
   md5
```

9. Set up the reporting database (datamart).

Note: You can skip this step if one of these is true:

- You are not providing site-wide reporting.
- You are providing reporting, and your reporting database will share port 5432 with your site database. In this case, just add these two lines to `/var/lib/pgsql/9.0/data/pg_hba.conf`:

```
host <REPORTS_DATABASE_NAME> <REPORTS_DATABASE_USERNAME>          <IP
 address of this box>/32  md5
host <REPORTS_DATABASE_NAME> <REPORTS_DATABASE_READ_ONLY_USERNAME> <IP
 address of this box>/32  md5
```

a) Point the datamart to the local machine.

```
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/reports
vi /var/lib/pgsql/9.0/reports/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of datamart box>'
port=5632
```

b) Configure access for the datamart.

```
vi /var/lib/pgsql/9.0/reports/pg_hba.conf
```

```
local all                      all
                      trust
# IPv4 local connections:
host  all                      all
127.0.0.1/32                  trust
# IPv6 local connections:
#host all                      all                                  ::1/128
                      trust
host  <REPORTS_DATABASE_NAME> <REPORTS_DATABASE_USERNAME>          <IP
address of this box>/32  md5
host  <REPORTS_DATABASE_NAME> <REPORTS_DATABASE_READ_ONLY_USERNAME> <IP
address of this box>/32  md5
```

10. Start PostgreSQL.

```
exit
/etc/init.d/postgresql-9.0 start
```

11. Create the databases.

```
su - postgres
```

a) Site database:

```
createuser -P -S --createdb --no-createrole <ctfdatabase_username>
createdb -E UTF8 -O <ctfdatabase_username> <ctfdatabasename>
```

b) Reporting database:

```
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_username>
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_readonlyusername>
createdb -p <reports_database_port> -E UTF8 -O <reports database username>
<reports_database_name>
```

Note:

- For the passwords, use the same passwords you recorded in the `site-options.conf` file.
- To specify a non-default port, use the -p option.

c) Restart PostgreSQL.

```
exit
/etc/init.d/postgresql-9.0 restart
```

12. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

13. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

14. Start TeamForge.

```
/etc/init.d/collabnet start
```

Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

```
jboss (app) (localhost:8080) ...........................failed to start
 in 600 seconds, giving up now. Please check the log:
/opt/collabnet/teamforge/log/apps/service.log FAILED
```

This can safely be ignored.

15. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

Go to *Verify your TeamForge 6.2 installation* for recommended steps to get started with your site.

Option 2: Install TeamForge 6.2 with source control on a separate box

In Option 2, we install the site database, the datamart and the reporting service on the main application box and source control services on a separate box. This can help on a site with heavy source code commit or checkout traffic.

Note: In this option, we will use the same port for the site database and the reports database. This is the default setting. When heavy traffic is expected, we recommend using port 5632 for the reporting database. See *Option 1* for an example.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Install Red Hat Enterprise Linux 6.1 and log in as root.
   - The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
   - See *the Red Hat installation guide* for help.

   Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

   See *Set up networking for your TeamForge box* on page 8 for details.
3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
4. Install the TeamForge application and reporting service.

   ```
   yum install teamforge-app teamforge-database teamforge-etl
   ```

   Tip: If the yum installer balks, you may have duplicate rpm packages.

   1. Get the `yum-utils` package, if it isn't already installed.

      ```
      yum install yum-utils
      ```

   2. Check for duplicate packages.

      ```
      package-cleanup --dupes
      ```

   3. Clean up the older packages, if any.

      ```
      package-cleanup --cleandupes
      ```

   4. Rerun the yum installer.

      ```
      yum install teamforge-app teamforge-database
      teamforge-etl
      ```

5. Rename the sample site configuration file from the installation package.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   cp conf/site-options-advanced.conf conf/site-options.conf
   ```

   Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

6. Configure the site-options.conf file.

```
vi conf/site-options.conf
```

a) Identify the boxes and the services running on them.

```
HOST_localhost=app etl database datamart
DOMAIN_localhost=<myappbox.domain.com>
HOST_<mycodebox.domain.com>=subversion cvs
```

b) Configure the database and the datamart.

Tip: For more information about configuring variables, see *site-options.conf* on page 359.

```
DATABASE_TYPE=postgresql
DATABASE_USERNAME=ctfuser
DATABASE_PASSWORD=ctfpwd
DATABASE_NAME=ctfdb
DATABASE_MAX_POOL_SIZE=220
REPORTS_DATABASE_USERNAME=ctfrptuser
REPORTS_DATABASE_PASSWORD=ctfrptpwd
REPORTS_DATABASE_NAME=ctfrptdb
REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
ETL_SOAP_SHARED_SECRET=<arbitrary_string>
SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

Tip: All the database names, user names and passwords values are arbitrary alphanumeric strings.

c) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use the same key in the external SCM integration server also.

d) Don't forget to save the file.

7. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

8. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/data/
vi /var/lib/pgsql/9.0/data/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of database box>'
```

b) Configure database access.

```
vi /var/lib/pgsql/9.0/data/pg_hba.conf
```

```
      # "local" is for Unix domain socket connections only
      local   all                           all
```

```
                               trust
      # IPv4 local connections:
      host    all                           all
          127.0.0.1/32         trust
      # IPv6 local connections:
      host    <DATABASE_NAME>            <DATABASE_USERNAME>
    <IP address of my.app.box>/32   md5
      host    <REPORTS_DATABASE_NAME>    <REPORTS_DATABASE_USERNAME>
    <IP address of my.app.box>/32   md5
      host    <REPORTS_DATABASE_NAME>
<REPORTS_DATABASE_READ_ONLY_USERNAME> <IP address of my.app.box>/32   md5
```

```
exit
/etc/init.d/postgresql-9.0 start
```

9. Create the databases.

```
su - postgres
```

a) Site database:

```
createuser -P -S --createdb --no-createrole <ctfdatabase_username>
createdb -E UTF8 -O <ctfdatabase_username> <ctfdatabasename>
```

b) Reporting database:

```
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_username>
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_readonlyusername>
createdb -p <reports_database_port> -E UTF8 -O <reports database username>
<reports_database_name>
```

Note:

- For the passwords, use the same passwords you recorded in the `site-options.conf` file.
- To specify a non-default port, use the -p option.

c) Restart PostgreSQL.

```
exit
/etc/init.d/postgresql-9.0 restart
```

10. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

11. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

12. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
```

```
/etc/init.d/httpd start
```

Do step 13 on the source code box. We'll call this `my.code.box`.

13. Install Red Hat Enterprise Linux 6.1 and log in as root.

- The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the Red Hat installation guide* for help.

> **Important:** Don't customize your installation. Select only the default packages list.

14. Check your basic networking setup.

See *Set up networking for your TeamForge box* on page 8 for details.

15. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

16. Install the TeamForge source control service.

```
yum install teamforge-scm
```

> **Tip:** If the yum installer balks, you may have duplicate rpm packages.
>
> **1.** Get the `yum-utils` package, if it isn't already installed.
>
> ```
> yum install yum-utils
> ```
>
> **2.** Check for duplicate packages.
>
> ```
> package-cleanup --dupes
> ```
>
> **3.** Clean up the older packages, if any.
>
> ```
> package-cleanup --cleandupes
> ```
>
> **4.** Rerun the yum installer.
>
> ```
> yum install teamforge-scm
> ```

17. Rename the sample site configuration file from the installation package.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
cp conf/site-options-advanced.conf conf/site-options.conf
```

> **Note:** The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

18. Configure the site-options.conf file.

a) Identify the boxes and the services running on them.

```
NODE_NAME=localhost
HOST_localhost=subversion cvs
DOMAIN_localhost=<mycodebox.domain.com>
HOST_<myappbox.domain.com>=app database
```

b) Configure the database connection.

```
DATABASE_TYPE=postgresql
DATABASE_USERNAME=ctfuser
```

```
DATABASE_PASSWORD=ctfpwd
DATABASE_NAME=ctfdb
```

c) Use the shared secret key, *SCM_DEFAULT_SHARED_SECRET*, from the `site-options.conf` file on the primary TeamForge server.

d) Don't forget to save the file.

19. Recreate the runtime environment.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

20. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

21. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

22. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

23. Start TeamForge.

```
/etc/init.d/collabnet start tomcat
```

Do step 23 on `my.app.box`:

24. Start TeamForge.

```
/etc/init.d/collabnet start
```

Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

```
jboss (app) (localhost:8080) ............................failed to start
 in 600 seconds, giving up now. Please check the log:
/opt/collabnet/teamforge/log/apps/service.log FAILED
```

This can safely be ignored.

Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

25. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

Go to *Verify your TeamForge 6.2 installation* for recommended steps to get started with your site.

Option 3: Install TeamForge 6.2 with reporting data on a separate box

In Option 3, we install the database, the reporting service and source control on the main application box and the datamart (reporting database) on a separate box. This enables site administrators to monitor activity closely without overloading the rest of the site.

In this example, we will specify a separate port for the reports database. By default, both the site database and the reporting database use port 5432, but when heavy traffic is expected, it can be a good idea to use port 5632 for the reporting database.

Note: If the remote machine where the datamart will run is not under your direct control, check with the DBA or other person in charge of that resource to make sure you can carry out these instructions on that box.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Install Red Hat Enterprise Linux 6.1 and log in as root.
   - The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
   - See *the Red Hat installation guide* for help.

   Important: Don't customize your installation. Select only the default packages list.
2. Check your basic networking setup.

   See *Set up networking for your TeamForge box* on page 8 for details.
3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
4. Install the TeamForge application and the database, reporting and source control services.

   ```
   yum install teamforge-app teamforge-database teamforge-etl teamforge-scm
   ```

   Tip: If the yum installer balks, you may have duplicate rpm packages.

   1. Get the `yum-utils` package, if it isn't already installed.

      ```
      yum install yum-utils
      ```
   2. Check for duplicate packages.

      ```
      package-cleanup --dupes
      ```
   3. Clean up the older packages, if any.

      ```
      package-cleanup --cleandupes
      ```
   4. Rerun the yum installer.

      ```
      yum install teamforge-app teamforge-database teamforge-etl
      teamforge-scm
      ```
5. Rename the sample site configuration file from the installation package.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
cp conf/site-options-advanced.conf conf/site-options.conf
```

Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

6. Configure the `site-options.conf` file.

```
vi conf/site-options.conf
```

a) Identify the boxes and the services running on them.

```

HOST_localhost=app database subversion cvs etl
DOMAIN_localhost=<myappbox.domain.com>
HOST_<mydatamartbox.domain.com>=datamart
```

b) Configure the database and the datamart.

Tip: For more information about configuring variables, see *site-options.conf* on page 359.

```
DATABASE_TYPE=postgresql
DATABASE_USERNAME=ctfuser
DATABASE_PASSWORD=ctfpwd
DATABASE_NAME=ctfdb
DATABASE_MAX_POOL_SIZE=220
REPORTS_DATABASE_USERNAME=ctfrptuser
REPORTS_DATABASE_PASSWORD=ctfrptpwd
REPORTS_DATABASE_NAME=ctfrptdb
REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
ETL_SOAP_SHARED_SECRET=<arbitrary_string>
SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
REPORTS_DATABASE_PORT=5632
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

Tip: The database name and user name values are arbitrary alphanumeric strings.

We also recommend the following:

- For small dataset customers: use the same instance as that of `ctfdb`; do not specify REPORTS_DATABASE_PORT.
- For medium to large dataset customers: use a separate instance; specify REPORTS_DATABASE_PORT.

c) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use that same key in the external SCM integration server also.

d) Don't forget to save the file.

7. Recreate the runtime environment.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

8. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/data
vi /var/lib/pgsql/9.0/data/postgresql.conf
listen_addresses = '127.0.0.1,<IP address of database box>'
```

b) Configure database access.

```
vi /var/lib/pgsql/9.0/data/pg_hba.conf
```

```
local   all                   all
    trust
# IPv4 local connections:
host    all                   all                       127.0.0.1/32
    trust
# IPv6 local connections:
#host   all                   all                       ::1/128
    trust
host    <DATABASE_NAME>    <DATABASE_USERNAME>       <IP address of
my.app.box>/32   md5
```

```
exit
/etc/init.d/postgresql-9.0 start
```

c) Create the site database.

```
su - postgres
createuser -P -S --createdb --no-createrole <ctfdatabase_username>
createdb -E UTF8 -O <ctfdatabase_username> <ctfdatabasename>
exit
/etc/init.d/postgresql-9.0 restart
```

9. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

Do step 10 on the datamart server. We'll call this `my.datamart.box`.

10. Install Red Hat Enterprise Linux 6.1 and log in as root.

- The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the Red Hat installation guide* for help.

Important: Don't customize your installation. Select only the default packages list.

11. Install PostgreSQL 9.0.

See *the PostgreSQL docs* for support.

12. Set up the reporting database (datamart).

a) Point the database to the local machine.

```
su - postgres
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/reports
```

```
vi /var/lib/pgsql/9.0/reports/postgresql.conf
```

```
       listen_addresses = '127.0.0.1,<IP address of my.datamart.box>'
       port=5632
```

b) Configure access for the datamart.

```
vi /var/lib/pgsql/9.0/reports/pg_hba.conf
```

```

local   all                                   all
                         trust
# IPv4 local connections:
host    all                                   all
   127.0.0.1/32          trust
# IPv6 local connections:
#host   all                                   all
   ::1/128               trust
host    <REPORTS_DATABASE_NAME>       <REPORTS_DATABASE_USERNAME>
   <IP address of my.app.box>/32   md5
host    <REPORTS_DATABASE_NAME>       <REPORTS_DATABASE_READ_ONLY_USER>
   <IP address of my.app.box>/32   md5
```

```
exit
```

c) Copy the datamart control script from `/opt/collabnet/teamforge/runtime/scripts` on `my.app.box` to the `/tmp` directory of `my.datamart.box`.

```
mv /etc/init.d/postgresql-9.0 /etc/init.d/postgresql-9.0_orig
cp /tmp/postgresql_reports /etc/init.d
```

Note: The `postgresql_reports` script is the one to use only if the datamart is running on a different server from the database, as it is in this example. In all other cases, use the `postgresql` script.

d) Start the reporting database service.

```
/etc/init.d/postgresql-9.0_reports start
```

e) Log in as the `postgres` user and create the reporting database.

Use the values from your `site-options.conf` file.

```
su - postgres
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_username>
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_readonlyusername>
createdb -p <reports_database_port> -E UTF8 -O <reports database username>
<reports database name>
exit
/etc/init.d/postgresql-9.0_reports restart
```

Note: To specify a non-default port, add the -p option.

Do step 13 on `my.app.box`:

13. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

14. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

15. Start TeamForge.

```
/etc/init.d/collabnet start
```

Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

```
jboss (app) (localhost:8080) ............................failed to start
 in 600 seconds, giving up now. Please check the log:
/opt/collabnet/teamforge/log/apps/service.log FAILED
```

This can safely be ignored.

Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

16. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

Go to *Verify your TeamForge 6.2 installation* for recommended steps to get started with your site.

Option 4: Distribute TeamForge 6.2 on three boxes with SCM and Reporting database on separate box

In Option 4, we install the site database and the reporting service on the main application box, while source control and the reporting database each get their own box. This can be a way to support the requirements of both coders and management.

In this example, we will use the same port for the site database and the reports database. This is the default setting. When heavy traffic is expected, it can be a good idea to use port 5632 for the reporting database. See *Option 1* for an example.

Note: If either of the remote machines (the datamart or the source code box) is not under your direct control, check with the DBA or other person in charge of that resource to make sure you can carry out these instructions on that box.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Install Red Hat Enterprise Linux 6.1 and log in as root.

- The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the Red Hat installation guide* for help.

Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

   See *Set up networking for your TeamForge box* on page 8 for details.
3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
4. Install the TeamForge application database and reporting service.

   ```
   yum install teamforge-app teamforge-database teamforge-etl
   ```

   Tip: If the yum installer balks, you may have duplicate rpm packages.

   1. Get the `yum-utils` package, if it isn't already installed.

      ```
      yum install yum-utils
      ```
   2. Check for duplicate packages.

      ```
      package-cleanup --dupes
      ```
   3. Clean up the older packages, if any.

      ```
      package-cleanup --cleandupes
      ```
   4. Rerun the yum installer.

      ```
      yum install teamforge-app teamforge-database
      teamforge-etl
      ```
5. Rename the sample site configuration file from the installation package.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   cp conf/site-options-advanced.conf conf/site-options.conf
   ```

   Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.
6. Configure the site-options.conf file.

   ```
   vi conf/site-options.conf
   ```

   a) Identify your boxes and the services running on them.

   ```
   HOST_localhost=app etl database
   DOMAIN_localhost=<myappbox.domain.com>
   HOST_<mydatamartbox.domain.com>=datamart
   HOST_<mycodebox.domain.com>=subversion cvs
   ```

   b) Configure the database and the datamart.

Tip: For more information about configuring variables, see *site-options.conf* on page 359.

```
DATABASE_TYPE=postgresql
DATABASE_USERNAME=ctfuser
DATABASE_PASSWORD=ctfpwd
DATABASE_NAME=ctfdb
DATABASE_MAX_POOL_SIZE=220
REPORTS_DATABASE_USERNAME=ctfrptuser
REPORTS_DATABASE_PASSWORD=ctfrptpwd
REPORTS_DATABASE_NAME=ctfrptdb
REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
REPORTS_DATABASE_MAX_POOL_SIZE=30
ETL_SOAP_SHARED_SECRET=<arbitrary_string>
SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
```

Tip: The database name and user name values are arbitrary alphanumeric strings.

c) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use that same key in the external SCM integration server also.

d) Don't forget to save the file.

7. Recreate the runtime environment.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

8. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/data/
vi /var/lib/pgsql/9.0/data/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of database box>'
```

b) Configure database access.

```
vi /var/lib/pgsql/9.0/data/pg_hba.conf
```

```
      local   all         all                               trust
      # IPv4 local connections:
      host    all         all         127.0.0.1/32          trust
      # IPv6 local connections:
      #host    all         all         ::1/128               trust
      host    <DATABASE_NAME>            <DATABASE_USERNAME>
    <IP address of my.app.box>/32   md5
```

```
exit
/etc/init.d/postgresql-9.0 start
```

c) Log in as the `postgres` user and create the site database.

```
su - postgres
createuser -P -S --createdb --no-createrole <ctfdatabase_username>
createdb -E UTF8 -O <ctfdatabase_username> <ctfdatabasename>
exit
```

9. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

   ```
   export http_proxy=
   ```

Do this on the datamart server. We'll call this `my.datamart.box`.

10. Install Red Hat Enterprise Linux 6.1 and log in as root.

    - The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
    - See *the Red Hat installation guide* for help.

    Important: Don't customize your installation. Select only the default packages list.

11. Install PostgreSQL 9.0.

    See *the PostgreSQL docs* for support.

12. Set up the reporting database.

    a) Point the database to the local machine.

    ```
    su - postgres
    /usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/reports
    vi /var/lib/pgsql/9.0/reports/postgresql.conf
    ```

    ```
    listen_addresses = '127.0.0.1,<IP address of my.datamart.box>'
    ```

    b) Configure database access.

    ```
    vi /var/lib/pgsql/9.0/reports/pg_hba.conf
    ```

    ```
           local   all         all                               trust
           # IPv4 local connections:
           host    all         all         127.0.0.1/32          trust
           # IPv6 local connections:
           #host    all         all         ::1/128               trust
           host    <REPORTS_DATABASE_NAME>    <REPORTS_DATABASE_USERNAME>
         <IP address of my.app.box>/32   md5
           host    <REPORTS_DATABASE_NAME>
    <REPORTS_DATABASE_READ_ONLY_USERNAME> <IP address of my.app.box>/32   md5
    ```

    ```
    exit
    ```

    c) Copy the datamart control script from `/opt/collabnet/teamforge/runtime/scripts` on `my.app.box` to the `/tmp` directory of `my.datamart.box`.

    ```
    mv /etc/init.d/postgresql-9.0 /etc/init.d/postgresql-9.0_orig
    cp /tmp/postgresql_reports /etc/init.d
    ```

    Note: The `postgresql_reports` script is the one to use only if the datamart is running on a different server from the database, as it is in this example. In all other cases, use the `postgresql` script.

    d) Start the reporting database service.

    ```
    /etc/init.d/postgresql-9.0_reports start
    ```

    e) Log in as the `postgres` user and create the reporting database.

    Use the values from your `site-options.conf` file.

    ```
    su - postgres
    ```

```
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_username>
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_readonlyusername>
createdb -p <reports_database_port> -E UTF8 -O <reports database username>
<reports database name>
exit
/etc/init.d/postgresql-9.0_reports restart
```

Note: To specify a non-default port, add the -p option.

Do step 13 on `my.app.box`:

13. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

14. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

Do step 15 on the source control server. We'll call this `my.code.box`.

15. Install Red Hat Enterprise Linux 6.1 and log in as root.

- The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the Red Hat installation guide* for help.

Important: Don't customize your installation. Select only the default packages list.

16. Check your basic networking setup.

See *Set up networking for your TeamForge box* on page 8 for details.

17. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
18. Install the TeamForge application.

```
yum install teamforge-scm
```

Tip: If the yum installer balks, you may have duplicate rpm packages.

1. Get the `yum-utils` package, if it isn't already installed.

```
yum install yum-utils
```

2. Check for duplicate packages.

```
package-cleanup --dupes
```

3. Clean up the older packages, if any.

```
package-cleanup --cleandupes
```

4. Rerun the yum installer.

```
yum install teamforge-scm
```

19. Rename the sample site configuration file from the installation package.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
cp conf/site-options-advanced.conf conf/site-options.conf
```

> **Note:** The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

20. Configure the site-options.conf file.
    a) Identify the boxes and the services running on them.

```
NODE_NAME=localhost
HOST_localhost=subversion cvs
DOMAIN_localhost=<mycodebox.domain.com>
HOST<myappbox.domain.com>=app database
```

    b) Configure the database connection.

```
DATABASE_TYPE=postgresql
DATABASE_USERNAME=ctfuser
DATABASE_PASSWORD=ctfpwd
DATABASE_NAME=ctfdb
```

    c) Use the shared secret key, *SCM_DEFAULT_SHARED_SECRET*, from the `site-options.conf` file on the primary TeamForge server.

21. Recreate the runtime environment.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

22. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

23. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

24. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

25. Start TeamForge.

```
/etc/init.d/collabnet start tomcat
```

Do step 25 on `my.app.box`:

26. Start TeamForge.

```
/etc/init.d/collabnet start
```

> **Note:** Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:
>
> ```
> jboss (app) (localhost:8080) ............................failed to start
>  in 600 seconds, giving up now. Please check the log:
> /opt/collabnet/teamforge/log/apps/service.log FAILED
> ```
>
> This can safely be ignored.

> **Note:** The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

27. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

Go to *Verify your TeamForge 6.2 installation* for recommended steps to get started with your site.

Option 5: Distribute TeamForge 6.2 on three boxes for intensive database utilization

In Option 5, we install the reporting service on the main application box, both databases on another box, and source control on a third box. This may be appropriate when intensive database utilization is a factor.

In this example, we will specify a separate port for the reports database. By default, both the site database and the reporting database use port 5432, but when heavy traffic is expected, it can be a good idea to use port 5632 for the reporting database.

> **Note:** If either of the remote machines (the data box or the source code box) is not under your direct control, check with the DBA or other person in charge of that resource to make sure you can carry out these instructions on that box.

> **Note:** In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Install Red Hat Enterprise Linux 6.1 and log in as root.
    - The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
    - See *the Red Hat installation guide* for help.

    > **Important:** Don't customize your installation. Select only the default packages list.
2. Check your basic networking setup.

    See *Set up networking for your TeamForge box* on page 8 for details.
3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
4. Install the TeamForge application and reporting service.

```
yum install teamforge-app teamforge-etl
```

Tip: If the yum installer balks, you may have duplicate rpm packages.

1. Get the `yum-utils` package, if it isn't already installed.

   ```
   yum install yum-utils
   ```

2. Check for duplicate packages.

   ```
   package-cleanup --dupes
   ```

3. Clean up the older packages, if any.

   ```
   package-cleanup --cleandupes
   ```

4. Rerun the yum installer.

   ```
   yum install teamforge-app teamforge-etl
   ```

5. Rename the sample site configuration file from the installation package.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   cp conf/site-options-advanced.conf conf/site-options.conf
   ```

   Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

6. Configure the `site-options.conf` file.

   ```
   vi conf/site-options.conf
   ```

   a) Identify the boxes and the services running on them.

   ```
   HOST_localhost=app etl
   DOMAIN_localhost=<myappbox.domain.com>
   HOST_<mydbbox.domain.com>=database datamart
   HOST_<myscmbox.domain.com>=subversion cvs
   ```

   b) Configure the database and the datamart.

   Tip: For more information about configuring variables, see *site-options.conf* on page 359.

   ```
   DATABASE_TYPE=postgresql
   DATABASE_USERNAME=ctfuser
   DATABASE_PASSWORD=ctfpwd
   DATABASE_NAME=ctfdb
   DATABASE_MAX_POOL_SIZE=220
   REPORTS_DATABASE_USERNAME=ctfrptuser
   REPORTS_DATABASE_PASSWORD=ctfrptpwd
   REPORTS_DATABASE_NAME=ctfrptdb
   REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
   REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
   ETL_SOAP_SHARED_SECRET=<arbitrary_string>
   SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
   REPORTS_DATABASE_PORT=5632
   REPORTS_DATABASE_MAX_POOL_SIZE=30
   ```

Tip: The database name and user name values are arbitrary alphanumeric strings.

We also recommend the following:

- For small dataset customers: use the same instance as that of `ctfdb`; do not specify REPORTS_DATABASE_PORT.
- For medium to large dataset customers: use a separate instance; specify REPORTS_DATABASE_PORT.

c) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use that same key in the external SCM integration server also.

d) Don't forget to save the file.

7. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

8. Recreate the runtime environment.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

Do step 9 on the database/datamart server. We'll call this `my.data.box`.

9. Install Red Hat Enterprise Linux 6.1 and log in as root.

- The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the Red Hat installation guide* for help.

Important: Don't customize your installation. Select only the default packages list.

10. Install PostgreSQL 9.0.

See *the PostgreSQL docs* for support.

11. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/data
vi /var/lib/pgsql/9.0/data/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of database box>'
```

b) Configure database access.

```
vi /var/lib/pgsql/9.0/data/pg_hba.conf
```

```
local   all                 all
   trust
# IPv4 local connections:
host    all                 all                        127.0.0.1/32
   trust
# IPv6 local connections:
#host   all                 all                        ::1/128
   trust
host    <DATABASE_NAME>  <DATABASE_USERNAME>     <IP address of
my.app.box>/32   md5
```

12. Set up the reporting database (datamart).

a) Point the database to the local machine.

```
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/reports
vi /var/lib/pgsql/9.0/reports/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of my datamart box>'
       port=5632
```

b) Configure access for the datamart.

```
vi /var/lib/pgsql/9.0/reports/pg_hba.conf
```

```

local   all                           all
                                               trust
# IPv4 local connections:
host    all                           all
   127.0.0.1/32                                trust
# IPv6 local connections:
#host   all                           all
   ::1/128                                     trust
host    <REPORTS_DATABASE_NAME>    <REPORTS_DATABASE_USERNAME>          <IP
 address of my.app.box/32   md5
host    <REPORTS_DATABASE_NAME>    <REPORTS_DATABASE_READ_ONLY_USERNAME>
<IP address of my.app.box>/32   md5
```

```
exit
```

c) Copy the postgresql script from `/opt/collabnet/teamforge/runtime/scripts` on `my.app.box` to the `/tmp` directory of `my.data.box`.

```
mv /etc/init.d/postgresql-9.0 /etc/init.d/postgresql-9.0_orig
cp /tmp/postgresql /etc/init.d
```

d) Start the reporting database service.

```
/etc/init.d/postgresql-9.0 start
```

13. Create the databases.

```
su - postgres
```

a) Site database:

```
createuser -P -S --createdb --no-createrole <ctfdatabase_username>
createdb -E UTF8 -O <ctfdatabase_username> <ctfdatabasename>
```

b) Reporting database:

```
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_username>
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_readonlyusername>
createdb -p <reports_database_port> -E UTF8 -O <reports database username>
<reports_database_name>
```

Note:

- For the passwords, use the same passwords you recorded in the `site-options.conf` file.

    - To specify a non-default port, use the -p option.

c) Restart PostgreSQL.

```
exit
/etc/init.d/postgresql-9.0 restart
```

Do step 14 on `my.app.box`

14. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

15. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

Do step 16 on the source control server. We'll call this `my.code.box`.

16. Install Red Hat Enterprise Linux 6.1 and log in as root.

- The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the Red Hat installation guide* for help.

Important: Don't customize your installation. Select only the default packages list.

17. Check your basic networking setup.
See *Set up networking for your TeamForge box* on page 8 for details.

18. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

19. Install the TeamForge source control service.

```
yum install teamforge-scm
```

Tip: If the yum installer balks, you may have duplicate rpm packages.

1. Get the `yum-utils` package, if it isn't already installed.

   ```
   yum install yum-utils
   ```

2. Check for duplicate packages.

   ```
   package-cleanup --dupes
   ```

3. Clean up the older packages, if any.

   ```
   package-cleanup --cleandupes
   ```

4. Rerun the yum installer.

   ```
   yum install teamforge-scm
   ```

20. Rename the sample site configuration file from the installation package.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
cp conf/site-options-advanced.conf conf/site-options.conf
```

Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

21. Configure the `site-options.conf` file.

a) Identify the boxes and the services running on them.

```
HOST_localhost=subversion cvs
DOMAIN_localhost=<myscmbox.domain.com>
HOST_<myappbox.domain.com>=app
HOST_<mydbbox.domain.com>=database
```

b) Configure the database connection.

```
DATABASE_TYPE=postgresql
DATABASE_USERNAME=ctfuser
DATABASE_PASSWORD=ctfpwd
DATABASE_NAME=ctfdb
```

c) Use the shared secret key, *SCM_DEFAULT_SHARED_SECRET*, from the `site-options.conf` file on the primary TeamForge server.

d) Don't forget to save the file.

22. Recreate the runtime environment.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

23. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

24. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

25. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

26. Start TeamForge.

```
/etc/init.d/collabnet start tomcat
```

Do step 27 on `my.app.box`

27. Start TeamForge.

```
/etc/init.d/collabnet start
```

Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

```
jboss (app) (localhost:8080) ............................failed to start
 in 600 seconds, giving up now. Please check the log:
/opt/collabnet/teamforge/log/apps/service.log FAILED
```

This can safely be ignored.

Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

28. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ```

    b) List all the `etl` jobs.

    ```
    ./etl-client.py -a
    ```

    c) Run `TrackerInitialJob`.

    ```
    ./etl-client.py -r TrackerInitialJob
    ```

Go to *Verify your TeamForge 6.2 installation* for recommended steps to get started with your site.

Option 6: Distribute TeamForge 6.2 services using Oracle

Option 6 is like Option 5, but it uses an Oracle database instead of a PostgreSQL database.

For simplicity, in this example we will have the site database and the reporting database share port 1521.

Note: If either of the remote machines (the data box or the source code box) is not under your direct control, check with the DBA or other person in charge of that resource to make sure you can carry out these instructions on that box.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Install Red Hat Enterprise Linux 6.1 and log in as root.

    - The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
    - See *the Red Hat installation guide* for help.

    Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

    See *Set up networking for your TeamForge box* on page 8 for details.

3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
4. Install the TeamForge application and reporting service.

    ```
    yum install teamforge-app teamforge-etl
    ```

Tip: If the yum installer balks, you may have duplicate rpm packages.

1. Get the `yum-utils` package, if it isn't already installed.

   ```
   yum install yum-utils
   ```

2. Check for duplicate packages.

   ```
   package-cleanup --dupes
   ```

3. Clean up the older packages, if any.

   ```
   package-cleanup --cleandupes
   ```

4. Rerun the yum installer.

   ```
   yum install teamforge-app teamforge-etl
   ```

5. Rename the sample site configuration file from the installation package.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   cp conf/site-options-advanced.conf conf/site-options.conf
   ```

   Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

6. Configure the site-options.conf file.

   ```
   vi conf/site-options.conf
   ```

   a) Identify the boxes and the services running on them.

   ```
   HOST_localhost=app etl
   DOMAIN_localhost=<myappbox.domain.com>
   HOST_<mydbbox.domain.com>=database datamart
   HOST_<myscmbox.domain.com>=subversion cvs
   ```

   b) Configure the database and the datamart.

   Tip: For more information about configuring variables, see *site-options.conf* on page 359.

   ```
   DATABASE_TYPE=oracle
   DATABASE_USERNAME=sitedatabaseusername
   DATABASE_PASSWORD=sitedatabasepwd
   DATABASE_NAME=sitedatabaseinstancename
   DATABASE_MAX_POOL_SIZE=220
   REPORTS_DATABASE_USERNAME=reportingdatabaseusername
   REPORTS_DATABASE_PASSWORD=reportingdatabasepwd
   REPORTS_DATABASE_NAME=reportingdatabaseinstancename
   REPORTS_DATABASE_READ_ONLY_USER=reportingreadonlyusername
   REPORTS_DATABASE_READ_ONLY_PASSWORD=reportingreadonlyuserpwd
   REPORTS_DATABASE_MAX_POOL_SIZE=30
   ETL_SOAP_SHARED_SECRET=<arbitrary_string>
   SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
   DATABASE_SERVICE_NAME=
   REPORTS_DATABASE_SERVICE_NAME=
   ```

Tip:

- The database name and user name values are arbitrary alphanumeric strings.
- To find the value for the *DATABASE_SERVICE_NAME* variable, log into your Oracle server and execute this command:

  ```
  su - oracle
  tnsping <database_name>
  ```

  In the output, find the value of *SERVICE_NAME*. Use that as the value of *DATABASE_SERVICE_NAME* in `site-options.conf`.

c) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use that same key in the external SCM integration server also.

d) Don't forget to save the file.

7. **Note:** Perform this step in case your Oracle server version is not 11.2.0.1.

Download the corresponding version of Oracle client from *http://www.oracle.com/technetwork/database/features/instant-client/index-097480.html* and run the following command:

```
yum localinstall <path to oracle client rpm>
```

8. Recreate the runtime environment.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

9. Copy the Oracle datamart setup script from `/opt/collabnet/teamforge/runtime/scripts` to the `/tmp` directory of `my.data.box`.

```
scp /opt/collabnet/teamforge/runtime/scripts/datamart-oracle-setup.sh
<username>@<my.data.box>:/tmp
```

Do step 10 on the database/datamart server. We'll call this `my.data.box`.

10. Install Red Hat Enterprise Linux 6.1 and log in as root.

- The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the Red Hat installation guide* for help.

Important: Don't customize your installation. Select only the default packages list.

11. Install Oracle 11 (R1 and R2).

See *the Oracle wiki* for details.

Note: Make sure your database uses UTF8 or AL32UTF8 encoding. This is needed to support users in Asian languages. See *this Oracle knowledge base article.*

12. Put the Oracle datamart setup script where TeamForge can find it.

```
mkdir /u1
cp /tmp/datamart-oracle-setup.sh /u1
```

13. Log in as the Oracle user and create the site database user and permissions.

See *Set up an Oracle database* on page 253 for help.

14. Create the reporting user and schema.

    ```
    cd /u1
    sh datamart-oracle-setup.sh
    ```

    Note: Your responses to the script's prompts must match the values of the equivalent variables in the `site-options.conf` file on `my.app.box`.

Do step 15 on `my.app.box`

15. Set up the initial site data.

    ```
    cd /opt/collabnet/teamforge-installer/6.2.0.1
    ./bootstrap-data.sh
    ```

16. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

    ```
    export http_proxy=
    ```

17. Swap in the new Apache configuration file.

    ```
    cd /etc/httpd/conf
    mv httpd.conf httpd.conf_old
    cp httpd.conf.cn_new httpd.conf
    /etc/init.d/httpd start
    ```

Do step 18 on the source control server. We'll call this `my.code.box`.

18. Install Red Hat Enterprise Linux 6.1 and log in as root.

    - The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
    - See *the Red Hat installation guide* for help.

    Important: Don't customize your installation. Select only the default packages list.

19. Check your basic networking setup.
    See *Set up networking for your TeamForge box* on page 8 for details.
20. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
21. Install the TeamForge source control service.

    ```
    yum install teamforge-scm
    ```

    Tip: If the yum installer balks, you may have duplicate rpm packages.

    1. Get the `yum-utils` package, if it isn't already installed.

       ```
       yum install yum-utils
       ```

    2. Check for duplicate packages.

       ```
       package-cleanup --dupes
       ```

    3. Clean up the older packages, if any.

       ```
       package-cleanup --cleandupes
       ```

    4. Rerun the yum installer.

```
yum install teamforge-scm
```

22. Rename the sample site configuration file from the installation package.

    ```
    cd /opt/collabnet/teamforge-installer/6.2.0.1
    cp conf/site-options-advanced.conf conf/site-options.conf
    ```

    Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

23. Configure the site-options.conf file.
    a) Identify the boxes and the services running on them.

    ```
    HOST_localhost=subversion cvs
    DOMAIN_localhost=<myscmbox.domain.com>
    HOST_<myappbox.domain.com>=app
    HOST_<mydbbox.domain.com>=database
    ```

    b) Configure the database connection.

    ```
    DATABASE_TYPE=oracle
    DATABASE_USERNAME=ctfuser
    DATABASE_PASSWORD=ctfpwd
    DATABASE_NAME=ctfdb
    ```

    c) Use the shared secret key, *SCM_DEFAULT_SHARED_SECRET*, from the `site-options.conf` file on the primary TeamForge server.
    d) Don't forget to save the file.
24. Recreate the runtime environment.

    ```
    cd /opt/collabnet/teamforge-installer/6.2.0.1
    ./install.sh -r -I -V
    ```

25. Set up the initial site data.

    ```
    cd /opt/collabnet/teamforge-installer/6.2.0.1
    ./bootstrap-data.sh
    ```

26. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

    ```
    export http_proxy=
    ```

27. Swap in the new Apache configuration file.

    ```
    cd /etc/httpd/conf
    mv httpd.conf httpd.conf_old
    cp httpd.conf.cn_new httpd.conf
    /etc/init.d/httpd start
    ```

28. Start TeamForge.

    ```
    /etc/init.d/collabnet start tomcat
    ```

Do step 29 on `my.app.box`

29. Start TeamForge.

    ```
    /etc/init.d/collabnet start
    ```

    Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

    ```
    jboss (app) (localhost:8080) ............................failed to start
     in 600 seconds, giving up now. Please check the log:
    /opt/collabnet/teamforge/log/apps/service.log FAILED
    ```

    This can safely be ignored.

    Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

30. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ```

    b) List all the `etl` jobs.

    ```
    ./etl-client.py -a
    ```

    c) Run `TrackerInitialJob`.

    ```
    ./etl-client.py -r TrackerInitialJob
    ```

Go to *Verify your TeamForge 6.2 installation* for recommended steps to get started with your site.

Option 7: Install TeamForge 6.2 with Black Duck Code Sight on a separate box

In Option 7, we install the site database, the datamart the reporting service and the source control service on the main application box and Black Duck Code Sight on a separate box.

Note: In this example, we will use the same port for the site database and the reports database. This is the default setting. When heavy traffic is expected, it can be a good idea to use port 5632 for the reporting database. See *Option 1* for an example.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Install Red Hat Enterprise Linux 6.1 and log in as root.

    - The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
    - See *the Red Hat installation guide* for help.

    Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

    See *Set up networking for your TeamForge box* on page 8 for details.

3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

4. Install the TeamForge application.

```
yum install teamforge-app teamforge-database teamforge-etl teamforge-scm
```

5. Rename the sample site configuration file from the installation package.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   cp conf/site-options-advanced.conf conf/site-options.conf
   ```

   Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

6. Configure the site-options.conf file.

   ```
   vi conf/site-options.conf
   ```

   a) Identify the box and the services running on it.

   ```
   HOST_localhost=app etl database datamart subversion cvs
   DOMAIN_localhost=<myappbox.domain.com>
   ```

   b) If you're installing Black Duck Code Sight, configure the following settings:

   ```
   HOST_mycodesearchbox.domain.com=codesearch
   ```

   Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

   ```
   BDCS_HOST=<my.host.name or my.domain.name>

   To enable SSL for Black Duck Code Sight, include this token:
   BDCS_SSL=on
   ```

   ```
   To change the default Black Duck Code Sight admin password, add these tokens:
   BDCS_ADMIN_USERNAME=<username>
   BDCS_ADMIN_PASSWORD=<password>

   To configure the port number for the Code Search Tomcat server, set this
   token:
   BDCS_TOMCAT_PORT=9180

   To specify the maximum results shown in Code Search, set this token:
   Caution: Increasing this might impact performance.
   BDCS_SDK_SEARCH_LIMIT_MAX=200
   ```

   c) Configure the database and the datamart.

   ```
   DATABASE_TYPE=postgresql
   DATABASE_USERNAME=ctfuser
   DATABASE_PASSWORD=ctfpwd
   DATABASE_NAME=ctfdb
   DATABASE_NAME=ctfdb
   DATABASE_MAX_POOL_SIZE=220
   REPORTS_DATABASE_USERNAME=ctfrptuser
   REPORTS_DATABASE_PASSWORD=ctfrptpwd
   REPORTS_DATABASE_NAME=ctfrptdb
   REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
   REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
   REPORTS_DATABASE_MAX_POOL_SIZE=30
   ETL_SOAP_SHARED_SECRET=<arbitrary_string>
   SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
   ```

Tip: All the database names, user names and passwords values are arbitrary alphanumeric strings>

d) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use the same key in the external SCM integration server also.

e) Don't forget to save the file.

7. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

Do step 8 on the Black Duck Code Sight server. We'll call this `my.code.box`.

8. Set up the Black Duck Code Sight server using *these instructions*.

Do step 9 on the `my.app.box`:

9. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/data/
vi /var/lib/pgsql/9.0/data/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of database box>'
```

b) Configure database access.

```
vi /var/lib/pgsql/9.0/data/pg_hba.conf
```

```

      # "local" is for Unix domain socket connections only
      local   all                           all
                               trust
      # IPv4 local connections:
      host    all                           all
          127.0.0.1/32         trust
      # IPv6 local connections:
      host    <DATABASE_NAME>            <DATABASE_USERNAME>
    <IP address of my.app.box>/32   md5
      host    <REPORTS_DATABASE_NAME>    <REPORTS_DATABASE_USERNAME>
    <IP address of my.app.box>/32   md5
      host    <REPORTS_DATABASE_NAME>
<REPORTS_DATABASE_READ_ONLY_USERNAME> <IP address of my.app.box>/32   md5
```

```
exit
/etc/init.d/postgresql-9.0 start
```

10. Create the databases.

```
su - postgres
```

a) Site database:

```
createuser -P -S --createdb --no-createrole <ctfdatabase_username>
createdb -E UTF8 -O <ctfdatabase_username> <ctfdatabasename>
```

b) Reporting database:

```
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_username>
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_readonlyusername>
createdb -p <reports_database_port> -E UTF8 -O <reports database username>
<reports_database_name>
```

Note:

- For the passwords, use the same passwords you recorded in the `site-options.conf` file.
- To specify a non-default port, use the -p option.

c) Restart PostgreSQL.

```
exit
/etc/init.d/postgresql-9.0 restart
```

11. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

12. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

13. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

14. Start TeamForge.

```
/etc/init.d/collabnet start
```

Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

```
jboss (app) (localhost:8080) ............................failed to start
 in 600 seconds, giving up now. Please check the log:
/opt/collabnet/teamforge/log/apps/service.log FAILED
```

This can safely be ignored.

Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

15. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

16. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

    Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

    Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

    ```
    sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
    ```

17. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

    After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

    ```
    ./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
    ```

    Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

    Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

18. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

    a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`
    b) `./trust-cert.sh`
    c) Restart the `collabnet` services.

    ```
    /etc/init.d/collabnet restart
    ```

Verify your TeamForge 6.2 installation

Congratulations: you have just installed your TeamForge 6.2 site. Now you can apply some finishing touches and make sure everything is running smoothly.

1. Turn on SSL for your site by editing the relevant variables in the `site-options.conf` file.

   See *Set up SSL for your TeamForge site* for details.

   Note: If SSL is enabled for any box belonging to your site, it must be enabled for all of them.

2. Log into your site as the administrator.

   The value of the *DOMAIN* variable in the `site-options.conf` file is the URL to log into.

3. Install your license key.

   See *Supply your TeamForge license key from Teamforge user interface* on page 248.

4. To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

   ```
   select * from etl_job where job_name ='tracker_initial_etl'
   ```

The status column should have a value of 1.

5. Create a sample project.

   See *Create a TeamForge project*.
6. Write a welcome message to your site's users.

   See *Create a site-wide broadcast*.

Now that you have successfully installed your TeamForge site in its basic configuration, you can use the instructions under *Maintain your TeamForge 6.2 site* on page 248 to help keep your site going.

Uninstall TeamForge 6.2

To remove TeamForge completely, use the YUM utility.

Important: This procedure removes the TeamForge and all associated databases, including your site data. Be sure to back up any data you want to keep.

1. Stop TeamForge.

   ```
   /etc/init.d/collabnet stop all
   ```
2. Run yum to remove TeamForge.

   ```
   yum erase TeamForge-installer
   ```

For every box in a multi-box site, use the same steps to uninstall.

Install CollabNet TeamForge 6.2 on CentOS

Install TeamForge 6.2 the easy way

The easiest way to install TeamForge is to install on a single box, dedicated to TeamForge only, taking the default configuration settings. We call this a "dedicated" install.

In TeamForge 6.2, this scenario includes installing Black Duck Code Sight as well on this box.

Important: It is *critical* that you start with a fresh machine, with no software installed apart from the boot loader. You must have root access to the server.

1. Install CentOS 6.1 and log in as root.

   - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
   - See *the Red Hat installation guide* for help.

   Important: Don't customize your installation. Select only the default packages list.
2. Check your basic networking setup.

   See *Set up networking for your TeamForge box* on page 8 for details.
3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
4. Install the TeamForge application.

   ```
   yum install teamforge
   ```
5. To install Black Duck Code Sight, run this command:

   ```
   yum install teamforge-codesearch
   ```
6. Set up your site's master configuration file.

```
vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
```

Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

At this stage, we'll make the minimal modifications required to set up a usable TeamForge site.

a) Edit the *DOMAIN_localhost* variable to point the site's URL to the server where the site is running.

Use this format:

```
DOMAIN_localhost=<domain_name>
```

For example, suppose SuperVillain Inc. wants its development site to have the URL `https://worlddomination.supervillain.org`. The *DOMAIN_localhost* variable will look like this:

```
DOMAIN_localhost=worlddomination.supervillain.org
```

b) Review the *DATABASE* variables.

You may want to substitute your own values for the default database names, user names and passwords.

c) Turn on the site-wide reporting functionality by adding the *REPORTS_** variables.

See *Turn on site-wide reporting* on page 263 for details.

d) By default, the site wide reports are not commented. To turn on the site wide reports, set the values. Else, comment out the following reports.

- REPORTS_DATABASE_NAME=
- REPORTS_DATABASE_PASSWORD=
- REPORTS_DATABASE_USERNAME=
- REPORTS_DATABASE_READ_ONLY_USER=
- REPORTS_DATABASE_READ_ONLY_PASSWORD=

e) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use the same key in the external SCM integration server also.

f) If you're installing Black Duck Code Sight, configure the following settings:

```
HOST_my.host.name=app etl database datamart subversion cvs codesearch
```

Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

```
BDCS_HOST=<my.host.name or my.domain.name>

To enable SSL for Black Duck Code Sight, include this token:
BDCS_SSL=on
```

Note: If you have Black Duck Code Sight on SSL and the following external certificate tokens are not provided, the installer will generate a self-signed certificate.

```
For valid SSL certificates, configure the following tokens:
BDCS_SSL_CERT_FILE=
BDCS_SSL_KEY_FILE=

The ca.crt and chain files are optional -- leave out the tokens if you don't
 use the files.
BDCS_SSL_CA_CERT_FILE=
BDCS_SSL_CHAIN_FILE=

```

```
To change the default Black Duck Code Sight admin password, add these tokens:
BDCS_ADMIN_USERNAME=<username>
```

```
BDCS_ADMIN_PASSWORD=<password>

To configure the port number for the Code Search Tomcat server, set this
token:
BDCS_TOMCAT_PORT=9180

To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

You also have the following settings for advanced Black Duck Code Sight configuration:

Note: You can only configure the following tokens once, at the time you install Black Duck Code Sight.

```
Configuration that contains the path where the repositories enabled for
codesearch are checked out:
BDCS_SCAN_SOURCE_DIR_ROOT=/opt/collabnet/blackduck/scan

Configuration that contains the path where the codesearch software is
installed:
BDCS_INSTALL_PATH=/opt/collabnet/blackduck

Configuration that contains the path where codesearch database is installed:
BDCS_PGSQL_HOME_DIR_ROOT=/opt/collabnet/blackduck/postgres

Configuration that specifies the port number for codesearch db server
BDCS_PGSQL_PORT=55435

Configuration that specifies the tomcat maximum heap memory size in
megabytes.
BDCS_TOMCAT_MX_IN_MB=1024

Configuration that specifies the shutdown port number for codesearch tomcat
 server
BDCS_TOMCAT_SHUTDOWN_PORT=9189
```

7. Run the installer.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   ./install.sh -r -I -V
   ```

8. Set up the initial site data.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   ./bootstrap-data.sh
   ```

9. Start TeamForge.

   ```
   /etc/init.d/collabnet start
   ```

   Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

10. Install the license for Black Duck Code Sight. For more information, see *Install the Black Duck Code Sight license* on page 276.
11. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

12. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

```
sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
```

13. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

```
./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
```

Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

14. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`

b) `./trust-cert.sh`

c) Restart the `collabnet` services.

```
/etc/init.d/collabnet restart
```

15. Apply some finishing touches and make sure everything is running smoothly.

a) Turn on SSL for your site by editing the relevant variables in the `site-options.conf` file.

See *Set up SSL for your TeamForge site*.

b) Reboot the server and make sure all services come up automatically at startup.

c) On CentOS, Apache may not automatically start up after a reboot. To ensure that it does, run this command now:

```
/sbin/chkconfig --level 2345 httpd on
```

d) Log into your site as the administrator.

The value of the *DOMAIN* variable in the `site-options.conf` file is the URL to log into.

e) Create a sample project.

See *Create a TeamForge project*.

f) Write a welcome message to your site's users.

See *Create a site-wide broadcast*.

Install TeamForge the advanced way

With TeamForge advance way of installation, you can split the TeamForge services to run in multiple boxes.

Your TeamForge site consists of a collection of services that work together. You can host these services on one box or on different boxes, in whatever combination works best for your conditions.

In an "advanced" install, you'll identify the hosts on which the various components of your TeamForge site will run. For each machine that's part of your site, you'll set up the needed services and define how and where each service runs, and how they communicate with each other.

In principle, a multi-box 6.2 site can have its services running in a wide variety of combinations on an undefined number of boxes. However, real-world sites tend to follow one of the following patterns, depending on the specific needs of the community of site users.

TeamForge 6.2 supports Black Duck Code Sight. "Option 7" explains how you would install TeamForge with Black Duck Code Sight on a separate server. If your setup involves some other "advanced" installation scenario, and you want to set up Black Duck Code Sight on a separate server, take a look at "Option 7" to see how that's done.

Option 1: Install all TeamForge 6.2 services on a single box

In Option 1, we install the database, the reporting service, source control, and the datamart (reporting database) on the main application box.

This is not the same as a dedicated install, even though it uses a single box. See *Do I need an advanced TeamForge installation?* on page 303

> **Note:** In this example, we will use a separate port for the reporting database. This can help improve the perceived speed of a site when database utilization is high. If you want the reporting database to share port 5432 with the site database, omit the *REPORTS_DATABASE_PORT* variable. See *Option 2: Install TeamForge 6.2 with source control on a separate box* for an example.

1. Install CentOS 6.1 and log in as root.
   - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
   - See *the Red Hat installation guide* for help.

   > **Important:** Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

   See *Set up networking for your TeamForge box* on page 8 for details.
3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
4. Install the TeamForge application.

   ```
   yum install teamforge-app teamforge-scm teamforge-database teamforge-etl
   ```

   > **Tip:** If the yum installer balks, you may have duplicate rpm packages.
   >
   > 1. Get the `yum-utils` package, if it isn't already installed.
   >
   >    ```
   >    yum install yum-utils
   >    ```
   > 2. Check for duplicate packages.
   >
   >    ```
   >    package-cleanup --dupes
   >    ```
   > 3. Clean up the older packages, if any.
   >
   >    ```
   >    package-cleanup --cleandupes
   >    ```
   > 4. Rerun the yum installer.

```
yum install teamforge-app teamforge-scm teamforge-database
teamforge-etl
```

5. Rename the sample site configuration file from the installation package.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   cp conf/site-options-advanced.conf conf/site-options.conf
   ```

   Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

6. Configure the site-options.conf file.

   ```
   vi conf/site-options.conf
   ```

   a) Identify the box and the services running on it.

   ```
   HOST_localhost=app etl database datamart subversion cvs
   DOMAIN_localhost=<myappbox.domain.com>
   ```

   b) Configure the database and the datamart, substituting your own values for the defaults where appropriate.

   Tip: For more information about configuring variables, see *site-options.conf* on page 359.

   ```
   DATABASE_TYPE=postgresql
   DATABASE_USERNAME=ctfuser
   DATABASE_PASSWORD=ctfpwd
   DATABASE_NAME=ctfdb
   DATABASE_MAX_POOL_SIZE=220
   REPORTS_DATABASE_USERNAME=ctfrptuser
   REPORTS_DATABASE_PASSWORD=ctfrptpwd
   REPORTS_DATABASE_NAME=ctfrptdb
   REPORTS_DATABASE_MAX_POOL_SIZE=30
   ```

   Tip: The database name and user name values are arbitrary alphanumeric strings.

   ```
   REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
   REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
   ETL_SOAP_SHARED_SECRET=<arbitrary_string>
   SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
   REPORTS_DATABASE_PORT=5632
   ```

   Note:

   - If ETL is configured, ETL_SOAP_SHARED_SECRET and SOAP_ANONYMOUS_SHARED_SECRET are required; if not, they are optional.
   - We also recommend the following:
     - For small dataset customers: use the same instance as that of `ctfdb`; do not specify REPORTS_DATABASE_PORT.
     - For medium to large dataset customers: use a separate instance; specify REPORTS_DATABASE_PORT.

   c) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use that same key in the external SCM integration server also.

d) Don't forget to save the file.

7. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

8. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/data
vi /var/lib/pgsql/9.0/data/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of database box>'
```

b) Configure database access for the site database.

```
vi /var/lib/pgsql/9.0/data/pg_hba.conf
```

```

local   all                 all
          trust
# IPv4 local connections:
host    all                 all                       127.0.0.1/32
          trust
# IPv6 local connections:
#host   all                 all                       ::1/128
          trust
host    <DATABASE_NAME>  <DATABASE_USERNAME     <IP address of app box>/32
   md5
```

9. Set up the reporting database (datamart).

Note: You can skip this step if one of these is true:

- You are not providing site-wide reporting.
- You are providing reporting, and your reporting database will share port 5432 with your site database. In this case, just add these two lines to `/var/lib/pgsql/9.0/data/pg_hba.conf`:

```

host <REPORTS_DATABASE_NAME> <REPORTS_DATABASE_USERNAME>          <IP
 address of this box>/32  md5
host <REPORTS_DATABASE_NAME> <REPORTS_DATABASE_READ_ONLY_USERNAME> <IP
 address of this box>/32  md5
```

a) Point the datamart to the local machine.

```
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/reports
vi /var/lib/pgsql/9.0/reports/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of datamart box>'
port=5632
```

b) Configure access for the datamart.

```
vi /var/lib/pgsql/9.0/reports/pg_hba.conf
```

```

local all                     all
```

```
                      trust
# IPv4 local connections:
host  all                     all
127.0.0.1/32                 trust
# IPv6 local connections:
#host all                     all                                  ::1/128
                      trust
host  <REPORTS_DATABASE_NAME> <REPORTS_DATABASE_USERNAME>          <IP
address of this box>/32  md5
host  <REPORTS_DATABASE_NAME> <REPORTS_DATABASE_READ_ONLY_USERNAME> <IP
address of this box>/32  md5
```

10. Start PostgreSQL.

```
exit
/etc/init.d/postgresql-9.0 start
```

11. Create the databases.

```
su - postgres
```

a) Site database:

```
createuser -P -S --createdb --no-createrole <ctfdatabase_username>
createdb -E UTF8 -O <ctfdatabase_username> <ctfdatabasename>
```

b) Reporting database:

```
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_username>
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_readonlyusername>
createdb -p <reports_database_port> -E UTF8 -O <reports database username>
<reports_database_name>
```

Note:

- For the passwords, use the same passwords you recorded in the `site-options.conf` file.
- To specify a non-default port, use the -p option.

c) Restart PostgreSQL.

```
exit
/etc/init.d/postgresql-9.0 restart
```

12. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

13. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

14. Start TeamForge.

    ```
    /etc/init.d/collabnet start
    ```

    Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

    ```
    jboss (app) (localhost:8080) ............................failed to start
     in 600 seconds, giving up now. Please check the log:
    /opt/collabnet/teamforge/log/apps/service.log FAILED
    ```

    This can safely be ignored.

15. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ```

    b) List all the `etl` jobs.

    ```
    ./etl-client.py -a
    ```

    c) Run `TrackerInitialJob`.

    ```
    ./etl-client.py -r TrackerInitialJob
    ```

Go to *Verify your TeamForge 6.2 installation* for recommended steps to get started with your site.

Option 2: Install TeamForge 6.2 with source control on a separate box

In Option 2, we install the site database, the datamart and the reporting service on the main application box and source control services on a separate box. This can help on a site with heavy source code commit or checkout traffic.

Note: In this example, we will use the same port for the site database and the reports database. This is the default setting. When heavy traffic is expected, it can be a good idea to use port 5632 for the reporting database. See *Option 1* for an example.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Install CentOS 6.1 and log in as root.

    - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
    - See *the Red Hat installation guide* for help.

    Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

    See *Set up networking for your TeamForge box* on page 8 for details.

3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

4. Install the TeamForge application and reporting service.

    ```
    yum install teamforge-app teamforge-database teamforge-etl
    ```

Tip: If the yum installer balks, you may have duplicate rpm packages.

1. Get the `yum-utils` package, if it isn't already installed.

   ```
   yum install yum-utils
   ```

2. Check for duplicate packages.

   ```
   package-cleanup --dupes
   ```

3. Clean up the older packages, if any.

   ```
   package-cleanup --cleandupes
   ```

4. Rerun the yum installer.

   ```
   yum install teamforge-app teamforge-database
   teamforge-etl
   ```

5. Rename the sample site configuration file from the installation package.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   cp conf/site-options-advanced.conf conf/site-options.conf
   ```

   Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

6. Configure the site-options.conf file.

   ```
   vi conf/site-options.conf
   ```

   a) Identify the boxes and the services running on them.

   ```
   HOST_localhost=app etl database datamart
   DOMAIN_localhost=<myappbox.domain.com>
   HOST_<mycodebox.domain.com>=subversion cvs
   ```

   b) Configure the database and the datamart.

   Tip: For more information about configuring variables, see *site-options.conf* on page 359.

   ```
   DATABASE_TYPE=postgresql
   DATABASE_USERNAME=ctfuser
   DATABASE_PASSWORD=ctfpwd
   DATABASE_NAME=ctfdb
   DATABASE_MAX_POOL_SIZE=220
   REPORTS_DATABASE_USERNAME=ctfrptuser
   REPORTS_DATABASE_PASSWORD=ctfrptpwd
   REPORTS_DATABASE_NAME=ctfrptdb
   REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
   REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
   ETL_SOAP_SHARED_SECRET=<arbitrary_string>
   SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
   REPORTS_DATABASE_MAX_POOL_SIZE=30
   ```

   Tip: All the database names, user names and passwords values are arbitrary alphanumeric strings.

c) ☞ **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use that same key in the external SCM integration server also.

d) Don't forget to save the file.

7. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

8. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/data/
vi /var/lib/pgsql/9.0/data/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of database box>'
```

b) Configure database access.

```
vi /var/lib/pgsql/9.0/data/pg_hba.conf
```

```
      # "local" is for Unix domain socket connections only
      local   all                           all
                               trust
      # IPv4 local connections:
      host    all                           all
          127.0.0.1/32         trust
      # IPv6 local connections:
      host    <DATABASE_NAME>           <DATABASE_USERNAME>
    <IP address of my.app.box>/32   md5
      host    <REPORTS_DATABASE_NAME>    <REPORTS_DATABASE_USERNAME>
    <IP address of my.app.box>/32   md5
      host    <REPORTS_DATABASE_NAME>
<REPORTS_DATABASE_READ_ONLY_USERNAME> <IP address of my.app.box>/32   md5
```

```
exit
/etc/init.d/postgresql-9.0 start
```

9. Create the databases.

```
su - postgres
```

a) Site database:

```
createuser -P -S --createdb --no-createrole <ctfdatabase_username>
createdb -E UTF8 -O <ctfdatabase_username> <ctfdatabasename>
```

b) Reporting database:

```
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_username>
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_readonlyusername>
createdb -p <reports_database_port> -E UTF8 -O <reports database username>
<reports_database_name>
```

Note:

- For the passwords, use the same passwords you recorded in the `site-options.conf` file.
- To specify a non-default port, use the -p option.

c) Restart PostgreSQL.

```
exit
/etc/init.d/postgresql-9.0 restart
```

10. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

11. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

12. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

Do step 13 on the source code server. We'll call this `my.code.box`.

13. Install CentOS 6.1 and log in as root.

- See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the Red Hat installation guide* for help.

Important: Don't customize your installation. Select only the default packages list.

14. Check your basic networking setup.
See *Set up networking for your TeamForge box* on page 8 for details.

15. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

16. Install the TeamForge source control service.

```
yum install teamforge-scm
```

Tip: If the yum installer balks, you may have duplicate rpm packages.

1. Get the `yum-utils` package, if it isn't already installed.

   ```
   yum install yum-utils
   ```

2. Check for duplicate packages.

   ```
   package-cleanup --dupes
   ```

3. Clean up the older packages, if any.

   ```
   package-cleanup --cleandupes
   ```

4. Rerun the yum installer.

```
yum install teamforge-scm
```

17. Rename the sample site configuration file from the installation package.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
cp conf/site-options-advanced.conf conf/site-options.conf
```

Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

18. Configure the site-options.conf file.

a) Identify the boxes and the services running on them.

```
NODE_NAME=localhost
HOST_localhost=subversion cvs
DOMAIN_localhost=<mycodebox.domain.com>
HOST_<myappbox.domain.com>=app database
```

b) Configure the database connection.

```
DATABASE_TYPE=postgresql
DATABASE_USERNAME=ctfuser
DATABASE_PASSWORD=ctfpwd
DATABASE_NAME=ctfdb
```

c) Use the shared secret key, *SCM_DEFAULT_SHARED_SECRET*, from the `site-options.conf` file on the primary TeamForge server.

d) Don't forget to save the file.

19. Recreate the runtime environment.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V -b
```

20. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

21. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

22. Start TeamForge.

```
/etc/init.d/collabnet start tomcat
```

Do step 23 on `my.app.box`:

23. Start TeamForge.

```
/etc/init.d/collabnet start
```

Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

```
jboss (app) (localhost:8080) ...........................failed to start
 in 600 seconds, giving up now. Please check the log:
/opt/collabnet/teamforge/log/apps/service.log FAILED
```

This can safely be ignored.

Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

24. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

Go to *Verify your TeamForge 6.2 installation* for recommended steps to get started with your site.

Option 3: Install TeamForge 6.2 with reporting data on a separate box

In Option 3, we install the database, the reporting service and source control on the main application box and the datamart (reporting database) on a separate box. This enables site administrators to monitor activity closely without overloading the rest of the site.

In this example, we will specify a separate port for the reports database. By default, both the site database and the reporting database use port 5432, but when heavy traffic is expected, it can be a good idea to use port 5632 for the reporting database.

Note: If the remote machine where the datamart will run is not under your direct control, check with the DBA or other person in charge of that resource to make sure you can carry out these instructions on that box.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Install CentOS 6.1 and log in as root.

- See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the Red Hat installation guide* for help.

Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

See *Set up networking for your TeamForge box* on page 8 for details.

3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

4. Install the TeamForge application and the database, reporting and source control services.

```
yum install teamforge-app teamforge-database teamforge-etl teamforge-scm
```

> **Tip:** If the yum installer balks, you may have duplicate rpm packages.
>
> 1. Get the `yum-utils` package, if it isn't already installed.
>
>    ```
>    yum install yum-utils
>    ```
>
> 2. Check for duplicate packages.
>
>    ```
>    package-cleanup --dupes
>    ```
>
> 3. Clean up the older packages, if any.
>
>    ```
>    package-cleanup --cleandupes
>    ```
>
> 4. Rerun the yum installer.
>
>    ```
>    yum install teamforge-app teamforge-database teamforge-etl
>    teamforge-scm
>    ```

5. Rename the sample site configuration file from the installation package.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   cp conf/site-options-advanced.conf conf/site-options.conf
   ```

   > **Note:** The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

6. Configure the `site-options.conf` file.

   ```
   vi conf/site-options.conf
   ```

   a) Identify the boxes and the services running on them.

   ```

   HOST_localhost=app database subversion cvs etl
   DOMAIN_localhost=<myappbox.domain.com>
   HOST_<mydatamartbox.domain.com>=datamart
   ```

   b) Configure the database and the datamart.

   > **Tip:** For more information about configuring variables, see *site-options.conf* on page 359.

   ```

   DATABASE_TYPE=postgresql
   DATABASE_USERNAME=ctfuser
   DATABASE_PASSWORD=ctfpwd
   DATABASE_NAME=ctfdb
   DATABASE_MAX_POOL_SIZE=220
   REPORTS_DATABASE_USERNAME=ctfrptuser
   REPORTS_DATABASE_PASSWORD=ctfrptpwd
   REPORTS_DATABASE_NAME=ctfrptdb
   REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
   REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
   ETL_SOAP_SHARED_SECRET=<arbitrary_string>
   SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
   REPORTS_DATABASE_PORT=5632
   REPORTS_DATABASE_MAX_POOL_SIZE=30
   ```

Tip: The database name and user name values are arbitrary alphanumeric strings.

c) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

   Remember that you need to use that same key in the external SCM integration server also.

d) Don't forget to save the file.

7. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

8. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/data
vi /var/lib/pgsql/9.0/data/postgresql.conf
listen_addresses = '127.0.0.1,<IP address of database box>'
```

b) Configure database access.

```
vi /var/lib/pgsql/9.0/data/pg_hba.conf
```

```
local   all                   all
    trust
# IPv4 local connections:
host    all                   all                       127.0.0.1/32
    trust
# IPv6 local connections:
#host   all                   all                       ::1/128
    trust
host    <DATABASE_NAME>    <DATABASE_USERNAME>       <IP address of
my.app.box>/32   md5
```

```
exit
/etc/init.d/postgresql-9.0 start
```

c) Create the site database.

```
su - postgres
createuser -P -S --createdb --no-createrole <ctfdatabase_username>
createdb -E UTF8 -O <ctfdatabase_username> <ctfdatabasename>
exit
/etc/init.d/postgresql-9.0 restart
```

9. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

Do step 10 on the datamart server. We'll call this `my.datamart.box`.

10. Install CentOS 6.1 and log in as root.

- See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the Red Hat installation guide* for help.

Important: Don't customize your installation. Select only the default packages list.

11. Install PostgreSQL 9.0.

    See *the PostgreSQL docs* for support.

12. Set up the reporting database (datamart).

    a) Point the database to the local machine.

    ```
    su - postgres
    /usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/reports
    vi /var/lib/pgsql/9.0/reports/postgresql.conf
    ```

    ```
           listen_addresses = '127.0.0.1,<IP address of my.datamart.box>'
           port=5632
    ```

    b) Configure access for the datamart.

    ```
    vi /var/lib/pgsql/9.0/reports/pg_hba.conf
    ```

    ```
    local   all                            all
                             trust
    # IPv4 local connections:
    host    all                            all
       127.0.0.1/32          trust
    # IPv6 local connections:
    #host   all                            all
       ::1/128               trust
    host    <REPORTS_DATABASE_NAME>        <REPORTS_DATABASE_USERNAME>
       <IP address of my.app.box>/32   md5
    host    <REPORTS_DATABASE_NAME>        <REPORTS_DATABASE_READ_ONLY_USER>
       <IP address of my.app.box>/32   md5
    ```

    ```
    exit
    ```

    c) Copy the datamart control script from `/opt/collabnet/teamforge/runtime/scripts` on `my.app.box` to the `/tmp` directory of `my.datamart.box`.

    ```
    mv /etc/init.d/postgresql-9.0 /etc/init.d/postgresql-9.0_orig
    cp /tmp/postgresql_reports /etc/init.d
    ```

    Note: The `postgresql_reports` script is the one to use only if the datamart is running on a different server from the database, as it is in this example. In all other cases, use the `postgresql` script.

    d) Start the reporting database service.

    ```
    /etc/init.d/postgresql-9.0_reports start
    ```

    e) Log in as the `postgres` user and create the reporting database.

    Use the values from your `site-options.conf` file.

    ```
    su - postgres
    createuser -p <reports_database_port> -P -S --createdb --no-createrole
    <reports_database_username>
    createuser -p <reports_database_port> -P -S --createdb --no-createrole
    <reports_database_readonlyusername>
    createdb -p <reports_database_port> -E UTF8 -O <reports database username>
    <reports database name>
    exit
    ```

```
/etc/init.d/postgresql-9.0_reports restart
```

Note: To specify a non-default port, add the -p option.

Do step 13 on `my.app.box`:

13. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

14. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

15. Start TeamForge.

```
/etc/init.d/collabnet start
```

Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

```
jboss (app) (localhost:8080) ............................failed to start
 in 600 seconds, giving up now. Please check the log:
/opt/collabnet/teamforge/log/apps/service.log FAILED
```

This can safely be ignored.

Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

16. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

Go to *Verify your TeamForge 6.2 installation* for recommended steps to get started with your site.

Option 4: Distribute TeamForge 6.2 on three boxes with SCM and Reporting database on separate box

In Option 4, we install the site database and the reporting service on the main application box, while source control and the reporting database each get their own box. This can be a way to support the requirements of both coders and management.

In this example, we will use the same port for the site database and the reports database. This is the default setting. When heavy traffic is expected, it can be a good idea to use port 5632 for the reporting database. See *Option 1* for an example.

Note: If either of the remote machines (the datamart or the source code box) is not under your direct control, check with the DBA or other person in charge of that resource to make sure you can carry out these instructions on that box.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Install CentOS 6.1 and log in as root.
   - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
   - See *the Red Hat installation guide* for help.

   Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

   See *Set up networking for your TeamForge box* on page 8 for details.
3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
4. Install the TeamForge application database and reporting service.

   ```
   yum install teamforge-app teamforge-database teamforge-etl
   ```

   Tip: If the yum installer balks, you may have duplicate rpm packages.

   1. Get the `yum-utils` package, if it isn't already installed.

      ```
      yum install yum-utils
      ```

   2. Check for duplicate packages.

      ```
      package-cleanup --dupes
      ```

   3. Clean up the older packages, if any.

      ```
      package-cleanup --cleandupes
      ```

   4. Rerun the yum installer.

      ```
      yum install teamforge-app teamforge-database
      teamforge-etl
      ```

5. Rename the sample site configuration file from the installation package.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   cp conf/site-options-advanced.conf conf/site-options.conf
   ```

   Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

6. Configure the site-options.conf file.

   ```
   vi conf/site-options.conf
   ```

a) Identify your boxes and the services running on them.

```
HOST_localhost=app etl database
DOMAIN_localhost=<myappbox.domain.com>
HOST_<mydatamartbox.domain.com>=datamart
HOST_<mycodebox.domain.com>=subversion cvs
```

b) Configure the database and the datamart.

Tip: For more information about configuring variables, see *site-options.conf* on page 359.

```
DATABASE_TYPE=postgresql
DATABASE_USERNAME=ctfuser
DATABASE_PASSWORD=ctfpwd
DATABASE_NAME=ctfdb
DATABASE_MAX_POOL_SIZE=220
REPORTS_DATABASE_USERNAME=ctfrptuser
REPORTS_DATABASE_PASSWORD=ctfrptpwd
REPORTS_DATABASE_NAME=ctfrptdb
REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
REPORTS_DATABASE_MAX_POOL_SIZE=30
ETL_SOAP_SHARED_SECRET=<arbitrary_string>
SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
```

Tip: The database name and user name values are arbitrary alphanumeric strings.

c) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use that same key in the external SCM integration server also.

d) Don't forget to save the file.

7. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

8. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/data/
vi /var/lib/pgsql/9.0/data/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of database box>'
```

b) Configure database access.

```
vi /var/lib/pgsql/9.0/data/pg_hba.conf
```

```
      local    all         all                               trust
      # IPv4 local connections:
      host     all         all         127.0.0.1/32          trust
      # IPv6 local connections:
      #host     all         all         ::1/128               trust
      host     <DATABASE_NAME>            <DATABASE_USERNAME>
    <IP address of my.app.box>/32   md5
```

```
exit
/etc/init.d/postgresql-9.0 start
```

c) Log in as the `postgres` user and create the site database.

```
su - postgres
createuser -P -S --createdb --no-createrole <ctfdatabase_username>
createdb -E UTF8 -O <ctfdatabase_username> <ctfdatabasename>
exit
```

9. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

Do step 10 on the datamart server. We'll call this `my.datamart.box`.

10. Install CentOS 6.1 and log in as root.

- See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the Red Hat installation guide* for help.

Important: Don't customize your installation. Select only the default packages list.

11. Install PostgreSQL 9.0.

See *the PostgreSQL docs* for support.

12. Set up the reporting database.

a) Point the database to the local machine.

```
su - postgres
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/reports
vi /var/lib/pgsql/9.0/reports/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of my.datamart.box>'
```

b) Configure database access.

```
vi /var/lib/pgsql/9.0/reports/pg_hba.conf
```

```
       local   all          all                                  trust
       # IPv4 local connections:
       host    all          all         127.0.0.1/32             trust
       # IPv6 local connections:
       #host    all          all         ::1/128                  trust
       host    <REPORTS_DATABASE_NAME>    <REPORTS_DATABASE_USERNAME>
     <IP address of my.app.box>/32   md5
       host    <REPORTS_DATABASE_NAME>
<REPORTS_DATABASE_READ_ONLY_USERNAME> <IP address of my.app.box>/32   md5
```

```
exit
```

c) Copy the datamart control script from `/opt/collabnet/teamforge/runtime/scripts` on `my.app.box` to the `/tmp` directory of `my.datamart.box`.

```
mv /etc/init.d/postgresql-9.0 /etc/init.d/postgresql-9.0_orig
cp /tmp/postgresql_reports /etc/init.d
```

Note: The `postgresql_reports` script is the one to use only if the datamart is running on a different server from the database, as it is in this example. In all other cases, use the `postgresql` script.

d) Start the reporting database service.

```
/etc/init.d/postgresql-9.0_reports start
```

e) Log in as the `postgres` user and create the reporting database.

Use the values from your `site-options.conf` file.

```
su - postgres
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_username>
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_readonlyusername>
createdb -p <reports_database_port> -E UTF8 -O <reports database username>
<reports database name>
exit
/etc/init.d/postgresql-9.0_reports restart
```

Note: To specify a non-default port, add the -p option.

Do step 13 on `my.app.box`:

13. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

14. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

Do step 15 on the source control box. We'll call this `my.code.box`.

15. Install CentOS 6.1 and log in as root.

- See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the Red Hat installation guide* for help.

Important: Don't customize your installation. Select only the default packages list.

16. Check your basic networking setup.

See *Set up networking for your TeamForge box* on page 8 for details.

17. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

18. Install the TeamForge application.

```
yum install teamforge-scm
```

Tip: If the yum installer balks, you may have duplicate rpm packages.

1. Get the `yum-utils` package, if it isn't already installed.

   ```
   yum install yum-utils
   ```

2. Check for duplicate packages.

   ```
   package-cleanup --dupes
   ```

3. Clean up the older packages, if any.

```
package-cleanup --cleandupes
```

4. Rerun the yum installer.

   ```
   yum install teamforge-scm
   ```

19. Rename the sample site configuration file from the installation package.

    ```
    cd /opt/collabnet/teamforge-installer/6.2.0.1
    cp conf/site-options-advanced.conf conf/site-options.conf
    ```

    Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

20. Configure the site-options.conf file.

    a) Identify the boxes and the services running on them.

    ```
    NODE_NAME=localhost
    HOST_localhost=subversion cvs
    DOMAIN_localhost=<mycodebox.domain.com>
    HOST<myappbox.domain.com>=app database
    ```

    b) Configure the database connection.

    ```
    DATABASE_TYPE=postgresql
    DATABASE_USERNAME=ctfuser
    DATABASE_PASSWORD=ctfpwd
    DATABASE_NAME=ctfdb
    ```

    c) Use the shared secret key, *SCM_DEFAULT_SHARED_SECRET*, from the `site-options.conf` file on the primary TeamForge server.

21. Run the installer.

    ```
    cd /opt/collabnet/teamforge-installer/6.2.0.1
    ./install.sh -r -I -V
    ```

22. Set up the initial site data.

    ```
    cd /opt/collabnet/teamforge-installer/6.2.0.1
    ./bootstrap-data.sh
    ```

23. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

    ```
    export http_proxy=
    ```

24. Swap in the new Apache configuration file.

    ```
    cd /etc/httpd/conf
    mv httpd.conf httpd.conf_old
    cp httpd.conf.cn_new httpd.conf
    /etc/init.d/httpd start
    ```

25. Start TeamForge.

    ```
    /etc/init.d/collabnet start tomcat
    ```

Do step 25 on `my.app.box`:

26. Start TeamForge.

    ```
    /etc/init.d/collabnet start
    ```

    Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

    ```
    jboss (app) (localhost:8080) ............................failed to start
     in 600 seconds, giving up now. Please check the log:
    /opt/collabnet/teamforge/log/apps/service.log FAILED
    ```

    This can safely be ignored.

    Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

27. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ```

    b) List all the `etl` jobs.

    ```
    ./etl-client.py -a
    ```

    c) Run `TrackerInitialJob`.

    ```
    ./etl-client.py -r TrackerInitialJob
    ```

Go to *Verify your TeamForge 6.2 installation* for recommended steps to get started with your site.

Option 5: Distribute TeamForge 6.2 on three boxes for intensive database utilization

In Option 5, we install the reporting service on the main application box, both databases on another box, and source control on a third box. This may be appropriate when intensive database utilization is a factor.

In this example, we will specify a separate port for the reports database. By default, both the site database and the reporting database use port 5432, but when heavy traffic is expected, it can be a good idea to use port 5632 for the reporting database.

Note: If either of the remote machines (the data box or the source code box) is not under your direct control, check with the DBA or other person in charge of that resource to make sure you can carry out these instructions on that box.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Install CentOS 6.1 and log in as root.

    - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
    - See *the Red Hat installation guide* for help.

    Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

    See *Set up networking for your TeamForge box* on page 8 for details.

3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
4. Install the TeamForge application and reporting service.

   ```
   yum install teamforge-app teamforge-etl
   ```

   Tip: If the yum installer balks, you may have duplicate rpm packages.

   1. Get the `yum-utils` package, if it isn't already installed.

      ```
      yum install yum-utils
      ```

   2. Check for duplicate packages.

      ```
      package-cleanup --dupes
      ```

   3. Clean up the older packages, if any.

      ```
      package-cleanup --cleandupes
      ```

   4. Rerun the yum installer.

      ```
      yum install teamforge-app teamforge-etl
      ```

5. Rename the sample site configuration file from the installation package.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   cp conf/site-options-advanced.conf conf/site-options.conf
   ```

   Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

6. Configure the `site-options.conf` file.

   ```
   vi conf/site-options.conf
   ```

   a) Identify the boxes and the services running on them.

   ```
   HOST_localhost=app etl
   DOMAIN_localhost=<myappbox.domain.com>
   HOST_<mydbbox.domain.com>=database datamart
   HOST_<myscmbox.domain.com>=subversion cvs
   ```

   b) Configure the database and the datamart.

   Tip: For more information about configuring variables, see *site-options.conf* on page 359.

   ```
   DATABASE_TYPE=postgresql
   DATABASE_USERNAME=ctfuser
   DATABASE_PASSWORD=ctfpwd
   DATABASE_NAME=ctfdb
   DATABASE_MAX_POOL_SIZE=220
   REPORTS_DATABASE_USERNAME=ctfrptuser
   REPORTS_DATABASE_PASSWORD=ctfrptpwd
   REPORTS_DATABASE_NAME=ctfrptdb
   REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
   REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
   ETL_SOAP_SHARED_SECRET=<arbitrary_string>
   ```

```
SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
REPORTS_DATABASE_PORT=5632
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

Tip: The database name and user name values are arbitrary alphanumeric strings.

c) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use that same key in the external SCM integration server also.

d) Don't forget to save the file.

7. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

8. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

Do step 9 on the database/datamart server. We'll call this `my.data.box`.

9. Install CentOS 6.1 and log in as root.

- See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the Red Hat installation guide* for help.

Important: Don't customize your installation. Select only the default packages list.

10. Install PostgreSQL 9.0.

See *the PostgreSQL docs* for support.

11. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/data
vi /var/lib/pgsql/9.0/data/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of database box>'
```

b) Configure database access.

```
vi /var/lib/pgsql/9.0/data/pg_hba.conf
```

```
local   all                 all
   trust
# IPv4 local connections:
host    all                 all                        127.0.0.1/32
   trust
# IPv6 local connections:
#host   all                 all                        ::1/128
   trust
host    <DATABASE_NAME>  <DATABASE_USERNAME>     <IP address of
my.app.box>/32   md5
```

12. Set up the reporting database (datamart).

a) Point the database to the local machine.

```
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/reports
vi /var/lib/pgsql/9.0/reports/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of my datamart box>'
       port=5632
```

b) Configure access for the datamart.

```
vi /var/lib/pgsql/9.0/reports/pg_hba.conf
```

```

local   all                           all
                                               trust
# IPv4 local connections:
host    all                           all
   127.0.0.1/32                                trust
# IPv6 local connections:
#host   all                           all
   ::1/128                                     trust
host    <REPORTS_DATABASE_NAME>    <REPORTS_DATABASE_USERNAME>          <IP
 address of my.app.box/32   md5
host    <REPORTS_DATABASE_NAME>    <REPORTS_DATABASE_READ_ONLY_USERNAME>
<IP address of my.app.box>/32   md5
```

```
exit
```

c) Copy the postgresql script from `/opt/collabnet/teamforge/runtime/scripts` on `my.app.box` to the `/tmp` directory of `my.data.box`.

```
mv /etc/init.d/postgresql-9.0 /etc/init.d/postgresql-9.0_orig
cp /tmp/postgresql-9.0 /etc/init.d
```

d) Start the reporting database service.

```
/etc/init.d/postgresql-9.0 start
```

13. Create the databases.

```
su - postgres
```

a) Site database:

```
createuser -P -S --createdb --no-createrole <ctfdatabase_username>
createdb -E UTF8 -O <ctfdatabase_username> <ctfdatabasename>
```

b) Reporting database:

```
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_username>
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_readonlyusername>
createdb -p <reports_database_port> -E UTF8 -O <reports database username>
<reports_database_name>
```

Note:

- For the passwords, use the same passwords you recorded in the `site-options.conf` file.
- To specify a non-default port, use the -p option.

c) Restart PostgreSQL.

```
exit
/etc/init.d/postgresql-9.0 restart
```

Do step 14 on `my.app.box`

14. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

15. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

Do step 16 on the source control server. We'll call this `my.code.box`.

16. Install CentOS 6.1 and log in as root.

- See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the Red Hat installation guide* for help.

👉 **Important:** Don't customize your installation. Select only the default packages list.

17. Check your basic networking setup.

    See *Set up networking for your TeamForge box* on page 8 for details.

18. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

19. Install the TeamForge source control service.

```
yum install teamforge-scm
```

👉 **Tip:** If the yum installer balks, you may have duplicate rpm packages.

1. Get the `yum-utils` package, if it isn't already installed.

```
yum install yum-utils
```

2. Check for duplicate packages.

```
package-cleanup --dupes
```

3. Clean up the older packages, if any.

```
package-cleanup --cleandupes
```

4. Rerun the yum installer.

```
yum install teamforge-scm
```

20. Rename the sample site configuration file from the installation package.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
cp conf/site-options-advanced.conf conf/site-options.conf
```

Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

21. Configure the `site-options.conf` file.

a) Identify the boxes and the services running on them.

```
HOST_localhost=subversion cvs
DOMAIN_localhost=<myscmbox.domain.com>
HOST_<myappbox.domain.com>=app
HOST_<mydbbox.domain.com>=database
```

b) Configure the database connection.

```
DATABASE_TYPE=postgresql
DATABASE_USERNAME=ctfuser
DATABASE_PASSWORD=ctfpwd
DATABASE_NAME=ctfdb
```

c) Use the shared secret key, *SCM_DEFAULT_SHARED_SECRET*, from the `site-options.conf` file on the primary TeamForge server.

d) Don't forget to save the file.

22. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

23. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

24. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

25. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

26. Start TeamForge.

```
/etc/init.d/collabnet start tomcat
```

Do step 27 on `my.app.box`

27. Start TeamForge.

```
/etc/init.d/collabnet start
```

Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

```
jboss (app) (localhost:8080) ............................failed to start
 in 600 seconds, giving up now. Please check the log:
/opt/collabnet/teamforge/log/apps/service.log FAILED
```

This can safely be ignored.

Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

28. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ```

    b) List all the `etl` jobs.

    ```
    ./etl-client.py -a
    ```

    c) Run `TrackerInitialJob`.

    ```
    ./etl-client.py -r TrackerInitialJob
    ```

Go to *Verify your TeamForge 6.2 installation* for recommended steps to get started with your site.

Option 6: Distribute TeamForge 6.2 services using Oracle

Option 6 is like Option 5, but it uses an Oracle database instead of a PostgreSQL database.

For simplicity, in this example we will have the site database and the reporting database share port 1521.

Note: If either of the remote machines (the data box or the source code box) is not under your direct control, check with the DBA or other person in charge of that resource to make sure you can carry out these instructions on that box.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Install CentOS 6.1 and log in as root.

    - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
    - See *the Red Hat installation guide* for help.

    Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

    See *Set up networking for your TeamForge box* on page 8 for details.

3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

4. Install the TeamForge application and reporting service.

    ```
    yum install teamforge-app teamforge-etl
    ```

    Tip: If the yum installer balks, you may have duplicate rpm packages.

    1. Get the `yum-utils` package, if it isn't already installed.

        ```
        yum install yum-utils
        ```

    2. Check for duplicate packages.

        ```
        package-cleanup --dupes
        ```

   3. Clean up the older packages, if any.

      ```
      package-cleanup --cleandupes
      ```

   4. Rerun the yum installer.

      ```
      yum install teamforge-app teamforge-etl
      ```

5. Rename the sample site configuration file from the installation package.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   cp conf/site-options-advanced.conf conf/site-options.conf
   ```

   Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

6. Configure the site-options.conf file.

   ```
   vi conf/site-options.conf
   ```

   a) Identify the boxes and the services running on them.

   ```
   HOST_localhost=app etl
   DOMAIN_localhost=<myappbox.domain.com>
   HOST_<mydbbox.domain.com>=database datamart
   HOST_<myscmbox.domain.com>=subversion cvs
   ```

   b) Configure the database and the datamart.

   Tip: For more information about configuring variables, see *site-options.conf* on page 359.

   ```
   DATABASE_TYPE=oracle
   DATABASE_USERNAME=sitedatabaseusername
   DATABASE_PASSWORD=sitedatabasepwd
   DATABASE_NAME=sitedatabaseinstancename
   DATABASE_MAX_POOL_SIZE=220
   REPORTS_DATABASE_USERNAME=reportingdatabaseusername
   REPORTS_DATABASE_PASSWORD=reportingdatabasepwd
   REPORTS_DATABASE_NAME=reportingdatabaseinstancename
   REPORTS_DATABASE_READ_ONLY_USER=reportingreadonlyusername
   REPORTS_DATABASE_READ_ONLY_PASSWORD=reportingreadonlyuserpwd
   REPORTS_DATABASE_MAX_POOL_SIZE=30
   ETL_SOAP_SHARED_SECRET=<arbitrary_string>
   SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
   DATABASE_SERVICE_NAME=
   REPORTS_DATABASE_SERVICE_NAME=
   ```

   Tip:

   - The database name and user name values are arbitrary alphanumeric strings.
   - To find the value for the *DATABASE_SERVICE_NAME* variable, log into your Oracle server and execute this command:

     ```
     su - oracle
     tnsping <database_name>
     ```

In the output, find the value of *SERVICE_NAME*. Use that as the value of *DATABASE_SERVICE_NAME* in `site-options.conf`.

c) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

   Remember that you need to use that same key in the external SCM integration server also.

d) Don't forget to save the file.

7. **Note:** Perform this step in case your Oracle server version is not 11.2.0.1.

Download the corresponding version of Oracle client from *http://www.oracle.com/technetwork/database/features/instant-client/index-097480.html* and run the following command:

```
yum localinstall <path to oracle client rpm>
```

8. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

9. Copy the Oracle datamart setup script from `/opt/collabnet/teamforge/runtime/scripts` to the `/tmp` directory of `my.data.box`.

```
scp /opt/collabnet/teamforge/runtime/scripts/datamart-oracle-setup.sh
<username>@<my.data.box>:/tmp
```

Do step 10 on the database/datamart server. We'll call this `my.data.box`.

10. Install CentOS 6.1 and log in as root.

- See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the Red Hat installation guide* for help.

Important: Don't customize your installation. Select only the default packages list.

11. Install Oracle 11 (R1 and R2).

See *this writeup* for details.

Note: Make sure your database uses UTF8 or AL32UTF8 encoding. This is needed to support users in Asian languages. See *this Oracle knowledge base article.*

12. Put the Oracle datamart setup script where TeamForge can find it.

```
mkdir /u1
cp /tmp/datamart-oracle-setup.sh /u1
```

13. Log in as the Oracle user and create the site database user and permissions.

See *Set up an Oracle database* on page 253 for help.

14. Create the reporting user and schema.

```
cd /u1
sh datamart-oracle-setup.sh
```

Note: Your responses to the script's prompts must match the values of the equivalent variables in the `site-options.conf` file on `my.app.box`.

Do step 15 on `my.app.box`

15. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

16. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

17. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

Do step 18 on the source control box. We'll call this `my.code.box`.

18. Install CentOS 6.1 and log in as root.

    - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
    - See *the Red Hat installation guide* for help.

    👉 **Important:** Don't customize your installation. Select only the default packages list.

19. Check your basic networking setup.

    See *Set up networking for your TeamForge box* on page 8 for details.

20. Install the TeamForge source control service.

```
yum install teamforge-scm
```

👉 **Tip:** If the yum installer balks, you may have duplicate rpm packages.

1. Get the `yum-utils` package, if it isn't already installed.

```
yum install yum-utils
```

2. Check for duplicate packages.

```
package-cleanup --dupes
```

3. Clean up the older packages, if any.

```
package-cleanup --cleandupes
```

4. Rerun the yum installer.

```
yum install teamforge-scm
```

21. Rename the sample site configuration file from the installation package.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
cp conf/site-options-advanced.conf conf/site-options.conf
```

👉 **Note:** The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

22. Configure the site-options.conf file.
    a) Identify the boxes and the services running on them.

    ```
    HOST_localhost=subversion cvs
    DOMAIN_localhost=<myscmbox.domain.com>
    HOST_<myappbox.domain.com>=app
    HOST_<mydbbox.domain.com>=database
    ```

    b) Configure the database connection.

    ```
    DATABASE_TYPE=oracle
    DATABASE_USERNAME=ctfuser
    DATABASE_PASSWORD=ctfpwd
    DATABASE_NAME=ctfdb
    ```

    c) Use the shared secret key, *SCM_DEFAULT_SHARED_SECRET*, from the `site-options.conf` file on the primary TeamForge server.
    d) Don't forget to save the file.
23. Run the installer.

    ```
    cd /opt/collabnet/teamforge-installer/6.2.0.1
    ./install.sh -r -I -V
    ```

24. Set up the initial site data.

    ```
    cd /opt/collabnet/teamforge-installer/6.2.0.1
    ./bootstrap-data.sh
    ```

25. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

    ```
    export http_proxy=
    ```

26. Swap in the new Apache configuration file.

    ```
    cd /etc/httpd/conf
    mv httpd.conf httpd.conf_old
    cp httpd.conf.cn_new httpd.conf
    /etc/init.d/httpd start
    ```

27. Start TeamForge.

    ```
    /etc/init.d/collabnet start tomcat
    ```

Do step 29 on `my.app.box`

28. Start TeamForge.

    ```
    /etc/init.d/collabnet start
    ```

    Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

    ```
    jboss (app) (localhost:8080) ............................failed to start
     in 600 seconds, giving up now. Please check the log:
    /opt/collabnet/teamforge/log/apps/service.log FAILED
    ```

    This can safely be ignored.

> **Note:** The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

29. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ```

    b) List all the `etl` jobs.

    ```
    ./etl-client.py -a
    ```

    c) Run `TrackerInitialJob`.

    ```
    ./etl-client.py -r TrackerInitialJob
    ```

Go to *Verify your TeamForge 6.2 installation* for recommended steps to get started with your site.

Option 7: Install TeamForge 6.2 with Black Duck Code Sight on a separate box

In Option 7, we install the site database, the datamart the reporting service and the source control service on the main application box and Black Duck Code Sight on a separate box.

> **Note:** In this example, we will use the same port for the site database and the reports database. This is the default setting. When heavy traffic is expected, it can be a good idea to use port 5632 for the reporting database. See *Option 1* for an example.

> **Note:** In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Install CentOS 6.1 and log in as root.

    - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
    - See *the Red Hat installation guide* for help.

    > **Important:** Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

    See *Set up networking for your TeamForge box* on page 8 for details.

3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

4. Install the TeamForge application.

    ```
    yum install teamforge-app teamforge-database teamforge-etl teamforge-scm
    ```

5. Rename the sample site configuration file from the installation package.

    ```
    cd /opt/collabnet/teamforge-installer/6.2.0.1
    cp conf/site-options-advanced.conf conf/site-options.conf
    ```

    > **Note:** The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

6. Configure the site-options.conf file.

```
vi conf/site-options.conf
```

a) Identify the box and the services running on it.

```
HOST_localhost=app etl database datamart subversion cvs
DOMAIN_localhost=<myappbox.domain.com>
```

b) If you're installing Black Duck Code Sight, configure the following settings:

```
HOST_mycodesearchbox.domain.com=codesearch
```

Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

```
BDCS_HOST=<my.host.name or my.domain.name>

To enable SSL for Black Duck Code Sight, include this token:
BDCS_SSL=on
```

```
To change the default Black Duck Code Sight admin password, add these tokens:
BDCS_ADMIN_USERNAME=<username>
BDCS_ADMIN_PASSWORD=<password>

To configure the port number for the Code Search Tomcat server, set this
token:
BDCS_TOMCAT_PORT=9180

To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

c) Configure the database and the datamart.

```
DATABASE_TYPE=postgresql
DATABASE_USERNAME=ctfuser
DATABASE_PASSWORD=ctfpwd
DATABASE_NAME=ctfdb
DATABASE_NAME=ctfdb
DATABASE_MAX_POOL_SIZE=220
REPORTS_DATABASE_USERNAME=ctfrptuser
REPORTS_DATABASE_PASSWORD=ctfrptpwd
REPORTS_DATABASE_NAME=ctfrptdb
REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
REPORTS_DATABASE_MAX_POOL_SIZE=30
ETL_SOAP_SHARED_SECRET=<arbitrary_string>
SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
```

Tip: All the database names, user names and passwords values are arbitrary alphanumeric strings>

d) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use the same key in the external SCM integration server also.

e) Don't forget to save the file.

7. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

Do step 8 on the Black Duck Code Sight server. We'll call this `my.code.box`.

8. Set up the Black Duck Code Sight server using *these instructions*.

Do step 9 on the `my.app.box`:

9. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/data/
vi /var/lib/pgsql/9.0/data/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of database box>'
```

b) Configure database access.

```
vi /var/lib/pgsql/9.0/data/pg_hba.conf
```

```
      # "local" is for Unix domain socket connections only
      local    all                           all
                            trust
      # IPv4 local connections:
      host     all                           all
          127.0.0.1/32         trust
      # IPv6 local connections:
      host     <DATABASE_NAME>            <DATABASE_USERNAME>
    <IP address of my.app.box>/32   md5
      host     <REPORTS_DATABASE_NAME>    <REPORTS_DATABASE_USERNAME>
    <IP address of my.app.box>/32   md5
      host     <REPORTS_DATABASE_NAME>
<REPORTS_DATABASE_READ_ONLY_USERNAME> <IP address of my.app.box>/32   md5
```

```
exit
/etc/init.d/postgresql-9.0 start
```

10. Create the databases.

```
su - postgres
```

a) Site database:

```
createuser -P -S --createdb --no-createrole <ctfdatabase_username>
createdb -E UTF8 -O <ctfdatabase_username> <ctfdatabasename>
```

b) Reporting database:

```
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_username>
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_readonlyusername>
createdb -p <reports_database_port> -E UTF8 -O <reports database username>
<reports_database_name>
```

Note:

- For the passwords, use the same passwords you recorded in the `site-options.conf` file.
- To specify a non-default port, use the -p option.

c) Restart PostgreSQL.

```
exit
/etc/init.d/postgresql-9.0 restart
```

11. Set up the initial site data.

    ```
    cd /opt/collabnet/teamforge-installer/6.2.0.1
    ./bootstrap-data.sh
    ```

12. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

    ```
    export http_proxy=
    ```

13. Swap in the new Apache configuration file.

    ```
    cd /etc/httpd/conf
    mv httpd.conf httpd.conf_old
    cp httpd.conf.cn_new httpd.conf
    /etc/init.d/httpd start
    ```

14. Start TeamForge.

    ```
    /etc/init.d/collabnet start
    ```

    Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

    ```
    jboss (app) (localhost:8080) ...........................failed to start
     in 600 seconds, giving up now. Please check the log:
    /opt/collabnet/teamforge/log/apps/service.log FAILED
    ```

    This can safely be ignored.

    Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

15. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ```

    b) List all the `etl` jobs.

    ```
    ./etl-client.py -a
    ```

    c) Run `TrackerInitialJob`.

    ```
    ./etl-client.py -r TrackerInitialJob
    ```

16. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

    Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

    Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

```
sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
```

17. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

    After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

    ```
    ./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
    ```

    Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

    Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

18. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

    a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`

    b) `./trust-cert.sh`

    c) Restart the `collabnet` services.

    ```
    /etc/init.d/collabnet restart
    ```

Verify your TeamForge 6.2 installation

Congratulations: you have just installed your TeamForge 6.2 site. Now you can apply some finishing touches and make sure everything is running smoothly.

1. On CentOS, Apache may not automatically start up after a reboot. To ensure that it does, run this command now:

   ```
   /sbin/chkconfig --level 2345 httpd on
   ```

2. Turn on SSL for your site by editing the relevant variables in the `site-options.conf` file.

   See *Set up SSL for your TeamForge site* for details.

   Note: If SSL is enabled for any box belonging to your site, it must be enabled for all of them.

3. Log into your site as the administrator.

   The value of the *DOMAIN* variable in the `site-options.conf` file is the URL to log into.

4. Install your license key.

   See *Supply your TeamForge license key from Teamforge user interface* on page 248.

5. To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

   ```
   select * from etl_job where job_name ='tracker_initial_etl'
   ```

   The status column should have a value of 1.

6. Install a project template.

   TeamForge comes with a sample project template that showcases some of the platform's most interesting features. Site administrators and project managers can use this template to jump-start projects without a lot of manual setup steps. See *Install project templates manually* on page 258.

   Note: This procedure is recommended, but not required.

7. Create a sample project.

See *Create a TeamForge project*.

8. Write a welcome message to your site's users.

   See *Create a site-wide broadcast*.

Now that you have successfully installed your TeamForge site in its basic configuration, you can use the instructions under *Maintain your TeamForge 6.2 site* on page 248 to help keep your site going.

Uninstall TeamForge 6.2

To remove TeamForge completely, use the YUM utility.

Important: This procedure removes the TeamForge and all associated databases, including your site data. Be sure to back up any data you want to keep.

1. Stop TeamForge.

   ```
   /etc/init.d/collabnet stop all
   ```

2. Run yum to remove TeamForge.

   ```
   yum erase TeamForge-installer
   ```

For every box in a multi-box site, use the same steps to uninstall.

Install CollabNet TeamForge 6.2 on SuSE

Install TeamForge 6.2 the easy way

The easiest way to install TeamForge is to install on a single box, dedicated to TeamForge only, taking the default configuration settings. We call this a "dedicated" install.

In TeamForge 6.2, this scenario includes installing Black Duck Code Sight as well on this box.

Important: It is *critical* that you start with a fresh machine, with no software installed apart from the boot loader. You must have root access to the server.

1. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.

   - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
   - See *the SuSE Linux Enterprise Server deployment guide* for help.

   Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

   See *Set up networking for your TeamForge box* on page 8 for details.

3. Set up the SuSE repository.

   a) Register the machine with Novell.

   ```
   suse_register -i -a email=<MailID> -a regcode-sles=<Registration code>
   ```

   where `<MailID>` is the email address associated with your SuSE Linux Enterprise Server license and `<Registration code>` is the Suse Enterprise Linux license code.

   b) Move the existing installer repository out of the way.

   ```
   cd /etc/zypp/repos.d/
   mv SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo
   SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo_old
   ```

c) Make sure the correct Novell repository is enabled.

Open `nu_novell_com:SLES11-SP1-Pool.repo` in a text editor and confirm that `enabled=1`.

d) Refresh `zypper`.

```
Zypper ref
```

Note: As an alternative, you can insert the SuSe Linux Enterprise Server DVD.

- Ensure that the DVD is mounted in the location specified by the *baseurl* variable in `SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo`.
- Use `zypper info postgresql` to check that the DVD is properly mounted.

4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/zypp/repos.d/`.

5. Install the TeamForge application.

```
zypper install teamforge
```

6. To install Black Duck Code Sight, run this command.

```
zypper install teamforge-codesearch
```

7. Set up your site's master configuration file.

```
vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
```

Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

At this stage, we'll make the minimal modifications required to set up a usable TeamForge site.

a) Edit the *DOMAIN_localhost* variable to point the site's URL to the server where the site is running.

Use this format:

```
DOMAIN_localhost=<domain_name>
```

For example, suppose SuperVillain Inc. wants its development site to have the URL `https://worlddomination.supervillain.org`. The *DOMAIN_localhost* variable will look like this:

```
DOMAIN_localhost=worlddomination.supervillain.org
```

b) Review the *DATABASE* variables.

You may want to substitute your own values for the default database names, user names and passwords.

c) Turn on the site-wide reporting functionality by adding the *REPORTS_** variables.

See *Turn on site-wide reporting* on page 263 for details.

d) By default, the site wide reports are not commented. To turn on the site wide reports, set the values. Else, comment out the following reports.

- REPORTS_DATABASE_NAME=
- REPORTS_DATABASE_PASSWORD=
- REPORTS_DATABASE_USERNAME=
- REPORTS_DATABASE_READ_ONLY_USER=
- REPORTS_DATABASE_READ_ONLY_PASSWORD=

e) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use the same key in the external SCM integration server also.

f) If you're installing Black Duck Code Sight, configure the following settings:

```
HOST_my.host.name=app etl database datamart subversion cvs codesearch
```

Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

```
BDCS_HOST=<my.host.name or my.domain.name>

To enable SSL for Black Duck Code Sight, include this token:
BDCS_SSL=on
```

Note: If you have Black Duck Code Sight on SSL and the following external certificate tokens are not provided, the installer will generate a self-signed certificate.

```
For valid SSL certificates, configure the following tokens:
BDCS_SSL_CERT_FILE=
BDCS_SSL_KEY_FILE=

The ca.crt and chain files are optional -- leave out the tokens if you don't
 use the files.
BDCS_SSL_CA_CERT_FILE=
BDCS_SSL_CHAIN_FILE=

```

```
To change the default Black Duck Code Sight admin password, add these tokens:
BDCS_ADMIN_USERNAME=<username>
BDCS_ADMIN_PASSWORD=<password>

To configure the port number for the Code Search Tomcat server, set this
token:
BDCS_TOMCAT_PORT=9180

To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

You also have the following settings for advanced Black Duck Code Sight configuration:

Note: You can only configure the following tokens once, at the time you install Black Duck Code Sight.

```
Configuration that contains the path where the repositories enabled for
codesearch are checked out:
BDCS_SCAN_SOURCE_DIR_ROOT=/opt/collabnet/blackduck/scan

Configuration that contains the path where the codesearch software is
installed:
BDCS_INSTALL_PATH=/opt/collabnet/blackduck

Configuration that contains the path where codesearch database is installed:
BDCS_PGSQL_HOME_DIR_ROOT=/opt/collabnet/blackduck/postgres

Configuration that specifies the port number for codesearch db server
BDCS_PGSQL_PORT=55435

Configuration that specifies the tomcat maximum heap memory size in
megabytes.
BDCS_TOMCAT_MX_IN_MB=1024

Configuration that specifies the shutdown port number for codesearch tomcat
 server
BDCS_TOMCAT_SHUTDOWN_PORT=9189
```

8. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

9. Set up the initial site data.

   ```
   ./bootstrap-data.sh
   ```

10. Start TeamForge.

    ```
    /etc/init.d/collabnet start
    ```

    👉 **Note:** The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

11. Install the license for Black Duck Code Sight. For more information, see *Install the Black Duck Code Sight license* on page 276.
12. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ```

    b) List all the `etl` jobs.

    ```
    ./etl-client.py -a
    ```

    c) Run `TrackerInitialJob`.

    ```
    ./etl-client.py -r TrackerInitialJob
    ```

13. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

    👉 **Note:** It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

    👉 **Note:** If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

    ```
    sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
    ```

14. 👉 **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

    After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

    ```
    ./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
    ```

    Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

    Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

15. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

    a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`

b) `./trust-cert.sh`
c) Restart the `collabnet` services.

```
/etc/init.d/collabnet restart
```

16. Apply some finishing touches and make sure everything is running smoothly.

a) Turn on SSL for your site by editing the relevant variables in the `site-options.conf` file.

See *Set up SSL for your TeamForge site*.

b) Reboot the server and make sure all services come up automatically at startup.
c) Log into your site as the administrator.

The value of the *DOMAIN* variable in the `site-options.conf` file is the URL to log into.

d) Create a sample project.

See *Create a TeamForge project*.

e) Write a welcome message to your site's users.

See *Create a site-wide broadcast*.

Install TeamForge the advanced way

If you need maximum flexibility and control over your 6.2 site, you'll want an "advanced" install.

Your TeamForge site consists of a collection of services that work together. You can host these services on one box or on different boxes, in whatever combination works best for your conditions.

In an "advanced" install, you'll identify the hosts on which the various components of your TeamForge site will run. For each machine that's part of your site, you'll set up the needed services and define how and where each service runs, and how they communicate with each other.

In principle, a multi-box 6.2 site can have its services running in a wide variety of combinations on an undefined number of boxes. However, real-world sites tend to follow one of the following patterns, depending on the specific needs of the community of site users.

TeamForge 6.2 supports Black Duck Code Sight. "Option 7" explains how you would install TeamForge with Black Duck Code Sight on a separate server. If your setup involves some other "advanced" installation scenario, and you want to set up Black Duck Code Sight on a separate server, take a look at "Option 7" to see how that's done.

Option 1: Install all TeamForge 6.2 services on a single box

In Option 1, we install the database, the reporting service, source control, and the datamart (reporting database) on the main application box.

This is not the same as a dedicated install, even though it uses a single box. See *Do I need an advanced TeamForge installation?* on page 303

Note: In this example, we will use a separate port for the reporting database. This can help improve the perceived speed of a site when database utilization is high. If you want the reporting database to share port 5432 with the site database, omit the *REPORTS_DATABASE_PORT* variable. See *Option 2: Install TeamForge 6.2 with source control on a separate box* for an example.

1. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.

- See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the SuSE Linux Enterprise Server deployment guide* for help.

Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

See *Set up networking for your TeamForge box* on page 8 for details.

3. Set up the SuSE repository.

   a) Register the machine with Novell.

   ```
   suse_register -i -a email=<MailID> -a regcode-sles=<Registration code>
   ```

   where `<MailID>` is the email address associated with your SuSE Linux Enterprise Server license and `<Registration code>` is the Suse Enterprise Linux license code.

   b) Move the existing installer repository out of the way.

   ```
   cd /etc/zypp/repos.d/
   mv SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo
   SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo_old
   ```

   c) Make sure the correct Novell repository is enabled.

   Open `nu_novell_com:SLES11-SP1-Pool.repo` in a text editor and confirm that `enabled=1`.

   d) Refresh `zypper`.

   ```
   Zypper ref
   ```

   Note: As an alternative, you can insert the SuSe Linux Enterprise Server DVD.

   - Ensure that the DVD is mounted in the location specified by the *baseurl* variable in `SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo`.
   - Use `zypper info postgresql` to check that the DVD is properly mounted.

4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/zypp/repos.d/`.

5. Install the TeamForge application.

   ```
   zypper install teamforge-app teamforge-scm teamforge-etl teamforge-database
   ```

6. Rename the sample site configuration file from the installation package.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   cp conf/site-options-advanced.conf conf/site-options.conf
   ```

   Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

7. Configure the site-options.conf file.

   ```
   vi conf/site-options.conf
   ```

   a) Identify the box and the services running on it.

   ```
   HOST_localhost=app etl database datamart subversion cvs
   DOMAIN_localhost=<myappbox.domain.com>
   ```

   b) Configure the database and the datamart, substituting your own values for the defaults where appropriate.

   Tip: For more information about configuring variables, see *site-options.conf* on page 359.

   ```
   DATABASE_TYPE=postgresql
   DATABASE_USERNAME=ctfuser
   DATABASE_PASSWORD=ctfpwd
   DATABASE_NAME=ctfdb
   ```

```
DATABASE_MAX_POOL_SIZE=220
REPORTS_DATABASE_USERNAME=ctfrptuser
REPORTS_DATABASE_PASSWORD=ctfrptpwd
REPORTS_DATABASE_NAME=ctfrptdb
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

Tip: The database name and user name values are arbitrary alphanumeric strings.

```
REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
ETL_SOAP_SHARED_SECRET=<arbitrary_string>
SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
REPORTS_DATABASE_PORT=5632
```

Note:

- If ETL is configured, ETL_SOAP_SHARED_SECRET and SOAP_ANONYMOUS_SHARED_SECRET are required; if not, they are optional.
- We also recommend the following:
  - For small dataset customers: use the same instance as that of `ctfdb`; do not specify REPORTS_DATABASE_PORT.
  - For medium to large dataset customers: use a separate instance; specify REPORTS_DATABASE_PORT.

c) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use that same key in the external SCM integration server also.

d) Don't forget to save the file.

8. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

9. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
initdb -D /var/lib/pgsql/data
vi /var/lib/pgsql/data/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of database box>'
```

b) Configure database access for the site database.

```
vi /var/lib/pgsql/data/pg_hba.conf
```

```

local   all                 all
          trust
# IPv4 local connections:
host    all                 all                          127.0.0.1/32
          trust
# IPv6 local connections:
#host   all                 all                          ::1/128
          trust
host    <DATABASE_NAME>  <DATABASE_USERNAME     <IP address of app box>/32
   md5
```

10. Set up the reporting database (datamart).

Note: You can skip this step if one of these is true:

- You are not providing site-wide reporting.
- You are providing reporting, and your reporting database will share port 5432 with your site database. In this case, just add these two lines to `/var/lib/pgsql/data/pg_hba.conf`:

```
host <REPORTS_DATABASE_NAME> <REPORTS_DATABASE_USERNAME>          <IP
 address of this box>/32  md5
host <REPORTS_DATABASE_NAME> <REPORTS_DATABASE_READ_ONLY_USERNAME> <IP
 address of this box>/32  md5
```

a) Point the datamart to the local machine.

```
initdb -D /var/lib/pgsql/reports
vi /var/lib/pgsql/reports/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of datamart box>'
port=5632
```

b) Configure access for the datamart.

```
vi /var/lib/pgsql/reports/pg_hba.conf
```

```
local all                    all
                      trust
# IPv4 local connections:
host  all                    all
127.0.0.1/32                trust
# IPv6 local connections:
#host all                    all                                  ::1/128
                      trust
host  <REPORTS_DATABASE_NAME> <REPORTS_DATABASE_USERNAME>          <IP
address of this box>/32  md5
host  <REPORTS_DATABASE_NAME> <REPORTS_DATABASE_READ_ONLY_USERNAME> <IP
address of this box>/32  md5
```

11. Start PostgreSQL.

```
exit
/etc/init.d/postgresql start
```

12. Create the databases.

```
su - postgres
```

a) Site database:

```
createuser -P -S --createdb --no-createrole <ctfdatabase_username>
createdb -E UTF8 -O <ctfdatabase_username> <ctfdatabasename>
```

b) Reporting database:

```
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_username>
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_readonlyusername>
```

```
createdb -p <reports_database_port> -E UTF8 -O <reports database username>
<reports_database_name>
```

Note:

- For the passwords, use the same passwords you recorded in the `site-options.conf` file.
- To specify a non-default port, use the -p option.

c) Restart PostgreSQL.

```
exit
/etc/init.d/postgresql restart
```

13. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

14. Swap in the new Apache configuration file.

```
cd /etc/apache2
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
cd /etc/sysconfig/
mv apache2 apache2_old
cp apache2.cn_new apache2
/etc/init.d/apache2 start
```

15. Start TeamForge.

Note: The sample TeamForge project template is installed as a part of the Collabnet startup script. If the project template is installed or available in the database by default, then the startup script will not re-install it.

```
/etc/init.d/collabnet start
```

Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

```
jboss (app) (localhost:8080) ............................failed to start
 in 600 seconds, giving up now. Please check the log:
/opt/collabnet/teamforge/log/apps/service.log FAILED
```

This can safely be ignored.

16. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

Go to *Verify your TeamForge 6.2 installation* for recommended steps to get started with your site.

Option 2: Install TeamForge 6.2 with source control on a separate box

In Option 2, we install the site database, the datamart and the reporting service on the main application box and source control services on a separate box. This can help on a site with heavy source code commit or checkout traffic.

Note: In this example, we will use the same port for the site database and the reports database. This is the default setting. When heavy traffic is expected, it can be a good idea to use port 5632 for the reporting database. See *Option 1* for an example.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.
   - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
   - See *the SuSE Linux Enterprise Server deployment guide* for help.

   Important: Don't customize your installation. Select only the default packages list.
2. Check your basic networking setup.

   See *Set up networking for your TeamForge box* on page 8 for details.
3. Set up the SuSE repository.

   a) Register the machine with Novell.

   ```
   suse_register -i -a email=<MailID> -a regcode-sles=<Registration code>
   ```

   where `<MailID>` is the email address associated with your SuSE Linux Enterprise Server license and `<Registration code>` is the Suse Enterprise Linux license code.

   b) Move the existing installer repository out of the way.

   ```
   cd /etc/zypp/repos.d/
   mv SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo
   SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo_old
   ```

   c) Make sure the correct Novell repository is enabled.

   Open `nu_novell_com:SLES11-SP1-Pool.repo` in a text editor and confirm that `enabled=1`.

   d) Refresh `zypper`.

   ```
   Zypper ref
   ```

   Note: As an alternative, you can insert the SuSe Linux Enterprise Server DVD.
   - Ensure that the DVD is mounted in the location specified by the *baseurl* variable in `SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo`.
   - Use `zypper info postgresql` to check that the DVD is properly mounted.
4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/zypp/repos.d/`.
5. Install the TeamForge application and reporting service.

   ```
   zypper install teamforge-app teamforge-etl teamforge-database
   ```

6. Rename the sample site configuration file from the installation package.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   cp conf/site-options-advanced.conf conf/site-options.conf
   ```

   Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

7. Configure the site-options.conf file.

   ```
   vi conf/site-options.conf
   ```

   a) Identify the boxes and the services running on them.

   ```
   HOST_localhost=app etl database datamart
   DOMAIN_localhost=<myappbox.domain.com>
   HOST_<mycodebox.domain.com>=subversion cvs
   ```

   b) Configure the database and the datamart.

   Tip: For more information about configuring variables, see *site-options.conf* on page 359.

   ```
   DATABASE_TYPE=postgresql
   DATABASE_USERNAME=ctfuser
   DATABASE_PASSWORD=ctfpwd
   DATABASE_NAME=ctfdb
   DATABASE_MAX_POOL_SIZE=220
   REPORTS_DATABASE_USERNAME=ctfrptuser
   REPORTS_DATABASE_PASSWORD=ctfrptpwd
   REPORTS_DATABASE_NAME=ctfrptdb
   REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
   REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
   ETL_SOAP_SHARED_SECRET=<arbitrary_string>
   SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
   REPORTS_DATABASE_MAX_POOL_SIZE=30
   ```

   Tip: All the database names, user names and passwords values are arbitrary alphanumeric strings.

   c) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

   Remember that you need to use that same key in the external SCM integration server also.

   d) Don't forget to save the file.

8. Run the installer.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   ./install.sh -r -I -V
   ```

9. Set up the site database.

   a) Point the database to the local machine.

   ```
   su - postgres
   initdb -D /var/lib/pgsql/data
   vi /var/lib/pgsql/data/postgresql.conf
   ```

   ```
   listen_addresses = '127.0.0.1,<IP address of database box>'
   ```

b) Configure database access.

```
vi /var/lib/pgsql/data/pg_hba.conf
```

```
      # "local" is for Unix domain socket connections only
      local   all                           all
                               trust
      # IPv4 local connections:
      host    all                           all
          127.0.0.1/32         trust
      # IPv6 local connections:
      host    <DATABASE_NAME>            <DATABASE_USERNAME>
    <IP address of my.app.box>/32   md5
      host    <REPORTS_DATABASE_NAME>    <REPORTS_DATABASE_USERNAME>
    <IP address of my.app.box>/32   md5
      host    <REPORTS_DATABASE_NAME>
<REPORTS_DATABASE_READ_ONLY_USERNAME> <IP address of my.app.box>/32   md5
```

```
exit
/etc/init.d/postgresql start
```

10. Create the databases.

```
su - postgres
```

a) Site database:

```
createuser -P -S --createdb --no-createrole <ctfdatabase_username>
createdb -E UTF8 -O <ctfdatabase_username> <ctfdatabasename>
```

b) Reporting database:

```
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_username>
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_readonlyusername>
createdb -p <reports_database_port> -E UTF8 -O <reports database username>
<reports_database_name>
```

Note:

- For the passwords, use the same passwords you recorded in the `site-options.conf` file.
- To specify a non-default port, use the -p option.

c) Restart PostgreSQL.

```
exit
/etc/init.d/postgresql restart
```

11. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

12. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

13. Swap in the new Apache configuration file.

    ```
    cd /etc/apache2
    mv httpd.conf httpd.conf_old
    cp httpd.conf.cn_new httpd.conf
    cd /etc/sysconfig/
    mv apache2 apache2_old
    cp apache2.cn_new apache2
    /etc/init.d/apache2 start
    ```

Do step 14 on the source code server. We'll call this `my.code.box`.

14. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.
    - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
    - See *the SuSE Linux Enterprise Server deployment guide* for help.

    Important: Don't customize your installation. Select only the default packages list.

15. Check your basic networking setup.

    See *Set up networking for your TeamForge box* on page 8 for details.

16. Set up the SuSE repository.

    a) Register the machine with Novell.

    ```
    suse_register -i -a email=<MailID> -a regcode-sles=<Registration code>
    ```

    where `<MailID>` is the email address associated with your SuSE Linux Enterprise Server license and `<Registration code>` is the Suse Enterprise Linux license code.

    b) Move the existing installer repository out of the way.

    ```
    cd /etc/zypp/repos.d/
    mv SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo
    SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo_old
    ```

    c) Make sure the correct Novell repository is enabled.

    Open `nu_novell_com:SLES11-SP1-Pool.repo` in a text editor and confirm that `enabled=1`.

    d) Refresh `zypper`.

    ```
    Zypper ref
    ```

    Note: As an alternative, you can insert the SuSe Linux Enterprise Server DVD.
    - Ensure that the DVD is mounted in the location specified by the *baseurl* variable in `SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo`.
    - Use `zypper info postgresql` to check that the DVD is properly mounted.

17. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/zypp/repos.d/`.

18. Install the TeamForge source control service.

    ```
    zypper install teamforge-scm
    ```

19. Rename the sample site configuration file from the installation package.

    ```
    cd /opt/collabnet/teamforge-installer/6.2.0.1
    cp conf/site-options-advanced.conf conf/site-options.conf
    ```

Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

20. Configure the site-options.conf file.

    a) Identify the boxes and the services running on them.

    ```
    NODE_NAME=localhost
    HOST_localhost=subversion cvs
    DOMAIN_localhost=<mycodebox.domain.com>
    HOST_<myappbox.domain.com>=app database
    ```

    b) Configure the database connection.

    ```
    DATABASE_TYPE=postgresql
    DATABASE_USERNAME=ctfuser
    DATABASE_PASSWORD=ctfpwd
    DATABASE_NAME=ctfdb
    ```

    c) Use the shared secret key, *SCM_DEFAULT_SHARED_SECRET*, from the `site-options.conf` file on the primary TeamForge server.

    d) Don't forget to save the file.

21. Re-create the runtime environment.

    ```
    cd /opt/collabnet/teamforge-installer/6.2.0.1
    ./install.sh -r -I -V -b
    ```

22. Set up the initial site data.

    ```
    cd /opt/collabnet/teamforge-installer/6.2.0.1
    ./bootstrap-data.sh
    ```

23. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

    ```
    export http_proxy=
    ```

24. Swap in the new Apache configuration file.

    ```
    cd /etc/apache2
    mv httpd.conf httpd.conf_old
    cp httpd.conf.cn_new httpd.conf
    cd /etc/sysconfig/
    mv apache2 apache2_old
    cp apache2.cn_new apache2
    /etc/init.d/apache2 start
    ```

25. Start TeamForge.

    ```
    /etc/init.d/collabnet start tomcat
    ```

Do step 25 on `my.app.box`:

26. Start TeamForge.

    ```
    /etc/init.d/collabnet start
    ```

Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

```
jboss (app) (localhost:8080) ............................failed to start
 in 600 seconds, giving up now. Please check the log:
/opt/collabnet/teamforge/log/apps/service.log FAILED
```

This can safely be ignored.

Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

27. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

Go to *Verify your TeamForge 6.2 installation* for recommended steps to get started with your site.

Option 3: Install TeamForge 6.2 with reporting data on a separate box

In Option 3, we install the database, the reporting service and source control on the main application box and the datamart (reporting database) on a separate box. This enables site administrators to monitor activity closely without overloading the rest of the site.

In this example, we will specify a separate port for the reports database. By default, both the site database and the reporting database use port 5432, but when heavy traffic is expected, it can be a good idea to use port 5632 for the reporting database.

Note: If the remote machine where the datamart will run is not under your direct control, check with the DBA or other person in charge of that resource to make sure you can carry out these instructions on that box.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.

- See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the SuSE Linux Enterprise Server deployment guide* for help.

Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

See *Set up networking for your TeamForge box* on page 8 for details.

3. Set up the SuSE repository.

a) Register the machine with Novell.

```
suse_register -i -a email=<MailID> -a regcode-sles=<Registration code>
```

where `<MailID>` is the email address associated with your SuSE Linux Enterprise Server license and `<Registration code>` is the Suse Enterprise Linux license code.

b) Move the existing installer repository out of the way.

```
cd /etc/zypp/repos.d/
mv SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo
SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo_old
```

c) Make sure the correct Novell repository is enabled.

Open `nu_novell_com:SLES11-SP1-Pool.repo` in a text editor and confirm that `enabled=1`.

d) Refresh `zypper`.

```
Zypper ref
```

Note: As an alternative, you can insert the SuSe Linux Enterprise Server DVD.

- Ensure that the DVD is mounted in the location specified by the *baseurl* variable in `SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo`.
- Use `zypper info postgresql` to check that the DVD is properly mounted.

4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/zypp/repos.d/`.

5. Install the TeamForge application and the database, reporting and source control services.

```
zypper install teamforge-app teamforge-database teamforge-etl teamforge-scm
```

6. Rename the sample site configuration file from the installation package.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
cp conf/site-options-advanced.conf conf/site-options.conf
```

Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

7. Configure the `site-options.conf` file.

```
vi conf/site-options.conf
```

a) Identify the boxes and the services running on them.

```


HOST_localhost=app database subversion cvs etl
DOMAIN_localhost=<myappbox.domain.com>
HOST_<mydatamartbox.domain.com>=datamart
```

b) Configure the database and the datamart.

Tip: For more information about configuring variables, see *site-options.conf* on page 359.

```
DATABASE_TYPE=postgresql
DATABASE_USERNAME=ctfuser
DATABASE_PASSWORD=ctfpwd
DATABASE_NAME=ctfdb
DATABASE_MAX_POOL_SIZE=220
REPORTS_DATABASE_USERNAME=ctfrptuser
```

```
REPORTS_DATABASE_PASSWORD=ctfrptpwd
REPORTS_DATABASE_NAME=ctfrptdb
REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
ETL_SOAP_SHARED_SECRET=<arbitrary_string>
SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
REPORTS_DATABASE_PORT=5632
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

Tip: The database name and user name values are arbitrary alphanumeric strings.

c) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use that same key in the external SCM integration server also.

d) Don't forget to save the file.

8. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

9. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
initdb -D /var/lib/pgsql/data
vi /var/lib/pgsql/data/postgresql.conf
listen_addresses = '127.0.0.1,<IP address of database box>'
```

b) Configure database access.

```
vi /var/lib/pgsql/data/pg_hba.conf
```

```

local   all                   all
    trust
# IPv4 local connections:
host    all                   all                        127.0.0.1/32
    trust
# IPv6 local connections:
#host   all                   all                        ::1/128
    trust
host    <DATABASE_NAME>    <DATABASE_USERNAME>       <IP address of
my.app.box>/32   md5
```

```
exit
/etc/init.d/postgresql start
```

c) Create the site database.

```
su - postgres
createuser -P -S --createdb --no-createrole <ctfdatabase_username>
createdb -E UTF8 -O <ctfdatabase_username> <ctfdatabasename>
exit
/etc/init.d/postgresql restart
```

10. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

Do step 11 on the datamart server. We'll call this `my.datamart.box`.

11. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.

    - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
    - See *the SuSE Linux Enterprise Server deployment guide* for help.

    Important: Don't customize your installation. Select only the default packages list.

12. Install PostgreSQL 9.0.

    See *the PostgreSQL docs* for support.

13. Set up the reporting database (datamart).

    a) Point the database to the local machine.

    ```
    su - postgres
    initdb -D /var/lib/pgsql/reports
    vi /var/lib/pgsql/reports/postgresql.conf
    ```

    ```
           listen_addresses = '127.0.0.1,<IP address of my.datamart.box>'
           port=5632
    ```

    b) Configure access for the datamart.

    ```
    vi /var/lib/pgsql/reports/pg_hba.conf
    ```

    ```
    local   all                           all
                             trust
    # IPv4 local connections:
    host    all                           all
       127.0.0.1/32          trust
    # IPv6 local connections:
    #host   all                           all
       ::1/128               trust
    host    <REPORTS_DATABASE_NAME>       <REPORTS_DATABASE_USERNAME>
       <IP address of my.app.box>/32   md5
    host    <REPORTS_DATABASE_NAME>       <REPORTS_DATABASE_READ_ONLY_USER>
       <IP address of my.app.box>/32   md5
    ```

    ```
    exit
    ```

    c) Copy the datamart control script from `/opt/collabnet/teamforge/runtime/scripts` on `my.app.box` to the `/tmp` directory of `my.datamart.box`.

    ```
    mv /etc/init.d/postgresql /etc/init.d/postgresql_orig
    cp /tmp/postgresql_reports /etc/init.d
    ```

    Note: The `postgresql_reports` script is the one to use only if the datamart is running on a different server from the database, as it is in this example. In all other cases, use the `postgresql` script.

    d) Start the reporting database service.

    ```
    /etc/init.d/postgresql_reports start
    ```

    e) Log in as the `postgres` user and create the reporting database.

    Use the values from your `site-options.conf` file.

    ```
    su - postgres
    ```

```
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_username>
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_readonlyusername>
createdb -p <reports_database_port> -E UTF8 -O <reports database username>
<reports database name>
exit
/etc/init.d/postgresql_reports restart
```

Note: To specify a non-default port, add the -p option.

Do step 14 on `my.app.box`:

14. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

15. Swap in the new Apache configuration file.

```
cd /etc/apache2
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
cd /etc/sysconfig/
mv apache2 apache2_old
cp apache2.cn_new apache2
/etc/init.d/apache2 start
```

16. Start TeamForge.

```
/etc/init.d/collabnet start
```

Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

```
jboss (app) (localhost:8080) ............................failed to start
 in 600 seconds, giving up now. Please check the log:
/opt/collabnet/teamforge/log/apps/service.log FAILED
```

This can safely be ignored.

Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

17. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

Go to *Verify your TeamForge 6.2 installation* for recommended steps to get started with your site.

Option 4: Distribute TeamForge 6.2 on three boxes with SCM and Reporting database on separate box

In Option 4, we install the site database and the reporting service on the main application box, while source control and the reporting database each get their own box. This can be a way to support the requirements of both coders and management.

In this example, we will use the same port for the site database and the reports database. This is the default setting. When heavy traffic is expected, it can be a good idea to use port 5632 for the reporting database. See *Option 1* for an example.

Note: If either of the remote machines (the datamart or the source code box) is not under your direct control, check with the DBA or other person in charge of that resource to make sure you can carry out these instructions on that box.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.
   - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
   - See *the SuSE Linux Enterprise Server deployment guide* for help.

   Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

   See *Set up networking for your TeamForge box* on page 8 for details.

3. Set up the SuSE repository.

   a) Register the machine with Novell.

   ```
   suse_register -i -a email=<MailID> -a regcode-sles=<Registration code>
   ```

   where `<MailID>` is the email address associated with your SuSE Linux Enterprise Server license and `<Registration code>` is the Suse Enterprise Linux license code.

   b) Move the existing installer repository out of the way.

   ```
   cd /etc/zypp/repos.d/
   mv SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo
   SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo_old
   ```

   c) Make sure the correct Novell repository is enabled.

   Open `nu_novell_com:SLES11-SP1-Pool.repo` in a text editor and confirm that `enabled=1`.

   d) Refresh `zypper`.

   ```
   Zypper ref
   ```

   Note: As an alternative, you can insert the SuSe Linux Enterprise Server DVD.

   - Ensure that the DVD is mounted in the location specified by the *baseurl* variable in `SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo`.
   - Use `zypper info postgresql` to check that the DVD is properly mounted.

4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/zypp/repos.d/`.

5. Install the TeamForge application database and reporting service.

   ```
   zypper install teamforge-app teamforge-database teamforge-etl
   ```

6. Rename the sample site configuration file from the installation package.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
cp conf/site-options-advanced.conf conf/site-options.conf
```

> **Note:** The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

7. Configure the site-options.conf file.

```
vi conf/site-options.conf
```

a) Identify your boxes and the services running on them.

```
HOST_localhost=app etl database
DOMAIN_localhost=<myappbox.domain.com>
HOST_<mydatamartbox.domain.com>=datamart
HOST_<mycodebox.domain.com>=subversion cvs
```

b) Configure the database and the datamart.

> **Tip:** For more information about configuring variables, see *site-options.conf* on page 359.

```
DATABASE_TYPE=postgresql
DATABASE_USERNAME=ctfuser
DATABASE_PASSWORD=ctfpwd
DATABASE_NAME=ctfdb
DATABASE_MAX_POOL_SIZE=220
REPORTS_DATABASE_USERNAME=ctfrptuser
REPORTS_DATABASE_PASSWORD=ctfrptpwd
REPORTS_DATABASE_NAME=ctfrptdb
REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
REPORTS_DATABASE_MAX_POOL_SIZE=30
ETL_SOAP_SHARED_SECRET=<arbitrary_string>
SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
```

> **Tip:** The database name and user name values are arbitrary alphanumeric strings.

c) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use that same key in the external SCM integration server also.

d) Don't forget to save the file.

8. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

9. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
initdb -D /var/lib/pgsql/data
```

```
vi /var/lib/pgsql/data/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of database box>'
```

b) Configure database access.

```
vi /var/lib/pgsql/data/pg_hba.conf
```

```
      local   all         all                               trust
      # IPv4 local connections:
      host    all         all         127.0.0.1/32          trust
      #host    all         all         ::1/128               trust
      host    <DATABASE_NAME>            <DATABASE_USERNAME>
    <IP address of my.app.box>/32   md5
```

```
exit
/etc/init.d/postgresql start
```

c) Log in as the `postgres` user and create the site database.

```
su - postgres
createuser -P -S --createdb --no-createrole <ctfdatabase_username>
createdb -E UTF8 -O <ctfdatabase_username> <ctfdatabasename>
exit
```

10. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

Do step 11 on the datamart server. We'll call this `my.datamart.box`.

11. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.

- See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the SuSE Linux Enterprise Server deployment guide* for help.

Important: Don't customize your installation. Select only the default packages list.

12. Install PostgreSQL 9.0.

See *the PostgreSQL docs* for support.

13. Set up the reporting database.

a) Point the database to the local machine.

```
su - postgres
initdb -D /var/lib/pgsql/reports
vi /var/lib/pgsql/reports/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of my.datamart.box>'
```

b) Configure database access.

```
vi /var/lib/pgsql/reports/pg_hba.conf
```

```
       local   all         all                               trust
       # IPv4 local connections:
       host    all         all         127.0.0.1/32          trust
       # IPv6 local connections:
       #host    all         all         ::1/128               trust
       host    <REPORTS_DATABASE_NAME>    <REPORTS_DATABASE_USERNAME>
```

```
     <IP address of my.app.box>/32   md5
       host    <REPORTS_DATABASE_NAME>
<REPORTS_DATABASE_READ_ONLY_USERNAME> <IP address of my.app.box>/32   md5
```

```
exit
```

c) Copy the datamart control script from `/opt/collabnet/teamforge/runtime/scripts` on `my.app.box` to the `/tmp` directory of `my.datamart.box`.

```
mv /etc/init.d/postgresql /etc/init.d/postgresql_orig
cp /tmp/postgresql_reports /etc/init.d
```

Note: The `postgresql_reports` script is the one to use only if the datamart is running on a different server from the database, as it is in this example. In all other cases, use the `postgresql` script.

d) Start the reporting database service.

```
/etc/init.d/postgresql_reports start
```

e) Log in as the `postgres` user and create the reporting database.

Use the values from your `site-options.conf` file.

```
su - postgres
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_username>
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_readonlyusername>
createdb -p <reports_database_port> -E UTF8 -O <reports database username>
<reports database name>
exit
/etc/init.d/postgresql_reports restart
```

Note: To specify a non-default port, add the -p option.

Do step 14 on `my.app.box`:

14. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

15. Swap in the new Apache configuration file.

```
cd /etc/apache2
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
cd /etc/sysconfig/
mv apache2 apache2_old
cp apache2.cn_new apache2
/etc/init.d/apache2 start
```

Do step 16 on the source control server. We'll call this `my.code.box`.

16. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.

- See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the SuSE Linux Enterprise Server deployment guide* for help.

> **Important:** Don't customize your installation. Select only the default packages list.

17. Check your basic networking setup.

See *Set up networking for your TeamForge box* on page 8 for details.

18. Set up the SuSE repository.

a) Register the machine with Novell.

```
suse_register -i -a email=<MailID> -a regcode-sles=<Registration code>
```

where `<MailID>` is the email address associated with your SuSE Linux Enterprise Server license and `<Registration code>` is the Suse Enterprise Linux license code.

b) Move the existing installer repository out of the way.

```
cd /etc/zypp/repos.d/
mv SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo
SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo_old
```

c) Make sure the correct Novell repository is enabled.

Open `nu_novell_com:SLES11-SP1-Pool.repo` in a text editor and confirm that `enabled=1`.

d) Refresh `zypper`.

```
Zypper ref
```

> **Note:** As an alternative, you can insert the SuSe Linux Enterprise Server DVD.
>
> - Ensure that the DVD is mounted in the location specified by the *baseurl* variable in `SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo`.
> - Use `zypper info postgresql` to check that the DVD is properly mounted.

19. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/zypp/repos.d/`.

20. Install the TeamForge application.

```
zypper install teamforge-scm
```

21. Rename the sample site configuration file from the installation package.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
cp conf/site-options-advanced.conf conf/site-options.conf
```

> **Note:** The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

22. Configure the site-options.conf file.

a) Identify the boxes and the services running on them.

```
NODE_NAME=localhost
HOST_localhost=subversion cvs
DOMAIN_localhost=<mycodebox.domain.com>
HOST<myappbox.domain.com>=app database
```

b) Configure the database connection.

```
DATABASE_TYPE=postgresql
DATABASE_USERNAME=ctfuser
```

```
DATABASE_PASSWORD=ctfpwd
DATABASE_NAME=ctfdb
```

c) Use the shared secret key, *SCM_DEFAULT_SHARED_SECRET*, from the `site-options.conf` file on the primary TeamForge server.

23. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

24. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

25. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

26. Swap in the new Apache configuration file.

```
cd /etc/apache2
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
cd /etc/sysconfig/
mv apache2 apache2_old
cp apache2.cn_new apache2
/etc/init.d/apache2 start
```

27. Start TeamForge.

```
/etc/init.d/collabnet start tomcat
```

Do step 27 on `my.app.box`:

28. Start TeamForge.

```
/etc/init.d/collabnet start
```

Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

```
jboss (app) (localhost:8080) ............................failed to start
 in 600 seconds, giving up now. Please check the log:
/opt/collabnet/teamforge/log/apps/service.log FAILED
```

This can safely be ignored.

Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

29. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

Go to *Verify your TeamForge 6.2 installation* for recommended steps to get started with your site.

Option 5: Distribute TeamForge 6.2 on three boxes for intensive database utilization

In Option 5, we install the reporting service on the main application box, both databases on another box, and source control on a third box. This may be appropriate when intensive database utilization is a factor.

In this example, we will specify a separate port for the reports database. By default, both the site database and the reporting database use port 5432, but when heavy traffic is expected, it can be a good idea to use port 5632 for the reporting database.

Note: If either of the remote machines (the data box or the source code box) is not under your direct control, check with the DBA or other person in charge of that resource to make sure you can carry out these instructions on that box.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.

   - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
   - See *the SuSE Linux Enterprise Server deployment guide* for help.

   Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

   See *Set up networking for your TeamForge box* on page 8 for details.

3. Set up the SuSE repository.

   a) Register the machine with Novell.

   ```
   suse_register -i -a email=<MailID> -a regcode-sles=<Registration code>
   ```

   where `<MailID>` is the email address associated with your SuSE Linux Enterprise Server license and `<Registration code>` is the Suse Enterprise Linux license code.

   b) Move the existing installer repository out of the way.

   ```
   cd /etc/zypp/repos.d/
   mv SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo
   SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo_old
   ```

   c) Make sure the correct Novell repository is enabled.

   Open `nu_novell_com:SLES11-SP1-Pool.repo` in a text editor and confirm that `enabled=1`.

   d) Refresh `zypper`.

   ```
   Zypper ref
   ```

Note: As an alternative, you can insert the SuSe Linux Enterprise Server DVD.

- Ensure that the DVD is mounted in the location specified by the *baseurl* variable in `SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo`.
- Use `zypper info postgresql` to check that the DVD is properly mounted.

4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/zypp/repos.d/`.

5. Install the TeamForge application and reporting service.

```
zypper install teamforge-app teamforge-etl
```

6. Rename the sample site configuration file from the installation package.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
cp conf/site-options-advanced.conf conf/site-options.conf
```

Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

7. Configure the `site-options.conf` file.

```
vi conf/site-options.conf
```

a) Identify the boxes and the services running on them.

```
HOST_localhost=app etl
DOMAIN_localhost=<myappbox.domain.com>
HOST_<mydbbox.domain.com>=database datamart
HOST_<myscmbox.domain.com>=subversion cvs
```

b) Configure the database and the datamart.

Tip: For more information about configuring variables, see *site-options.conf* on page 359.

```
DATABASE_TYPE=postgresql
DATABASE_USERNAME=ctfuser
DATABASE_PASSWORD=ctfpwd
DATABASE_NAME=ctfdb
DATABASE_MAX_POOL_SIZE=220
REPORTS_DATABASE_USERNAME=ctfrptuser
REPORTS_DATABASE_PASSWORD=ctfrptpwd
REPORTS_DATABASE_NAME=ctfrptdb
REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
ETL_SOAP_SHARED_SECRET=<arbitrary_string>
SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
REPORTS_DATABASE_PORT=5632
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

Tip: The database name and user name values are arbitrary alphanumeric strings.

c) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use that same key in the external SCM integration server also.

d) Don't forget to save the file.

8. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

   ```
   export http_proxy=
   ```

9. Run the installer.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   ./install.sh -r -I -V
   ```

Do step 10 on the database/datamart server. We'll call this `my.data.box`.

10. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.

    - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
    - See *the SuSE Linux Enterprise Server deployment guide* for help.

    Important: Don't customize your installation. Select only the default packages list.

11. Install PostgreSQL 9.0.

    See *the PostgreSQL docs* for support.

12. Set up the site database.

    a) Point the database to the local machine.

    ```
    su - postgres
    initdb -D /var/lib/pgsql/data
    vi /var/lib/pgsql/data/postgresql.conf
    ```

    ```
    listen_addresses = '127.0.0.1,<IP address of database box>'
    ```

    b) Configure database access.

    ```
    vi /var/lib/pgsql/data/pg_hba.conf
    ```

    ```

    local   all                 all
       trust
    # IPv4 local connections:
    host    all                 all                        127.0.0.1/32
       trust
    # IPv6 local connections:
    #host   all                 all                        ::1/128
       trust
    host    <DATABASE_NAME>  <DATABASE_USERNAME>     <IP address of
    my.app.box>/32   md5
    ```

13. Set up the reporting database (datamart).

    a) Point the database to the local machine.

    ```
    initdb -D /var/lib/pgsql/reports
    vi /var/lib/pgsql/reports/postgresql.conf
    ```

    ```
    listen_addresses = '127.0.0.1,<IP address of my datamart box>'
           port=5632
    ```

    b) Configure access for the datamart.

    ```
    vi /var/lib/pgsql/reports/pg_hba.conf
    ```

    ```

    local   all                           all
    ```

```
                                                trust
# IPv4 local connections:
host    all                           all
   127.0.0.1/32                                 trust
# IPv6 local connections:
#host   all                           all
   ::1/128                                      trust
host    <REPORTS_DATABASE_NAME>    <REPORTS_DATABASE_USERNAME>         <IP
 address of my.app.box/32   md5
host    <REPORTS_DATABASE_NAME>    <REPORTS_DATABASE_READ_ONLY_USERNAME>
<IP address of my.app.box>/32   md5
```

```
exit
```

c) Copy the postgresql script from `/opt/collabnet/teamforge/runtime/scripts` on `my.app.box` to the `/tmp` directory of `my.data.box`.

```
mv /etc/init.d/postgresql /etc/init.d/postgresql_orig
cp /tmp/postgresql /etc/init.d
```

d) Start the reporting database service.

```
/etc/init.d/postgresql start
```

14. Create the databases.

```
su - postgres
```

a) Site database:

```
createuser -P -S --createdb --no-createrole <ctfdatabase_username>
createdb -E UTF8 -O <ctfdatabase_username> <ctfdatabasename>
```

b) Reporting database:

```
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_username>
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_readonlyusername>
createdb -p <reports_database_port> -E UTF8 -O <reports database username>
<reports_database_name>
```

Note:

- For the passwords, use the same passwords you recorded in the `site-options.conf` file.
- To specify a non-default port, use the -p option.

c) Restart PostgreSQL.

```
exit
/etc/init.d/postgresql restart
```

Do step 15 on `my.app.box`

15. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

16. Swap in the new Apache configuration file.

    ```
    cd /etc/apache2
    mv httpd.conf httpd.conf_old
    cp httpd.conf.cn_new httpd.conf
    cd /etc/sysconfig/
    mv apache2 apache2_old
    cp apache2.cn_new apache2
    /etc/init.d/apache2 start
    ```

Do step 17 on the source control server. We'll call this `my.code.box`.

17. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.

    - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
    - See *the SuSE Linux Enterprise Server deployment guide* for help.

    Important: Don't customize your installation. Select only the default packages list.

18. Check your basic networking setup.

    See *Set up networking for your TeamForge box* on page 8 for details.

19. Set up the SuSE repository.

    a) Register the machine with Novell.

    ```
    suse_register -i -a email=<MailID> -a regcode-sles=<Registration code>
    ```

    where `<MailID>` is the email address associated with your SuSE Linux Enterprise Server license and `<Registration code>` is the Suse Enterprise Linux license code.

    b) Move the existing installer repository out of the way.

    ```
    cd /etc/zypp/repos.d/
    mv SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo
    SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo_old
    ```

    c) Make sure the correct Novell repository is enabled.

    Open `nu_novell_com:SLES11-SP1-Pool.repo` in a text editor and confirm that `enabled=1`.

    d) Refresh `zypper`.

    ```
    Zypper ref
    ```

    Note: As an alternative, you can insert the SuSe Linux Enterprise Server DVD.

    - Ensure that the DVD is mounted in the location specified by the *baseurl* variable in `SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo`.
    - Use `zypper info postgresql` to check that the DVD is properly mounted.

20. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/zypp/repos.d/`.

21. Install the TeamForge source control service.

    ```
    zypper install teamforge-scm
    ```

22. Rename the sample site configuration file from the installation package.

    ```
    cd /opt/collabnet/teamforge-installer/6.2.0.1
    cp conf/site-options-advanced.conf conf/site-options.conf
    ```

Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

23. Configure the `site-options.conf` file.

a) Identify the boxes and the services running on them.

```
HOST_localhost=subversion cvs
DOMAIN_localhost=<myscmbox.domain.com>
HOST_<myappbox.domain.com>=app
HOST_<mydbbox.domain.com>=database
```

b) Configure the database connection.

```
DATABASE_TYPE=postgresql
DATABASE_USERNAME=ctfuser
DATABASE_PASSWORD=ctfpwd
DATABASE_NAME=ctfdb
```

c) Use the shared secret key, *SCM_DEFAULT_SHARED_SECRET*, from the `site-options.conf` file on the primary TeamForge server.

d) Don't forget to save the file.

24. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

25. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

26. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

27. Swap in the new Apache configuration file.

```
cd /etc/apache2
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
cd /etc/sysconfig/
mv apache2 apache2_old
cp apache2.cn_new apache2
/etc/init.d/apache2 start
```

28. Start TeamForge.

```
/etc/init.d/collabnet start tomcat
```

Do step 29 on `my.app.box`

29. Start TeamForge.

```
/etc/init.d/collabnet start
```

Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

```
jboss (app) (localhost:8080) ...........................failed to start
 in 600 seconds, giving up now. Please check the log:
/opt/collabnet/teamforge/log/apps/service.log FAILED
```

This can safely be ignored.

Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

30. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ```

    b) List all the `etl` jobs.

    ```
    ./etl-client.py -a
    ```

    c) Run `TrackerInitialJob`.

    ```
    ./etl-client.py -r TrackerInitialJob
    ```

Go to *Verify your TeamForge 6.2 installation* for recommended steps to get started with your site.

Option 6: Distribute TeamForge 6.2 services using Oracle

Option 6 is like Option 5, but it uses an Oracle database instead of a PostgreSQL database.

For simplicity, in this example we will have the site database and the reporting database share port 1521.

Note: If either of the remote machines (the data box or the source code box) is not under your direct control, check with the DBA or other person in charge of that resource to make sure you can carry out these instructions on that box.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.

    - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
    - See *the SuSE Linux Enterprise Server deployment guide* for help.

    Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

    See *Set up networking for your TeamForge box* on page 8 for details.

3. Set up the SuSE repository.

    a) Register the machine with Novell.

    ```
    suse_register -i -a email=<MailID> -a regcode-sles=<Registration code>
    ```

    where `<MailID>` is the email address associated with your SuSE Linux Enterprise Server license and `<Registration code>` is the Suse Enterprise Linux license code.

b) Move the existing installer repository out of the way.

```
cd /etc/zypp/repos.d/
mv SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo
SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo_old
```

c) Make sure the correct Novell repository is enabled.

Open `nu_novell_com:SLES11-SP1-Pool.repo` in a text editor and confirm that `enabled=1`.

d) Refresh `zypper`.

```
Zypper ref
```

Note: As an alternative, you can insert the SuSe Linux Enterprise Server DVD.

- Ensure that the DVD is mounted in the location specified by the *baseurl* variable in `SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo`.
- Use `zypper info postgresql` to check that the DVD is properly mounted.

4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/zypp/repos.d/`.

5. Install the TeamForge application and reporting service.

```
zypper install teamforge-app teamforge-etl
```

6. Rename the sample site configuration file from the installation package.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
cp conf/site-options-advanced.conf conf/site-options.conf
```

Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

7. Configure the site-options.conf file.

```
vi conf/site-options.conf
```

a) Identify the boxes and the services running on them.

```
HOST_localhost=app etl
DOMAIN_localhost=<myappbox.domain.com>
HOST_<mydbbox.domain.com>=database datamart
HOST_<myscmbox.domain.com>=subversion cvs
```

b) Configure the database and the datamart.

Tip: For more information about configuring variables, see *site-options.conf* on page 359.

```
DATABASE_TYPE=oracle
DATABASE_USERNAME=sitedatabaseusername
DATABASE_PASSWORD=sitedatabasepwd
DATABASE_NAME=sitedatabaseinstancename
DATABASE_MAX_POOL_SIZE=220
REPORTS_DATABASE_USERNAME=reportingdatabaseusername
REPORTS_DATABASE_PASSWORD=reportingdatabasepwd
REPORTS_DATABASE_NAME=reportingdatabaseinstancename
REPORTS_DATABASE_READ_ONLY_USER=reportingreadonlyusername
```

```
REPORTS_DATABASE_READ_ONLY_PASSWORD=reportingreadonlyuserpwd
REPORTS_DATABASE_MAX_POOL_SIZE=30
ETL_SOAP_SHARED_SECRET=<arbitrary_string>
SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
DATABASE_SERVICE_NAME=
REPORTS_DATABASE_SERVICE_NAME=
```

Tip:

- The database name and user name values are arbitrary alphanumeric strings.
- To find the value for the *DATABASE_SERVICE_NAME* variable, log into your Oracle server and execute this command:

  ```
  su - oracle
  tnsping <database_name>
  ```

  In the output, find the value of *SERVICE_NAME*. Use that as the value of *DATABASE_SERVICE_NAME* in `site-options.conf`.

c) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use that same key in the external SCM integration server also.

d) Don't forget to save the file.

8. **Note:** Perform this step in case your Oracle server version is not 11.2.0.1.

Download the corresponding version of Oracle client from *http://www.oracle.com/technetwork/database/features/instant-client/index-097480.html* and run the following command:

```
zypper install <path to oracle client rpm>
```

9. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

10. Copy the Oracle datamart setup script from `/opt/collabnet/teamforge/runtime/scripts` to the `/tmp` directory of `my.data.box`.

```
scp /opt/collabnet/teamforge/runtime/scripts/datamart-oracle-setup.sh
<username>@<my.data.box>:/tmp
```

Do step 11 on the database/datamart server. We'll call this `my.data.box`.

11. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.

- See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the SuSE Linux Enterprise Server deployment guide* for help.

Important: Don't customize your installation. Select only the default packages list.

12. Install Oracle 11 (R1 and R2).

See *the Oracle wiki* for details.

Note: Make sure your database uses UTF8 or AL32UTF8 encoding. This is needed to support users in Asian languages. See *this Oracle knowledge base article.*

13. Put the Oracle datamart setup script where TeamForge can find it.

    ```
    mkdir /u1
    cp /tmp/datamart-oracle-setup.sh /u1
    ```

14. Log in as the Oracle user and create the site database user and permissions.

    See *Set up an Oracle database* on page 253 for help.

15. Create the reporting user and schema.

    ```
    cd /u1
    sh datamart-oracle-setup.sh
    ```

    👉 **Note:** Your responses to the script's prompts must match the values of the equivalent variables in the `site-options.conf` file on `my.app.box`.

Do step 16 on `my.app.box`

16. Set up the initial site data.

    ```
    cd /opt/collabnet/teamforge-installer/6.2.0.1
    ./bootstrap-data.sh
    ```

17. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

    ```
    export http_proxy=
    ```

18. Swap in the new Apache configuration file.

    ```
    cd /etc/apache2
    mv httpd.conf httpd.conf_old
    cp httpd.conf.cn_new httpd.conf
    cd /etc/sysconfig/
    mv apache2 apache2_old
    cp apache2.cn_new apache2
    /etc/init.d/apache2 start
    ```

Do step 19 on the source control server. We'll call this `my.code.box`.

19. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.

    - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
    - See *the SuSE Linux Enterprise Server deployment guide* for help.

    👉 **Important:** Don't customize your installation. Select only the default packages list.

20. Check your basic networking setup.

    See *Set up networking for your TeamForge box* on page 8 for details.

21. Set up the SuSE repository.

    a) Register the machine with Novell.

    ```
    suse_register -i -a email=<MailID> -a regcode-sles=<Registration code>
    ```

    where `<MailID>` is the email address associated with your SuSE Linux Enterprise Server license and `<Registration code>` is the Suse Enterprise Linux license code.

    b) Move the existing installer repository out of the way.

    ```
    cd /etc/zypp/repos.d/
    ```

```
mv SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo
SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo_old
```

c) Make sure the correct Novell repository is enabled.

Open `nu_novell_com:SLES11-SP1-Pool.repo` in a text editor and confirm that `enabled=1`.

d) Refresh `zypper`.

```
Zypper ref
```

> **Note:** As an alternative, you can insert the SuSe Linux Enterprise Server DVD.
>
> - Ensure that the DVD is mounted in the location specified by the *baseurl* variable in `SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo`.
> - Use `zypper info postgresql` to check that the DVD is properly mounted.

22. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/zypp/repos.d/`.
23. Install the TeamForge source control service.

```
zypper install teamforge-scm
```

24. Rename the sample site configuration file from the installation package.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
cp conf/site-options-advanced.conf conf/site-options.conf
```

> **Note:** The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

25. Configure the site-options.conf file.

a) Identify the boxes and the services running on them.

```
HOST_localhost=subversion cvs
DOMAIN_localhost=<myscmbox.domain.com>
HOST_<myappbox.domain.com>=app
HOST_<mydbbox.domain.com>=database
```

b) Configure the database connection.

```
DATABASE_TYPE=oracle
DATABASE_USERNAME=ctfuser
DATABASE_PASSWORD=ctfpwd
DATABASE_NAME=ctfdb
```

c) Use the shared secret key, *SCM_DEFAULT_SHARED_SECRET*, from the `site-options.conf` file on the primary TeamForge server.

d) Don't forget to save the file.

26. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

27. Set up the initial site data.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./bootstrap-data.sh
```

28. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

```
export http_proxy=
```

29. Swap in the new Apache configuration file.

```
cd /etc/apache2
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
cd /etc/sysconfig/
mv apache2 apache2_old
cp apache2.cn_new apache2
/etc/init.d/apache2 start
```

30. Start TeamForge.

```
/etc/init.d/collabnet start tomcat
```

Do step 31 on `my.app.box`

31. Start TeamForge.

```
/etc/init.d/collabnet start
```

> **Note:** Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:
>
> ```
> jboss (app) (localhost:8080) ............................failed to start
>  in 600 seconds, giving up now. Please check the log:
> /opt/collabnet/teamforge/log/apps/service.log FAILED
> ```
>
> This can safely be ignored.

> **Note:** The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

32. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

Go to *Verify your TeamForge 6.2 installation* for recommended steps to get started with your site.

Option 7: Install TeamForge 6.2 with Black Duck Code Sight on a separate box

In Option 7, we install the site database, the datamart the reporting service and the source control service on the main application box and Black Duck Code Sight on a separate box.

> **Note:** In this example, we will use the same port for the site database and the reports database. This is the default setting. When heavy traffic is expected, it can be a good idea to use port 5632 for the reporting database. See *Option 1* for an example.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.
   - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
   - See *the SuSE Linux Enterprise Server deployment guide* for help.

   Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

   See *Set up networking for your TeamForge box* on page 8 for details.

3. Set up the SuSE repository.

   a) Register the machine with Novell.

   ```
   suse_register -i -a email=<MailID> -a regcode-sles=<Registration code>
   ```

   where `<MailID>` is the email address associated with your SuSE Linux Enterprise Server license and `<Registration code>` is the Suse Enterprise Linux license code.

   b) Move the existing installer repository out of the way.

   ```
   cd /etc/zypp/repos.d/
   mv SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo
   SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo_old
   ```

   c) Make sure the correct Novell repository is enabled.

   Open `nu_novell_com:SLES11-SP1-Pool.repo` in a text editor and confirm that `enabled=1`.

   d) Refresh `zypper`.

   ```
   Zypper ref
   ```

   Note: As an alternative, you can insert the SuSe Linux Enterprise Server DVD.

   - Ensure that the DVD is mounted in the location specified by the *baseurl* variable in `SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo`.
   - Use `zypper info postgresql` to check that the DVD is properly mounted.

4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

5. Install the TeamForge application.

   ```
   zypper install teamforge
   ```

6. Rename the sample site configuration file from the installation package.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   cp conf/site-options-advanced.conf conf/site-options.conf
   ```

   Note: The files `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` contain options to tune the performance of the TeamForge site. To tune your site's performance, you can look through these files for the load specifications they are intended for, and use the appropriate one for your site's requirements.

7. Configure the site-options.conf file.

```
vi conf/site-options.conf
```

a) Identify the box and the services running on it.

```

HOST_localhost=app etl database datamart subversion cvs
DOMAIN_localhost=<myappbox.domain.com>
```

b) If you're installing Black Duck Code Sight, configure the following settings:

```
HOST_mycodesearchbox.domain.com=codesearch
```

Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

```
BDCS_HOST=<my.host.name or my.domain.name>

To enable SSL for Black Duck Code Sight, include this token:
BDCS_SSL=on
```

```
To change the default Black Duck Code Sight admin password, add these tokens:
BDCS_ADMIN_USERNAME=<username>
BDCS_ADMIN_PASSWORD=<password>

To configure the port number for the Code Search Tomcat server, set this
token:
BDCS_TOMCAT_PORT=9180

To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

c) Configure the database and the datamart.

```
DATABASE_TYPE=postgresql
DATABASE_USERNAME=ctfuser
DATABASE_PASSWORD=ctfpwd
DATABASE_NAME=ctfdb
DATABASE_NAME=ctfdb
DATABASE_MAX_POOL_SIZE=220
REPORTS_DATABASE_USERNAME=ctfrptuser
REPORTS_DATABASE_PASSWORD=ctfrptpwd
REPORTS_DATABASE_NAME=ctfrptdb
REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
REPORTS_DATABASE_MAX_POOL_SIZE=30
ETL_SOAP_SHARED_SECRET=<arbitrary_string>
SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
```

Tip: All the database names, user names and passwords values are arbitrary alphanumeric strings>

d) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use the same key in the external SCM integration server also.

e) Don't forget to save the file.

8. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

Do step 9 on the Black Duck Code Sight server. We'll call this `my.code.box`.

9. Set up the Black Duck Code Sight server using *these instructions*.

Do step 10 on the `my.app.box`:

10. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
initdb -D /var/lib/pgsql/data
vi /var/lib/pgsql/data/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of database box>'
```

b) Configure database access.

```
vi /var/lib/pgsql/data/pg_hba.conf
```

```

      # "local" is for Unix domain socket connections only
      local   all                           all
                               trust
      # IPv4 local connections:
      host    all                           all
          127.0.0.1/32         trust
      # IPv6 local connections:
      host    <DATABASE_NAME>            <DATABASE_USERNAME>
    <IP address of my.app.box>/32   md5
      host    <REPORTS_DATABASE_NAME>    <REPORTS_DATABASE_USERNAME>
    <IP address of my.app.box>/32   md5
      host    <REPORTS_DATABASE_NAME>
<REPORTS_DATABASE_READ_ONLY_USERNAME> <IP address of my.app.box>/32   md5
```

```
exit
/etc/init.d/postgresql start
```

11. Create the databases.

```
su - postgres
```

a) Site database:

```
createuser -P -S --createdb --no-createrole <ctfdatabase_username>
createdb -E UTF8 -O <ctfdatabase_username> <ctfdatabasename>
```

b) Reporting database:

```
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_username>
createuser -p <reports_database_port> -P -S --createdb --no-createrole
<reports_database_readonlyusername>
createdb -p <reports_database_port> -E UTF8 -O <reports database username>
<reports_database_name>
```

Note:

- For the passwords, use the same passwords you recorded in the `site-options.conf` file.
- To specify a non-default port, use the -p option.

c) Restart PostgreSQL.

```
exit
```

```
/etc/init.d/postgresql restart
```

12. Set up the initial site data.

    ```
    cd /opt/collabnet/teamforge-installer/6.2.0.1
    ./bootstrap-data.sh
    ```

13. If you are installing on a machine that is behind a proxy, unset the *http_proxy* variable.

    ```
    export http_proxy=
    ```

14. Swap in the new Apache configuration file.

    ```
    cd /etc/apache2
    mv httpd.conf httpd.conf_old
    cp httpd.conf.cn_new httpd.conf
    cd /etc/sysconfig/
    mv apache2 apache2_old
    cp apache2.cn_new apache2
    /etc/init.d/apache2 start
    ```

15. Start TeamForge.

    ```
    /etc/init.d/collabnet start
    ```

    Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this:

    ```
    jboss (app) (localhost:8080) ............................failed to start
     in 600 seconds, giving up now. Please check the log:
    /opt/collabnet/teamforge/log/apps/service.log FAILED
    ```

    This can safely be ignored.

    Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

16. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ```

    b) List all the `etl` jobs.

    ```
    ./etl-client.py -a
    ```

    c) Run `TrackerInitialJob`.

    ```
    ./etl-client.py -r TrackerInitialJob
    ```

17. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

    Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

☞ **Note:** If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

```
sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
```

18. ☞ **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

    After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

    ```
    ./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
    ```

    Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

    Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

19. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

    a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`

    b) `./trust-cert.sh`

    c) Restart the `collabnet` services.

    ```
    /etc/init.d/collabnet restart
    ```

Verify your TeamForge 6.2 installation

Congratulations: You have just installed your TeamForge 6.2 site. Now you can apply some finishing touches and make sure everything is running smoothly.

1. Turn on SSL for your site by editing the relevant variables in the `site-options.conf` file.

   See *Set up SSL for your TeamForge site* for details.

   ☞ **Note:** If SSL is enabled for any box belonging to your site, it must be enabled for all of them.

2. Log into your site as the administrator.

   The value of the *DOMAIN* variable in the `site-options.conf` file is the URL to log into.

3. Install your license key.

   See *Supply your TeamForge license key from Teamforge user interface* on page 248.

4. To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

   ```
   select * from etl_job where job_name ='tracker_initial_etl'
   ```

   The status column should have a value of 1.

5. Install a project template.

   TeamForge comes with a sample project template that showcases some of the platform's most interesting features. Site administrators and project managers can use this template to jump-start projects without a lot of manual setup steps. See *Install project templates manually* on page 258.

   ☞ **Note:** This procedure is recommended, but not required.

6. Create a sample project.

   See *Create a TeamForge project*.

7. Write a welcome message to your site's users.

   See *Create a site-wide broadcast*.

Now that you have successfully installed your TeamForge site in its basic configuration, you can use the instructions under *Maintain your TeamForge 6.2 site* on page 248 to help keep your site going.

Uninstall TeamForge 6.2

To remove TeamForge completely, use the zypper utility.

Important: This procedure removes the TeamForge and all associated databases, including your site data. Be sure to back up any data you want to keep.

1. Stop TeamForge.

   ```
   /etc/init.d/collabnet stop all
   ```

2. Run zypper to remove TeamForge.

   ```
   zypper remove TeamForge-installer
   ```

For every box in a multi-box site, use the same steps to uninstall.

Install TeamForge on VMware or ESXi

To get the functionality of CollabNet TeamForge with the ease of installation and maintenance that comes with VMware, run CollabNet TeamForge in a VMware player.

Note: For the hardware and software required to run TeamForge 6.2, see *Hardware and software requirements for CollabNet TeamForge on a virtual machine*.

Get TeamForge 6.2 for VMware or ESXi

Download the CollabNet TeamForge installer from CollabNet and unzip it on the machine that will host your TeamForge site.

Get TeamForge 6.2 for VMware

The VMware installation is ideal for small number of TeamForge user installations due to its detailed installation process. You have to download the CollabNet TeamForge installer from CollabNet and unzip it on the machine that will host your TeamForge site.

Note: The machine on which you are running the VMware player must have at least 4 GB RAM and a 2 GHz processor.

1. Download the installer from *http://www.collab.net/products/teamforge/buy-it*.
2. Unzip the `TeamForge-6.2.0.0-VMware.zip` file.
3. Install the VMware player.
   - On Windows, double-click the `VMware-player.exe` file.
4. Start the VMware player.
   - On Windows, click **Start** > **Programs** > **VMware** > **VMware Player** .

   Note: You don't have to update the VMware player, but you can.
5. In the **Commands** section, click **Open**.
6. In the file window, browse to `\TeamForge\Image\TeamForge.vmx`.

   Note: Starting the VMware image may take a few minutes, depending on the speed of your system.

Get TeamForge for ESXi

The ESXi 5.0 image server is ideal for large TeamForge user installations due to its simplified installation process. You can download the CollabNet TeamForge installer from CollabNet and unzip it on the machine to host your TeamForge site.

- Install the ESXi 5.0 server in a machine where TeamForge 6.2 site is hosted.
- Install the VSphereClient 5.0 in a Windows (client) machine to connect the ESXi server.

Follow the steps to install TeamForge on an EXSi server:

1. To download the installer, contact the CollabNet support team.
2. Extract `TeamForge-6.2.0.0-VMware-ESXi.zip`.
3. Run the VSphere client from the Windows box to connect the ESXi server.
4. Click **Configuration** > **Storage** to upload the extracted folder on the ESXi DataStore. Select the DataStorage Location and click **Upload**.
5. Create a virtual machine with 4GB RAM.
6. Select the existing VMDK file.

   Note: You should not create a new VMDK file.

7. Start the ESXi image.

Configure CollabNet TeamForge

After you have installed VMware Player, configure the CollabNet TeamForge VMware image.

Only one user needs to configure CollabNet TeamForge. This instance acts as the application server. To access CollabNet TeamForge , the CollabNet TeamForge application server must be running in VMware Player. Then other users can access it via a Web browser without running VMware Player.

1. In the VMware player, log in with the username `root` and the password `changeme`.
2. Enter and confirm a new Linux password.

   Tip: The system may warn that your password does not meet security standards. For example, it may be too short. This does not mean the password is rejected. If you confirm the same password, it will work.

3. When prompted to run the configuration tool, type `y`.
4. Read the product license agreement.

   Type `q` to close it.

   Tip: You can use the space bar to advance a screen at a time.

5. If you accept the license terms, type `y`.
6. In the CollabNet TeamForge configuration tool, choose **Dynamic Networking (DHCP)** or **Static Networking (Static IP)**

   - Dynamic networking is useful for a one-person trial installation. It is quick and easy, but email integration with TeamForge will not work correctly.

     Note: If your IP address changes, you may also have to reconfigure source control.

   - Static networking is best if you are evaluating CollabNet TeamForge with a team, or if you already have a license and intend to use TeamForge to support your team.

     To configure static networking, you will need to get a static IP address and hostname from your network administrator, and specify your network settings when prompted.

     Tip: In this case, it's also a good idea to run TeamForge in VMware Player on a dedicated machine.

The networking for TeamForge is restarted.

7. Specify your outgoing email (SMTP) server.

   - For a one-person evaluation, accept the default value.
   - If you have a CollabNet TeamForge license and intend to send email outside of your firewall, use the SMTP server settings provided by your network administrator.

     Note: Depending on your corporate email configuration, your system administrator may need to permit TeamForge to send mail to the corporate mail server.

8. Choose whether to run CollabNet TeamForge at startup.

   - Choose “Yes” to start CollabNet TeamForge automatically whenever you start the TeamForge VMware image.
   - Choose “No” to require a manual CollabNet TeamForge startup whenever you start the TeamForge VMware image.

9. At the prompt, click **Enter** to start your CollabNet TeamForge site.

   Note: Startup can take several minutes, depending on the speed of the host system. On some slower systems, you may get a false failure message from JBoss, like this: `jboss (app) (localhost:8080) ............................failed to start in 600 seconds, giving up now. Please check the log: /opt/collabnet/teamforge/log/apps/service.log FAILED`

   This can safely be ignored.

   Tip: From now on, you can stop and restart TeamForge using these commands:

   ```
   /etc/init.d/httpd stop
   /etc/init.d/collabnet stop
   /etc/init.d/postgresql-9.0 stop
   ```

   ```
   /etc/init.d/httpd start
   /etc/init.d/postgresql-9.0 start
   /etc/init.d/collabnet start
   ```

10. Log into your new site with the user name `admin` and the password `admin`.

    The URL for your site is the IP address or domain name provided in the Linux console at the end of the installation process.

    Note: You will have to change your administrator password when you first log in.

Any user with access to the network where the host system is running can now get to your site via a Web browser.

Note: To track the ETL job failures, configure the token SOAP_ANONYMOUS_SHARED_SECRET in site-options.conf and re-create runtime. This token sends notifications when the ETL job fails.

For more details, please click the following link: *SOAP_ANONYMOUS_SHARED_SECRET*

Supply your TeamForge license key

Your license key enables you to use CollabNet TeamForge for the period of your contract.

Your license key will only work for the IP address of the machine that your CollabNet TeamForge is running on, as specified in your order form.

Tip: These steps are for installing your license key via the web interface. If you prefer, you can install it as a text file instead. See *Supply your CollabNet TeamForge license key as a text file* on page 249.

1. Locate the confirmation email you received from your CollabNet representative when you purchased your contract.
2. Log into your site as the site administrator.

   Note: The site administrator is different from the root user on the machine where the site is running.

3. Click **Admin** > **License Key** .
   If you have entered a license before, the IP address and current licensed number of users on your site are listed on the **License Key** page. Verify that the IP address is the same as the one you entered in your order form.
4. Click **Enter License Key**.
5. Copy your new license key from the confirmation email and paste it into the **Enter License Key** field.
   A license key string looks like this:
   [illegible]

   Tip: save this license key in case you need to reinstall CollabNet TeamForge.

6. Click **Save**.
7. Verify that the new value for **Licensed Number of Users** matches the total number of licensed users in your contract.

Uninstall TeamForge 6.2

To remove TeamForge completely, use the YUM utility.

Important: This procedure removes the TeamForge and all associated databases, including your site data. Be sure to back up any data you want to keep.

1. Stop TeamForge.

```
/etc/init.d/collabnet stop all
```

2. Run yum to remove TeamForge.

```
yum erase TeamForge-installer
```

For every box in a multi-box site, use the same steps to uninstall.

Upgrade to TeamForge 6.2 Patch

Please use this guide to directly upgrade to TeamForge 6.2 from any version prior to TeamForge 6.2 .

When you upgrade to TeamForge 6.2, you can have Black Duck Code Sight on the same box as the main TeamForge application, or on a separate box. When you upgrade to TeamForge 6.2, all the recent patches will also be upgraded automatically. Below are some of the upgrade options available. Please choose the instructions that fits your scenario.

Note: Due to the Lucene upgrade for search functionality, upgrading to TeamForge 6.2 requires a complete re-index of the site. This could take several hours, and the index data could double in size.

Plan your upgrade to TeamForge 6.2

As the first step in upgrading to TeamForge 6.2, consider some key questions that will affect how your new site works.

1. Where is everything?

   TeamForge consists of five interrelated services that can run on separate hardware or share one or more boxes in various configurations. If you aren't the person who first installed your current TeamForge site (or maybe even if you are), it's essential to catalog the hosts where your services are running and to know what configuration has been applied to them.

2. Provide site-wide reporting?

   TeamForge 6.1.x enables site administrators to track user logins for their site. More reporting options are coming.

   If your users want this feature, you'll have to turn on a service known as extract-transform-load (ETL), during the upgrade process. You'll also have to configure a new database called the datamart. (These elements are off by default.)

   After your site is upgraded, you can also choose to move these new services off to one or more separate servers, the same as you can do with the existing TeamForge services.

3. "Dedicated" or "advanced?"

   The type of TeamForge installation you have makes a difference for how you upgrade and patch the site. If your site is a dedicated site, you'll be able to skip some of the steps outlined here. If you don't know whether your site was originally installed as dedicated or advanced, here's how you can find out: *Is my TeamForge site "dedicated" or "advanced?"*

4. Branding changes?

   Every release of TeamForge can bring changes to the look and feel of the product. TeamForge 6.2 is no exception. If you have edited files in your site's branding repository (that's how you customize the look and feel of the product), you must download the new branding package and check into your branding repository the new versions of any files you have edited. See *Customize anything on your site* for instructions.

5. Special database settings?

   The efficiency of your database can have an impact on your users' perception of the site's usability. If your site uses a PostgreSQL database (which is the default), you may want to consider tuning it to fit your specific circumstances. The default settings are intended for a small-to-medium site running on a single server. See *What are the right PostgreSQL settings for my site?* on page 316 for recommendations from CollabNet's performance team on optimizing PostgreSQL for different conditions.

6. Upgraded JDK

   TeamForge 6.2 uses JDK 1.6.0_26. If you are upgrading on the same box, and that box has a JDK at an earlier version, the upgrade utility upgrades the JDK. However, you'll still need to edit the *JAVA_HOME* variable in your `site-options.conf` file to reflect the new JDK version. See *Upgrade a TeamForge site to 6.2 on the same hardware*.

Upgrade to TeamForge 6.2 on Red Hat

You can upgrade to TeamForge 6.2 from a pre-6.2 version of TeamForge. You can upgrade on the same box where your current TeamForge site is running, or you can take this opportunity to move your site to a new box. When you upgrade to TeamForge 6.2, all the recent patches will also be upgraded automatically. Please choose the instructions that fits your scenario.

Note: The YUM installer will install the TeamForge site in the default directory "/opt/collabnet/teamforge" only. If the SITE_DIR token in the `site-options.conf` file has a value other than the default directory, then set the token "SITE_DIR=/opt/collabnet/teamforge" in `site-options.conf` file.

Note: Due to the Lucene upgrade for search functionality, upgrading to TeamForge 6.2 requires a complete re-index of the site. This could take several hours, and the index data could double in size.

Upgrade to TeamForge 6.2 on the same box - Black Duck Code Sight on a separate box

To upgrade to TeamForge 6.2, you install the new site and convert your existing site's data.

For this procedure, we'll assume that you are upgrading on the same box where your existing TeamForge site is running. It's also possible to simultaneously upgrade and move your site to new hardware, but since we are working with a dedicated installation, the priority here is to keep things as simple and quick as possible. See *Should I upgrade to TeamForge 6.2 on a new box?* on page 315 for some background information.

Tip: If there is any doubt about what kind of site you are working with, see *Is my TeamForge site "dedicated" or "advanced?"*

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

1. Back up your site data.
   a) Make a dump file of your site database.

   (This may be the same as your TeamForge application server or a separate box.)

   You have to do a PostgreSQL dump because we are upgrading the PostgreSQL application as part of this upgrade.

   Note: These commands are for a PostgreSQL database, which is the default. If your site uses an Oracle database, follow the *Oracle backup procedure* instead.

   ```
   su - postgres
   /usr/bin/pg_dumpall > /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp
   exit
   mkdir /tmp/backup_dir
   cp /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp /tmp/backup_dir/
   ```

   Note: If your reporting database is running on a separate port, back up your reporting database too:

   ```
   /usr/bin/pg_dumpall -p <reports_database_port> >
   /var/lib/pgsql/9.0/backups/teamforge_reporting_data_backup.dmp
   ```

   b) Make an archive file with the following data directories:

Directory	Contents
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments
/svnroot	Subversion source code repositories
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

   ```
   cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
   /tmp/backup_dir
   cd /tmp
   tar czvf 611backup.tgz backup_dir
   ```

   c) Back up your SSH keys, if any.
   d) Back up your SSL certificates and keys, if any.
2. Stop TeamForge.

   ```
   /etc/init.d/collabnet stop all
   ```

3. Move the repositories from any previous installs out of the way.

   ```
   mv /etc/yum.repos.d/collabnet-6.1.1.0.repo
   /etc/yum.repos.d/collabnet-6.1.1.0.repo.cn_backup
   ```

4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

5. Install the TeamForge application.

   ```
   yum install teamforge
   ```

   Tip: If the yum installer fails, you may have duplicate rpm packages installed.

   1. Get the `yum-utils` package, if it isn't already installed.

      ```
      yum install yum-utils
      ```

   2. Check for duplicate packages.

      ```
      package-cleanup --dupes
      ```

   3. Clean up the older packages, if any.

      ```
      package-cleanup --cleandupes
      ```

   4. Rerun the yum installer.

      ```
      yum install teamforge [options]
      ```

6. Set up your site's master configuration file.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
   ```

   Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

   a) If you're installing Black Duck Code Sight, configure the following settings:

   ```
   HOST_mycodesearchbox.domain.com=codesearch
   ```

   Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

   ```
   BDCS_HOST=<my.host.name or my.domain.name>

   To enable SSL for Black Duck Code Sight, include this token:
   BDCS_SSL=on
   ```

   ```
   To change the default Black Duck Code Sight admin password, add these tokens:
   BDCS_ADMIN_USERNAME=<username>
   BDCS_ADMIN_PASSWORD=<password>

   To configure the port number for the Code Search Tomcat server, set this
   token:
   BDCS_TOMCAT_PORT=9180

   To specify the maximum results shown in Code Search, set this token:
   Caution: Increasing this might impact performance.
   BDCS_SDK_SEARCH_LIMIT_MAX=200
   ```

   b) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

   Remember that you need to use the same key in the external SCM integration server also.

   c) Increase the value of MAX_WWW_CLIENTS.

   ```
   MAX_WWW_CLIENTS=220
   ```

   d) Increase the value of PGSQL_MAX_CONNECTIONS.

   ```
   PGSQL_MAX_CONNECTIONS=220
   ```

e) Set the DATABASE_MAX_POOL_SIZE token as follows:

```
DATABASE_MAX_POOL_SIZE=220
```

f) Set the REPORTS_DATABASE_MAX_POOL_SIZE token as follows:

```
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

g) Increase the ETL heap size.

```
ETL_JAVA_OPTS=-Xms160m -Xmx512m -server -XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails
 -Dsun.rmi.dgc.client.gcInterval=600000
-Dsun.rmi.dgc.server.gcInterval=600000
```

h) Set the USERS_WITH_NO_EXPIRY_PASSWORD token as follows:

```
USERS_WITH_NO_EXPIRY_PASSWORD=admin,nobody,system,scmviewer
```

i) Make sure that the following tokens have a value if ETL is enabled.

```
SOAP_ANONYMOUS_SHARED_SECRET=
ETL_SOAP_SHARED_SECRET=
```

7. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

8. Update the file permissions on your site's data.

```
/opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
```

Note: This process can take a long time for a site with a lot of data.

Do this on the Black Duck Code Sight server. We'll call this `my.code.box`.

9. Set up the Black Duck Code Sight server using *these instructions*.

Do this on my.app.box:

10. Convert your site data to work with TeamForge 6.2.

Tip: Before you kick off the data migration, use the `/etc/init.d/collabnet status` command to make sure the Jboss, Tomcat and Tomcatcs services are stopped.

```
/opt/collabnet/teamforge/runtime/scripts/migrate.py
```

The `migrate.py` script locates the existing site data and modifies it as needed.

This includes configuration data for LDAP and the James mail server. Any modifications that you have applied to these components on your old site are reproduced on your upgraded TeamForge 6.2 site.

11. Run the Subversion working copy script when you are upgrading to TeamForge 6.2 and the old Teamforge site has the SVN 1.6.x version.

a) `cd <SITE_DIR>/runtime/scripts`

b) `./svn-upgrade-working-copies.sh`

Note: Type "Y" when prompted.

12. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

- You are logged in as "root"
- You run the command only on the TeamForge application box
- Your TeamForge database is running

Run the post-install script from the [*RUNTIME_DIR*]/scripts directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
./postinstall_62p1.py
```

13. Start TeamForge.

    ```
    /etc/init.d/collabnet start
    ```

14. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ```

    b) List all the `etl` jobs.

    ```
    ./etl-client.py -a
    ```

    c) Run `TrackerInitialJob`.

    ```
    ./etl-client.py -r TrackerInitialJob
    ```

15. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

    Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

    Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

    ```
    sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
    ```

16. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

    After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

    ```
    ./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
    ```

    Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

    Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

17. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

    a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`

    b) `./trust-cert.sh`

    c) Restart the `collabnet` services.

    ```
    /etc/init.d/collabnet restart
    ```

18. Apply the finishing touches and make sure everything is running smoothly after upgrading to TeamForge 6.2.

a) Make sure your users can still access their source control services.

   See *Synchronize TeamForge source control integrations* on page 264.

b) If you are bringing SSL certificates and keys from your old site, make sure their locations match the paths specified by the *SSL_CERT_FILE* and *SSL_KEY_FILE* variables in `site-options.conf`. See *Set up SSL for your TeamForge site*.

c) Log into your site as the administrator.

d) Reboot the server and make sure all services come up automatically at startup.

e) Rebuild your site's search index so that users get up-to-date search results.

   See *Rebuild TeamForge search indexes* on page 254 for details.

f) To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

```
select * from etl_job where job_name ='tracker_initial_etl'
```

   The status column should have a value of 1.

g) If your site has custom branding, verify that your branding changes still work as intended.

   See *Customize anything on your site*.

h) Let your site's users know they've been upgraded.

   See *Create a site-wide broadcast*.

☞ **Important:** Do not delete the `teamforge-installer/6.2.0.1` directory. You will need it for future maintenance and upgrades.

☞ **Note:** After the upgrade, it takes some time for the publishing repositories to get created for projects imported from other TeamForge sites.

Upgrade to TeamForge 6.2 on new hardware - Black Duck Code Sight on a separate box

To upgrade to TeamForge 6.2, set up a new box, then bring over your old site's data and convert it.

TeamForge 6.2 runs on Red Hat 6.1. To take advantage of the new operating system, you should install a fresh box and move your TeamForge site to it.

If necessary, however, TeamForge 6.2 can still run on Red Hat 5.6. If you need to run your new site on the same box that your existing site is running on, see *Upgrade to TeamForge 6.2 on the same box - Black Duck Code Sight on a separate box*.

☞ **Note:** In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

On the existing TeamForge application box, log in as root and take these steps:

1. Stop the TeamForge application server and the Apache server, if they are running.

```
/etc/init.d/httpd stop
/etc/init.d/collabnet stop
```

2. Back up your site data.

   a) Make a dump file of your site database.

      (This may be the same as your TeamForge application server or a separate box.)

      You have to do a PostgreSQL dump because we are upgrading the PostgreSQL application as part of this upgrade.

      ☞ **Note:** These commands are for a PostgreSQL database, which is the default. If your site uses an Oracle database, follow the *Oracle backup procedure* instead.

```
su - postgres
/usr/bin/pg_dumpall > /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp
exit
mkdir /tmp/backup_dir
cp /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp /tmp/backup_dir/
```

Note: If your reporting database is running on a separate port, back up your reporting database too:

```
/usr/bin/pg_dumpall -p <reports_database_port> >
/var/lib/pgsql/9.0/backups/teamforge_reporting_data_backup.dmp
```

b) Make an archive file with the following data directories:

Directory	Contents
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments
/svnroot	Subversion source code repositories
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

```
cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
/tmp/backup_dir
cd /tmp
tar czvf 611backup.tgz backup_dir
```

c) Back up your SSH keys, if any.

d) Back up your SSL certificates and keys, if any.

3. Stop PostgreSQL.

```
/etc/init.d/postgresql-9.0 stop
```

4. Copy the file system data to the new box.

```
scp /tmp/611backup.tgz username@newbox:/tmp
```

5. Copy the master configuration file from the old server to the same location on the new server.

```
scp /opt/collabnet/teamforge-installer/6.1.1.0/conf/site-options.conf
username@newbox:/tmp
```

Tip: `scp` is just an example. Use whatever file transfer method you prefer.

Do this on the new TeamForge 6.2 box:

6. Install Red Hat Enterprise Linux 6.1 and log in as root.

- The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the Red Hat installation guide* for help.

Important: Don't customize your installation. Select only the default packages list.

7. Check your basic networking setup.

See *Set up networking for your TeamForge box* on page 8 for details.

8. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

9. Install the TeamForge application.

```
yum install teamforge
```

10. Put the `site-options.conf` file where the installer can find it.

```
cp /tmp/site-options.conf /opt/collabnet/teamforge-installer/6.2.0.1/conf
```

11. Log in as root and unpack the file system data.

```
cd /tmp
tar xzvf 611backup.tgz
```

12. Set up your site's master configuration file.

```
vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
```

Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

a) Update the host name and domain name, if necessary.

```
HOST_my.host.name=app database subversion cvs etl datamart
DOMAIN_my.host.name=my.domain.name
```

b) Review the *DATABASE* variables.

You may want to substitute your own values for the default database names, user names and passwords.

c) Turn on the site-wide reporting functionality by adding the *REPORTS_** variables.

See *Turn on site-wide reporting* on page 263 for details.

d) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use the same key in the external SCM integration server also.

e) Increase the value of MAX_WWW_CLIENTS.

```
MAX_WWW_CLIENTS=220
```

f) Increase the value of PGSQL_MAX_CONNECTIONS.

```
PGSQL_MAX_CONNECTIONS=220
```

g) Set the DATABASE_MAX_POOL_SIZE token as follows:

```
DATABASE_MAX_POOL_SIZE=220
```

h) Set the REPORTS_DATABASE_MAX_POOL_SIZE token as follows:

```
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

i) Increase the ETL heap size.

```
ETL_JAVA_OPTS=-Xms160m -Xmx512m -server -XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails
 -Dsun.rmi.dgc.client.gcInterval=600000
-Dsun.rmi.dgc.server.gcInterval=600000
```

j) Set the USERS_WITH_NO_EXPIRY_PASSWORD token as follows:

```
USERS_WITH_NO_EXPIRY_PASSWORD=admin,nobody,system,scmviewer
```

k) Make sure that the following tokens have a value if ETL is enabled.

```
SOAP_ANONYMOUS_SHARED_SECRET=
ETL_SOAP_SHARED_SECRET=
```

l) If you're installing Black Duck Code Sight, configure the following settings:

```
HOST_mycodesearchbox.domain.com=codesearch
```

Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

```
BDCS_HOST=<my.host.name or my.domain.name>

To enable SSL for Black Duck Code Sight, include this token:
BDCS_SSL=on
```

```
To change the default Black Duck Code Sight admin password, add these tokens:
BDCS_ADMIN_USERNAME=<username>
BDCS_ADMIN_PASSWORD=<password>

To configure the port number for the Code Search Tomcat server, set this
token:
BDCS_TOMCAT_PORT=9180

To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

13. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

14. Bring your site data back.

a) Reload the PostgreSQL data.

```
su - postgres
/usr/bin/psql < /tmp/backup_dir/teamforge_data_backup.dmp
exit
```

Note: If your reporting database is running on a separate port, restore that data too:

```
su - postgres -c "/usr/bin/psql -p <reports_database_port> <
/tmp/backup_dir/teamforge_reporting_data_backup.dmp"
```

b) Reload `svnroot`, `sf-svnroot`, `cvsroot`, and `var`.

15. Update the file permissions on your site's data.

```
/opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
```

Note: This process can take a long time for a site with a lot of data.

Do this on the Black Duck Code Sight server. We'll call this `my.code.box`.

16. Set up the Black Duck Code Sight server using *these instructions*.

Do this on my.app.box:

17. Convert your site data to work with TeamForge 6.2.

Tip: Before you kick off the data migration, use the `/etc/init.d/collabnet status` command to make sure the Jboss, Tomcat and Tomcatcs services are stopped.

```
/opt/collabnet/teamforge/runtime/scripts/migrate.py
```

The `migrate.py` script locates the existing site data and modifies it as needed.

This includes configuration data for LDAP and the James mail server. Any modifications that you have applied to these components on your old site are reproduced on your upgraded TeamForge 6.2 site.

18. Run the Subversion working copy script when you are upgrading to TeamForge 6.2 and the old Teamforge site has the SVN 1.6.x version.

    a) `cd <SITE_DIR>/runtime/scripts`

    b) `./svn-upgrade-working-copies.sh`

    Note: Type "Y" when prompted.

19. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

    - You are logged in as "root"
    - You run the command only on the TeamForge application box
    - Your TeamForge database is running

    Run the post-install script from the `[RUNTIME_DIR]/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ./postinstall_62p1.py
    ```

20. Start TeamForge.

    ```
    /etc/init.d/collabnet start
    ```

    Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

21. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ```

    b) List all the `etl` jobs.

    ```
    ./etl-client.py -a
    ```

    c) Run `TrackerInitialJob`.

    ```
    ./etl-client.py -r TrackerInitialJob
    ```

22. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

    Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

    Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

    ```
    sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
    ```

23. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

```
./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
```

Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

24. **Note:** Do this if your site directory (SITE_DIR) is not the default `/opt/collabnet/teamforge`.

If your old site directory is a different location, for example, `/usr/local/teamforge`, create a symlink as follows:

```
cd /usr/local/
ln -s /opt/collabnet/teamforge
```

25. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`
b) `./trust-cert.sh`
c) Restart the `collabnet` services.

```
/etc/init.d/collabnet restart
```

26. Apply the finishing touches and make sure everything is running smoothly after upgrading to TeamForge 6.2.

a) Make sure your users can still access their source control services.

See *Synchronize TeamForge source control integrations* on page 264.

b) If you are bringing SSL certificates and keys from your old site, make sure their locations match the paths specified by the *SSL_CERT_FILE* and *SSL_KEY_FILE* variables in `site-options.conf`. See *Set up SSL for your TeamForge site*.
c) Log into your site as the administrator.
d) Reboot the server and make sure all services come up automatically at startup.
e) Rebuild your site's search index so that users get up-to-date search results.

See *Rebuild TeamForge search indexes* on page 254 for details.

f) To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

```
select * from etl_job where job_name ='tracker_initial_etl'
```

The status column should have a value of 1.

g) If your site has custom branding, verify that your branding changes still work as intended.

See *Customize anything on your site*.

h) Let your site's users know they've been upgraded.

See *Create a site-wide broadcast*.

Important: Do not delete the `teamforge-installer/6.2.0.1` directory. You will need it for future maintenance and upgrades.

Note: After the upgrade, it takes some time for the publishing repositories to get created for projects imported from other TeamForge sites.

Upgrade an advanced TeamForge site to TeamForge 6.2

Upgrading to TeamForge 6.2 on an advanced site can be complicated but you get more flexibility and control.

If there is any doubt about what kind of site you are working with, see *Is my TeamForge site "dedicated" or "advanced?"*

Upgrade from TeamForge 6.1.1 to 6.2

To upgrade to TeamForge 6.2 without changing the box where your earlier version of TeamForge is running, you have to install the new TeamForge site and migrate the site data.

There are a few critical factors to keep in mind when upgrading to TeamForge 6.2.

- For this procedure, we'll assume that you are upgrading on the same box where your existing TeamForge site is running. It's also possible to simultaneously upgrade and move your site to new hardware. To do that, see *Upgrade from TeamForge 6.1.1 to 6.2 on new hardware*.
- This procedure is meant for sites that were installed in "advanced" mode. If your existing site was installed in "dedicated" mode, use *Upgrade to TeamForge 6.2 on the same box - Black Duck Code Sight on a separate box* instead. If there is any doubt about what kind of site you are working with, see *Is my TeamForge site "dedicated" or "advanced?"*

1. Back up your site data.

a) Make a dump file of your site database.

(This may be the same as your TeamForge application server or a separate box.)

You have to do a PostgreSQL dump because we are upgrading the PostgreSQL application as part of this upgrade.

Note: These commands are for a PostgreSQL database, which is the default. If your site uses an Oracle database, follow the *Oracle backup procedure* instead.

```
su - postgres
/usr/bin/pg_dumpall > /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp
exit
mkdir /tmp/backup_dir
cp /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp /tmp/backup_dir/
```

Note: If your reporting database is running on a separate port, back up your reporting database too:

```
/usr/bin/pg_dumpall -p <reports_database_port> >
/var/lib/pgsql/9.0/backups/teamforge_reporting_data_backup.dmp
```

b) Make an archive file with the following data directories:

Directory	Contents
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments
/svnroot	Subversion source code repositories
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

```
cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
/tmp/backup_dir
cd /tmp
tar czvf 611backup.tgz backup_dir
```

c) Back up your SSH keys, if any.

d) Back up your SSL certificates and keys, if any.

2. Stop TeamForge.

```
/etc/init.d/httpd stop
/etc/init.d/postgresql-9.0 stop
/etc/init.d/collabnet stop
```

3. If the database is running on a separate box, go to that box and move the old PostgreSQL control script out of the way.

   ```
   mv /etc/init.d/postgresql_ctf /etc/init.d/postgresql_ctf_old
   ```

4. If the reporting database is running on a separate box, go to that box and move the old datamart PostgreSQL control script out of the way.

   ```
   mv /etc/init.d/postgresql_reports /etc/init.d/postgresql_reports_old
   ```

5. Move the repositories from any previous installs out of the way.

   ```
   mv /etc/yum.repos.d/collabnet-6.1.1.0.repo
   /etc/yum.repos.d/collabnet-6.1.1.0.repo.cn_backup
   ```

6. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
7. Install the TeamForge application.

   ```
   yum install teamforge-app teamforge-scm teamforge-database teamforge-etl
   ```

   Tip: If the yum installer fails, you may have duplicate rpm packages installed.

   1. Get the `yum-utils` package, if it isn't already installed.

      ```
      yum install yum-utils
      ```

   2. Check for duplicate packages.

      ```
      package-cleanup --dupes
      ```

   3. Clean up the older packages, if any.

      ```
      package-cleanup --cleandupes
      ```

   4. Rerun the yum installer.

      ```
      yum install teamforge [options]
      ```

8. Set up your site's master configuration file.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
   ```

   Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

   a) If you're installing Black Duck Code Sight, configure the following settings:

   ```
   HOST_mycodesearchbox.domain.com=codesearch
   ```

   Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

   ```
   BDCS_HOST=<my.host.name or my.domain.name>
   ```

```
To enable SSL for Black Duck Code Sight, include this token:
BDCS_SSL=on

To change the default Black Duck Code Sight admin password, add these tokens:
BDCS_ADMIN_USERNAME=<username>
BDCS_ADMIN_PASSWORD=<password>

To configure the port number for the Code Search Tomcat server, set this
token:
BDCS_TOMCAT_PORT=9180

To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

b) 👉 **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

   Remember that you need to use the same key in the external SCM integration server also.

c) Increase the value of MAX_WWW_CLIENTS.

```
MAX_WWW_CLIENTS=220
```

d) Increase the value of PGSQL_MAX_CONNECTIONS.

```
PGSQL_MAX_CONNECTIONS=220
```

e) Set the DATABASE_MAX_POOL_SIZE token as follows:

```
DATABASE_MAX_POOL_SIZE=220
```

f) Set the REPORTS_DATABASE_MAX_POOL_SIZE token as follows:

```
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

g) Increase the ETL heap size.

```
ETL_JAVA_OPTS=-Xms160m -Xmx512m -server -XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails
 -Dsun.rmi.dgc.client.gcInterval=600000
-Dsun.rmi.dgc.server.gcInterval=600000
```

h) Set the USERS_WITH_NO_EXPIRY_PASSWORD token as follows:

```
USERS_WITH_NO_EXPIRY_PASSWORD=admin,nobody,system,scmviewer
```

i) Make sure that the following tokens have a value if ETL is enabled.

```
SOAP_ANONYMOUS_SHARED_SECRET=
ETL_SOAP_SHARED_SECRET=
```

j) 👉 **Note:** Perform this check only if you are uisng an Oracle database.

   Make sure that the database service names of the production database and reports database are configured to DATABASE_SERVICE_NAME and REPORTS_DATABASE_SERVICE_NAME respectively.

k) Review the variables you've changed, then save the `site-options.conf` file.

9. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

10. If the database is running on a separate box, copy the `postgresql` script from `/opt/collabnet/teamforge/runtime/scripts` on my.app.box to the `/tmp` directory of my.data.box.

```
cp /tmp/postgresql_ctf /etc/init.d
```

11. Start the database service.

```
/etc/init.d/postgresql_ctf start
```

12. If the reporting database is running on a separate box, copy the datamart control script from `/opt/collabnet/teamforge/runtime/scripts` on my.app.box to the `/tmp` directory of my.datamart.box.

```
cp /tmp/postgresql_reports /etc/init.d
```

13. Start the reporting database service.

```
/etc/init.d/postgresql_reports start
```

14. Update the file permissions on your site's data.

```
/opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
```

Note: This process can take a long time for a site with a lot of data.

Do this on the Black Duck Code Sight server. We'll call this `my.code.box`.

15. Set up the Black Duck Code Sight server using *these instructions*.

Do this on my.app.box:

16. Convert your site data to work with TeamForge 6.2.

Tip: Before you kick off the data migration, use the `/etc/init.d/collabnet status` command to make sure the Jboss, Tomcat and Tomcatcs services are stopped.

```
/opt/collabnet/teamforge/runtime/scripts/migrate.py
```

The `migrate.py` script locates the existing site data and modifies it as needed.

This includes configuration data for LDAP and the James mail server. Any modifications that you have applied to these components on your old site are reproduced on your upgraded TeamForge 6.2 site.

17. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

18. Run the Subversion working copy script when you are upgrading to TeamForge 6.2 and the old Teamforge site has the SVN 1.6.x version.

a) `cd <SITE_DIR>/runtime/scripts`

b) `./svn-upgrade-working-copies.sh`

Note: Type "Y" when prompted.

19. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

- You are logged in as "root"
- You run the command only on the TeamForge application box
- Your TeamForge database is running

Run the post-install script from the `[`*`RUNTIME_DIR`*`]/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

```
./postinstall_62p1.py
```

20. Start TeamForge.

    Start PostgreSQL if it is not running.

    ```
    /etc/init.d/postgresql-9.0 start
    ```

    Start the CollabNet services.

    ```
    /etc/init.d/collabnet start
    ```

21. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ```

    b) List all the `etl` jobs.

    ```
    ./etl-client.py -a
    ```

    c) Run `TrackerInitialJob`.

    ```
    ./etl-client.py -r TrackerInitialJob
    ```

22. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

    Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

    Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

    ```
    sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
    ```

23. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

    After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

    ```
    ./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
    ```

    Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

    Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

24. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

    a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`
    b) `./trust-cert.sh`
    c) Restart the `collabnet` services.

    ```
    /etc/init.d/collabnet restart
    ```

25. Apply the finishing touches and make sure everything is running smoothly after upgrading to TeamForge 6.2.

a) Make sure your users can still access their source control services.

   See *Synchronize TeamForge source control integrations* on page 264.

b) If you are bringing SSL certificates and keys from your old site, make sure their locations match the paths specified by the *SSL_CERT_FILE* and *SSL_KEY_FILE* variables in `site-options.conf`. See *Set up SSL for your TeamForge site*.

c) Log into your site as the administrator.

d) Reboot the server and make sure all services come up automatically at startup.

e) Rebuild your site's search index so that users get up-to-date search results.

   See *Rebuild TeamForge search indexes* on page 254 for details.

f) To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

```
select * from etl_job where job_name ='tracker_initial_etl'
```

   The status column should have a value of 1.

g) If your site has custom branding, verify that your branding changes still work as intended.

   See *Customize anything on your site*.

h) Let your site's users know they've been upgraded.

   See *Create a site-wide broadcast*.

Important: Do not delete the `teamforge-installer/6.2.0.1` directory. You will need it for future maintenance and upgrades.

Note: After the upgrade, it takes some time for the publishing repositories to get created for projects imported from other TeamForge sites.

Upgrade to TeamForge 6.2 on new hardware

To upgrade to TeamForge 6.2, set up a new box, then bring over your old site's data and convert it.

TeamForge 6.2 runs on Red Hat Enterprise Linux 6.1. To take advantage of the new operating system, you should install a fresh box and move your TeamForge 6.2 site to it.

Note: This procedure assumes that you are running your new site-wide reporting database on the same box where your TeamForge application and database are running, and that the reporting database shares the same port as the site database.

You don't have to set it up exactly like this.

- You can run the reporting database on a separate box. For an example of that, see *Option 3: Install TeamForge 6.2 with reporting data on a separate box*.
- You can run the reporting database on the same box as the site database, but with a separate port. For an example, see *Option 5: Distribute TeamForge 6.2 services a different way*
- In a multi-box installation of Black Duck Code Sight, all machines must have the same time - without this, ETL will not function properly.

Take these steps on the new TeamForge 6.2 box:

1. Install Red Hat Enterprise Linux 6.1 and log in as root.

- The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the Red Hat installation guide* for help.

Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

   See *Set up networking for your TeamForge box* for details.
3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

On the TeamForge 6.1.1 box, log in as root and take these steps:

4. Stop the TeamForge application server and the Apache server, if they are running.

   ```
   /etc/init.d/httpd stop
   /etc/init.d/collabnet stop
   ```
5. Back up your site data.

   a) Make a dump file of your site database.

   (This may be the same as your TeamForge application server or a separate box.)

   You have to do a PostgreSQL dump because we are upgrading the PostgreSQL application as part of this upgrade.

   Note: These commands are for a PostgreSQL database, which is the default. If your site uses an Oracle database, follow the *Oracle backup procedure* instead.

   ```
   su - postgres
   /usr/bin/pg_dumpall > /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp
   exit
   mkdir /tmp/backup_dir
   cp /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp /tmp/backup_dir/
   ```

   Note: If your reporting database is running on a separate port, back up your reporting database too:

   ```
   /usr/bin/pg_dumpall -p <reports_database_port> >
   /var/lib/pgsql/9.0/backups/teamforge_reporting_data_backup.dmp
   ```

   b) Make an archive file with the following data directories:

Directory	Contents
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments
/svnroot	Subversion source code repositories
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

   ```
   cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
   /tmp/backup_dir
   cd /tmp
   tar czvf 611backup.tgz backup_dir
   ```

   c) Back up your SSH keys, if any.

   d) Back up your SSL certificates and keys, if any.
6. Stop PostgreSQL.

   ```
   /etc/init.d/postgresql-9.0 stop
   ```
7. If the database is running on a separate box, go to that box and move the old PostgreSQL control script out of the way.

```
mv /etc/init.d/postgresql_ctf /etc/init.d/postgresql_ctf_old
```

8. If the reporting database is running on a separate box, go to that box and move the old datamart PostgreSQL control script out of the way.

   ```
   mv /etc/init.d/postgresql_reports /etc/init.d/postgresql_reports_old
   ```

9. Copy the file system data to the new box.

   ```
   scp /tmp/611backup.tgz username@newbox:/tmp
   ```

10. Copy the master configuration file from the old server to the same location on the new server.

    ```
    scp /opt/collabnet/teamforge-installer/6.1.1.0/conf/site-options.conf
    username@newbox:/tmp
    ```

    Tip: `scp` is just an example. Use whatever file transfer method you prefer.

11. If the old server has the TeamForge CLI Server add-on installed, then copy the `cliserver.properties` file under `/etc/` from the old server to `/shared/cliserver`

    ```
    sudo cp /etc/cliserver.properties /shared/cliserver/
    ```

Do this on the new TeamForge 6.2 box:

12. Log in as root and unpack the file system data.

    ```
    cd /tmp
    tar xzvf 611backup.tgz
    ```

13. Install the TeamForge application.

    ```
    yum install teamforge-app teamforge-scm teamforge-database teamforge-etl
    ```

    Tip: If the yum installer fails, you may have duplicate rpm packages installed.

    1. Get the `yum-utils` package, if it isn't already installed.

       ```
       yum install yum-utils
       ```

    2. Check for duplicate packages.

       ```
       package-cleanup --dupes
       ```

    3. Clean up the older packages, if any.

       ```
       package-cleanup --cleandupes
       ```

    4. Rerun the yum installer.

       ```
       yum install teamforge [options]
       ```

14. Put the `site-options.conf` file where the installer can find it.

    ```
    cp /tmp/site-options.conf /opt/collabnet/teamforge-installer/6.2.0.1/conf
    ```

15. Set up your site's master configuration file.

    ```
    vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
    ```

Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

a) Update the host name and domain name, if necessary.

```
HOST_my.host.name=app database subversion cvs etl datamart
DOMAIN_my.host.name=my.domain.name
```

b) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use the same key in the external SCM integration server also.

c) Increase the value of MAX_WWW_CLIENTS.

```
MAX_WWW_CLIENTS=220
```

d) Increase the value of PGSQL_MAX_CONNECTIONS.

```
PGSQL_MAX_CONNECTIONS=220
```

e) Set the DATABASE_MAX_POOL_SIZE token as follows:

```
DATABASE_MAX_POOL_SIZE=220
```

f) Set the REPORTS_DATABASE_MAX_POOL_SIZE token as follows:

```
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

g) Increase the ETL heap size.

```
ETL_JAVA_OPTS=-Xms160m -Xmx512m -server -XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails
 -Dsun.rmi.dgc.client.gcInterval=600000
-Dsun.rmi.dgc.server.gcInterval=600000
```

h) Set the USERS_WITH_NO_EXPIRY_PASSWORD token as follows:

```
USERS_WITH_NO_EXPIRY_PASSWORD=admin,nobody,system,scmviewer
```

i) Make sure that the following tokens have a value if ETL is enabled.

```
SOAP_ANONYMOUS_SHARED_SECRET=
ETL_SOAP_SHARED_SECRET=
```

j) If you're installing Black Duck Code Sight, configure the following settings:

```
HOST_mycodesearchbox.domain.com=codesearch
```

Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

```
BDCS_HOST=<my.host.name or my.domain.name>

To enable SSL for Black Duck Code Sight, include this token:
BDCS_SSL=on
```

```
To change the default Black Duck Code Sight admin password, add these tokens:
BDCS_ADMIN_USERNAME=<username>
BDCS_ADMIN_PASSWORD=<password>

To configure the port number for the Code Search Tomcat server, set this
token:
BDCS_TOMCAT_PORT=9180

To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

16. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

17. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/data
vi /var/lib/pgsql/9.0/data/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of data box>'
```

b) Configure database access for the site database.

```
vi /var/lib/pgsql/9.0/data/pg_hba.conf
```

```

local  all                     all
                       trust
# IPv4 local connections:
host   all                     all
127.0.0.1/32                 trust
# IPv6 local connections:
#host  all                     all                                  ::1/128
                      trust
host   <DATABASE_NAME>         <DATABASE_USERNAME                    <IP
address of app box>/32  md5
host   <REPORTS_DATABASE_NAME> <REPORTS_DATABASE_USERNAME>          <IP
address of app box>/32  md5
host   <REPORTS_DATABASE_NAME> <REPORTS_DATABASE_READ_ONLY_USERNAME> <IP
address of app box>/32  md5
```

c) Exit and restart PostgreSQL.

```
exit
/etc/init.d/postgresql-9.0 start
```

18. Bring your site data back.

a) Reload the PostgreSQL data.

```
su - postgres
/usr/bin/psql < /tmp/backup_dir/teamforge_data_backup.dmp
exit
```

Note: If your reporting database is running on a separate port, restore that data too:

```
su - postgres -c "/usr/bin/psql -p <reports_database_port> <
/tmp/backup_dir/teamforge_reporting_data_backup.dmp"
```

b) Reload `svnroot`, `sf-svnroot`, `cvsroot`, and `var`.

19. Update the file permissions on your site's data.

```
/opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
```

Note: This process can take a long time for a site with a lot of data.

Do this on the Black Duck Code Sight server. We'll call this `my.code.box`.

20. Set up the Black Duck Code Sight server using *these instructions*.

Do this on my.app.box:

21. Convert your site data to work with TeamForge 6.2.

    Tip: Before you kick off the data migration, use the `/etc/init.d/collabnet status` command to make sure the Jboss, Tomcat and Tomcatcs services are stopped.

    ```
    /opt/collabnet/teamforge/runtime/scripts/migrate.py
    ```

    The `migrate.py` script locates the existing site data and modifies it as needed.

    This includes configuration data for LDAP and the James mail server. Any modifications that you have applied to these components on your old site are reproduced on your upgraded TeamForge 6.2 site.

22. Swap in the new Apache configuration file.

    ```
    cd /etc/httpd/conf
    mv httpd.conf httpd.conf_old
    cp httpd.conf.cn_new httpd.conf
    /etc/init.d/httpd start
    ```

23. Run the Subversion working copy script when you are upgrading to TeamForge 6.2 and the old Teamforge site has the SVN 1.6.x version.

    a) `cd <SITE_DIR>/runtime/scripts`

    b) `./svn-upgrade-working-copies.sh`

    Note: Type "Y" when prompted.

24. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

    - You are logged in as "root"
    - You run the command only on the TeamForge application box
    - Your TeamForge database is running

    Run the post-install script from the `[`*`RUNTIME_DIR`*`]/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ./postinstall_62p1.py
    ```

25. Start TeamForge.

    a) Start PostgreSQL if it is not running.

    ```
    /etc/init.d/postgresql-9.0 start
    ```

    b) Start `collabnet` services.

    ```
    /etc/init.d/collabnet start
    ```

26. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

27. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

```
sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
```

28. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

```
./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
```

Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

29. **Note:** Do this if your site directory (SITE_DIR) is not the default `/opt/collabnet/teamforge`.

If your old site directory is a different location, for example, `/usr/local/teamforge`, create a symlink as follows:

```
cd /usr/local/
ln -s /opt/collabnet/teamforge
```

30. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`

b) `./trust-cert.sh`

c) Restart the `collabnet` services.

```
/etc/init.d/collabnet restart
```

31. Apply the finishing touches and make sure everything is running smoothly after upgrading to TeamForge 6.2.

a) Make sure your users can still access their source control services.

See *Synchronize TeamForge source control integrations* on page 264.

b) If you are bringing SSL certificates and keys from your old site, make sure their locations match the paths specified by the *SSL_CERT_FILE* and *SSL_KEY_FILE* variables in `site-options.conf`. See *Set up SSL for your TeamForge site*.

c) Log into your site as the administrator.

d) Reboot the server and make sure all services come up automatically at startup.

e) Rebuild your site's search index so that users get up-to-date search results.

   See *Rebuild TeamForge search indexes* on page 254 for details.

f) To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

```
select * from etl_job where job_name ='tracker_initial_etl'
```

   The status column should have a value of 1.

g) If your site has custom branding, verify that your branding changes still work as intended.

   See *Customize anything on your site*.

h) Let your site's users know they've been upgraded.

   See *Create a site-wide broadcast*.

> **Important:** Do not delete the `teamforge-installer/6.2.0.1` directory. You will need it for future maintenance and upgrades.

Besides Black Duck Code Sight, TeamForge 6.2 supports integrations with Review Board and Git. For specific instructions on installing these tools, see:

- *Review Board* on page 279
- *Set up the TeamForge Git integration* on page 283

> **Note:** After the upgrade, it takes some time for the publishing repositories to get created for projects imported from other TeamForge sites.

Upgrade TeamForge to version 6.2 on the same box (Oracle) - Black Duck Code Sight on a separate box

To upgrade to TeamForge 6.2 without changing the box where your pre-6.2 TeamForge site is running, you have to install the new TeamForge site and migrate the site data.

TeamForge 6.2 runs on Red Hat 6.1.

If you need to run your new site on new hardware, see *Upgrade TeamForge to version 6.2 on new hardware (Oracle) - Black Duck Code Sight on a separate box*.

> **Note:** In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

On the existing TeamForge application box, log in as root and take these steps:

1. Back up your site data.

   a) Make a dump file of your site database.

      To back up the Oracle database, follow the *Oracle backup procedure*.

   b) Make an archive file with the following data directories:

Directory	Contents
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments
/svnroot	Subversion source code repositories
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

```
cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
/tmp/backup_dir
cd /tmp
```

```
tar czvf 611backup.tgz backup_dir
```

c) Back up your SSH keys, if any.
d) Back up your SSL certificates and keys, if any.

2. Stop the TeamForge application server and the Apache server, if they are running.

   ```
   /etc/init.d/httpd stop
   /etc/init.d/collabnet stop
   ```

3. Move the repositories from any previous installs out of the way.

   ```
   mv /etc/yum.repos.d/collabnet-6.1.1.0.repo
   /etc/yum.repos.d/collabnet-6.1.1.0.repo.cn_backup
   ```

4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
5. Install the TeamForge application.

   ```
   yum install teamforge-app teamforge-scm teamforge-etl
   ```

   Tip: If the yum installer balks, you may have duplicate rpm packages.

   1. Get the `yum-utils` package, if it isn't already installed.

      ```
      yum install yum-utils
      ```

   2. Check for duplicate packages.

      ```
      package-cleanup --dupes
      ```

   3. Clean up the older packages, if any.

      ```
      package-cleanup --cleandupes
      ```

   4. Rerun the yum installer.

      ```
      yum install teamforge [options]
      ```

6. Set up your site's master configuration file.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
   ```

   Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

   a) If you're installing Black Duck Code Sight, configure the following settings:

   ```
   HOST_mycodesearchbox.domain.com=codesearch
   ```

   Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

   ```
   BDCS_HOST=<my.host.name or my.domain.name>

   To enable SSL for Black Duck Code Sight, include this token:
   BDCS_SSL=on
   ```

   ```
   To change the default Black Duck Code Sight admin password, add these tokens:
   BDCS_ADMIN_USERNAME=<username>
   BDCS_ADMIN_PASSWORD=<password>

   To configure the port number for the Code Search Tomcat server, set this
   ```

```
token:
BDCS_TOMCAT_PORT=9180

To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

b) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use the same key in the external SCM integration server also.

c) Increase the value of MAX_WWW_CLIENTS.

```
MAX_WWW_CLIENTS=220
```

d) Set the DATABASE_MAX_POOL_SIZE token as follows:

```
DATABASE_MAX_POOL_SIZE=220
```

e) Set the REPORTS_DATABASE_MAX_POOL_SIZE token as follows:

```
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

f) Increase the ETL heap size.

```
ETL_JAVA_OPTS=-Xms160m -Xmx512m -server -XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails
 -Dsun.rmi.dgc.client.gcInterval=600000
-Dsun.rmi.dgc.server.gcInterval=600000
```

g) Set the USERS_WITH_NO_EXPIRY_PASSWORD token as follows:

```
USERS_WITH_NO_EXPIRY_PASSWORD=admin,nobody,system,scmviewer
```

h) Make sure that the following tokens have a value if ETL is enabled.

```
SOAP_ANONYMOUS_SHARED_SECRET=
ETL_SOAP_SHARED_SECRET=
```

i) **Note:** Perform this check only if you are uisng an Oracle database.

Make sure that the database service names of the production database and reports database are configured to DATABASE_SERVICE_NAME and REPORTS_DATABASE_SERVICE_NAME respectively.

j) Review the variables you've changed, then save the `site-options.conf` file.

7. **Note:** Execute this step only if your Oracle server version is not 11.2.0.1.

Download the corresponding version of Oracle client from *http://www.oracle.com/technetwork/database/features/instant-client/index-097480.html* and run this command:

```
yum localinstall <path to oracle client rpm>
```

8. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

9. Update the file permissions on your site's data.

```
/opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
```

Note: This process can take a long time for a site with a lot of data.

Do this on the Black Duck Code Sight server. We'll call this `my.code.box`.

10. Set up the Black Duck Code Sight server using *these instructions*.

Do this on my.app.box:

11. Convert your site data to work with TeamForge 6.2.

    Tip: Before you kick off the data migration, use the `/etc/init.d/collabnet status` command to make sure the Jboss, Tomcat and Tomcatcs services are stopped.

    ```
    /opt/collabnet/teamforge/runtime/scripts/migrate.py
    ```

    The `migrate.py` script locates the existing site data and modifies it as needed.

    This includes configuration data for LDAP and the James mail server. Any modifications that you have applied to these components on your old site are reproduced on your upgraded TeamForge 6.2 site.

12. Swap in the new Apache configuration file.

    ```
    cd /etc/httpd/conf
    mv httpd.conf httpd.conf_old
    cp httpd.conf.cn_new httpd.conf
    /etc/init.d/httpd start
    ```

13. Run the Subversion working copy script when you are upgrading to TeamForge 6.2 and the old Teamforge site has the SVN 1.6.x version.

    a) `cd <SITE_DIR>/runtime/scripts`
    b) `./svn-upgrade-working-copies.sh`

       Note: Type "Y" when prompted.

14. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

    - You are logged in as "root"
    - You run the command only on the TeamForge application box
    - Your TeamForge database is running

    Run the post-install script from the `[RUNTIME_DIR]/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ./postinstall_62p1.py
    ```

15. Start TeamForge.

    ```
    /etc/init.d/collabnet start
    ```

    Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

16. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

       ```
       cd /opt/collabnet/teamforge/runtime/scripts
       ```

    b) List all the `etl` jobs.

       ```
       ./etl-client.py -a
       ```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

17. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

    Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

    Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

    ```
    sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
    ```

18. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

    After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

    ```
    ./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
    ```

    Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

    Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

19. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

    a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`
    b) `./trust-cert.sh`
    c) Restart the `collabnet` services.

    ```
    /etc/init.d/collabnet restart
    ```

20. Apply the finishing touches and make sure everything is running smoothly after upgrading to TeamForge 6.2.

    a) Make sure your users can still access their source control services.

       See *Synchronize TeamForge source control integrations* on page 264.

    b) If you are bringing SSL certificates and keys from your old site, make sure their locations match the paths specified by the *SSL_CERT_FILE* and *SSL_KEY_FILE* variables in `site-options.conf`. See *Set up SSL for your TeamForge site*.
    c) Log into your site as the administrator.
    d) Reboot the server and make sure all services come up automatically at startup.
    e) Rebuild your site's search index so that users get up-to-date search results.

       See *Rebuild TeamForge search indexes* on page 254 for details.

    f) To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

       ```
       select * from etl_job where job_name ='tracker_initial_etl'
       ```

       The status column should have a value of 1.
    g) If your site has custom branding, verify that your branding changes still work as intended.

       See *Customize anything on your site*.

h) Let your site's users know they've been upgraded.

See *Create a site-wide broadcast*.

Important: Do not delete the `teamforge-installer/6.2.0.1` directory. You will need it for future maintenance and upgrades.

Note: After the upgrade, it takes some time for the publishing repositories to get created for projects imported from other TeamForge sites.

Upgrade TeamForge to version 6.2 on new hardware (Oracle) - Black Duck Code Sight on a separate box

To upgrade to TeamForge 6.2, set up a new box, then bring over your old site's data and convert it.

TeamForge 6.2 runs on Red Hat Enterprise Linux6.1. To take advantage of the new operating system, you should install a fresh box and move your pre-6.2 TeamForge site to it.

If necessary, however, TeamForge 6.2 can still run on Red Hat 5.6. If you need to run your new site on the same box that your existing site is running on, see *Upgrade TeamForge to version 6.2 on the same box (Oracle) - Black Duck Code Sight on a separate box*.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

On the existing TeamForge application box, log in as root and take these steps:

1. Stop the TeamForge application server and the Apache server, if they are running.

```
/etc/init.d/httpd stop
/etc/init.d/collabnet stop
```

2. Back up your site data.

a) Make a dump file of your site database.

To back up the Oracle database, follow the *Oracle backup procedure*.

b) Make an archive file with the following data directories:

Directory	**Contents**
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments
/svnroot	Subversion source code repositories
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

```
cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
/tmp/backup_dir
cd /tmp
tar czvf 611backup.tgz backup_dir
```

c) Back up your SSH keys, if any.

d) Back up your SSL certificates and keys, if any.

3. Copy the file system data to the new box.

```
scp /tmp/611backup.tgz username@newbox:/tmp
```

4. Copy the master configuration file from the old server to the same location on the new server.

```
scp /opt/collabnet/teamforge-installer/6.1.1.0/conf/site-options.conf
username@newbox:/tmp
```

Tip: `scp` is just an example. Use whatever file transfer method you prefer.

Take these steps on the new TeamForge 6.2 box:

5. Install Red Hat Enterprise Linux 6.1 and log in as root.
    - The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
    - See *the Red Hat installation guide* for help.

    Important: Don't customize your installation. Select only the default packages list.

6. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
7. Install the TeamForge application.

    ```
    yum install teamforge-app teamforge-scm teamforge-etl
    ```

    Tip: If the yum installer balks, you may have duplicate rpm packages.

    1. Get the `yum-utils` package, if it isn't already installed.

        ```
        yum install yum-utils
        ```

    2. Check for duplicate packages.

        ```
        package-cleanup --dupes
        ```

    3. Clean up the older packages, if any.

        ```
        package-cleanup --cleandupes
        ```

    4. Rerun the yum installer.

        ```
        yum install teamforge [options]
        ```

8. Put the `site-options.conf` file where the installer can find it.

    ```
    cp /tmp/site-options.conf /opt/collabnet/teamforge-installer/6.2.0.1/conf
    ```

9. Log in as root and unpack the file system data.

    ```
    cd /tmp
    tar xzvf 611backup.tgz
    ```

10. Update the host name and domain name, if necessary.

    ```
    HOST_my.host.name=app subversion cvs etl
    HOST_my.db.name=database datamart
    DOMAIN_my.host.name=my.domain.name
    ```

11. In the `site-options.conf` file, make sure you do the following:

    a) If you're installing Black Duck Code Sight, configure the following settings:

    ```
    HOST_mycodesearchbox.domain.com=codesearch
    ```

Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

```
BDCS_HOST=<my.host.name or my.domain.name>

To enable SSL for Black Duck Code Sight, include this token:
BDCS_SSL=on
```

```
To change the default Black Duck Code Sight admin password, add these tokens:
BDCS_ADMIN_USERNAME=<username>
BDCS_ADMIN_PASSWORD=<password>

To configure the port number for the Code Search Tomcat server, set this
token:
BDCS_TOMCAT_PORT=9180

To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

b) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use the same key in the external SCM integration server also.

c) Increase the value of MAX_WWW_CLIENTS.

```
MAX_WWW_CLIENTS=220
```

d) Set the DATABASE_MAX_POOL_SIZE token as follows:

```
DATABASE_MAX_POOL_SIZE=220
```

e) Set the REPORTS_DATABASE_MAX_POOL_SIZE token as follows:

```
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

f) Increase the ETL heap size.

```
ETL_JAVA_OPTS=-Xms160m -Xmx512m -server -XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails
 -Dsun.rmi.dgc.client.gcInterval=600000
-Dsun.rmi.dgc.server.gcInterval=600000
```

g) Set the USERS_WITH_NO_EXPIRY_PASSWORD token as follows:

```
USERS_WITH_NO_EXPIRY_PASSWORD=admin,nobody,system,scmviewer
```

h) Make sure that the following tokens have a value if ETL is enabled.

```
SOAP_ANONYMOUS_SHARED_SECRET=
ETL_SOAP_SHARED_SECRET=
```

i) **Note:** Perform this check only if you are uisng an Oracle database.

Make sure that the database service names of the production database and reports database are configured to DATABASE_SERVICE_NAME and REPORTS_DATABASE_SERVICE_NAME respectively.

j) Review the variables you've changed, then save the `site-options.conf` file.

12. **Note:** Execute this step only if your Oracle server version is not 11.2.0.1.

Download the corresponding version of Oracle client from *http://www.oracle.com/technetwork/database/features/instant-client/index-097480.html* and run this command:

```
yum localinstall <path to oracle client rpm>
```

13. Run the installer.

    ```
    cd /opt/collabnet/teamforge-installer/6.2.0.1
    ./install.sh -r -I -V
    ```

14. Bring your site data back.
    a) Reload `svnroot`, `sf-svnroot`, `cvsroot`, and `var`.

15. Update the file permissions on your site's data.

    ```
    /opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
    ```

    Note: This process can take a long time for a site with a lot of data.

Do this on the Black Duck Code Sight server. We'll call this `my.code.box`.

16. Set up the Black Duck Code Sight server using *these instructions*.

Do this on my.app.box:

17. Convert your site data to work with TeamForge 6.2.

    Tip: Before you kick off the data migration, use the `/etc/init.d/collabnet status` command to make sure the Jboss, Tomcat and Tomcatcs services are stopped.

    ```
    /opt/collabnet/teamforge/runtime/scripts/migrate.py
    ```

    The `migrate.py` script locates the existing site data and modifies it as needed.

    This includes configuration data for LDAP and the James mail server. Any modifications that you have applied to these components on your old site are reproduced on your upgraded TeamForge 6.2 site.

18. Swap in the new Apache configuration file.

    ```
    cd /etc/httpd/conf
    mv httpd.conf httpd.conf_old
    cp httpd.conf.cn_new httpd.conf
    /etc/init.d/httpd start
    ```

19. Run the Subversion working copy script when you are upgrading to TeamForge 6.2 and the old Teamforge site has the SVN 1.6.x version.
    a) `cd <SITE_DIR>/runtime/scripts`
    b) `./svn-upgrade-working-copies.sh`

       Note: Type "Y" when prompted.

20. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

    - You are logged in as "root"
    - You run the command only on the TeamForge application box
    - Your TeamForge database is running

    Run the post-install script from the `[`*`RUNTIME_DIR`*`]/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ./postinstall_62p1.py
    ```

21. Start TeamForge.

    ```
    /etc/init.d/collabnet start
    ```

Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

22. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ```

    b) List all the `etl` jobs.

    ```
    ./etl-client.py -a
    ```

    c) Run `TrackerInitialJob`.

    ```
    ./etl-client.py -r TrackerInitialJob
    ```

23. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

    Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

    Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

    ```
    sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
    ```

24. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

    After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

    ```
    ./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
    ```

    Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

    Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

25. **Note:** Do this if your site directory (SITE_DIR) is not the default `/opt/collabnet/teamforge`.

    If your old site directory is a different location, for example, `/usr/local/teamforge`, create a symlink as follows:

    ```
    cd /usr/local/
    ln -s /opt/collabnet/teamforge
    ```

26. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

    a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`

    b) `./trust-cert.sh`

    c) Restart the `collabnet` services.

    ```
    /etc/init.d/collabnet restart
    ```

27. Apply the finishing touches and make sure everything is running smoothly after upgrading to TeamForge 6.2.

a) Make sure your users can still access their source control services.

See *Synchronize TeamForge source control integrations* on page 264.

b) If you are bringing SSL certificates and keys from your old site, make sure their locations match the paths specified by the *SSL_CERT_FILE* and *SSL_KEY_FILE* variables in `site-options.conf`. See *Set up SSL for your TeamForge site*.

c) Log into your site as the administrator.

d) Reboot the server and make sure all services come up automatically at startup.

e) Rebuild your site's search index so that users get up-to-date search results.

See *Rebuild TeamForge search indexes* on page 254 for details.

f) To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

```
select * from etl_job where job_name ='tracker_initial_etl'
```

The status column should have a value of 1.

g) If your site has custom branding, verify that your branding changes still work as intended.

See *Customize anything on your site*.

h) Let your site's users know they've been upgraded.

See *Create a site-wide broadcast*.

Important: Do not delete the `teamforge-installer/6.2.0.1` directory. You will need it for future maintenance and upgrades.

Note: After the upgrade, it takes some time for the publishing repositories to get created for projects imported from other TeamForge sites.

Upgrade a stand-alone TeamForge source control box on the same hardware

If your TeamForge setup includes source control running on its own box, you'll have to upgrade that box as well as the main TeamForge application box.

For example, if you used *these install instructions* to install TeamForge 6.2 Patch 1, then this procedure is for you.

Note: This procedure is meant for sites that were installed in "advanced" mode. If your existing site was installed in "dedicated" mode, use *Upgrade to TeamForge 6.2 on the same box - Black Duck Code Sight on a separate box* instead. If there is any doubt about what kind of site you are working with, see *Is my TeamForge site "dedicated" or "advanced?"*

1. Back up your site data.

a) Make an archive file with the following data directories:

Directory	**Contents**
/svnroot	Subversion source code repositories
/cvsroot	CVS source code repositories (not present on all sites)

```
mkdir /tmp/backup_dir
cp -Rpf /svnroot /cvsroot /tmp/backup_dir
```

b) Back up your SSH keys, if any.

c) Back up your SSL certificates and keys, if any.

2. Stop TeamForge.

```
/etc/init.d/httpd stop
/etc/init.d/collabnet stop tomcat
```

3. Move the repositories from any previous installs out of the way.

   ```
   mv /etc/yum.repos.d/collabnet-6.1.1.0.repo
   /etc/yum.repos.d/collabnet-6.1.1.0.repo.cn_backup
   ```

4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
5. On the source code box, install the source code component of the TeamForge application.

   ```
   yum clean all
   yum install teamforge-scm
   ```

6. Set up your site's master configuration file.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
   ```

   Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

   a) Use the shared secret key, *SCM_DEFAULT_SHARED_SECRET*, from the `site-options.conf` file on the primary TeamForge server.
   b) Increase the value of MAX_WWW_CLIENTS.

   ```
   MAX_WWW_CLIENTS=220
   ```

   c) Review the variables you've changed, then save the `site-options.conf` file.
7. Create the runtime environment.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   ./install.sh -r -I -V
   ```

8. Update the file permissions on your site's data.

   ```
   /opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
   ```

9. Swap in the new Apache configuration file.

   ```
   cd /etc/httpd/conf
   mv httpd.conf httpd.conf_old
   cp httpd.conf.cn_new httpd.conf
   /etc/init.d/httpd start
   ```

10. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

    - You are logged in as "root"
    - You run the command only on the TeamForge application box
    - Your TeamForge database is running

    Run the post-install script from the `[RUNTIME_DIR]/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ./postinstall_62p1.py
    ```

11. Start TeamForge.

    ```
    /etc/init.d/httpd start
    ```

```
/etc/init.d/collabnet start tomcat
```

Upgrade to TeamForge 6.2 on CentOS

You can upgrade to TeamForge 6.2 from TeamForge 6.1.1. You can upgrade on the same box where your current TeamForge site is running, or you can take this opportunity to move your site to a new box. Choose the instructions that fit your case.

Note: The YUM installer will install the CollabNet TeamForge site in the default directory "/opt/collabnet/teamforge" only. If the SITE_DIR token in the `site-options.conf` file has a value other than the default directory, then set the token "SITE_DIR=/opt/collabnet/teamforge" in `site-options.conf` file.

Note: Due to the Lucene upgrade for search functionality, upgrading to TeamForge 6.2 requires a complete re-index of the site. This could take several hours, and the index data could double in size.

Upgrade to TeamForge 6.2 on the same box - Black Duck Code Sight on a separate box

To upgrade to TeamForge 6.2, you install the new site and convert your existing site's data.

For this procedure, we'll assume that you are upgrading on the same box where your existing TeamForge site is running. It's also possible to simultaneously upgrade and move your site to new hardware, but since we are working with a dedicated installation, the priority here is to keep things as simple and quick as possible. See *Should I upgrade to TeamForge 6.2 on a new box?* on page 315 for some background information.

Tip: If there is any doubt about what kind of site you are working with, see *Is my TeamForge site "dedicated" or "advanced?"*

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

1. Back up your site data.
   a) Make a dump file of your site database.

      (This may be the same as your TeamForge application server or a separate box.)

      You have to do a PostgreSQL dump because we are upgrading the PostgreSQL application as part of this upgrade.

      Note: These commands are for a PostgreSQL database, which is the default. If your site uses an Oracle database, follow the *Oracle backup procedure* instead.

      ```
      su - postgres
      /usr/bin/pg_dumpall > /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp
      exit
      mkdir /tmp/backup_dir
      cp /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp /tmp/backup_dir/
      ```

      Note: If your reporting database is running on a separate port, back up your reporting database too:

      ```
      /usr/bin/pg_dumpall -p <reports_database_port> >
      /var/lib/pgsql/9.0/backups/teamforge_reporting_data_backup.dmp
      ```

   b) Make an archive file with the following data directories:

Directory	Contents
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments

Directory	**Contents**
/svnroot	Subversion source code repositories
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

```
cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
/tmp/backup_dir
cd /tmp
tar czvf 611backup.tgz backup_dir
```

c) Back up your SSH keys, if any.
d) Back up your SSL certificates and keys, if any.

2. Stop TeamForge.

```
/etc/init.d/collabnet stop all
```

3. Move the repositories from any previous installs out of the way.

```
mv /etc/yum.repos.d/collabnet-6.1.1.0.repo
/etc/yum.repos.d/collabnet-6.1.1.0.repo.cn_backup
```

4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

5. Install the TeamForge application.

```
yum install teamforge
```

👉 **Tip:** If the yum installer fails, you may have duplicate rpm packages installed.

1. Get the `yum-utils` package, if it isn't already installed.

```
yum install yum-utils
```

2. Check for duplicate packages.

```
package-cleanup --dupes
```

3. Clean up the older packages, if any.

```
package-cleanup --cleandupes
```

4. Rerun the yum installer.

```
yum install teamforge [options]
```

6. Set up your site's master configuration file.

```
vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
```

👉 **Note:** `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

a) If you're installing Black Duck Code Sight, configure the following settings:

```
HOST_mycodesearchbox.domain.com=codesearch
```

Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

```
BDCS_HOST=<my.host.name or my.domain.name>

To enable SSL for Black Duck Code Sight, include this token:
BDCS_SSL=on
```

```
To change the default Black Duck Code Sight admin password, add these tokens:
BDCS_ADMIN_USERNAME=<username>
BDCS_ADMIN_PASSWORD=<password>

To configure the port number for the Code Search Tomcat server, set this
token:
BDCS_TOMCAT_PORT=9180

To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

b) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use the same key in the external SCM integration server also.

c) Increase the value of MAX_WWW_CLIENTS.

```
MAX_WWW_CLIENTS=220
```

d) Increase the value of PGSQL_MAX_CONNECTIONS.

```
PGSQL_MAX_CONNECTIONS=220
```

e) Set the DATABASE_MAX_POOL_SIZE token as follows:

```
DATABASE_MAX_POOL_SIZE=220
```

f) Set the REPORTS_DATABASE_MAX_POOL_SIZE token as follows:

```
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

g) Increase the ETL heap size.

```
ETL_JAVA_OPTS=-Xms160m -Xmx512m -server -XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails
 -Dsun.rmi.dgc.client.gcInterval=600000
-Dsun.rmi.dgc.server.gcInterval=600000
```

h) Set the USERS_WITH_NO_EXPIRY_PASSWORD token as follows:

```
USERS_WITH_NO_EXPIRY_PASSWORD=admin,nobody,system,scmviewer
```

i) Make sure that the following tokens have a value if ETL is enabled.

```
SOAP_ANONYMOUS_SHARED_SECRET=
ETL_SOAP_SHARED_SECRET=
```

7. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

8. Update the file permissions on your site's data.

```
/opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
```

Note: This process can take a long time for a site with a lot of data.

Do this on the Black Duck Code Sight server. We'll call this `my.code.box`.

9. Set up the Black Duck Code Sight server using *these instructions*.

Do this on my.app.box:

10. Convert your site data to work with TeamForge 6.2.

    Tip: Before you kick off the data migration, use the `/etc/init.d/collabnet status` command to make sure the Jboss, Tomcat and Tomcatcs services are stopped.

    ```
    /opt/collabnet/teamforge/runtime/scripts/migrate.py
    ```

    The `migrate.py` script locates the existing site data and modifies it as needed.

    This includes configuration data for LDAP and the James mail server. Any modifications that you have applied to these components on your old site are reproduced on your upgraded TeamForge 6.2 site.

11. Run the Subversion working copy script when you are upgrading to TeamForge 6.2 and the old Teamforge site has the SVN 1.6.x version.

    a) `cd <SITE_DIR>/runtime/scripts`

    b) `./svn-upgrade-working-copies.sh`

       Note: Type "Y" when prompted.

12. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

    - You are logged in as "root"
    - You run the command only on the TeamForge application box
    - Your TeamForge database is running

    Run the post-install script from the `[RUNTIME_DIR]/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ./postinstall_62p1.py
    ```

13. Start TeamForge.

    ```
    /etc/init.d/collabnet start
    ```

    Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

14. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

       ```
       cd /opt/collabnet/teamforge/runtime/scripts
       ```

    b) List all the `etl` jobs.

       ```
       ./etl-client.py -a
       ```

    c) Run `TrackerInitialJob`.

       ```
       ./etl-client.py -r TrackerInitialJob
       ```

15. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

    Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

    Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

    ```
    sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
    ```

16. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

    After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

    ```
    ./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
    ```

    Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

    Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

17. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

    a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`

    b) `./trust-cert.sh`

    c) Restart the `collabnet` services.

    ```
    /etc/init.d/collabnet restart
    ```

18. Apply the finishing touches and make sure everything is running smoothly after upgrading to TeamForge 6.2.

    Note: To ensure that Apache starts up automatically after a reboot, run this command now:

    ```
    /sbin/chkconfig --level 2345 httpd on
    ```

    a) Make sure your users can still access their source control services.

    See *Synchronize TeamForge source control integrations* on page 264.

    b) If you are bringing SSL certificates and keys from your old site, make sure their locations match the paths specified by the *SSL_CERT_FILE* and *SSL_KEY_FILE* variables in `site-options.conf`. See *Set up SSL for your TeamForge site*.

    c) Log into your site as the administrator.

    d) Reboot the server and make sure all services come up automatically at startup.

    e) Rebuild your site's search index so that users get up-to-date search results.

    See *Rebuild TeamForge search indexes* on page 254 for details.

    f) To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

    ```
    select * from etl_job where job_name ='tracker_initial_etl'
    ```

    The status column should have a value of 1.

    g) If your site has custom branding, verify that your branding changes still work as intended.

    See *Customize anything on your site*.

h) Let your site's users know they've been upgraded.

See *Create a site-wide broadcast*.

> **Important:** Do not delete the `teamforge-installer/6.2.0.1` directory. You will need it for future maintenance and upgrades.

> **Note:** After the upgrade, it takes some time for the publishing repositories to get created for projects imported from other TeamForge sites.

Upgrade a dedicated site to TeamForge 6.2 on new hardware

To upgrade to TeamForge 6.2, set up a new box, then bring over your old site's data and convert it.

TeamForge 6.2 runs on CentOS 6.1. To take advantage of the new operating system, you should install a fresh box and move your TeamForge site to it.

If necessary, however, TeamForge 6.2 can still run on CentOS 5.6. If you need to run your new site on the same box that your existing site is running on, see *Upgrade to TeamForge 6.2 on the same box - Black Duck Code Sight on a separate box*.

> **Note:** In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

On the existing TeamForge application box, log in as root and take these steps:

1. Stop the TeamForge application server and the Apache server, if they are running.

```
/etc/init.d/httpd stop
/etc/init.d/collabnet stop
```

2. Back up your site data.

a) Make a dump file of your site database.

(This may be the same as your TeamForge application server or a separate box.)

You have to do a PostgreSQL dump because we are upgrading the PostgreSQL application as part of this upgrade.

> **Note:** These commands are for a PostgreSQL database, which is the default. If your site uses an Oracle database, follow the *Oracle backup procedure* instead.

```
su - postgres
/usr/bin/pg_dumpall > /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp
exit
mkdir /tmp/backup_dir
cp /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp /tmp/backup_dir/
```

> **Note:** If your reporting database is running on a separate port, back up your reporting database too:

```
/usr/bin/pg_dumpall -p <reports_database_port> >
/var/lib/pgsql/9.0/backups/teamforge_reporting_data_backup.dmp
```

b) Make an archive file with the following data directories:

Directory	Contents
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments
/svnroot	Subversion source code repositories

Directory	**Contents**
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

```
cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
/tmp/backup_dir
cd /tmp
tar czvf 611backup.tgz backup_dir
```

c) Back up your SSH keys, if any.
d) Back up your SSL certificates and keys, if any.

3. Stop PostgreSQL.

```
/etc/init.d/postgresql stop
```

4. Copy the file system data to the new box.

```
scp /tmp/611backup.tgz username@newbox:/tmp
```

5. Copy the master configuration file from the old server to the same location on the new server.

```
scp /opt/collabnet/teamforge-installer/6.1.1.0/conf/site-options.conf
username@newbox:/tmp
```

👉 **Tip:** `scp` is just an example. Use whatever file transfer method you prefer.

Do step 6 on the new TeamForge 6.2 box:

6. Install CentOS 6.1 and log in as root.

- See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the Red Hat installation guide* for help.

👉 **Important:** Don't customize your installation. Select only the default packages list.

7. Check your basic networking setup.

See *Set up networking for your TeamForge box* on page 8 for details.

8. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

9. Install the TeamForge application.

```
yum install teamforge
```

10. Put the `site-options.conf` file where the installer can find it.

```
cp /tmp/site-options.conf /opt/collabnet/teamforge-installer/6.2.0.1/conf
```

11. Log in as root and unpack the file system data.

```
cd /tmp
tar xzvf 611backup.tgz
```

12. Set up your site's master configuration file.

```
vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
```

Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

a) Update the host name and domain name, if necessary.

```
HOST_my.host.name=app database subversion cvs etl datamart
DOMAIN_my.host.name=my.domain.name
```

b) Review the *DATABASE* variables.

You may want to substitute your own values for the default database names, user names and passwords.

c) Turn on the site-wide reporting functionality by adding the *REPORTS_** variables.

See *Turn on site-wide reporting* on page 263 for details.

d) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use the same key in the external SCM integration server also.

e) Increase the value of MAX_WWW_CLIENTS.

```
MAX_WWW_CLIENTS=220
```

f) Increase the value of PGSQL_MAX_CONNECTIONS.

```
PGSQL_MAX_CONNECTIONS=220
```

g) Set the DATABASE_MAX_POOL_SIZE token as follows:

```
DATABASE_MAX_POOL_SIZE=220
```

h) Set the REPORTS_DATABASE_MAX_POOL_SIZE token as follows:

```
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

i) Increase the ETL heap size.

```
ETL_JAVA_OPTS=-Xms160m -Xmx512m -server -XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails
 -Dsun.rmi.dgc.client.gcInterval=600000
-Dsun.rmi.dgc.server.gcInterval=600000
```

j) Set the USERS_WITH_NO_EXPIRY_PASSWORD token as follows:

```
USERS_WITH_NO_EXPIRY_PASSWORD=admin,nobody,system,scmviewer
```

k) Make sure that the following tokens have a value if ETL is enabled.

```
SOAP_ANONYMOUS_SHARED_SECRET=
ETL_SOAP_SHARED_SECRET=
```

l) If you're installing Black Duck Code Sight, configure the following settings:

```
HOST_mycodesearchbox.domain.com=codesearch
```

Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

```
BDCS_HOST=<my.host.name or my.domain.name>

To enable SSL for Black Duck Code Sight, include this token:
BDCS_SSL=on
```

```
To change the default Black Duck Code Sight admin password, add these tokens:
BDCS_ADMIN_USERNAME=<username>
BDCS_ADMIN_PASSWORD=<password>

To configure the port number for the Code Search Tomcat server, set this
token:
BDCS_TOMCAT_PORT=9180
```

```
To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

13. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

Do step 14 on the Black Duck Code Sight server. We'll call this `my.code.box`.

14. Set up the Black Duck Code Sight server using *these instructions*.

Do step 15 on my.app.box:

15. Bring your site data back.
    a) Reload the PostgreSQL data.

    ```
    su - postgres
    /usr/bin/psql < /tmp/backup_dir/teamforge_data_backup.dmp
    exit
    ```

    ☞ **Note:** If your reporting database is running on a separate port, restore that data too:

    ```
    su - postgres -c "/usr/bin/psql -p <reports_database_port> <
    /tmp/backup_dir/teamforge_reporting_data_backup.dmp"
    ```

    b) Reload `svnroot`, `sf-svnroot`, `cvsroot`, and `var`.
16. Update the file permissions on your site's data.

    ```
    /opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
    ```

    ☞ **Note:** This process can take a long time for a site with a lot of data.
17. Convert your site data to work with TeamForge 6.2.

    ☞ **Tip:** Before you kick off the data migration, use the `/etc/init.d/collabnet status` command to make sure the Jboss, Tomcat and Tomcatcs services are stopped.

    ```
    /opt/collabnet/teamforge/runtime/scripts/migrate.py
    ```

    The `migrate.py` script locates the existing site data and modifies it as needed.

    This includes configuration data for LDAP and the James mail server. Any modifications that you have applied to these components on your old site are reproduced on your upgraded TeamForge 6.2 site.
18. Run the Subversion working copy script when you are upgrading to TeamForge 6.2 and the old Teamforge site has the SVN 1.6.x version.
    a) `cd <SITE_DIR>/runtime/scripts`
    b) `./svn-upgrade-working-copies.sh`

    ☞ **Note:** Type "Y" when prompted.
19. ☞ **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:
    - You are logged in as "root"
    - You run the command only on the TeamForge application box
    - Your TeamForge database is running

Run the post-install script from the `[RUNTIME_DIR]/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
./postinstall_62p1.py
```

20. Start TeamForge.

    ```
    /etc/init.d/collabnet start
    ```

    Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

21. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ```

    b) List all the `etl` jobs.

    ```
    ./etl-client.py -a
    ```

    c) Run `TrackerInitialJob`.

    ```
    ./etl-client.py -r TrackerInitialJob
    ```

22. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

    Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

    Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

    ```
    sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
    ```

23. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

    After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

    ```
    ./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
    ```

    Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

    Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

24. **Note:** Do this if your site directory (SITE_DIR) is not the default `/opt/collabnet/teamforge`.

    If your old site directory is a different location, for example, `/usr/local/teamforge`, create a symlink as follows:

    ```
    cd /usr/local/
    ln -s /opt/collabnet/teamforge
    ```

25. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:
    a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`
    b) `./trust-cert.sh`
    c) Restart the `collabnet` services.

    ```
    /etc/init.d/collabnet restart
    ```

26. Apply the finishing touches and make sure everything is running smoothly after upgrading to TeamForge 6.2.

    👉 **Note:** To ensure that Apache starts up automatically after a reboot, run this command now:

    ```
    /sbin/chkconfig --level 2345 httpd on
    ```

    a) Make sure your users can still access their source control services.

       See *Synchronize TeamForge source control integrations* on page 264.
    b) If you are bringing SSL certificates and keys from your old site, make sure their locations match the paths specified by the *SSL_CERT_FILE* and *SSL_KEY_FILE* variables in `site-options.conf`. See *Set up SSL for your TeamForge site*.
    c) Log into your site as the administrator.
    d) Reboot the server and make sure all services come up automatically at startup.
    e) Rebuild your site's search index so that users get up-to-date search results.

       See *Rebuild TeamForge search indexes* on page 254 for details.
    f) To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

       ```
       select * from etl_job where job_name ='tracker_initial_etl'
       ```

       The status column should have a value of 1.
    g) If your site has custom branding, verify that your branding changes still work as intended.

       See *Customize anything on your site*.
    h) Let your site's users know they've been upgraded.

       See *Create a site-wide broadcast*.

    👉 **Important:** Do not delete the `teamforge-installer/6.2.0.1` directory. You will need it for future maintenance and upgrades.

👉 **Note:** After the upgrade, it takes some time for the publishing repositories to get created for projects imported from other TeamForge sites.

Upgrade an advanced TeamForge site to TeamForge 6.2

Upgrading to TeamForge 6.2 on an advanced site can be complicated but you get more flexibility and control.

If there is any doubt about what kind of site you are working with, see *Is my TeamForge site "dedicated" or "advanced?"*

Upgrade a TeamForge site to 6.2 on the same hardware

To upgrade to TeamForge 6.2 without changing the box where your TeamForge 6.1.1 site is running, you have to install the new TeamForge site and migrate the site data.

There are a few critical factors to keep in mind when upgrading to TeamForge 6.2.

- For this procedure, we'll assume that you are upgrading on the same box where your existing TeamForge site is running. It's also possible to simultaneously upgrade and move your site to new hardware. To do that, see *Upgrade to TeamForge 6.2 on new hardware*.

- This procedure is meant for sites that were installed in "advanced" mode. If your existing site was installed in "dedicated" mode, use *Upgrade to TeamForge 6.2 on the same box - Black Duck Code Sight on a separate box* instead. If there is any doubt about what kind of site you are working with, see *Is my TeamForge site "dedicated" or "advanced?"*

1. Back up your site data.

a) Make a dump file of your site database.

(This may be the same as your TeamForge application server or a separate box.)

You have to do a PostgreSQL dump because we are upgrading the PostgreSQL application as part of this upgrade.

Note: These commands are for a PostgreSQL database, which is the default. If your site uses an Oracle database, follow the *Oracle backup procedure* instead.

```
su - postgres
/usr/bin/pg_dumpall > /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp
exit
mkdir /tmp/backup_dir
cp /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp /tmp/backup_dir/
```

Note: If your reporting database is running on a separate port, back up your reporting database too:

```
/usr/bin/pg_dumpall -p <reports_database_port> >
/var/lib/pgsql/9.0/backups/teamforge_reporting_data_backup.dmp
```

b) Make an archive file with the following data directories:

Directory	Contents
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments
/svnroot	Subversion source code repositories
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

```
cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
/tmp/backup_dir
cd /tmp
tar czvf 611backup.tgz backup_dir
```

c) Back up your SSH keys, if any.

d) Back up your SSL certificates and keys, if any.

2. Stop TeamForge.

```
/etc/init.d/httpd stop
/etc/init.d/postgresql-9.0 stop
/etc/init.d/collabnet stop
```

3. If the database is running on a separate box, go to that box and move the old PostgreSQL control script out of the way.

```
mv /etc/init.d/postgresql_ctf /etc/init.d/postgresql_ctf_old
```

4. If the reporting database is running on a separate box, go to that box and move the old datamart PostgreSQL control script out of the way.

```
mv /etc/init.d/postgresql_reports /etc/init.d/postgresql_reports_old
```

5. Uninstall the PostgreSQL support packages to clear the way for TeamForge to install PostgreSQL 9.0.

   (These packages are installed with the OS by default.)

   ```
   yum erase postgresql-libs postgresql-docs
   ```

6. Move the repositories from any previous installs out of the way.

   ```
   mv /etc/yum.repos.d/collabnet-6.1.1.0.repo
   /etc/yum.repos.d/collabnet-6.1.1.0.repo.cn_backup
   ```

7. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
8. Install the TeamForge application.

   ```
   yum install teamforge
   ```

9. Set up your site's master configuration file.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
   ```

   Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

   a) Update the host name and domain name, if necessary.

   ```
   HOST_my.host.name=app database subversion cvs etl datamart
   DOMAIN_my.host.name=my.domain.name
   ```

   b) Review the *DATABASE* variables.

   You may want to substitute your own values for the default database names, user names and passwords.

   c) Turn on the site-wide reporting functionality by adding the *REPORTS_** variables.

   See *Turn on site-wide reporting* on page 263 for details.

   d) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

   Remember that you need to use the same key in the external SCM integration server also.

   e) Increase the value of MAX_WWW_CLIENTS.

   ```
   MAX_WWW_CLIENTS=220
   ```

   f) Increase the value of PGSQL_MAX_CONNECTIONS.

   ```
   PGSQL_MAX_CONNECTIONS=220
   ```

   g) Set the DATABASE_MAX_POOL_SIZE token as follows:

   ```
   DATABASE_MAX_POOL_SIZE=220
   ```

   h) Set the REPORTS_DATABASE_MAX_POOL_SIZE token as follows:

   ```
   REPORTS_DATABASE_MAX_POOL_SIZE=30
   ```

   i) Increase the ETL heap size.

   ```
   ETL_JAVA_OPTS=-Xms160m -Xmx512m -server -XX:+HeapDumpOnOutOfMemoryError
   -XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails
    -Dsun.rmi.dgc.client.gcInterval=600000
   -Dsun.rmi.dgc.server.gcInterval=600000
   ```

   j) Set the USERS_WITH_NO_EXPIRY_PASSWORD token as follows:

   ```
   USERS_WITH_NO_EXPIRY_PASSWORD=admin,nobody,system,scmviewer
   ```

k) Make sure that the following tokens have a value if ETL is enabled.

```
SOAP_ANONYMOUS_SHARED_SECRET=
ETL_SOAP_SHARED_SECRET=
```

l) If you're installing Black Duck Code Sight, configure the following settings:

```
HOST_mycodesearchbox.domain.com=codesearch
```

Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

```
BDCS_HOST=<my.host.name or my.domain.name>

To enable SSL for Black Duck Code Sight, include this token:
BDCS_SSL=on
```

```
To change the default Black Duck Code Sight admin password, add these tokens:
BDCS_ADMIN_USERNAME=<username>
BDCS_ADMIN_PASSWORD=<password>

To configure the port number for the Code Search Tomcat server, set this
token:
BDCS_TOMCAT_PORT=9180

To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

10. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

11. If the database is running on a separate box, copy the `postgresql` script from `/opt/collabnet/teamforge/runtime/scripts` on my.app.box to the `/tmp` directory of my.data.box.

```
cp /tmp/postgresql_ctf /etc/init.d
```

12. Start the database service.

```
/etc/init.d/postgresql_ctf start
```

13. If the reporting database is running on a separate box, copy the datamart control script from `/opt/collabnet/teamforge/runtime/scripts` on my.app.box to the `/tmp` directory of my.datamart.box.

```
cp /tmp/postgresql_reports /etc/init.d
```

14. Start the reporting database service.

```
/etc/init.d/postgresql_reports start
```

15. Update the file permissions on your site's data.

```
/opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
```

Note: This process can take a long time for a site with a lot of data.

Do step 16 on the Black Duck Code Sight server. We'll call this `my.code.box`.

16. Set up the Black Duck Code Sight server using *these instructions*.

Do step 17 on my.app.box:

17. Convert your site data to work with TeamForge 6.2.

    Tip: Before you kick off the data migration, use the `/etc/init.d/collabnet status` command to make sure the Jboss, Tomcat and Tomcatcs services are stopped.

    ```
    /opt/collabnet/teamforge/runtime/scripts/migrate.py
    ```

    The `migrate.py` script locates the existing site data and modifies it as needed.

    This includes configuration data for LDAP and the James mail server. Any modifications that you have applied to these components on your old site are reproduced on your upgraded TeamForge 6.2 site.
18. Swap in the new Apache configuration file.

    ```
    cd /etc/httpd/conf
    mv httpd.conf httpd.conf_old
    cp httpd.conf.cn_new httpd.conf
    /etc/init.d/httpd start
    ```
19. Run the Subversion working copy script when you are upgrading to TeamForge 6.2 and the old Teamforge site has the SVN 1.6.x version.

    a) `cd <SITE_DIR>/runtime/scripts`

    b) `./svn-upgrade-working-copies.sh`

       Note: Type "Y" when prompted.
20. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

    - You are logged in as "root"
    - You run the command only on the TeamForge application box
    - Your TeamForge database is running

    Run the post-install script from the `[RUNTIME_DIR]/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ./postinstall_62p1.py
    ```
21. Start TeamForge.

    Start PostgreSQL if it is not running.

    ```
    /etc/init.d/postgresql-9.0 start
    ```

    Start the CollabNet services.

    ```
    /etc/init.d/collabnet start
    ```
22. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ```

    b) List all the `etl` jobs.

    ```
    ./etl-client.py -a
    ```

    c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

23. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

    Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

    Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

    ```
    sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
    ```

24. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

    After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

    ```
    ./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
    ```

    Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

    Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

25. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

    a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`

    b) `./trust-cert.sh`

    c) Restart the `collabnet` services.

    ```
    /etc/init.d/collabnet restart
    ```

26. Apply the finishing touches and make sure everything is running smoothly after upgrading to TeamForge 6.2.

    Note: To ensure that Apache starts up automatically after a reboot, run this command now:

    ```
    /sbin/chkconfig --level 2345 httpd on
    ```

    a) Make sure your users can still access their source control services.

    See *Synchronize TeamForge source control integrations* on page 264.

    b) If you are bringing SSL certificates and keys from your old site, make sure their locations match the paths specified by the *SSL_CERT_FILE* and *SSL_KEY_FILE* variables in `site-options.conf`. See *Set up SSL for your TeamForge site*.

    c) Log into your site as the administrator.

    d) Reboot the server and make sure all services come up automatically at startup.

    e) Rebuild your site's search index so that users get up-to-date search results.

    See *Rebuild TeamForge search indexes* on page 254 for details.

    f) To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

    ```
    select * from etl_job where job_name ='tracker_initial_etl'
    ```

    The status column should have a value of 1.

g) If your site has custom branding, verify that your branding changes still work as intended.

   See *Customize anything on your site*.

h) Let your site's users know they've been upgraded.

   See *Create a site-wide broadcast*.

   Important: Do not delete the `teamforge-installer/6.2.0.1` directory. You will need it for future maintenance and upgrades.

Note: After the upgrade, it takes some time for the publishing repositories to get created for projects imported from other TeamForge sites.

Upgrade to TeamForge 6.2 on new hardware

To upgrade to TeamForge 6.2, set up a new box, then bring over your old site's data and convert it.

TeamForge 6.2 runs on CentOS 6.1. To take advantage of the new operating system, you should install a fresh box and move your TeamForge 6.2 site to it.

If you need to run your new site on the same box that your existing site is running on, see *Upgrade a TeamForge site to 6.2 on the same hardware*.

Note: This procedure assumes that you are running your new site-wide reporting database on the same box where your TeamForge application and database are running, and that the reporting database shares the same port as the site database.

You don't have to set it up exactly like this.

- You can run the reporting database on a separate box. For an example of that, see *Option 3: Install TeamForge 6.2 with reporting data on a separate box*.
- You can run the reporting database on the same box as the site database, but with a separate port. For an example, see *Option 5: Distribute TeamForge 6.2 services a different way*
- In a multi-box installation of Black Duck Code Sight, all machines must have the same time - without this, ETL will not function properly.

Take these steps on the new TeamForge 6.2 box:

1. Install CentOS 6.1 and log in as root.

   - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
   - See *the Red Hat installation guide* for help.

   Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

   See *Set up networking for your TeamForge box* for details.

3. Uninstall the PostgreSQL support package and the Dovecot mail server to clear the way for TeamForge to install PostgreSQL 9.0.4. These packages are installed as part of the default CentOS install.

   ```
   yum erase postgresql-libs dovecot
   ```

4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

On the TeamForge 6.1 box, log in as root and take these steps:

5. Stop the TeamForge application server and the Apache server, if they are running.

   ```
   /etc/init.d/httpd stop
   /etc/init.d/collabnet stop
   ```

6. Back up your site data.

a) Make a dump file of your site database.

(This may be the same as your TeamForge application server or a separate box.)

You have to do a PostgreSQL dump because we are upgrading the PostgreSQL application as part of this upgrade.

Note: These commands are for a PostgreSQL database, which is the default. If your site uses an Oracle database, follow the *Oracle backup procedure* instead.

```
su - postgres
/usr/bin/pg_dumpall > /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp
exit
mkdir /tmp/backup_dir
cp /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp /tmp/backup_dir/
```

Note: If your reporting database is running on a separate port, back up your reporting database too:

```
/usr/bin/pg_dumpall -p <reports_database_port> >
/var/lib/pgsql/9.0/backups/teamforge_reporting_data_backup.dmp
```

b) Make an archive file with the following data directories:

Directory	Contents
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments
/svnroot	Subversion source code repositories
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

```
cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
/tmp/backup_dir
cd /tmp
tar czvf 611backup.tgz backup_dir
```

c) Back up your SSH keys, if any.

d) Back up your SSL certificates and keys, if any.

7. Stop PostgreSQL.

```
/etc/init.d/postgresql-9.0 stop
```

8. If the database is running on a separate box, go to that box and move the old PostgreSQL control script out of the way.

```
mv /etc/init.d/postgresql_ctf /etc/init.d/postgresql_ctf_old
```

9. If the reporting database is running on a separate box, go to that box and move the old datamart PostgreSQL control script out of the way.

```
mv /etc/init.d/postgresql_reports /etc/init.d/postgresql_reports_old
```

10. Copy the file system data to the new box.

```
scp /tmp/611backup.tgz username@newbox:/tmp
```

11. Copy the master configuration file from the old server to the same location on the new server.

```
scp /opt/collabnet/teamforge-installer/6.1.1.0/conf/site-options.conf
username@newbox:/tmp
```

Tip: `scp` is just an example. Use whatever file transfer method you prefer.

Do this on the new TeamForge 6.2 Patch 1 box:

12. Log in as root and unpack the file system data.

    ```
    cd /tmp
    tar xzvf 611backup.tgz
    ```

13. Install the TeamForge application.

    ```
    yum install teamforge-app teamforge-scm teamforge-database teamforge-etl
    ```

    Tip: If the yum installer fails, you may have duplicate rpm packages installed.

    1. Get the `yum-utils` package, if it isn't already installed.

       ```
       yum install yum-utils
       ```

    2. Check for duplicate packages.

       ```
       package-cleanup --dupes
       ```

    3. Clean up the older packages, if any.

       ```
       package-cleanup --cleandupes
       ```

    4. Rerun the yum installer.

       ```
       yum install teamforge [options]
       ```

14. Put the `site-options.conf` file where the installer can find it.

    ```
    cp /tmp/site-options.conf /opt/collabnet/teamforge-installer/6.2.0.1/conf
    ```

15. Set up your site's master configuration file.

    ```
    vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
    ```

    Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

    a) Update the host name and domain name, if necessary.

    ```
    HOST_my.host.name=app database subversion cvs etl datamart
    DOMAIN_my.host.name=my.domain.name
    ```

    b) Review the *DATABASE* variables.

    You may want to substitute your own values for the default database names, user names and passwords.

    c) Turn on the site-wide reporting functionality by adding the *REPORTS_** variables.

    See *Turn on site-wide reporting* on page 263 for details.

    d) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

    Remember that you need to use the same key in the external SCM integration server also.

e) Increase the value of MAX_WWW_CLIENTS.

```
MAX_WWW_CLIENTS=220
```

f) Increase the value of PGSQL_MAX_CONNECTIONS.

```
PGSQL_MAX_CONNECTIONS=220
```

g) Set the DATABASE_MAX_POOL_SIZE token as follows:

```
DATABASE_MAX_POOL_SIZE=220
```

h) Set the REPORTS_DATABASE_MAX_POOL_SIZE token as follows:

```
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

i) Increase the ETL heap size.

```
ETL_JAVA_OPTS=-Xms160m -Xmx512m -server -XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails
 -Dsun.rmi.dgc.client.gcInterval=600000
-Dsun.rmi.dgc.server.gcInterval=600000
```

j) Set the USERS_WITH_NO_EXPIRY_PASSWORD token as follows:

```
USERS_WITH_NO_EXPIRY_PASSWORD=admin,nobody,system,scmviewer
```

k) Make sure that the following tokens have a value if ETL is enabled.

```
SOAP_ANONYMOUS_SHARED_SECRET=
ETL_SOAP_SHARED_SECRET=
```

l) If you're installing Black Duck Code Sight, configure the following settings:

```
HOST_mycodesearchbox.domain.com=codesearch
```

Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

```
BDCS_HOST=<my.host.name or my.domain.name>

To enable SSL for Black Duck Code Sight, include this token:
BDCS_SSL=on
```

```
To change the default Black Duck Code Sight admin password, add these tokens:
BDCS_ADMIN_USERNAME=<username>
BDCS_ADMIN_PASSWORD=<password>

To configure the port number for the Code Search Tomcat server, set this
token:
BDCS_TOMCAT_PORT=9180

To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

16. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

17. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
/usr/pgsql-9.0/bin/initdb -D /var/lib/pgsql/9.0/data
```

```
vi /var/lib/pgsql/9.0/data/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of data box>'
```

b) Configure database access for the site database.

```
vi /var/lib/pgsql/9.0/data/pg_hba.conf
```

```

local  all                     all
                       trust
# IPv4 local connections:
host   all                     all
127.0.0.1/32                 trust
# IPv6 local connections:
#host  all                     all                                    ::1/128
                      trust
host   <DATABASE_NAME>         <DATABASE_USERNAME                   <IP
address of app box>/32  md5
host   <REPORTS_DATABASE_NAME> <REPORTS_DATABASE_USERNAME>          <IP
address of app box>/32  md5
host   <REPORTS_DATABASE_NAME> <REPORTS_DATABASE_READ_ONLY_USERNAME> <IP
address of app box>/32  md5
```

c) Exit and restart PostgreSQL.

```
exit
/etc/init.d/postgresql-9.0 start
```

18. Bring your site data back.

a) Reload the PostgreSQL data.

```
su - postgres
/usr/bin/psql < /tmp/backup_dir/teamforge_data_backup.dmp
exit
```

Note: If your reporting database is running on a separate port, restore that data too:

```
su - postgres -c "/usr/bin/psql -p <reports_database_port> <
/tmp/backup_dir/teamforge_reporting_data_backup.dmp"
```

b) Reload `svnroot`, `sf-svnroot`, `cvsroot`, and `var`.

19. Update the file permissions on your site's data.

```
/opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
```

Note: This process can take a long time for a site with a lot of data.

Do this on the Black Duck Code Sight server. We'll call this `my.code.box`.

20. Set up the Black Duck Code Sight server using *these instructions*.

Do this on my.app.box:

21. Convert your site data to work with TeamForge 6.2.

Tip: Before you kick off the data migration, use the `/etc/init.d/collabnet status` command to make sure the Jboss, Tomcat and Tomcatcs services are stopped.

```
/opt/collabnet/teamforge/runtime/scripts/migrate.py
```

The `migrate.py` script locates the existing site data and modifies it as needed.

This includes configuration data for LDAP and the James mail server. Any modifications that you have applied to these components on your old site are reproduced on your upgraded TeamForge 6.2 site.

22. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

23. Run the Subversion working copy script when you are upgrading to TeamForge 6.2 and the old Teamforge site has the SVN 1.6.x version.

a) `cd <SITE_DIR>/runtime/scripts`

b) `./svn-upgrade-working-copies.sh`

Note: Type "Y" when prompted.

24. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

- You are logged in as "root"
- You run the command only on the TeamForge application box
- Your TeamForge database is running

Run the post-install script from the `[`*`RUNTIME_DIR`*`]/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
./postinstall_62p1.py
```

25. Start TeamForge.

Start PostgreSQL if it is not running.

```
/etc/init.d/postgresql-9.0 start
```

Start CollabNet services.

```
/etc/init.d/collabnet start
```

26. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

27. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

```
sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
```

28. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

    After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

    ```
    ./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
    ```

    Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

    Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

29. **Note:** Do this if your site directory (SITE_DIR) is not the default `/opt/collabnet/teamforge`.

    If your old site directory is a different location, for example, `/usr/local/teamforge`, create a symlink as follows:

    ```
    cd /usr/local/
    ln -s /opt/collabnet/teamforge
    ```

30. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:
    a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`
    b) `./trust-cert.sh`
    c) Restart the `collabnet` services.

    ```
    /etc/init.d/collabnet restart
    ```

31. Apply the finishing touches and make sure everything is running smoothly after upgrading to TeamForge 6.2.

    Note: To ensure that Apache starts up automatically after a reboot, run this command now:

    ```
    /sbin/chkconfig --level 2345 httpd on
    ```

    a) Make sure your users can still access their source control services.

       See *Synchronize TeamForge source control integrations* on page 264.

    b) If you are bringing SSL certificates and keys from your old site, make sure their locations match the paths specified by the *SSL_CERT_FILE* and *SSL_KEY_FILE* variables in `site-options.conf`. See *Set up SSL for your TeamForge site*.
    c) Log into your site as the administrator.
    d) Reboot the server and make sure all services come up automatically at startup.
    e) Rebuild your site's search index so that users get up-to-date search results.

       See *Rebuild TeamForge search indexes* on page 254 for details.

    f) To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

```
select * from etl_job where job_name ='tracker_initial_etl'
```

The status column should have a value of 1.

g) If your site has custom branding, verify that your branding changes still work as intended.

See *Customize anything on your site*.

h) Let your site's users know they've been upgraded.

See *Create a site-wide broadcast*.

Important: Do not delete the `teamforge-installer/6.2.0.1` directory. You will need it for future maintenance and upgrades.

Note: After the upgrade, it takes some time for the publishing repositories to get created for projects imported from other TeamForge sites.

Upgrade TeamForge to version 6.2 on the same box (Oracle)

To upgrade to TeamForge 6.2 without changing the box where your TeamForge 6.1.1 site is running, you have to install the new TeamForge site and migrate the site data.

TeamForge 6.2 runs on CentOS 6.1.

If you need to run your new site on new hardware, see *Upgrade TeamForge to version 6.2 on new hardware (Oracle)*.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

On the existing TeamForge application box, log in as root and take these steps:

1. Back up your site data.

   a) Make a dump file of your site database.

   To back up the Oracle database, follow the *Oracle backup procedure*.

   b) Make an archive file with the following data directories:

Directory	Contents
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments
/svnroot	Subversion source code repositories
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

```
cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
/tmp/backup_dir
cd /tmp
tar czvf 611backup.tgz backup_dir
```

   c) Back up your SSH keys, if any.

   d) Back up your SSL certificates and keys, if any.

2. Stop the TeamForge application server and the Apache server, if they are running.

```
/etc/init.d/httpd stop
/etc/init.d/collabnet stop
```

3. Move the repositories from any previous installs out of the way.

```
mv /etc/yum.repos.d/collabnet-6.1.1.0.repo
/etc/yum.repos.d/collabnet-6.1.1.0.repo.cn_backup
```

4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
5. Install the TeamForge application.

   ```
   yum install teamforge-app teamforge-scm teamforge-etl
   ```

   Tip: If the yum installer balks, you may have duplicate rpm packages.

   1. Get the `yum-utils` package, if it isn't already installed.

      ```
      yum install yum-utils
      ```

   2. Check for duplicate packages.

      ```
      package-cleanup --dupes
      ```

   3. Clean up the older packages, if any.

      ```
      package-cleanup --cleandupes
      ```

   4. Rerun the yum installer.

      ```
      yum install teamforge [options]
      ```

6. Set up your site's master configuration file.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
   ```

   Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

   a) If you're installing Black Duck Code Sight, configure the following settings:

   ```
   HOST_mycodesearchbox.domain.com=codesearch
   ```

   Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

   ```
   BDCS_HOST=<my.host.name or my.domain.name>

   To enable SSL for Black Duck Code Sight, include this token:
   BDCS_SSL=on
   ```

   ```
   To change the default Black Duck Code Sight admin password, add these tokens:
   BDCS_ADMIN_USERNAME=<username>
   BDCS_ADMIN_PASSWORD=<password>

   To configure the port number for the Code Search Tomcat server, set this
   token:
   BDCS_TOMCAT_PORT=9180

   To specify the maximum results shown in Code Search, set this token:
   Caution: Increasing this might impact performance.
   BDCS_SDK_SEARCH_LIMIT_MAX=200
   ```

   b) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

   Remember that you need to use the same key in the external SCM integration server also.

c) Increase the value of MAX_WWW_CLIENTS.

```
MAX_WWW_CLIENTS=220
```

d) Set the DATABASE_MAX_POOL_SIZE token as follows:

```
DATABASE_MAX_POOL_SIZE=220
```

e) Set the REPORTS_DATABASE_MAX_POOL_SIZE token as follows:

```
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

f) Increase the ETL heap size.

```
ETL_JAVA_OPTS=-Xms160m -Xmx512m -server -XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails
 -Dsun.rmi.dgc.client.gcInterval=600000
-Dsun.rmi.dgc.server.gcInterval=600000
```

g) Set the USERS_WITH_NO_EXPIRY_PASSWORD token as follows:

```
USERS_WITH_NO_EXPIRY_PASSWORD=admin,nobody,system,scmviewer
```

h) Make sure that the following tokens have a value if ETL is enabled.

```
SOAP_ANONYMOUS_SHARED_SECRET=
ETL_SOAP_SHARED_SECRET=
```

i) **Note:** Perform this check only if you are uisng an Oracle database.

Make sure that the database service names of the production database and reports database are configured to DATABASE_SERVICE_NAME and REPORTS_DATABASE_SERVICE_NAME respectively.

j) Review the variables you've changed, then save the `site-options.conf` file.

7. **Note:** Execute this step only if your Oracle server version is not 11.2.0.1.

Download the corresponding version of Oracle client from *http://www.oracle.com/technetwork/database/features/instant-client/index-097480.html* and run this command:

```
yum localinstall <path to oracle client rpm>
```

8. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

9. Update the file permissions on your site's data.

```
/opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
```

Note: This process can take a long time for a site with a lot of data.

Do step 10 on the Black Duck Code Sight server. We'll call this `my.code.box`.

10. Set up the Black Duck Code Sight server using *these instructions*.

Do step 11 on my.app.box:

11. Convert your site data to work with TeamForge 6.2.

Tip: Before you kick off the data migration, use the `/etc/init.d/collabnet status` command to make sure the Jboss, Tomcat and Tomcatcs services are stopped.

```
/opt/collabnet/teamforge/runtime/scripts/migrate.py
```

The `migrate.py` script locates the existing site data and modifies it as needed.

This includes configuration data for LDAP and the James mail server. Any modifications that you have applied to these components on your old site are reproduced on your upgraded TeamForge 6.2 site.

12. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

13. Run the Subversion working copy script when you are upgrading to TeamForge 6.2 and the old Teamforge site has the SVN 1.6.x version.

a) `cd <SITE_DIR>/runtime/scripts`

b) `./svn-upgrade-working-copies.sh`

Note: Type "Y" when prompted.

14. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

- You are logged in as "root"
- You run the command only on the TeamForge application box
- Your TeamForge database is running

Run the post-install script from the `[RUNTIME_DIR]/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
./postinstall_62p1.py
```

15. Start TeamForge.

```
/etc/init.d/collabnet start
```

Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

16. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

17. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

```
sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
```

18. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

    After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

    ```
    ./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
    ```

    Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

    Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

19. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:
    a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`
    b) `./trust-cert.sh`
    c) Restart the `collabnet` services.

    ```
    /etc/init.d/collabnet restart
    ```

20. Apply the finishing touches and make sure everything is running smoothly after upgrading to TeamForge 6.2.

    Note: To ensure that Apache starts up automatically after a reboot, run this command now:

    ```
    /sbin/chkconfig --level 2345 httpd on
    ```

    a) Make sure your users can still access their source control services.

    See *Synchronize TeamForge source control integrations* on page 264.

    b) If you are bringing SSL certificates and keys from your old site, make sure their locations match the paths specified by the *SSL_CERT_FILE* and *SSL_KEY_FILE* variables in `site-options.conf`. See *Set up SSL for your TeamForge site*.
    c) Log into your site as the administrator.
    d) Reboot the server and make sure all services come up automatically at startup.
    e) Rebuild your site's search index so that users get up-to-date search results.

    See *Rebuild TeamForge search indexes* on page 254 for details.

    f) To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

    ```
    select * from etl_job where job_name ='tracker_initial_etl'
    ```

    The status column should have a value of 1.
    g) If your site has custom branding, verify that your branding changes still work as intended.

    See *Customize anything on your site*.

    h) Let your site's users know they've been upgraded.

    See *Create a site-wide broadcast*.

Important: Do not delete the `teamforge-installer/6.2.0.1` directory. You will need it for future maintenance and upgrades.

Note: After the upgrade, it takes some time for the publishing repositories to get created for projects imported from other TeamForge sites.

Upgrade TeamForge to version 6.2 on new hardware (Oracle)

To upgrade to TeamForge 6.2, set up a new box, then bring over your old site's data and convert it.

TeamForge 6.2 runs on CentOS 6.1. To take advantage of the new operating system, you should install a fresh box and move your TeamForge 6.2 Patch 1 site to it.

If necessary, however, TeamForge 6.2 can still run on CentOS 5.6. If you need to run your new site on the same box that your existing site is running on, see *Upgrade TeamForge to version 6.2 on the same box (Oracle)*.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

On the existing TeamForge application box, log in as root and take these steps:

1. Stop the TeamForge application server and the Apache server, if they are running.

   ```
   /etc/init.d/httpd stop
   /etc/init.d/collabnet stop
   ```

2. Back up your site data.
   a) Make a dump file of your site database.

   To back up the Oracle database, follow the *Oracle backup procedure*.

   b) Make an archive file with the following data directories:

Directory	Contents
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments
/svnroot	Subversion source code repositories
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

   ```
   cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
   /tmp/backup_dir
   cd /tmp
   tar czvf 611backup.tgz backup_dir
   ```

   c) Back up your SSH keys, if any.
   d) Back up your SSL certificates and keys, if any.

3. Copy the file system data to the new box.

   ```
   scp /tmp/611backup.tgz username@newbox:/tmp
   ```

4. Copy the master configuration file from the old server to the same location on the new server.

   ```
   scp /opt/collabnet/teamforge-installer/6.1.1.0/conf/site-options.conf
   username@newbox:/tmp
   ```

   Tip: `scp` is just an example. Use whatever file transfer method you prefer.

Take these steps on the new TeamForge 6.2 box:

5. Install CentOS 6.1 and log in as root.

   - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.

- See *the Red Hat installation guide* for help.

  Important: Don't customize your installation. Select only the default packages list.

6. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
7. Install the TeamForge application.

   ```
   yum install teamforge-app teamforge-scm teamforge-etl
   ```

   Tip: If the yum installer balks, you may have duplicate rpm packages.

   1. Get the `yum-utils` package, if it isn't already installed.

      ```
      yum install yum-utils
      ```

   2. Check for duplicate packages.

      ```
      package-cleanup --dupes
      ```

   3. Clean up the older packages, if any.

      ```
      package-cleanup --cleandupes
      ```

   4. Rerun the yum installer.

      ```
      yum install teamforge [options]
      ```

8. Put the `site-options.conf` file where the installer can find it.

   ```
   cp /tmp/site-options.conf /opt/collabnet/teamforge-installer/6.2.0.1/conf
   ```

9. Log in as root and unpack the file system data.

   ```
   cd /tmp
   tar xzvf 611backup.tgz
   ```

10. Update the host name and domain name, if necessary.

    ```
    HOST_my.host.name=app subversion cvs etl
    HOST_my.db.name=database datamart
    DOMAIN_my.host.name=my.domain.name
    ```

11. Set up your site's master configuration file.

    ```
    vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
    ```

    Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

    a) If you're installing Black Duck Code Sight, configure the following settings:

    ```
    HOST_mycodesearchbox.domain.com=codesearch
    ```

    Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

    ```
    BDCS_HOST=<my.host.name or my.domain.name>
    ```

```
To enable SSL for Black Duck Code Sight, include this token:
BDCS_SSL=on
```

```
To change the default Black Duck Code Sight admin password, add these tokens:
BDCS_ADMIN_USERNAME=<username>
BDCS_ADMIN_PASSWORD=<password>

To configure the port number for the Code Search Tomcat server, set this
token:
BDCS_TOMCAT_PORT=9180

To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

b) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

   Remember that you need to use the same key in the external SCM integration server also.

c) Increase the value of MAX_WWW_CLIENTS.

```
MAX_WWW_CLIENTS=220
```

d) Set the DATABASE_MAX_POOL_SIZE token as follows:

```
DATABASE_MAX_POOL_SIZE=220
```

e) Set the REPORTS_DATABASE_MAX_POOL_SIZE token as follows:

```
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

f) Increase the ETL heap size.

```
ETL_JAVA_OPTS=-Xms160m -Xmx512m -server -XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails
 -Dsun.rmi.dgc.client.gcInterval=600000
-Dsun.rmi.dgc.server.gcInterval=600000
```

g) Set the USERS_WITH_NO_EXPIRY_PASSWORD token as follows:

```
USERS_WITH_NO_EXPIRY_PASSWORD=admin,nobody,system,scmviewer
```

h) Make sure that the following tokens have a value if ETL is enabled.

```
SOAP_ANONYMOUS_SHARED_SECRET=
ETL_SOAP_SHARED_SECRET=
```

i) **Note:** Perform this check only if you are uisng an Oracle database.

   Make sure that the database service names of the production database and reports database are configured to DATABASE_SERVICE_NAME and REPORTS_DATABASE_SERVICE_NAME respectively.

j) Review the variables you've changed, then save the `site-options.conf` file.

12. **Note:** Execute this step only if your Oracle server version is not 11.2.0.1.

Download the corresponding version of Oracle client from *http://www.oracle.com/technetwork/database/features/instant-client/index-097480.html* and run this command:

```
yum localinstall <path to oracle client rpm>
```

13. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

14. Bring your site data back.

a) Reload `svnroot`, `sf-svnroot`, `cvsroot`, and `var`.

15. Update the file permissions on your site's data.

```
/opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
```

> **Note:** This process can take a long time for a site with a lot of data.

Do step 20 on the Black Duck Code Sight server. We'll call this `my.code.box`.

16. Set up the Black Duck Code Sight server using *these instructions*.

Do step 21 on my.app.box:

17. Convert your site data to work with TeamForge 6.2.

> **Tip:** Before you kick off the data migration, use the `/etc/init.d/collabnet status` command to make sure the Jboss, Tomcat and Tomcatcs services are stopped.

```
/opt/collabnet/teamforge/runtime/scripts/migrate.py
```

The `migrate.py` script locates the existing site data and modifies it as needed.

This includes configuration data for LDAP and the James mail server. Any modifications that you have applied to these components on your old site are reproduced on your upgraded TeamForge 6.2 site.

18. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

19. Run the Subversion working copy script when you are upgrading to TeamForge 6.2 and the old Teamforge site has the SVN 1.6.x version.

a) `cd <SITE_DIR>/runtime/scripts`

b) `./svn-upgrade-working-copies.sh`

> **Note:** Type "Y" when prompted.

20. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

- You are logged in as "root"
- You run the command only on the TeamForge application box
- Your TeamForge database is running

Run the post-install script from the `[RUNTIME_DIR]/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
./postinstall_62p1.py
```

21. Start TeamForge.

```
/etc/init.d/collabnet start
```

> **Note:** The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

22. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

23. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

    Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

    Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

    ```
    sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
    ```

24. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

    After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

    ```
    ./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
    ```

    Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

    Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

25. **Note:** Do this if your site directory (SITE_DIR) is not the default `/opt/collabnet/teamforge`.

    If your old site directory is a different location, for example, `/usr/local/teamforge`, create a symlink as follows:

    ```
    cd /usr/local/
    ln -s /opt/collabnet/teamforge
    ```

26. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

    a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`

    b) `./trust-cert.sh`

    c) Restart the `collabnet` services.

    ```
    /etc/init.d/collabnet restart
    ```

27. Apply the finishing touches and make sure everything is running smoothly after upgrading to TeamForge 6.2.

Note: To ensure that Apache starts up automatically after a reboot, run this command now:

```
/sbin/chkconfig --level 2345 httpd on
```

a) Make sure your users can still access their source control services.

See *Synchronize TeamForge source control integrations* on page 264.

b) If you are bringing SSL certificates and keys from your old site, make sure their locations match the paths specified by the *SSL_CERT_FILE* and *SSL_KEY_FILE* variables in `site-options.conf`. See *Set up SSL for your TeamForge site*.

c) Log into your site as the administrator.

d) Reboot the server and make sure all services come up automatically at startup.

e) Rebuild your site's search index so that users get up-to-date search results.

See *Rebuild TeamForge search indexes* on page 254 for details.

f) To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

```
select * from etl_job where job_name ='tracker_initial_etl'
```

The status column should have a value of 1.

g) If your site has custom branding, verify that your branding changes still work as intended.

See *Customize anything on your site*.

h) Let your site's users know they've been upgraded.

See *Create a site-wide broadcast*.

Important: Do not delete the `teamforge-installer/6.2.0.1` directory. You will need it for future maintenance and upgrades.

Note: After the upgrade, it takes some time for the publishing repositories to get created for projects imported from other TeamForge sites.

Upgrade a stand-alone TeamForge source control box on the same hardware

If your TeamForge setup includes source control running on its own box, you'll have to upgrade that box as well as the main TeamForge application box.

For example, if you used *these install instructions* to install TeamForge 6.2, then this procedure is for you.

Note: This procedure is meant for sites that were installed in "advanced" mode. If your existing site was installed in "dedicated" mode, use *Upgrade to TeamForge 6.2 on the same box - Black Duck Code Sight on a separate box* instead. If there is any doubt about what kind of site you are working with, see *Is my TeamForge site "dedicated" or "advanced?"*

1. Back up your site data.

a) Make an archive file with the following data directories:

Directory	Contents
/svnroot	Subversion source code repositories
/cvsroot	CVS source code repositories (not present on all sites)

```
mkdir /tmp/backup_dir
cp -Rpf /svnroot /cvsroot /tmp/backup_dir
```

b) Back up your SSH keys, if any.

c) Back up your SSL certificates and keys, if any.

2. Stop TeamForge.

```
/etc/init.d/httpd stop
/etc/init.d/collabnet stop tomcat
```

3. Move the repositories from any previous installs out of the way.

```
mv /etc/yum.repos.d/collabnet-6.1.1.0.repo
/etc/yum.repos.d/collabnet-6.1.1.0.repo.cn_backup
```

4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

5. On the source code box, install the source code component of the TeamForge application.

```
yum clean all
yum install teamforge-scm
```

6. Set up your site's master configuration file.

```
vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
```

👉 **Note:** `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

a) Use the shared secret key, *SCM_DEFAULT_SHARED_SECRET*, from the `site-options.conf` file on the primary TeamForge server.

b) Increase the value of MAX_WWW_CLIENTS.

```
MAX_WWW_CLIENTS=220
```

c) Review the variables you've changed, then save the `site-options.conf` file.

7. Create the runtime environment.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

8. Update the file permissions on your site's data.

```
/opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
```

9. Swap in the new Apache configuration file.

```
cd /etc/httpd/conf
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
/etc/init.d/httpd start
```

10. 👉 **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

- You are logged in as "root"
- You run the command only on the TeamForge application box
- Your TeamForge database is running

Run the post-install script from the `[`*`RUNTIME_DIR`*`]/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
./postinstall_62p1.py
```

11. Start TeamForge.

```
/etc/init.d/httpd start
/etc/init.d/collabnet start tomcat
```

Upgrade to TeamForge 6.2 on SuSE

You can upgrade to TeamForge 6.2 from TeamForge 6.1.1. You can upgrade on the same box where your current TeamForge site is running, or you can take this opportunity to move your site to a new box. Choose the instructions that fit your case.

Note: The zypper installer will install the CollabNet TeamForge site in the default directory "/opt/collabnet/teamforge" only. If the SITE_DIR token in the `site-options.conf` file has a value other than the default directory, then set the token "SITE_DIR=/opt/collabnet/teamforge" in `site-options.conf` file.

Note: Due to the Lucene upgrade for search functionality, upgrading to TeamForge 6.2 requires a complete re-index of the site. This could take several hours, and the index data could double in size.

Upgrade to TeamForge 6.2 on the same box - Black Duck Code Sight on a separate box

To upgrade to TeamForge 6.2, you install the new site and convert your existing site's data.

For this procedure, we'll assume that you are upgrading on the same box where your existing TeamForge site is running. It's also possible to simultaneously upgrade and move your site to new hardware, but since we are working with a dedicated installation, the priority here is to keep things as simple and quick as possible. See *Should I upgrade to TeamForge 6.2 on a new box?* on page 315 for some background information.

Tip: If there is any doubt about what kind of site you are working with, see *Is my TeamForge site "dedicated" or "advanced?"*

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

1. Back up your site data.

a) Make a dump file of your site database.

(This may be the same as your TeamForge application server or a separate box.)

You have to do a PostgreSQL dump because we are upgrading the PostgreSQL application as part of this upgrade.

Note: These commands are for a PostgreSQL database, which is the default. If your site uses an Oracle database, follow the *Oracle backup procedure* instead.

```
su - postgres
/usr/bin/pg_dumpall > /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp
exit
mkdir /tmp/backup_dir
cp /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp /tmp/backup_dir/
```

Note: If your reporting database is running on a separate port, back up your reporting database too:

```
/usr/bin/pg_dumpall -p <reports_database_port> >
/var/lib/pgsql/9.0/backups/teamforge_reporting_data_backup.dmp
```

b) Make an archive file with the following data directories:

Directory	**Contents**
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments
/svnroot	Subversion source code repositories
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

```
cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
/tmp/backup_dir
cd /tmp
tar czvf 611backup.tgz backup_dir
```

c) Back up your SSH keys, if any.

d) Back up your SSL certificates and keys, if any.

2. Stop TeamForge.

   ```
   /etc/init.d/collabnet stop all
   ```

3. Move the repositories from any previous installs out of the way.

   ```
   mv /etc/zypp/repos.d/collabnet-6.1.1.0.repo
   /etc/zypp/repos.d/collabnet-6.1.1.0.repo.cn_backup
   ```

4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/zypp/repos.d`/.
5. Remove TeamForge rpms with old names.

   ```
   rpm -qa|grep teamforge-sles|xargs zypper rm
   ```

6. Install the TeamForge application.

   ```
   zypper install teamforge
   ```

7. Set up your site's master configuration file.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
   ```

   Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

   a) If you're installing Black Duck Code Sight, configure the following settings:

   ```
   HOST_mycodesearchbox.domain.com=codesearch
   ```

   Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

   ```
   BDCS_HOST=<my.host.name or my.domain.name>

   To enable SSL for Black Duck Code Sight, include this token:
   BDCS_SSL=on
   ```

   ```
   To change the default Black Duck Code Sight admin password, add these tokens:
   BDCS_ADMIN_USERNAME=<username>
   BDCS_ADMIN_PASSWORD=<password>

   To configure the port number for the Code Search Tomcat server, set this
   token:
   BDCS_TOMCAT_PORT=9180
   ```

```
To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

b) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

   Remember that you need to use the same key in the external SCM integration server also.

c) Increase the value of MAX_WWW_CLIENTS.

```
MAX_WWW_CLIENTS=220
```

d) Increase the value of PGSQL_MAX_CONNECTIONS.

```
PGSQL_MAX_CONNECTIONS=220
```

e) Set the DATABASE_MAX_POOL_SIZE token as follows:

```
DATABASE_MAX_POOL_SIZE=220
```

f) Set the REPORTS_DATABASE_MAX_POOL_SIZE token as follows:

```
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

g) Increase the ETL heap size.

```
ETL_JAVA_OPTS=-Xms160m -Xmx512m -server -XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails
 -Dsun.rmi.dgc.client.gcInterval=600000
-Dsun.rmi.dgc.server.gcInterval=600000
```

h) Set the USERS_WITH_NO_EXPIRY_PASSWORD token as follows:

```
USERS_WITH_NO_EXPIRY_PASSWORD=admin,nobody,system,scmviewer
```

i) Make sure that the following tokens have a value if ETL is enabled.

```
SOAP_ANONYMOUS_SHARED_SECRET=
ETL_SOAP_SHARED_SECRET=
```

8. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

9. Update the file permissions on your site's data.

```
/opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
```

Note: This process can take a long time for a site with a lot of data.

Do step 10 on the Black Duck Code Sight server. We'll call this `my.code.box`.

10. Set up the Black Duck Code Sight server using *these instructions*.

Do step 13 on my.app.box:

11. Convert your site data to work with TeamForge 6.2.

Tip: Before you kick off the data migration, use the `/etc/init.d/collabnet status` command to make sure the Jboss, Tomcat and Tomcatcs services are stopped.

```
/opt/collabnet/teamforge/runtime/scripts/migrate.py
```

The `migrate.py` script locates the existing site data and modifies it as needed.

This includes configuration data for LDAP and the James mail server. Any modifications that you have applied to these components on your old site are reproduced on your upgraded TeamForge 6.2 site.

12. Run the Subversion working copy script when you are upgrading to TeamForge 6.2 and the old Teamforge site has the SVN 1.6.x version.

a) `cd <SITE_DIR>/runtime/scripts`

b) `./svn-upgrade-working-copies.sh`

Note: Type "Y" when prompted.

13. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

- You are logged in as "root"
- You run the command only on the TeamForge application box
- Your TeamForge database is running

Run the post-install script from the `[`*`RUNTIME_DIR`*`]/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
./postinstall_62p1.py
```

14. Start TeamForge.

```
/etc/init.d/collabnet start
```

Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

15. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

16. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

```
sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
```

17. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`

b) `./trust-cert.sh`

c) Restart the `collabnet` services.

```
/etc/init.d/collabnet restart
```

18. Apply the finishing touches and make sure everything is running smoothly after upgrading to TeamForge 6.2.

a) Make sure your users can still access their source control services.

   See *Synchronize TeamForge source control integrations* on page 264.

b) If you are bringing SSL certificates and keys from your old site, make sure their locations match the paths specified by the *SSL_CERT_FILE* and *SSL_KEY_FILE* variables in `site-options.conf`. See *Set up SSL for your TeamForge site*.

c) Log into your site as the administrator.

d) Reboot the server and make sure all services come up automatically at startup.

e) Rebuild your site's search index so that users get up-to-date search results.

   See *Rebuild TeamForge search indexes* on page 254 for details.

f) To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

```
select * from etl_job where job_name ='tracker_initial_etl'
```

   The status column should have a value of 1.

g) If your site has custom branding, verify that your branding changes still work as intended.

   See *Customize anything on your site*.

h) Let your site's users know they've been upgraded.

   See *Create a site-wide broadcast*.

> **Important:** Do not delete the `teamforge-installer/6.2.0.1` directory. You will need it for future maintenance and upgrades.

> **Note:** After the upgrade, it takes some time for the publishing repositories to get created for projects imported from other TeamForge sites.

Upgrade a dedicated site to TeamForge 6.2 on new hardware

To upgrade to TeamForge 6.2, set up a new box, then bring over your old site's data and convert it.

TeamForge 6.2 runs on SLES 11 SP1. To take advantage of the new operating system, you should install a fresh box and move your TeamForge site to it.

> **Note:** In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

On the existing TeamForge application box, log in as root and take these steps:

1. Stop the TeamForge application server and the Apache server, if they are running.

```
/etc/init.d/apache2 stop
/etc/init.d/collabnet stop
```

2. Back up your site data.

a) Make a dump file of your site database.

   (This may be the same as your TeamForge application server or a separate box.)

   You have to do a PostgreSQL dump because we are upgrading the PostgreSQL application as part of this upgrade.

Note: These commands are for a PostgreSQL database, which is the default. If your site uses an Oracle database, follow the *Oracle backup procedure* instead.

```
su - postgres
/usr/bin/pg_dumpall > /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp
exit
mkdir /tmp/backup_dir
cp /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp /tmp/backup_dir/
```

Note: If your reporting database is running on a separate port, back up your reporting database too:

```
/usr/bin/pg_dumpall -p <reports_database_port> >
/var/lib/pgsql/9.0/backups/teamforge_reporting_data_backup.dmp
```

b) Make an archive file with the following data directories:

Directory	Contents
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments
/svnroot	Subversion source code repositories
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

```
cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
/tmp/backup_dir
cd /tmp
tar czvf 611backup.tgz backup_dir
```

c) Back up your SSH keys, if any.

d) Back up your SSL certificates and keys, if any.

3. Stop PostgreSQL.

```
/etc/init.d/postgresql stop
```

4. Copy the file system data to the new box.

```
scp /tmp/611backup.tgz username@newbox:/tmp
```

5. Copy the master configuration file from the old server to the same location on the new server.

```
scp /opt/collabnet/teamforge-installer/6.1.1.0/conf/site-options.conf
username@newbox:/tmp
```

Tip: `scp` is just an example. Use whatever file transfer method you prefer.

Do step 6 on the new TeamForge 6.2 Patch 1 box:

6. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.

- See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
- See *the SuSE Linux Enterprise Server deployment guide* for help.

Important: Don't customize your installation. Select only the default packages list.

7. Check your basic networking setup.

See *Set up networking for your TeamForge box* on page 8 for details.

8. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/zypp/repos.d/`.
9. Put the `site-options.conf` file where the installer can find it.

```
cp /tmp/site-options.conf /opt/collabnet/teamforge-installer/6.2.0.1/conf
```

10. Log in as root and unpack the file system data.

```
cd /tmp
tar xzvf 611backup.tgz
```

11. Set up your site's master configuration file.

```
vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
```

👉 **Note:** `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

a) Update the host name and domain name, if necessary.

```
HOST_my.host.name=app database subversion cvs etl datamart
DOMAIN_my.host.name=my.domain.name
```

b) Review the *DATABASE* variables.

You may want to substitute your own values for the default database names, user names and passwords.

c) Turn on the site-wide reporting functionality by adding the *REPORTS_** variables.

See *Turn on site-wide reporting* on page 263 for details.

d) 👉 **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use the same key in the external SCM integration server also.

e) Increase the value of MAX_WWW_CLIENTS.

```
MAX_WWW_CLIENTS=220
```

f) Increase the value of PGSQL_MAX_CONNECTIONS.

```
PGSQL_MAX_CONNECTIONS=220
```

g) Set the DATABASE_MAX_POOL_SIZE token as follows:

```
DATABASE_MAX_POOL_SIZE=220
```

h) Set the REPORTS_DATABASE_MAX_POOL_SIZE token as follows:

```
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

i) Increase the ETL heap size.

```
ETL_JAVA_OPTS=-Xms160m -Xmx512m -server -XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails
 -Dsun.rmi.dgc.client.gcInterval=600000
-Dsun.rmi.dgc.server.gcInterval=600000
```

j) Set the USERS_WITH_NO_EXPIRY_PASSWORD token as follows:

```
USERS_WITH_NO_EXPIRY_PASSWORD=admin,nobody,system,scmviewer
```

k) Make sure that the following tokens have a value if ETL is enabled.

```
SOAP_ANONYMOUS_SHARED_SECRET=
ETL_SOAP_SHARED_SECRET=
```

l) If you're installing Black Duck Code Sight, configure the following settings:

```
HOST_mycodesearchbox.domain.com=codesearch
```

Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

```
BDCS_HOST=<my.host.name or my.domain.name>

To enable SSL for Black Duck Code Sight, include this token:
BDCS_SSL=on
```

```
To change the default Black Duck Code Sight admin password, add these tokens:
BDCS_ADMIN_USERNAME=<username>
BDCS_ADMIN_PASSWORD=<password>

To configure the port number for the Code Search Tomcat server, set this
token:
BDCS_TOMCAT_PORT=9180

To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

12. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

Do step 12 on the Black Duck Code Sight server. We'll call this `my.code.box`.

13. Set up the Black Duck Code Sight server using *these instructions*.

Do step 15 on my.app.box:

14. Bring your site data back.

a) Reload the PostgreSQL data.

```
su - postgres
/usr/bin/psql < /tmp/backup_dir/teamforge_data_backup.dmp
exit
```

Note: If your reporting database is running on a separate port, restore that data too:

```
su - postgres -c "/usr/bin/psql -p <reports_database_port> <
/tmp/backup_dir/teamforge_reporting_data_backup.dmp"
```

b) Reload `svnroot`, `sf-svnroot`, `cvsroot`, and `var`.

15. Update the file permissions on your site's data.

```
/opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
```

Note: This process can take a long time for a site with a lot of data.

16. Convert your site data to work with TeamForge 6.2.

Tip: Before you kick off the data migration, use the `/etc/init.d/collabnet status` command to make sure the Jboss, Tomcat and Tomcatcs services are stopped.

```
/opt/collabnet/teamforge/runtime/scripts/migrate.py
```

The `migrate.py` script locates the existing site data and modifies it as needed.

This includes configuration data for LDAP and the James mail server. Any modifications that you have applied to these components on your old site are reproduced on your upgraded TeamForge 6.2 site.

17. Run the Subversion working copy script when you are upgrading to TeamForge 6.2 and the old Teamforge site has the SVN 1.6.x version.

a) `cd <SITE_DIR>/runtime/scripts`

b) `./svn-upgrade-working-copies.sh`

Note: Type "Y" when prompted.

18. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

- You are logged in as "root"
- You run the command only on the TeamForge application box
- Your TeamForge database is running

Run the post-install script from the `[`*`RUNTIME_DIR`*`]/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
./postinstall_62p1.py
```

19. Start TeamForge.

```
/etc/init.d/collabnet start
```

Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

20. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

21. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

```
sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
```

22. **Note:** Do this if your site directory (SITE_DIR) is not the default `/opt/collabnet/teamforge`.

If your old site directory is a different location, for example, `/usr/local/teamforge`, create a symlink as follows:

```
cd /usr/local/
ln -s /opt/collabnet/teamforge
```

23. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:
    a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`
    b) `./trust-cert.sh`
    c) Restart the `collabnet` services.

    ```
    /etc/init.d/collabnet restart
    ```

24. Apply the finishing touches and make sure everything is running smoothly after upgrading to TeamForge 6.2.
    a) Make sure your users can still access their source control services.

       See *Synchronize TeamForge source control integrations* on page 264.

    b) If you are bringing SSL certificates and keys from your old site, make sure their locations match the paths specified by the *SSL_CERT_FILE* and *SSL_KEY_FILE* variables in `site-options.conf`. See *Set up SSL for your TeamForge site*.
    c) Log into your site as the administrator.
    d) Reboot the server and make sure all services come up automatically at startup.
    e) Rebuild your site's search index so that users get up-to-date search results.

       See *Rebuild TeamForge search indexes* on page 254 for details.

    f) To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

       ```
       select * from etl_job where job_name ='tracker_initial_etl'
       ```

       The status column should have a value of 1.
    g) If your site has custom branding, verify that your branding changes still work as intended.

       See *Customize anything on your site*.

    h) Let your site's users know they've been upgraded.

       See *Create a site-wide broadcast*.

    ☞ **Important:** Do not delete the `teamforge-installer/6.2.0.1` directory. You will need it for future maintenance and upgrades.

☞ **Note:** After the upgrade, it takes some time for the publishing repositories to get created for projects imported from other TeamForge sites.

Upgrade an advanced TeamForge site to TeamForge 6.2

Upgrading to TeamForge 6.2 on an advanced site can be complicated but you get more flexibility and control.

If there is any doubt about what kind of site you are working with, see *Is my TeamForge site "dedicated" or "advanced?"*

Upgrade a TeamForge site to 6.2 on the same hardware

To upgrade to TeamForge 6.2 without changing the box where your TeamForge 6.1 site is running, you have to install the new TeamForge site and migrate the site data.

There are a few critical factors to keep in mind when upgrading to TeamForge 6.2.

- For this procedure, we'll assume that you are upgrading on the same box where your existing TeamForge site is running. It's also possible to simultaneously upgrade and move your site to new hardware. To do that, see *Upgrade to TeamForge 6.2 on new hardware*.
- This procedure is meant for sites that were installed in "advanced" mode. If your existing site was installed in "dedicated" mode, use *Upgrade to TeamForge 6.2 on the same box - Black Duck Code Sight on a separate box* instead. If there is any doubt about what kind of site you are working with, see *Is my TeamForge site "dedicated" or "advanced?"*

1. Back up your site data.

a) Make a dump file of your site database.

(This may be the same as your TeamForge application server or a separate box.)

You have to do a PostgreSQL dump because we are upgrading the PostgreSQL application as part of this upgrade.

Note: These commands are for a PostgreSQL database, which is the default. If your site uses an Oracle database, follow the *Oracle backup procedure* instead.

```
su - postgres
/usr/bin/pg_dumpall > /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp
exit
mkdir /tmp/backup_dir
cp /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp /tmp/backup_dir/
```

Note: If your reporting database is running on a separate port, back up your reporting database too:

```
/usr/bin/pg_dumpall -p <reports_database_port> >
/var/lib/pgsql/9.0/backups/teamforge_reporting_data_backup.dmp
```

b) Make an archive file with the following data directories:

Directory	**Contents**
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments
/svnroot	Subversion source code repositories
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

```
cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
/tmp/backup_dir
cd /tmp
tar czvf 611backup.tgz backup_dir
```

c) Back up your SSH keys, if any.

d) Back up your SSL certificates and keys, if any.

2. Stop TeamForge.

```
/etc/init.d/apache2 stop
/etc/init.d/postgresql stop
/etc/init.d/collabnet stop
```

3. If the database is running on a separate box, go to that box and move the old PostgreSQL control script out of the way.

```
mv /etc/init.d/postgresql_ctf /etc/init.d/postgresql_ctf_old
```

4. If the reporting database is running on a separate box, go to that box and move the old datamart PostgreSQL control script out of the way.

   ```
   mv /etc/init.d/postgresql_reports /etc/init.d/postgresql_reports_old
   ```

5. Uninstall the PostgreSQL support packages to clear the way for TeamForge to install PostgreSQL 9.0.

   (These packages are installed with the OS by default.)

   ```
   zypper remove postgresql-libs postgresql-docs
   ```

6. Move the repositories from any previous installs out of the way.

   ```
   mv /etc/zypp/repos.d/collabnet-6.1.1.0.repo
   /etc/zypp/repos.d/collabnet-6.1.1.0.repo.cn_backup
   ```

7. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/zypp/repos.d/`.
8. Configure the zypper package manager to install the latest vendor packages.
   a) Add this line to the `/etc/zypp/zypp.conf` file:

   ```
   solver.allowVendorChange = true
   ```

   b) Refresh zypper.

   ```
   zypper ref
   ```

9. Remove TeamForge rpms with old names.

   ```
   rpm -qa|grep teamforge-sles|xargs zypper rm
   ```

10. Install the TeamForge application.

    ```
    zypper install teamforge
    ```

11. Set up your site's master configuration file.

    ```
    vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
    ```

    Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

    a) Update the host name and domain name, if necessary.

    ```
    HOST_my.host.name=app database subversion cvs etl datamart
    DOMAIN_my.host.name=my.domain.name
    ```

    b) Review the *DATABASE* variables.

    You may want to substitute your own values for the default database names, user names and passwords.

    c) Turn on the site-wide reporting functionality by adding the *REPORTS_** variables.

    See *Turn on site-wide reporting* on page 263 for details.

    d) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

    Remember that you need to use the same key in the external SCM integration server also.

    e) Increase the value of MAX_WWW_CLIENTS.

    ```
    MAX_WWW_CLIENTS=220
    ```

    f) Increase the value of PGSQL_MAX_CONNECTIONS.

    ```
    PGSQL_MAX_CONNECTIONS=220
    ```

g) Set the DATABASE_MAX_POOL_SIZE token as follows:

```
DATABASE_MAX_POOL_SIZE=220
```

h) Set the REPORTS_DATABASE_MAX_POOL_SIZE token as follows:

```
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

i) Increase the ETL heap size.

```
ETL_JAVA_OPTS=-Xms160m -Xmx512m -server -XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails
 -Dsun.rmi.dgc.client.gcInterval=600000
-Dsun.rmi.dgc.server.gcInterval=600000
```

j) Set the USERS_WITH_NO_EXPIRY_PASSWORD token as follows:

```
USERS_WITH_NO_EXPIRY_PASSWORD=admin,nobody,system,scmviewer
```

k) Make sure that the following tokens have a value if ETL is enabled.

```
SOAP_ANONYMOUS_SHARED_SECRET=
ETL_SOAP_SHARED_SECRET=
```

l) If you're installing Black Duck Code Sight, configure the following settings:

```
HOST_mycodesearchbox.domain.com=codesearch
```

Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

```
BDCS_HOST=<my.host.name or my.domain.name>

To enable SSL for Black Duck Code Sight, include this token:
BDCS_SSL=on
```

```
To change the default Black Duck Code Sight admin password, add these tokens:
BDCS_ADMIN_USERNAME=<username>
BDCS_ADMIN_PASSWORD=<password>

To configure the port number for the Code Search Tomcat server, set this
token:
BDCS_TOMCAT_PORT=9180

To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

12. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

13. If the database is running on a separate box, copy the `postgresql` script from `/opt/collabnet/teamforge/runtime/scripts` on my.app.box to the `/tmp` directory of my.data.box.

```
cp /tmp/postgresql_ctf /etc/init.d
```

14. Start the database service.

```
/etc/init.d/postgresql_ctf start
```

15. If the reporting database is running on a separate box, copy the datamart control script from `/opt/collabnet/teamforge/runtime/scripts` on my.app.box to the `/tmp` directory of my.datamart.box.

```
cp /tmp/postgresql_reports /etc/init.d
```

16. Start the reporting database service.

    ```
    /etc/init.d/postgresql_reports start
    ```

17. Update the file permissions on your site's data.

    ```
    /opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
    ```

    Note: This process can take a long time for a site with a lot of data.

Do step 18 on the Black Duck Code Sight server. We'll call this `my.code.box`.

18. Set up the Black Duck Code Sight server using *these instructions*.

Do step 19 on my.app.box:

19. Convert your site data to work with TeamForge 6.2.

    Tip: Before you kick off the data migration, use the `/etc/init.d/collabnet status` command to make sure the Jboss, Tomcat and Tomcatcs services are stopped.

    ```
    /opt/collabnet/teamforge/runtime/scripts/migrate.py
    ```

    The `migrate.py` script locates the existing site data and modifies it as needed.

    This includes configuration data for LDAP and the James mail server. Any modifications that you have applied to these components on your old site are reproduced on your upgraded TeamForge 6.2 site.

20. Swap in the new Apache configuration file.

    ```
    cd /etc/apache2
    mv httpd.conf httpd.conf_old
    cp httpd.conf.cn_new httpd.conf
    cd /etc/sysconfig/
    mv apache2 apache2_old
    cp apache2.cn_new apache2
    /etc/init.d/apache2 start
    ```

21. Run the Subversion working copy script when you are upgrading to TeamForge 6.2 and the old Teamforge site has the SVN 1.6.x version.

    a) `cd <SITE_DIR>/runtime/scripts`

    b) `./svn-upgrade-working-copies.sh`

    Note: Type "Y" when prompted.

22. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

    - You are logged in as "root"
    - You run the command only on the TeamForge application box
    - Your TeamForge database is running

    Run the post-install script from the `[`*`RUNTIME_DIR`*`]/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ./postinstall_62p1.py
    ```

23. Start TeamForge.

Start PostgreSQL if it is not running.

```
/etc/init.d/postgresql start
```

Start the CollabNet services.

```
/etc/init.d/collabnet start
```

24. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

    Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

    a) Change to the `runtime/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ```

    b) List all the `etl` jobs.

    ```
    ./etl-client.py -a
    ```

    c) Run `TrackerInitialJob`.

    ```
    ./etl-client.py -r TrackerInitialJob
    ```

25. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

    Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

    Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

    ```
    sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
    ```

26. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

    After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

    ```
    ./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
    ```

    Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

    Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

27. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

    a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`
    b) `./trust-cert.sh`
    c) Restart the `collabnet` services.

    ```
    /etc/init.d/collabnet restart
    ```

28. Apply the finishing touches and make sure everything is running smoothly after upgrading to TeamForge 6.2.

    a) Make sure your users can still access their source control services.

    See *Synchronize TeamForge source control integrations* on page 264.

b) If you are bringing SSL certificates and keys from your old site, make sure their locations match the paths specified by the *SSL_CERT_FILE* and *SSL_KEY_FILE* variables in `site-options.conf`. See *Set up SSL for your TeamForge site*.

c) Log into your site as the administrator.

d) Reboot the server and make sure all services come up automatically at startup.

e) Rebuild your site's search index so that users get up-to-date search results.

See *Rebuild TeamForge search indexes* on page 254 for details.

f) To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

```
select * from etl_job where job_name ='tracker_initial_etl'
```

The status column should have a value of 1.

g) If your site has custom branding, verify that your branding changes still work as intended.

See *Customize anything on your site*.

h) Let your site's users know they've been upgraded.

See *Create a site-wide broadcast*.

Important: Do not delete the `teamforge-installer/6.2.0.1` directory. You will need it for future maintenance and upgrades.

Note: After the upgrade, it takes some time for the publishing repositories to get created for projects imported from other TeamForge sites.

Upgrade to TeamForge 6.2 on new hardware

To upgrade to TeamForge 6.2, set up a new box, then bring over your old site's data and convert it.

TeamForge 6.2 runs on SuSE Linux Enterprise Server 11 SP1. To take advantage of the new operating system, you should install a fresh box and move your TeamForge 6.2 site to it.

Note: This procedure assumes that you are running your new site-wide reporting database on the same box where your TeamForge application and database are running, and that the reporting database shares the same port as the site database.

You don't have to set it up exactly like this.

- You can run the reporting database on a separate box. For an example of that, see *Option 3: Install TeamForge 6.2 with reporting data on a separate box*.
- You can run the reporting database on the same box as the site database, but with a separate port. For an example, see *Option 5: Distribute TeamForge 6.2 services a different way*
- In a multi-box installation of Black Duck Code Sight, all machines must have the same time - without this, ETL will not function properly.

Take these steps on the new TeamForge 6.2 box:

1. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.
   - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
   - See *the SuSE Linux Enterprise Server deployment guide* for help.

   Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

   See *Set up networking for your TeamForge box* for details.

3. Set up the SuSE repository.

a) Register the machine with Novell.

```
suse_register -i -a email=<MailID> -a regcode-sles=<Registration code>
```

where `<MailID>` is the email address associated with your SuSE Linux Enterprise Server license and `<Registration code>` is the Suse Enterprise Linux license code.

b) Move the existing installer repository out of the way.

```
cd /etc/zypp/repos.d/
mv SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo
SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo_old
```

c) Make sure the correct Novell repository is enabled.

Open `nu_novell_com:SLES11-SP1-Pool.repo` in a text editor and confirm that `enabled=1`.

d) Refresh `zypper`.

```
Zypper ref
```

Note: As an alternative, you can insert the SuSe Linux Enterprise Server DVD.

- Ensure that the DVD is mounted in the location specified by the *baseurl* variable in `SUSE-Linux-Enterprise-Server-11-SP1\ 11.1.1-1.152.repo`.
- Use `zypper info postgresql` to check that the DVD is properly mounted.

4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/zypp/repos.d/`.

On the TeamForge 6.1 box, log in as root and take these steps:

5. Stop the TeamForge application server and the Apache server, if they are running.

```
/etc/init.d/apache2 stop
/etc/init.d/collabnet stop
```

6. Back up your site data.

a) Make a dump file of your site database.

(This may be the same as your TeamForge application server or a separate box.)

You have to do a PostgreSQL dump because we are upgrading the PostgreSQL application as part of this upgrade.

Note: These commands are for a PostgreSQL database, which is the default. If your site uses an Oracle database, follow the *Oracle backup procedure* instead.

```
su - postgres
/usr/bin/pg_dumpall > /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp
exit
mkdir /tmp/backup_dir
cp /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp /tmp/backup_dir/
```

Note: If your reporting database is running on a separate port, back up your reporting database too:

```
/usr/bin/pg_dumpall -p <reports_database_port> >
/var/lib/pgsql/9.0/backups/teamforge_reporting_data_backup.dmp
```

b) Make an archive file with the following data directories:

Directory	Contents
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments
/svnroot	Subversion source code repositories
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

```
cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
/tmp/backup_dir
cd /tmp
tar czvf 611backup.tgz backup_dir
```

c) Back up your SSH keys, if any.

d) Back up your SSL certificates and keys, if any.

7. Stop PostgreSQL.

   ```
   /etc/init.d/postgresql-9.0 stop
   ```

8. If the database is running on a separate box, go to that box and move the old PostgreSQL control script out of the way.

   ```
   mv /etc/init.d/postgresql_ctf /etc/init.d/postgresql_ctf_old
   ```

9. If the reporting database is running on a separate box, go to that box and move the old datamart PostgreSQL control script out of the way.

   ```
   mv /etc/init.d/postgresql_reports /etc/init.d/postgresql_reports_old
   ```

10. Copy the file system data to the new box.

    ```
    scp /tmp/611backup.tgz username@newbox:/tmp
    ```

11. Copy the master configuration file from the old server to the same location on the new server.

    ```
    scp /opt/collabnet/teamforge-installer/6.1.1.0/conf/site-options.conf
    username@newbox:/tmp
    ```

    Tip: `scp` is just an example. Use whatever file transfer method you prefer.

Do step 10 on the new TeamForge 6.2 box:

12. Log in as root and unpack the file system data.

    ```
    cd /tmp
    tar xzvf 611backup.tgz
    ```

13. Install the TeamForge application.

    ```
    zypper install teamforge
    ```

14. Put the `site-options.conf` file where the installer can find it.

    ```
    cp /tmp/site-options.conf /opt/collabnet/teamforge-installer/6.2.0.1/conf
    ```

15. Set up your site's master configuration file.

```
vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
```

Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

a) Update the host name and domain name, if necessary.

```
HOST_my.host.name=app database subversion cvs etl datamart
DOMAIN_my.host.name=my.domain.name
```

b) Review the *DATABASE* variables.

You may want to substitute your own values for the default database names, user names and passwords.

c) Turn on the site-wide reporting functionality by adding the *REPORTS_** variables.

See *Turn on site-wide reporting* on page 263 for details.

d) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use the same key in the external SCM integration server also.

e) Increase the value of MAX_WWW_CLIENTS.

```
MAX_WWW_CLIENTS=220
```

f) Increase the value of PGSQL_MAX_CONNECTIONS.

```
PGSQL_MAX_CONNECTIONS=220
```

g) Set the DATABASE_MAX_POOL_SIZE token as follows:

```
DATABASE_MAX_POOL_SIZE=220
```

h) Set the REPORTS_DATABASE_MAX_POOL_SIZE token as follows:

```
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

i) Increase the ETL heap size.

```
ETL_JAVA_OPTS=-Xms160m -Xmx512m -server -XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails
 -Dsun.rmi.dgc.client.gcInterval=600000
-Dsun.rmi.dgc.server.gcInterval=600000
```

j) Set the USERS_WITH_NO_EXPIRY_PASSWORD token as follows:

```
USERS_WITH_NO_EXPIRY_PASSWORD=admin,nobody,system,scmviewer
```

k) Make sure that the following tokens have a value if ETL is enabled.

```
SOAP_ANONYMOUS_SHARED_SECRET=
ETL_SOAP_SHARED_SECRET=
```

l) If you're installing Black Duck Code Sight, configure the following settings:

```
HOST_mycodesearchbox.domain.com=codesearch
```

Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

```
BDCS_HOST=<my.host.name or my.domain.name>

To enable SSL for Black Duck Code Sight, include this token:
BDCS_SSL=on
```

```
To change the default Black Duck Code Sight admin password, add these tokens:
BDCS_ADMIN_USERNAME=<username>
BDCS_ADMIN_PASSWORD=<password>

To configure the port number for the Code Search Tomcat server, set this
```

```
token:
BDCS_TOMCAT_PORT=9180

To specify the maximum results shown in Code Search, set this token:
Caution: Increasing this might impact performance.
BDCS_SDK_SEARCH_LIMIT_MAX=200
```

16. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

17. Set up the site database.

a) Point the database to the local machine.

```
su - postgres
initdb -D /var/lib/pgsql/data
vim /var/lib/pgsql/data/postgresql.conf
```

```
listen_addresses = '127.0.0.1,<IP address of data box>'
```

b) Configure database access for the site database.

```
vi /var/lib/pgsql/data/pg_hba.conf
```

```

local  all                     all
                       trust
# IPv4 local connections:
host   all                     all
127.0.0.1/32                 trust
# IPv6 local connections:
#host  all                     all                                 ::1/128
                      trust
host   <DATABASE_NAME>         <DATABASE_USERNAME                   <IP
address of app box>/32  md5
host   <REPORTS_DATABASE_NAME> <REPORTS_DATABASE_USERNAME>          <IP
address of app box>/32  md5
host   <REPORTS_DATABASE_NAME> <REPORTS_DATABASE_READ_ONLY_USERNAME> <IP
address of app box>/32  md5
```

c) Exit and restart PostgreSQL.

```
exit
/etc/init.d/postgresql start
```

18. Bring your site data back.

a) Reload the PostgreSQL data.

```
su - postgres
/usr/bin/psql < /tmp/backup_dir/teamforge_data_backup.dmp
exit
```

Note: If your reporting database is running on a separate port, restore that data too:

```
su - postgres -c "/usr/bin/psql -p <reports_database_port> <
/tmp/backup_dir/teamforge_reporting_data_backup.dmp"
```

b) Reload `svnroot`, `sf-svnroot`, `cvsroot`, and `var`.

19. Update the file permissions on your site's data.

    ```
    /opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
    ```

    Note: This process can take a long time for a site with a lot of data.

Do step 20 on the Black Duck Code Sight server. We'll call this `my.code.box`.

20. Set up the Black Duck Code Sight server using *these instructions*.

Do step 21 on my.app.box:

21. Convert your site data to work with TeamForge 6.2.

    Tip: Before you kick off the data migration, use the `/etc/init.d/collabnet status` command to make sure the Jboss, Tomcat and Tomcatcs services are stopped.

    ```
    /opt/collabnet/teamforge/runtime/scripts/migrate.py
    ```

    The `migrate.py` script locates the existing site data and modifies it as needed.

    This includes configuration data for LDAP and the James mail server. Any modifications that you have applied to these components on your old site are reproduced on your upgraded TeamForge 6.2 site.

22. Swap in the new Apache configuration file.

    ```
    cd /etc/apache2
    mv httpd.conf httpd.conf_old
    cp httpd.conf.cn_new httpd.conf
    cd /etc/sysconfig/
    mv apache2 apache2_old
    cp apache2.cn_new apache2
    /etc/init.d/apache2 start
    ```

23. Run the Subversion working copy script when you are upgrading to TeamForge 6.2 and the old Teamforge site has the SVN 1.6.x version.

    a) `cd <SITE_DIR>/runtime/scripts`
    b) `./svn-upgrade-working-copies.sh`

       Note: Type "Y" when prompted.

24. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

    - You are logged in as "root"
    - You run the command only on the TeamForge application box
    - Your TeamForge database is running

    Run the post-install script from the `[RUNTIME_DIR]/scripts` directory.

    ```
    cd /opt/collabnet/teamforge/runtime/scripts
    ./postinstall_62p1.py
    ```

25. Start TeamForge.

    Start PostgreSQL if it is not running.

    ```
    /etc/init.d/postgresql start
    ```

    Start CollabNet services.

```
/etc/init.d/collabnet start
```

26. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

27. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

```
sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
```

28. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

```
./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
```

Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

29. **Note:** Do this if your site directory (SITE_DIR) is not the default `/opt/collabnet/teamforge`.

If your old site directory is a different location, for example, `/usr/local/teamforge`, create a symlink as follows:

```
cd /usr/local/
ln -s /opt/collabnet/teamforge
```

30. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`

b) `./trust-cert.sh`

c) Restart the `collabnet` services.

```
/etc/init.d/collabnet restart
```

31. Apply the finishing touches and make sure everything is running smoothly after upgrading to TeamForge 6.2.

a) Make sure your users can still access their source control services.

See *Synchronize TeamForge source control integrations* on page 264.

b) If you are bringing SSL certificates and keys from your old site, make sure their locations match the paths specified by the *SSL_CERT_FILE* and *SSL_KEY_FILE* variables in `site-options.conf`. See *Set up SSL for your TeamForge site*.

c) Log into your site as the administrator.

d) Reboot the server and make sure all services come up automatically at startup.

e) Rebuild your site's search index so that users get up-to-date search results.

See *Rebuild TeamForge search indexes* on page 254 for details.

f) To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

```
select * from etl_job where job_name ='tracker_initial_etl'
```

The status column should have a value of 1.

g) If your site has custom branding, verify that your branding changes still work as intended.

See *Customize anything on your site*.

h) Let your site's users know they've been upgraded.

See *Create a site-wide broadcast*.

Important: Do not delete the `teamforge-installer/6.2.0.1` directory. You will need it for future maintenance and upgrades.

Note: After the upgrade, it takes some time for the publishing repositories to get created for projects imported from other TeamForge sites.

Upgrade TeamForge to version 6.2 on the same box (Oracle)

To upgrade to TeamForge 6.2 without changing the box where your TeamForge 6.1.1 site is running, you have to install the new TeamForge site and migrate the site data.

TeamForge 6.2 runs on SLES 11 SP1.

If you need to run your new site on new hardware, see *Upgrade TeamForge to version 6.2 on new hardware (Oracle) - Black Duck Code Sight on a separate box*.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

On the existing TeamForge application box, log in as root and take these steps:

1. Back up your site data.

a) Make a dump file of your site database.

To back up the Oracle database, follow the *Oracle backup procedure*.

b) Make an archive file with the following data directories:

Directory	Contents
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments
/svnroot	Subversion source code repositories
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

```
cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
/tmp/backup_dir
cd /tmp
tar czvf 611backup.tgz backup_dir
```

   c) Back up your SSH keys, if any.
   d) Back up your SSL certificates and keys, if any.

2. Stop the TeamForge application server and the Apache server, if they are running.

   ```
   /etc/init.d/apache2 stop
   /etc/init.d/collabnet stop
   ```

3. Move the repositories from any previous installs out of the way.

   ```
   mv /etc/zypp/repos.d/collabnet-6.1.1.0.repo
   /etc/zypp/repos.d/collabnet-6.1.1.0.repo.cn_backup
   ```

4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/zypp/repos.d`/.
5. Configure the zypper package manager to install the latest vendor packages.
   a) Add this line to the `/etc/zypp/zypp.conf file`:

   ```
   solver.allowVendorChange = true
   ```

   b) Refresh zypper.
6. Install the TeamForge application.

   ```
   zypper install teamforge-sles-app teamforge-sles-scm teamforge-sles-etl
   ```

7. Set up your site's master configuration file.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
   ```

   Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

   a) If you're installing Black Duck Code Sight, configure the following settings:

   ```
   HOST_mycodesearchbox.domain.com=codesearch
   ```

   Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

   ```
   BDCS_HOST=<my.host.name or my.domain.name>

   To enable SSL for Black Duck Code Sight, include this token:
   BDCS_SSL=on
   ```

   ```
   To change the default Black Duck Code Sight admin password, add these tokens:
   BDCS_ADMIN_USERNAME=<username>
   BDCS_ADMIN_PASSWORD=<password>

   To configure the port number for the Code Search Tomcat server, set this
   token:
   BDCS_TOMCAT_PORT=9180

   To specify the maximum results shown in Code Search, set this token:
   Caution: Increasing this might impact performance.
   BDCS_SDK_SEARCH_LIMIT_MAX=200
   ```

   b) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

Remember that you need to use the same key in the external SCM integration server also.

c) Increase the value of MAX_WWW_CLIENTS.

```
MAX_WWW_CLIENTS=220
```

d) Set the DATABASE_MAX_POOL_SIZE token as follows:

```
DATABASE_MAX_POOL_SIZE=220
```

e) Set the REPORTS_DATABASE_MAX_POOL_SIZE token as follows:

```
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

f) Increase the ETL heap size.

```
ETL_JAVA_OPTS=-Xms160m -Xmx512m -server -XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails
 -Dsun.rmi.dgc.client.gcInterval=600000
-Dsun.rmi.dgc.server.gcInterval=600000
```

g) Set the USERS_WITH_NO_EXPIRY_PASSWORD token as follows:

```
USERS_WITH_NO_EXPIRY_PASSWORD=admin,nobody,system,scmviewer
```

h) Make sure that the following tokens have a value if ETL is enabled.

```
SOAP_ANONYMOUS_SHARED_SECRET=
ETL_SOAP_SHARED_SECRET=
```

i) **Note:** Perform this check only if you are uisng an Oracle database.

Make sure that the database service names of the production database and reports database are configured to DATABASE_SERVICE_NAME and REPORTS_DATABASE_SERVICE_NAME respectively.

j) Review the variables you've changed, then save the `site-options.conf` file.

8. **Note:** Execute this step only if your Oracle server version is not 11.2.0.1.

Download the corresponding version of Oracle client from *http://www.oracle.com/technetwork/database/features/instant-client/index-097480.html* and run this command:

```
zypper install <path to oracle client rpm>
```

9. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

10. Update the file permissions on your site's data.

```
/opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
```

Note: This process can take a long time for a site with a lot of data.

Do step 18 on the Black Duck Code Sight server. We'll call this `my.code.box`.

11. Set up the Black Duck Code Sight server using *these instructions*.

Do step 14 on my.app.box:

12. Convert your site data to work with TeamForge 6.2.

Tip: Before you kick off the data migration, use the `/etc/init.d/collabnet status` command to make sure the Jboss, Tomcat and Tomcatcs services are stopped.

```
/opt/collabnet/teamforge/runtime/scripts/migrate.py
```

The migrate.py script locates the existing site data and modifies it as needed.

This includes configuration data for LDAP and the James mail server. Any modifications that you have applied to these components on your old site are reproduced on your upgraded TeamForge 6.2 site.

13. Swap in the new Apache configuration file.

```
cd /etc/apache2
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
cd /etc/sysconfig/
mv apache2 apache2_old
cp apache2.cn_new apache2
/etc/init.d/apache2 start
```

14. Run the Subversion working copy script when you are upgrading to TeamForge 6.2 and the old Teamforge site has the SVN 1.6.x version.

a) `cd <SITE_DIR>/runtime/scripts`

b) `./svn-upgrade-working-copies.sh`

Note: Type "Y" when prompted.

15. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

- You are logged in as "root"
- You run the command only on the TeamForge application box
- Your TeamForge database is running

Run the post-install script from the [*RUNTIME_DIR*]/scripts directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
./postinstall_62p1.py
```

16. Start TeamForge.

```
/etc/init.d/collabnet start
```

Note: The sample TeamForge project template is installed as part of the collabnet startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

17. To include Tracker metrics in reports, you need to run TrackerInitialJob when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the runtime/scripts directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the etl jobs.

```
./etl-client.py -a
```

c) Run TrackerInitialJob.

```
./etl-client.py -r TrackerInitialJob
```

18. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight post-install.sh script.

Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

```
sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
```

19. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

```
./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
```

Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

20. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:

a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`

b) `./trust-cert.sh`

c) Restart the `collabnet` services.

```
/etc/init.d/collabnet restart
```

21. Apply the finishing touches and make sure everything is running smoothly after upgrading to TeamForge 6.2.

a) Make sure your users can still access their source control services.

See *Synchronize TeamForge source control integrations* on page 264.

b) If you are bringing SSL certificates and keys from your old site, make sure their locations match the paths specified by the *SSL_CERT_FILE* and *SSL_KEY_FILE* variables in `site-options.conf`. See *Set up SSL for your TeamForge site*.

c) Log into your site as the administrator.

d) Reboot the server and make sure all services come up automatically at startup.

e) Rebuild your site's search index so that users get up-to-date search results.

See *Rebuild TeamForge search indexes* on page 254 for details.

f) To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

```
select * from etl_job where job_name ='tracker_initial_etl'
```

The status column should have a value of 1.

g) If your site has custom branding, verify that your branding changes still work as intended.

See *Customize anything on your site*.

h) Let your site's users know they've been upgraded.

See *Create a site-wide broadcast*.

Important: Do not delete the `teamforge-installer/6.2.0.1` directory. You will need it for future maintenance and upgrades.

Note: After the upgrade, it takes some time for the publishing repositories to get created for projects imported from other TeamForge sites.

Upgrade TeamForge to version 6.2 on new hardware (Oracle) - Black Duck Code Sight on a separate box

To upgrade to TeamForge 6.2, set up a new box, then bring over your old site's data and convert it.

TeamForge 6.2 runs on SuSE Linux Enterprise Server 11 SP1. To take advantage of the new operating system, you should install a fresh box and move your TeamForge 6.1.1 site to it.

If you need to run your new site on the same box that your existing site is running on, see *Upgrade TeamForge to version 6.2 on the same box (Oracle)*.

Note: In a multi-box installation of TeamForge, all machines must have the same time - without this, ETL will not function properly.

On the existing TeamForge application box, log in as root and take these steps:

1. Stop the TeamForge application server and the Apache server, if they are running.

   ```
   /etc/init.d/apache2 stop
   /etc/init.d/collabnet stop
   ```

2. Back up your site data.
   a) Make a dump file of your site database.

      To back up the Oracle database, follow the *Oracle backup procedure*.
   b) Make an archive file with the following data directories:

Directory	Contents
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments
/svnroot	Subversion source code repositories
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

      ```
      cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
      /tmp/backup_dir
      cd /tmp
      tar czvf 611backup.tgz backup_dir
      ```
   c) Back up your SSH keys, if any.
   d) Back up your SSL certificates and keys, if any.
3. Copy the file system data to the new box.

   ```
   scp /tmp/611backup.tgz username@newbox:/tmp
   ```

4. Copy the master configuration file from the old server to the same location on the new server.

   ```
   scp /opt/collabnet/teamforge-installer/6.1.1.0/conf/site-options.conf
   username@newbox:/tmp
   ```

   Tip: `scp` is just an example. Use whatever file transfer method you prefer.

Take these steps on the new TeamForge 6.2 box:

5. Install SuSE Linux Enterprise Server 11 SP1 and log in as root.

   - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.

- See *the SuSE Linux Enterprise Server deployment guide* for help.

  Important: Don't customize your installation. Select only the default packages list.

6. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/zypp/repos.d/`.
7. Install the TeamForge application.

   ```
   zypper install teamforge-app teamforge-scm teamforge-etl
   ```

8. Put the `site-options.conf` file where the installer can find it.

   ```
   cp /tmp/site-options.conf /opt/collabnet/teamforge-installer/6.2.0.1/conf
   ```

9. Log in as root and unpack the file system data.

   ```
   cd /tmp
   tar xzvf 611backup.tgz
   ```

10. Update the host name and domain name, if necessary.

    ```
    HOST_my.host.name=app subversion cvs etl
    HOST_my.db.name=database datamart
    DOMAIN_my.host.name=my.domain.name
    ```

11. Set up your site's master configuration file.

    ```
    vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
    ```

    Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

    a) If you're installing Black Duck Code Sight, configure the following settings:

    ```
    HOST_mycodesearchbox.domain.com=codesearch
    ```

    Note: In case the HOST_ token is configured as HOST_localhost, then specify the following token with a valid hostname or domain name.

    ```
    BDCS_HOST=<my.host.name or my.domain.name>

    To enable SSL for Black Duck Code Sight, include this token:
    BDCS_SSL=on
    ```

    ```
    To change the default Black Duck Code Sight admin password, add these tokens:
    BDCS_ADMIN_USERNAME=<username>
    BDCS_ADMIN_PASSWORD=<password>

    To configure the port number for the Code Search Tomcat server, set this
    token:
    BDCS_TOMCAT_PORT=9180

    To specify the maximum results shown in Code Search, set this token:
    Caution: Increasing this might impact performance.
    BDCS_SDK_SEARCH_LIMIT_MAX=200
    ```

    b) **Important: It is mandatory that you include the *SCM_DEFAULT_SHARED_SECRET* token in the site-options.conf file of the primary TeamForge server, and give it a value of 16-24 characters.**

    Remember that you need to use the same key in the external SCM integration server also.

    c) Increase the value of MAX_WWW_CLIENTS.

    ```
    MAX_WWW_CLIENTS=220
    ```

d) Set the DATABASE_MAX_POOL_SIZE token as follows:

```
DATABASE_MAX_POOL_SIZE=220
```

e) Set the REPORTS_DATABASE_MAX_POOL_SIZE token as follows:

```
REPORTS_DATABASE_MAX_POOL_SIZE=30
```

f) Increase the ETL heap size.

```
ETL_JAVA_OPTS=-Xms160m -Xmx512m -server -XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails
 -Dsun.rmi.dgc.client.gcInterval=600000
-Dsun.rmi.dgc.server.gcInterval=600000
```

g) Set the USERS_WITH_NO_EXPIRY_PASSWORD token as follows:

```
USERS_WITH_NO_EXPIRY_PASSWORD=admin,nobody,system,scmviewer
```

h) Make sure that the following tokens have a value if ETL is enabled.

```
SOAP_ANONYMOUS_SHARED_SECRET=
ETL_SOAP_SHARED_SECRET=
```

i) **Note:** Perform this check only if you are uisng an Oracle database.

Make sure that the database service names of the production database and reports database are configured to DATABASE_SERVICE_NAME and REPORTS_DATABASE_SERVICE_NAME respectively.

j) Review the variables you've changed, then save the `site-options.conf` file.

12. **Note:** Execute this step only if your Oracle server version is not 11.2.0.1.

Download the corresponding version of Oracle client from *http://www.oracle.com/technetwork/database/features/instant-client/index-097480.html* and run this command:

```
zypper install <path to oracle client rpm>
```

13. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.1
./install.sh -r -I -V
```

14. Bring your site data back.

a) Reload `svnroot`, `sf-svnroot`, `cvsroot`, and `var`.

15. Update the file permissions on your site's data.

```
/opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
```

Note: This process can take a long time for a site with a lot of data.

Do step 16 on the Black Duck Code Sight server. We'll call this `my.code.box`.

16. Set up the Black Duck Code Sight server using *these instructions*.

Do step 18 on my.app.box:

17. Convert your site data to work with TeamForge 6.2.

Tip: Before you kick off the data migration, use the `/etc/init.d/collabnet status` command to make sure the Jboss, Tomcat and Tomcatcs services are stopped.

```
/opt/collabnet/teamforge/runtime/scripts/migrate.py
```

The `migrate.py` script locates the existing site data and modifies it as needed.

This includes configuration data for LDAP and the James mail server. Any modifications that you have applied to these components on your old site are reproduced on your upgraded TeamForge 6.2 site.

18. Swap in the new Apache configuration file.

```
cd /etc/apache2
mv httpd.conf httpd.conf_old
cp httpd.conf.cn_new httpd.conf
cd /etc/sysconfig/
mv apache2 apache2_old
cp apache2.cn_new apache2
/etc/init.d/apache2 start
```

19. Run the Subversion working copy script when you are upgrading to TeamForge 6.2 and the old Teamforge site has the SVN 1.6.x version.

a) `cd <SITE_DIR>/runtime/scripts`

b) `./svn-upgrade-working-copies.sh`

Note: Type "Y" when prompted.

20. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

- You are logged in as "root"
- You run the command only on the TeamForge application box
- Your TeamForge database is running

Run the post-install script from the `[`*`RUNTIME_DIR`*`]/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
./postinstall_62p1.py
```

21. Start TeamForge.

```
/etc/init.d/collabnet start
```

Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

22. To include Tracker metrics in reports, you need to run `TrackerInitialJob` when the site is up.

Running the job for the first time is a manual step. A successful run of the this tracker initial load will trigger incremental loads. For more information see *When do I run the Tracker initial load job?* on page 320.

a) Change to the `runtime/scripts` directory.

```
cd /opt/collabnet/teamforge/runtime/scripts
```

b) List all the `etl` jobs.

```
./etl-client.py -a
```

c) Run `TrackerInitialJob`.

```
./etl-client.py -r TrackerInitialJob
```

23. After you've installed Black Duck Code Sight and the TeamForge application is up and running, run the Black Duck Code Sight `post-install.sh` script.

Note: It is assumed that Subversion's client configuration file (`/root/.subversion/config`) for the root user is the default one without customization.

Note: If the Black Duck Code Sight is running on a separate box, run the following command in the code sight box.

```
sudo /opt/collabnet/teamforge/runtime/scripts/codesearch/post-install.sh
```

24. **Note:** Do this if you have a multi-box setup with an SCM integration server on a separate box.

    After you run the Black Duck Code Sight `post-install.sh` script, run the following script from the same directory:

    ```
    ./svn_cache.sh <Repository Base URL Path of the SCM Integration Server>
    ```

    Provide a Repository Base URL similar to "http://myint.box.net/svn/repos" where `myint.box` is the box with the SCM integration server.

    Also, if you add a new integration server at some later point, you'll need to run this script, (after creating new integration server), in the TeamForge `app` box.

25. **Note:** Do this if your site directory (SITE_DIR) is not the default `/opt/collabnet/teamforge`.

    If your old site directory is a different location, for example, `/usr/local/teamforge`, create a symlink as follows:

    ```
    cd /usr/local/
    ln -s /opt/collabnet/teamforge
    ```

26. After installing Black Duck Code Sight, if the *VALIDATE_SSL_CERTS* token is set to "true", you must run the codesearch runtime script *trust-cert.sh* in the application box. To run the script follow the steps below:
    a) `cd /opt/collabnet/teamforge/runtime/scripts/codesearch`
    b) `./trust-cert.sh`
    c) Restart the `collabnet` services.

    ```
    /etc/init.d/collabnet restart
    ```

27. Apply the finishing touches and make sure everything is running smoothly after upgrading to TeamForge 6.2.
    a) Make sure your users can still access their source control services.

       See *Synchronize TeamForge source control integrations* on page 264.
    b) If you are bringing SSL certificates and keys from your old site, make sure their locations match the paths specified by the *SSL_CERT_FILE* and *SSL_KEY_FILE* variables in `site-options.conf`. See *Set up SSL for your TeamForge site*.
    c) Log into your site as the administrator.
    d) Reboot the server and make sure all services come up automatically at startup.
    e) Rebuild your site's search index so that users get up-to-date search results.

       See *Rebuild TeamForge search indexes* on page 254 for details.
    f) To verify that the tracker initial load (triggered through `TrackerInitialJob`) completed successfully, run the following SQL from `[RUNTIME_DIR]/scripts/psql-reporting-wrapper` or by by selecting the **Datamart** option on the **System Tools** > **Ad Hoc Database Query** page in the TeamForge web interface.

       ```
       select * from etl_job where job_name ='tracker_initial_etl'
       ```

       The status column should have a value of 1.
    g) If your site has custom branding, verify that your branding changes still work as intended.

See *Customize anything on your site*.

h) Let your site's users know they've been upgraded.

See *Create a site-wide broadcast*.

> **Important:** Do not delete the `teamforge-installer/6.2.0.1` directory. You will need it for future maintenance and upgrades.

> **Note:** After the upgrade, it takes some time for the publishing repositories to get created for projects imported from other TeamForge sites.

Upgrade a stand-alone TeamForge source control box on the same hardware

If your TeamForge setup includes source control running on its own box, you'll have to upgrade that box as well as the main TeamForge application box.

For example, if you used *these install instructions* to install TeamForge 6.2, then this procedure is for you.

> **Note:** This procedure is meant for sites that were installed in "advanced" mode. If your existing site was installed in "dedicated" mode, use *Upgrade to TeamForge 6.2 on the same box - Black Duck Code Sight on a separate box* instead. If there is any doubt about what kind of site you are working with, see *Is my TeamForge site "dedicated" or "advanced?"*

1. Back up your site data.

a) Make an archive file with the following data directories:

Directory	**Contents**
/svnroot	Subversion source code repositories
/cvsroot	CVS source code repositories (not present on all sites)

```
mkdir /tmp/backup_dir
cp -Rpf /svnroot /cvsroot /tmp/backup_dir
```

b) Back up your SSH keys, if any.

c) Back up your SSL certificates and keys, if any.

2. Stop TeamForge.

```
/etc/init.d/httpd stop
/etc/init.d/collabnet stop tomcat
```

3. Move the repositories from any previous installs out of the way.

```
mv /etc/zypp/repos.d/collabnet-6.1.1.0.repo
/etc/zypp/repos.d/collabnet-6.1.1.0.repo.cn_backup
```

4. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/zypp/repos.d/`.

5. Configure the zypper package manager to install the latest vendor packages.

a) Add this line to the `/etc/zypp/zypp.conf` file.

```
solver.allowVendorChange = true
```

b) Refresh zypper.

```
zypper ref
```

6. Install the TeamForge application.

```
zypper install teamforge-sles-scm
```

7. Set up your site's master configuration file.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
   ```

   Note: `vi` is given as an example. Emacs, gedit, or any other *nix text editor will also work.

   a) Use the shared secret key, *SCM_DEFAULT_SHARED_SECRET*, from the `site-options.conf` file on the primary TeamForge server.
   b) Increase the value of MAX_WWW_CLIENTS.

      ```
      MAX_WWW_CLIENTS=220
      ```

   c) Review the variables you've changed, then save the `site-options.conf` file.
8. Create the runtime environment.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   ./install.sh -r -I -V
   ```

9. Update the file permissions on your site's data.

   ```
   /opt/collabnet/teamforge/runtime/scripts/fix_data_permissions.sh
   ```

10. Swap in the new Apache configuration file.

    ```
    cd /etc/apache2
    mv httpd.conf httpd.conf_old
    cp httpd.conf.cn_new httpd.conf
    cd /etc/sysconfig/
    mv apache2 apache2_old
    cp apache2.cn_new apache2
    /etc/init.d/apache2 start
    ```

11. Start TeamForge.

    ```
    /etc/init.d/httpd start
    /etc/init.d/collabnet start tomcat
    ```

Is my TeamForge site "dedicated" or "advanced?"

Check the value of the *DEDICATED_INSTALL* variable to see what kind of site you are working with.

The type of TeamForge installation you have makes a difference for how you upgrade and patch the site. If you weren't the one who installed your existing site, you'll need to find out if your site is a dedicated or advanced installation.

One easy way to tell if you have an advanced site is to check if any of your site's services are running on separate boxes from the main TeamForge application. This can only happen on an advanced site.

However, if your site has all its services running on the same box, it is not necessarily a dedicated site in the sense that we're talking about. You can have an advanced site on a single box.

If there is any doubt, look in the site's master configuration file.

1. Open the `site-options.conf` file.

   This is the master configuration file that controls your TeamForge site.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.1/conf/site-options.conf
   ```

> **Note:** `vi` is an example. Any *nix text editor will work.

2. Look for the *DEDICATED_INSTALL* variable.

   - If *DEDICATED_INSTALL* is set to true, the TeamForge you have a dedicated installation, with the default configuration and minimal user intervention.
   - If *DEDICATED_INSTALL* is set to false, or is not present, you have an advanced installation, with customizations appropriate to this particular site's conditions and use patterns.

3. As you work through the instructions for upgrading or patching your site, watch for notes like this one:

   > **Note:** If you are working with a *dedicated* TeamForge installation, you can skip this. See *Is my TeamForge site "dedicated" or "advanced?"*

   If you do have a dedicated site, this may help lighten your load a little.

Enable reporting while upgrading to TeamForge 6.2

When upgrading from a TeamForge pre-6.2 site that does not have reporting, you have to configure a collection of variables in the `site-options.conf` to turn on reporting in TeamForge 6.2

The following procedure is an outline of what you need to when upgrading from TeamForge pre-6.2 versions (no reporting) to TeamForge 6.2 (with reporting). For specific commands on upgrading (on the same or new hardware), see the instructions for *upgrade (dedicated)* and *upgrade (advanced)*.

1. Stop TeamForge.
2. Back up your site data.
3. Install the TeamForge 6.2 build, making sure that you change the pre-6.2 site-options for the `jdk` and `MaxPermSize` requirements in 6.2.

   > **Note:** Tokens related to reporting should not be enabled.

4. Migrate the data to TeamForge 6.2.
5. Stop all services. *Enable reporting-related tokens in `site-options.conf`* and recreate the runtime.
6. Start the database if it is not running.
7. From the `runtime/scripts` directory, run the `bootstrap-reporting-data.py` script.
8. You need to add the SSL certificate to the Java keystore if SSL is set to on, the site uses a self-signed certificate and VALIDATE_SSL_CERTS is set to "true".

   For instructions on adding the self-signed certificate to the Java keystore, see *Protect integrations with SSL* on page 261.

9. Start the TeamForge 6.2 site and make sure that reporting is enabled.

Troubleshooting: Upgrade PostgreSQL manually

The TeamForge upgrade utility upgrades PostgreSQL for you automatically when you run the `prepare-environment.sh` script. However, when you upgrade to TeamForge 6.2 Patch 1 from TeamForge 5.4, patch 1, it is possible for the automatic PostreSQL upgrade to fail. If this happens, you can do the PostgreSQL upgrade yourself.

The error, if it occurs, will look like this:

```
ERROR: postgres upgrade failed.
Exiting due to fatal error.
```

1. Create a database dump.

Note: If you have already made the dump, skip this step.

```
su - postgres -c /usr/bin/pg_dumpall > /tmp/dumppath/
```

2. Upgrade PostgreSQL.
   a) Ensure that PostgreSQL is running.

   ```
   /etc/init.d/postgresql-9.0 start
   ```

   b) Upgrade the PostgreSQL packages.

   ```
   yum install postgresql postgresql-server postgresql-docs
   ```

   c) If you get this error:

   ```
   %postun(postgresql-server-8.3.8-1PGDG.rhel5.x86_64) scriptlet failed,
   exit status 1
   ```

   then run this command:

   ```
   yum erase postgresql-server-8.3.8-1PGDG.rhel5
   ```

3. Move the old `pgsql` directory out of the way.

   ```
   mv /var/lib/pgsql/9.0/ /var/lib/pgsql/9.0_old
   ```

4. Rerun the `prepare-environment.sh` command. When it runs successfully, you can run `install.sh` and `migrate.py`.

   Important: After you run the installer and before you run the migration command, you must reload the PostgreSQL data dump:

   ```
   su - postgres -c /usr/bin/psql < /tmp/dumppath/<name>.dmp
   ```

Install a different build of TeamForge 6.2

You can uninstall the current release and install a new build of the same CollabNet TeamForge release without touching your site's data.

Replacing an instance of TeamForge with a new build of the same release on the same hardware is known as "point upgrading."

Point upgrading is a partial application of the process for upgrading to a new release. For comparison, see *Upgrade to TeamForge 6.2*.

1. Stop TeamForge.

   ```
   /etc/init.d/httpd stop
   /etc/init.d/apache2 stop
   /etc/init.d/postgresql-9.0 stop /etc/init.d/postgresql stop
   /etc/init.d/collabnet stop
   ```

2. Install the TeamForge application.

   ```
   yum install teamforge-app teamforge-scm teamforge-database teamforge-etl
   zypper install teamforge
   ```

Tip: If the yum installer balks, you may have duplicate rpm packages.

1. Get the `yum-utils` package, if it isn't already installed.

   ```
   yum install yum-utils
   ```

2. Check for duplicate packages.

   ```
   package-cleanup --dupes
   ```

3. Clean up the older packages, if any.

   ```
   package-cleanup --cleandupes
   ```

4. Rerun the yum installer.

   ```
   yum install teamforge [options]
   ```

3. Run the installer.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.0
   ```

   Note: Make sure the token SCM_DEFAULT_SHARED_SECRET is present in the `site-options.conf`.

   ```
   sudo ./install.sh -r -I -V
   ```

4. Start TeamForge.

   ```
   /etc/init.d/collabnet start
   ```

   Note: The sample TeamForge project template is installed as part of the `collabnet` startup script. If the project template is installed, or it exists in the database by default, the startup script will not re-install it.

Patch TeamForge 6.2

To apply a TeamForge 6.2 patch, you must have TeamForge 6.2 up and running.

Note:

TeamForge add-on packages can remain installed when a patch for TeamForge 6.2 is applied. No updates are required. However, you should verify the compatibility of Add-ons applied to your site as some may be more specific to your site.

The most common Add-ons and their TeamForge compatibility are published here: *https://ctf.open.collab.net/sf/go/page1363*

To determine the compatibility of Add-ons specific to your site or any other query that may not be published on the page, run this command on your TeamForge server:

```
cd /opt/collabnet/teamforge/add-ons
grep sfee-version */package.properties
```

If you have any questions regarding compatibility or updating a specific add-on, contact CollabNet Support for more details.

Patch CollabNet TeamForge 6.2 on Red Hat

Use this information to install or downgrade a TeamForge patch on RedHat.

Apply a patch

The patch installer is built into the existing TeamForge installation, and it updates itself automatically via `yum` when you run it.

1. Stop TeamForge

   ```
   /etc/init.d/httpd stop
   /etc/init.d/postgresql-9.0 stop
   /etc/init.d/collabnet stop
   ```

   Note: In case of multi-box setup, run the above commands in the respective boxes.

2. Uninstall all TeamForge 6.2 hot fixes.
3. Install the TeamForge application patch.

   ```
   yum install teamforge
   ```

   When you execute the yum command, it will fetch and install all the Teamforge patches available in the Collabnet yum repository for Teamforge 6.2

   Note:

   During the upgrade, the site-options.conf file is automatically backed up into `/opt/collabnet/teamforge-installer/6.2.0.1/conf.`
   For Advanced Mode Setup: Upgrade TeamForge based on the services enabled in the respective boxes. Example: `yum install teamforge-scm` in case of "SCM on a separate box".

4. Recreate the runtime environment.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   ```

   ```
   ./install.sh -r -I -V
   ```

5. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

   - You are logged in as "root"
   - You run the command only on the TeamForge application box
   - Your TeamForge database is running

   Run the post-install script from the `[`*`RUNTIME_DIR`*`]/scripts` directory.

   ```
   cd /opt/collabnet/teamforge/runtime/scripts
   ./postinstall_62p1.py
   ```

   Important: Running the above post install script

   ```
   postinstall_62p1.py
   ```

   is critical for proper installation of the patch. For more information, see *postinstall_62p1.py* on page 349

6. Start TeamForge.

   ```
   /etc/init.d/httpd start
   /etc/init.d/postgresql-9.0 start
   ```

```
/etc/init.d/collabnet start
```

To verify if the patch is working:

Click **Admin** in the site navigation bar.
On the site administration navigation bar, click **System Tools**.
Click **Build Information** and observe the following:

Version: 6.2.0.1
Applied Patches: 224.1: CN-collabnet-core,CN-migration,CN-runtime

To upgrade Review Board see *Upgrade Review Board to latest build from CollabNet* on page 281

Downgrade a patch

To downgrade a patch that you have installed on your TeamForge site, run the patch installer from the directory corresponding to that patch.

1. Stop TeamForge.

   ```
   /etc/init.d/httpd stop
   /etc/init.d/postgresql-9.0 stop
   /etc/init.d/collabnet stop
   ```

   👉 **Note:** In case of multi-box setup, run the above commands in the respective boxes.

2. Run the downgrade command.

   ```
   yum downgrade CN-collabnet-core CN-runtime CN-migration teamforge
   TeamForge-installer teamforge-app teamforge-database teamforge-etl
   teamforge-scm
   ```

   👉 **Note:** When you downgrade, the `site-options.conf` file is backed up in `/opt/collabnet/teamforge-installer/6.2.0.0/conf`

   For Advanced Mode Setup: Downgrade TeamForge based on the services enabled in the box. Example: `yum downgrade teamforge-scm CN-collabnet-core CN-migration CN-runtime TeamForge-installer` in case of "SCM on a separate box".

3. Recreate the run time environment.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.0
   ./install.sh -r -n -V -I
   ```

4. Start TeamForge.

   ```
   /etc/init.d/httpd start
   /etc/init.d/postgresql-9.0 start
   /etc/init.d/collabnet start
   ```

To verify if the patch has been reverted:

Click **Admin** in the site navigation bar.
On the site administration navigation bar, click **System Tools**.
Click **Build Information** and observe the following:

Version: 6.2.0.0

Applied Patches: None

To upgrade Review Board see *Upgrade Review Board to latest build from CollabNet* on page 281

Patch CollabNet TeamForge 6.2 on CentOS

Use this information to install or downgrade a TeamForge patch on CentOS.

Apply a patch

The patch installer is built into the existing TeamForge installation, and it updates itself automatically via `yum` when you run it.

1. Stop TeamForge

   ```
   /etc/init.d/httpd stop
   /etc/init.d/postgresql-9.0 stop
   /etc/init.d/collabnet stop
   ```

   Note: In case of multi-box setup, run the above commands in the respective boxes.

2. Uninstall all TeamForge 6.2 hot fixes.
3. Install the TeamForge application patch.

   ```
   yum install teamforge
   ```

   When you execute the yum command, it will fetch and install all the Teamforge patches available in the Collabnet yum repository for Teamforge 6.2

   Note:

   During the upgrade, the site-options.conf file is automatically backed up into `/opt/collabnet/teamforge-installer/6.2.0.1/conf.`

   For Advanced Mode Setup: Upgrade teamforge based on the services enabled in the respective boxes. Example: `yum install teamforge-scm` in case of "SCM on a separate box".

4. Recreate the runtime environment.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   ./install.sh -r -I -V
   ```

5. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

   - You are logged in as "root"
   - You run the command only on the TeamForge application box
   - Your TeamForge database is running

   Run the post-install script from the `[`*`RUNTIME_DIR`*`]/scripts` directory.

   ```
   cd /opt/collabnet/teamforge/runtime/scripts
   ./postinstall_62p1.py
   ```

   Important: Running the above post install script

   ```
   postinstall_62p1.py
   ```

   is critical for proper installation of the patch. For more information, see *postinstall_62p1.py* on page 349

6. Start TeamForge.

```
/etc/init.d/httpd start
/etc/init.d/postgresql-9.0 start
/etc/init.d/collabnet start
```

To verify if the patch is working:

Click **Admin** in the site navigation bar.
On the site administration navigation bar, click **System Tools**.
Click **Build Information** and observe the following:

Version: 6.2.0.1
Applied Patches: 224.1: CN-collabnet-core,CN-migration,CN-runtime

To upgrade Review Board see *Upgrade Review Board to latest build from CollabNet* on page 281

Downgrade a patch

To downgrade a patch that you have installed on your TeamForge site, run the patch installer from the directory corresponding to that patch.

1. Stop TeamForge.

```
/etc/init.d/httpd stop
/etc/init.d/postgresql-9.0 stop
/etc/init.d/collabnet stop
```

Note: In case of multi-box setup, run the above commands in the respective boxes.

2. Run the downgrade command.

```
yum downgrade CN-collabnet-core CN-runtime CN-migration teamforge
TeamForge-installer teamforge-app teamforge-database teamforge-etl
teamforge-scm
```

Note:

When you downgrade, the `site-options.conf` file is backed up in `/opt/collabnet/teamforge-installer/6.2.0.0/conf`
For Advanced Mode Setup: Downgrade teamforge, based on the services enabled in the box. Example: `yum downgrade teamforge-scm CN-collabnet-core CN-migration CN-runtime TeamForge-installer` in case of "SCM on a separate box".

3. Recreate the run time environment.

```
cd /opt/collabnet/teamforge-installer/6.2.0.0
./install.sh -r -n -V -I
```

4. Start TeamForge.

```
/etc/init.d/httpd start
/etc/init.d/postgresql-9.0 start
/etc/init.d/collabnet start
```

To verify if the patch has been reverted:

Click **Admin** in the site navigation bar.
On the site administration navigation bar, click **System Tools**.

Click **Build Information** and observe the following:

Version: 6.2.0.0
Applied Patches: None

Patch CollabNet TeamForge 6.2 on SuSE

Use this information to install or downgrade a TeamForge patch on SuSE.

Apply a patch

The patch installer is built into the existing TeamForge installation, and it updates itself automatically via `yum` when you run it.

1. Stop TeamForge.

   ```
   /etc/init.d/apache2 stop
   /etc/init.d/postgresql stop
   /etc/init.d/collabnet stop
   ```

   Note: In case of multi-box setup, run the above commands in the respective boxes.

2. Uninstall all TeamForge 6.2 hot fixes.
3. Install the patch.

   ```
   zypper install teamforge
   ```

   When you execute the zypper command, it will fetch and install all the Teamforge patches available in the Collabnet yum repository for Teamforge 6.2

   Note: During the upgrade, the site-options.conf file is automatically backed up into `/opt/collabnet/teamforge-installer/6.2.0.1/conf.`

   For Advanced Mode Setup: Upgrade TeamForge based on the services enabled in the respective boxes. Example: zypper install teamforge-scm in case of "SCM on a separate box".

4. Recreate the runtime environment.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   ./install.sh -r -I -V
   ```

5. **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

   - You are logged in as "root"
   - You run the command only on the TeamForge application box
   - Your TeamForge database is running

   Run the post-install script from the `[`*`RUNTIME_DIR`*`]/scripts` directory.

   ```
   cd /opt/collabnet/teamforge/runtime/scripts
   ./postinstall_62p1.py
   ```

   Important: Running the above post install script

   ```
   postinstall_62p1.py
   ```

   is critical for proper installation of the patch. For more information, see *postinstall_62p1.py* on page 349

6. Start TeamForge.

```
/etc/init.d/apache2 start
/etc/init.d/postgresql start
/etc/init.d/collabnet start
```

To verify if the patch is working:

Click **Admin** in the site navigation bar.
On the site administration navigation bar, click **System Tools**.
Click **Build Information** and observe the following:

Version: 6.2.0.1
Applied Patches: 224.1: CN-collabnet-core,CN-migration,CN-runtime

To upgrade Review Board see *Upgrade Review Board to latest build from CollabNet* on page 281

Downgrade a patch

To downgrade a patch that you have installed on your TeamForge site, run the patch installer from the directory corresponding to that patch.

1. Stop TeamForge.

   ```
   /etc/init.d/apache2 stop
   /etc/init.d/postgresql stop
   /etc/init.d/collabnet stop
   ```

   Note: In case of multi-box setup, run the above commands in the respective boxes.

2. Downgrade the patch

   ```
   zypper install teamforge-6.2.0.0-224
   ```

   During installation, you will be prompted with 3 options. Select the option to downgrade the "TeamForge and CN packages.

   Note: During the upgrade, the site-options.conf file is automatically backed up into `/opt/collabnet/teamforge-installer/6.2.0.0/`

   For Advanced Mode Setup: Downgrade TeamForge based on the services enabled in the box. Example: zypper install teamforge-scm-6.2.0.0-224 incase of "SCM on a separate box".

3. Recreate the runtime environment

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.0
   ./install.sh -r -V -I
   ```

4. Start TeamForge.

   ```
   /etc/init.d/apache2 start
   /etc/init.d/postgresql start
   /etc/init.d/collabnet start
   ```

To verify if the patch has been reverted:

Click **Admin** in the site navigation bar.
On the site administration navigation bar, click **System Tools**.
Click **Build Information** and observe the following:

Version: 6.2.0.0
Applied Patches: None

Patch CollabNet TeamForge 6.2 on VMware Player

Use this information to install, uninstall, or downgrade a TeamForge patch on VMware Player.

Apply a patch

The patch installer is built into the existing TeamForge installation, and it updates itself automatically via `yum` when you run it.

1. Stop Teamforge.

   ```
   /etc/init.d/httpd stop
   /etc/init.d/postgresql-9.0 stop
   /etc/init.d/collabnet stop
   ```

2. Install the TeamForge application patch.

   ```
   yum install teamforge
   ```

   👉 **Note:** During the upgrade, the site-options.conf file is automatically backed up into `/opt/collabnet/teamforge-installer/6.2.0.1/conf.`

3. Recreate the runtime environment.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.1
   ./install.sh -r -I -V
   ```

4. 👉 **Note:** Run this command to delete redundant information from the Teamforge database. Make sure that:

   - You are logged in as "root"
   - You run the command only on the TeamForge application box
   - Your TeamForge database is running

   Run the post-install script from the `[`*`RUNTIME_DIR`*`]/scripts` directory.

   ```
   cd /opt/collabnet/teamforge/runtime/scripts
   ./postinstall_62p1.py
   ```

For more information, see *postinstall_62p1.py* on page 349

5. Start TeamForge.

   ```
   /etc/init.d/httpd start
   /etc/init.d/postgresql-9.0 start
   /etc/init.d/collabnet start
   ```

6. Verify that the patch has worked.u
   a) Log onto the site as a site administrator.
   b) Click **System Tools** on the **Admin** tab.
   c) Click **Build Information** and observe the patches that are present.
7. Ensure that your users can access their source code.
   a) Click **Admin** in the CollabNet TeamForge navigation bar.
   b) On the site administration navigation bar, click **Integrations**.
   c) For each source control service you are supporting, verify that the right paths are specified.

- **SOAP service host** should be `localhost` or the host name of the server on which you just installed TeamForge.
- **Repository base URL** should be the URL for the top level of your source code server (which may be the same as your application server). For example, `http://<myscmbox>/svn/repos`
- **SCM Viewer URL** should be the URL for the ViewVC application on your source control server. For example, `http://<myscmbox>/integration/viewvc/viewvc.cgi`

d) Select all your source code integrations and click **Synchronize Permissions**.

This updates the permissions on your code repositories so that users can access them from the new site.

Note: By default, the *DISABLE_CREATE_INTEGRATION_SERVERS* flag in the `site-options.conf` file is set to false, which allows users to create new external integrations. To suppress the ability to add integrations, change this setting to true and recreate the runtime environment before making the site available to users.

Downgrade a patch

To downgrade a patch that you have installed on your TeamForge site, run the patch installer from the directory corresponding to that patch.

1. Stop Teamforge.

```
/etc/init.d/httpd stop
/etc/init.d/postgresql-9.0 stop
/etc/init.d/collabnet stop
```

2. Run the downgrade command.

```
yum downgrade CN-collabnet-core CN-runtime CN-migration teamforge
TeamForge-installer teamforge-app teamforge-database teamforge-etl
teamforge-scm
```

Note: When you downgrade, the site-options.conf file is backed up in `/opt/collabnet/teamforge-installer/6.2.0.0/conf.`

3. Recreate the runtime environment.

```
cd /opt/collabnet/teamforge-installer/6.2.0.0
./install.sh -r -I -V
```

4. Start TeamForge.

```
/etc/init.d/httpd start
/etc/init.d/postgresql-9.0 start
/etc/init.d/collabnet start
```

5. Verify that the patch was reverted

a) Log onto the site as a site administrator.
b) Click **System Tools** on the **Admin** tab.
c) Click **Build Information** and observe the patches that are present.

To verify if the patch has been reverted:

Click **Admin** in the site navigation bar.
On the site administration navigation bar, click **System Tools**.
Click **Build Information** and observe the following:

Version: 6.2.0.0
Applied Patches: None

To upgrade Review Board see *Upgrade Review Board to latest build from CollabNet* on page 281

Troubleshoot patches

You may encounter problems like these when applying or removing a patch.

Can't install patch

When you try to install a patch, the component upgrade process may error out if you do not have a full component upgrade bundle.

You may see the following error:

```
Error message: "The patch file <package name> could not be found in the patch
    directory. Please verify the patch and try again."
```

1. Check that the RPMs in the install list are present in the upgrade component directory.
2. If you receive this message you should verify that you have received and unpacked the whole Component Upgrade bundle.

Patch installation fails

If the environment is corrupted, the patch installation process may fail.

Suppose you are upgrading an installation from patch level 1 to level 4 and the system has finished uninstalling the packages. While trying to install the first package, the system encounters a problem and the installation fails.

Run the `upgrade-site.sh` script with the -F option to get past a failed installation.
In this scenario, you can get to patch level 1 with one of these commands:

- `./upgrade-site.sh -d /opt/collabnet/teamforge -r -F`
- `./upgrade-site.sh -d /opt/collabnet/teamforge -l 1 -F`
- `./upgrade-site.sh -d /opt/collabnet/teamforge -f manifest-1 -F`

Note: The -F option forces the specified upgrade or downgrade.

Maintain your TeamForge 6.2 site

You've got CollabNet TeamForge installed, up to date, and operating on the appropriate scale. Now you're in day-to-day maintenance mode. While you're waiting around for something to go wrong, there's a lot you can do to support users and project managers, monitor the site's performance, and generally keep things running smoothly.

Supply your TeamForge license key from Teamforge user interface

Your license key enables you to use CollabNet TeamForge for the period of your contract.

Your license key will only work for the IP address of the machine that your CollabNet TeamForge is running on, as specified in your order form.

Tip: These steps are for installing your license key via the web interface. If you prefer, you can install it as a text file instead. See *Supply your CollabNet TeamForge license key as a text file* on page 249.

1. Locate the confirmation email you received from your CollabNet representative when you purchased your contract.
2. Log into your site as the site administrator.

   Note: The site administrator is different from the root user on the machine where the site is running.

3. Click **Admin** > **License Key** .
   If you have entered a license before, the IP address and current licensed number of users on your site are listed on the **License Key** page. Verify that the IP address is the same as the one you entered in your order form.
4. Click **Enter License Key**.
5. Copy your new license key from the confirmation email and paste it into the **Enter License Key** field.
   A license key string looks like this:
   [illegible]

   Tip: save this license key in case you need to reinstall CollabNet TeamForge.
6. Click **Save**.
7. Verify that the new value for **Licensed Number of Users** matches the total number of licensed users in your contract.

Supply your CollabNet TeamForge license key as a text file

Your license key enables you to use CollabNet TeamForge for the period of your contract.

Your license key will only work for the IP address of the machine that your CollabNet TeamForge is running on.

Important: If you are upgrading from a site with a limited number of users to an enterprise-scale site, you must install your license key before starting CollabNet TeamForge . Otherwise, your site could be rendered inoperable.

1. Locate the confirmation email you received from your CollabNet representative when you purchased your contract.
2. Create a text file and copy-paste your license key from the confirmation email into it.

   For example, if your organization has 80 users who will use only the source code management features and 100 users who need the full range of application lifecycle management features, your license key string may look like this:
   [illegible]

   Tip: save this license key in case you need to reinstall CollabNet TeamForge.
3. Save the text file as `/opt/collabnet/teamforge/var/etc/sflicense.txt`

   Tip: Save your license key somewhere remote too, in case you need to reinstall CollabNet TeamForge and your `sflicense.txt` file is not accessible.
4. Make the license file usable by the application.

   ```
   chmod 0400 /opt/collabnet/teamforge/var/etc/sflicense.txt
   chown ctf-admin:ctf-admin /opt/collabnet/teamforge/var/etc/sflicense.txt
   ```

   Note: If necessary, change `ctf-admin` to match the value of the *APP_USER* variable in the `site-options.conf` file.

Support CollabNet TeamForge System Administrators

As a system administrator, you can do these things to help maximize the effectiveness and productivity of your site's users.

Authenticate users with LDAP

Use LDAP to facilitate managing users and groups in CollabNet TeamForge.

Set up LDAP integration for the CollabNet TeamForge site

Follow these steps to convert your CollabNet TeamForge installation to authenticate against your corporate OpenLDAP server.

Note: Only OpenLDAP 2.3.27-5 is officially supported, but with some modifications you may be able to make a simple Active Directory integration work as well. See the suggested modifications for *login-config.xml* on page 402.

1. Shut down CollabNet TeamForge .

   ```
   /etc/init.d/httpd stop
   /etc/init.d/collabnet stop
   /etc/init.d/postgresql-9.0 stop
   ```

2. Copy the LDAP configuration file to the data directory.

   ```
   cd /opt/collabnet/teamforge
   cp dist/jboss/jboss-3.2.6/server/default/conf/login-config.xml
   var/etc/login-config.xml
   ```

3. Edit the `<installation_source>/conf/site-options.conf` file.
   a) Tell CollabNet TeamForge to use LDAP authentication.

      Under "External User Authentication," uncomment this line:

      ```
      USE_EXTERNAL_USER_AUTHENTICATION=false
      ```

      and change its value to true.
   b) Tell CollabNet TeamForge where to look for your LDAP configuration settings.

      Uncomment this line:

      ```
      LOGIN_CONFIG_XML_FILE={__DATA_DIR__}/etc/login-config.xml
      ```

      Note: `DATA_DIR` is usually mapped to the `/opt/collabnet/teamforge/var` directory. You may want to check the *SITE_DIR* and *DATA_DIR* variables.
   c) Check that the *MINIMUM_PASSWORD_LENGTH* variable matches the limit used on the LDAP server.

      If your LDAP server does not enforce a minimum password length, set *MINIMUM_PASSWORD_LENGTH* to 0 (zero).

      Note: If a password is used in LDAP that is shorter than the minimum allowable password length in CollabNet TeamForge, you will not be able to create the user in CollabNet TeamForge .

4. In the `/opt/collabnet/teamforge/var/etc/login-config.xml` file, modify the TeamForge `application-policy` block to enable CollabNet TeamForge to authenticate against your LDAP server.

   Tip: The `application-policy` block begins on line 113 of the `login-config.xml` file.

   a) Replace the TeamForge `application-policy` block with the code listed in the sample `application-policy` block in *login-config.xml* on page 402.

b) Replace `principalDNPrefix` with your LDAP username parameter.

   In the example `application-policy` block, the username is stored in LDAP as the uid parameter.

   Note: Make sure to include the trailing = in the prefix.

c) Replace `principalDNSuffix` with the LDAP domain in which usernames are stored.

   Note: Make sure to include the leading comma in the suffix if one is needed.

d) Replace `java.naming.provider.url` with the URL of your LDAP server.

   In the example `application-policy` block, the URL of the LDAP server is `ldap://util.dev.sf.net:389/`.

   Note: Make sure to include `ldap://` at the beginning of the URL.

5. Save all the files you have edited and change their ownership back to `sf-admin`.

```
chown sf-admin.sf-admin login-config.xml
```

6. Recreate the runtime environment.

```
./install.sh -V -r -d /opt/collabnet/teamforge
```

Modify the application policy

To enable CollabNet TeamForge to authenticate against your LDAP server, modify the application-policy block of the `login-config.xml` file.

When the username is passed to the login module from CollabNet TeamForge , it is translated into a DN for lookup on the LDAP server.

1. The DN that is sent to the LDAP server is:

```
            <principalDNPrefix><username><principalDNSuffix>
            principalDNPrefix - Replace principalDNPrefix with your LDAP
username parameter.
```

Note: In the example application-policy block, the username is stored in LDAP as the uid parameter.

Important: Be sure to include the trailing = in the prefix.

2. `principalDNSuffix - Replace principalDNSuffix with the LDAP domain in which usernames are stored.`

In the example application-policy block, the username is stored in the People organizational unit in the dev.sf.net domain. This is represented as:

```
            ,ou=People,dc=dev,dc=sf,dc=net
```

Important: Be sure to include the leading comma in the suffix if one is needed.

3. `Replace java.naming.provider.url with the URL of your LDAP server.`

In the example application-policy block, the URL of the LDAP server is:

```
            ldap://util.dev.sf.net:389/
```

Note: Be sure to include `ldap://` at the beginning of the URL.

Important: To complete your CollabNet TeamForge configuration and enable your CollabNet TeamForge JBoss installation to authenticate against your corporate LDAP server, you must restart CollabNet TeamForge .

Turn off LDAP authentication

During some maintenance operations, such as upgrades, you may need to turn off LDAP authentication temporarily.

1. Open the `site-options.conf` file.

   This is the master configuration file that controls your TeamForge site.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.0/conf/site-options.conf
   ```

   Note: `vi` is an example. Any *nix text editor will work.

2. In the `site-options.conf` file, comment out these variables:

   - USE_EXTERNAL_USER_AUTHENTICATION
   - LOGIN_CONFIG_XML_FILE
   - MINIMUM_PASSWORD_LENGTH

3. Restart the runtime environment.

   ```
   ./install.sh -V -r -d /opt/collabnet/teamforge
   ```

4. Review the variables you've changed, then save the `site-options.conf` file.

Back up CollabNet TeamForge data

Save a copy of your TeamForge site's data to a location from where you can quickly retrieve it to your TeamForge 6.2 site.

- If you are upgrading by installing TeamForge 6.2 on new hardware, then you'll need the backed-up site data to complete the upgrade.
- If you are upgrading your site on the same hardware, then you won't need the backed-up data but you should create it anyway, as a precaution.

1. Stop the TeamForge application server and the Apache server, if they are running.

   ```
   /etc/init.d/httpd stop
   /etc/init.d/apache2 stop
   /etc/init.d/collabnet stop
   ```

2. Back up your site data.

   a) Make a dump file of your site database.

      (This may be the same as your TeamForge application server or a separate box.)

      You have to do a PostgreSQL dump because we are upgrading the PostgreSQL application as part of this upgrade.

      Note: These commands are for a PostgreSQL database, which is the default. If your site uses an Oracle database, follow the *Oracle backup procedure* instead.

      ```
      su - postgres
      /usr/bin/pg_dumpall > /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp
      exit
      mkdir /tmp/backup_dir
      cp /var/lib/pgsql/9.0/backups/teamforge_data_backup.dmp /tmp/backup_dir/
      ```

Note: If your reporting database is running on a separate port, back up your reporting database too:

```
/usr/bin/pg_dumpall -p <reports_database_port> >
/var/lib/pgsql/9.0/backups/teamforge_reporting_data_backup.dmp
```

b) Make an archive file with the following data directories:

Directory	Contents
/opt/collabnet/teamforge/var	User-created data, such as artifact attachments
/svnroot	Subversion source code repositories
/sf-svnroot	Subversion repository for branding data
/cvsroot	CVS source code repositories (not present on all sites)

```
cp -Rpf /svnroot /sf-svnroot /cvsroot /opt/collabnet/teamforge/var
/tmp/backup_dir
cd /tmp
tar czvf 611backup.tgz backup_dir
```

c) Back up your SSH keys, if any.

d) Back up your SSL certificates and keys, if any.

Set up an Oracle database

To use an Oracle database for your CollabNet TeamForge data, set up the Oracle database and tell the installer how to handle it.

1. Make sure your database uses UTF8 or AL32UTF8 encoding.

   This is needed to support users in Asian languages.

   For information about discovering and changing the database encoding, see *this Oracle knowledge base article*.
2. Connect to your Oracle database.

   ```
   SQL> connect <adminusername>@<db_name>/<adminpassword> as sysdba
   ```
3. Create the database user and password you will use to connect from CollabNet TeamForge to Oracle.

   ```
   SQL> create user <sf user> identified by <sf passwd> default tablespace <your
   tablespace> temporary tablespace <temporary tablespace>;
   User created.
   ```
4. Grant permissions to the user that you just created.

   ```
   SQL> grant unlimited tablespace to <sf user>;
   SQL> grant create snapshot to <sf user>;
   SQL> grant create cluster to <sf user>;
   SQL> grant create database link to <sf user>;
   SQL> grant create procedure to <sf user>;
   SQL> grant create sequence to <sf user>;
   SQL> grant create synonym to <sf user>;
   SQL> grant create trigger to <sf user>;
   SQL> grant create type to <sf user>;
   SQL> grant create view to <sf user>;
   SQL> grant query rewrite to <sf user>;
   ```

```
SQL> grant alter session to <sf user>;
SQL> grant create table to <sf user>;
SQL> grant create session to <sf user>;
SQL> exit
```

Note: Replace <sf user> with the database username specified in `site-options.conf` and <sf passwd> with the database password specified in `site-options.conf`.

The CollabNet TeamForge installer creates the tables and default values for you.

Rebuild TeamForge search indexes

You can rebuild your site's search index without stopping TeamForge.

Any new objects created during this time will not be immediately indexed, but will be queued until after the re-indexing.

1. Make sure the TeamForge site is up.
2. Run the re-index script.

   ```
   /opt/collabnet/teamforge/runtime/scripts/SearchReindex.py
   ```

After the script completes, everything is queued for re-indexing. It will take some time to process the re-index requests.

Note: Due to the Lucene upgrade for search functionality, upgrading to TeamForge 6.2 requires a complete re-index of the site. This could take several hours, and the index data could double in size.

Permit big file uploads

When many users store very large files on your site, you may sometimes notice a slowdown in your site's performance. You can reduce the impact of such a use pattern by telling TeamForge not to index files larger than a certain size.

Note: It's also a good idea to let your users know that the Documents tool in TeamForge is not designed primarily as a storage device. As a best practice, upload documents to make them available for collaboration, not for backup or long-term storage.

1. Open the `site-options.conf` file.

   This is the master configuration file that controls your TeamForge site.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.0/conf/site-options.conf
   ```

   Note: `vi` is an example. Any *nix text editor will work.

2. Add the *SEARCH_MAX_FILE_SIZE* parameter and give it a value equal to the maximum size (in bytes) of files to be indexed.

   Note: The default value is 10M. With this value, files larger than 10M are not indexed.

   A value of zero or less specifies that there is no limit, which is the same as the default behavior without the variable.
3. Review the variables you've changed, then save the `site-options.conf` file.

Allow searching of archive files

By default, users can't search the content of archive files uploaded to TeamForge, such as `zip`, `tar`, or `docx` files. If your users need it, you can provide this ability.

Microsoft Office 2007 files, such as files with the `.docx` extension, are archive files. By default their content is not indexed and does not show up in search results. However, information that TeamForge maintains about those documents, such as title, author, description and version, does appear in search results.

If you permit archive searching, watch for performance slowdowns associated with the larger volume of indexing that TeamForge is doing. Depending on your site members' use patterns, the performance cost may or may not be acceptable to your users.

Note: It's also a good idea to let your users know that the Documents tool in TeamForge is not designed primarily as a storage device. As a best practice, upload documents to make them available for collaboration, not for backup or long-term storage.

1. Open the `site-options.conf` file.

   This is the master configuration file that controls your TeamForge site.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.0/conf/site-options.conf
   ```

   Note: `vi` is an example. Any *nix text editor will work.

2. Add the *SEARCH_SUPPRESS_ARCHIVE_SUB_DOCS* parameter and set it to false.
   This enables files inside archives (such as `.zip`, `.gz`, or `.tar`) to be indexed for search.
3. Review the variables you've changed, then save the `site-options.conf` file.

Limit the size of message attachments

To avoid overtaxing your mail server or your storage volume, you may want to set a ceiling on the size of the attachments that users can send to a forum via email.

When a user sends an attachment that is larger than the limit, the message is rejected and the user gets an email from the Site Administrator explaining that the attachment exceeded the limit.

Tip: Before imposing a file attachment size limit, it's a good idea to point your users to better ways of collaborating around large files. Consider suggesting source code repositories, backup systems, or other appropriate solutions.

1. Open the `site-options.conf` file.

   This is the master configuration file that controls your TeamForge site.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.0/conf/site-options.conf
   ```

   Note: `vi` is an example. Any *nix text editor will work.

2. Set the value of the *DISCUSSION_MAX_ATTACHMENT_SIZE* variable to a reasonable level.
   For example, if your users are given to using Microsoft Word documents on the site, you might set *DISCUSSION_MAX_ATTACHMENT_SIZE* to 10 MB, and increase the value by two or three MB at a time if users need more headroom.
3. Review the variables you've changed, then save the `site-options.conf` file.

Limit the size of document attachments

When many users store very large documents on your site, you may sometimes notice a slowdown in your site's performance. You can reduce the impact of such a use pattern by telling TeamForge not to attach documents larger than a certain size.

Note: It's also a good idea to let your users know that the Documents tool in TeamForge is not designed primarily as a storage device. As a best practice, upload documents to make them available for collaboration, not for backup or long-term storage.

1. Open the `site-options.conf` file.

   This is the master configuration file that controls your TeamForge site.

```
vi /opt/collabnet/teamforge-installer/6.2.0.0/conf/site-options.conf
```

Note: `vi` is an example. Any *nix text editor will work.

2. Add the *DOCUMENT_MAX_FILE_UPLOAD_SIZE* parameter and give it a value equal to the maximum size (in megabytes) of documents to be uploaded.
3. Review the variables you've changed, then save the `site-options.conf` file.

Who can post to discussions by email?

To help reduce the risk of spam or other mischief, you may need to limit the users who can post to discussion forums by email.

To leverage the advantages of community collaboration, you should keep your forums as open as you can. However, some sites require tighter control over who can participate in discussions. TeamForge enables you to balance openness against privacy along a spectrum of choices.

1. Open the `site-options.conf` file.

   This is the master configuration file that controls your TeamForge site.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.0/conf/site-options.conf
   ```

   Note: `vi` is an example. Any *nix text editor will work.

2. Add the *DISCUSSION_EMAIL_POSTING* variable, and give it the value that reflects the degree of openness your site's discussion forums require.

   Use one of these values:

Value	Description
0	Allow only forum admins.
1	Users with roles and permissions.
4	All logged in users.
5	Allow known email addresses only.
6	Allow all site users and guests.

3. Review the variables you've changed, then save the `site-options.conf` file.

The value you set here determines the maximum degree of openness to email posting for all projects on your site. For example, consider a site where project members can post by email (level 3). For a project that requires extra security, the project administrator can choose to accept email only from users with the appropriate role (level 1). However, a project owner cannot accept email posts from a less restrictive category of users, such as all users who are logged in (level 4).

Who can monitor discussions?

You may need to limit the users who can monitor discussion forums.

To leverage the advantages of community collaboration, you should keep your forums as open as you can. However, some sites require tighter control over how users keep track of discussions. TeamForge enables you to balance openness against privacy along a spectrum of choices.

1. Open the `site-options.conf` file.

   This is the master configuration file that controls your TeamForge site.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.0/conf/site-options.conf
   ```

Note: `vi` is an example. Any *nix text editor will work.

2. Add the *DISCUSSION_EMAIL_MONITORING* variable, and give it the value that reflects who you want to get updates on discussions via email.

   Use one of these values:

Value	Description
0	Allow only forum admins.
1	Users with role permissions.
4	All logged in users.
5	Allow all site users and guests.

3. Review the variables you've changed, then save the `site-options.conf` file.

The value you set here determines the maximum degree of openness to monitoring discussions for all projects on your site. For example, consider a site where project members can monitor discussions (level 3). For a project that requires extra security, the project administrator can dictate that only users with the appropriate role can monitor discussions (level 1). However, a project owner cannot allow monitoring for a less restrictive category of users, such as all users who are logged in (level 4).

Reduce discussion spam

You can filter out some kinds of spam from your project's discussion forums.

1. Open the `site-options.conf` file.

   This is the master configuration file that controls your TeamForge site.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.0/conf/site-options.conf
   ```

   Note: `vi` is an example. Any *nix text editor will work.

2. Add one or more MIME types to the Reject MIME types filter.

   The presence of any of these MIME types in an incoming message (via email) will cause its rejection with appropriate notification to the posting user.

   For example:*DISCUSSION_REJECT_MIME_TYPES*=application/pdf,text/xml
3. Add one or more MIME types to the Drop MIME types filter.

   The presence of any of these MIME types in an incoming message (via email)will cause its attachment to be deleted with appropriate notification to the posting user.

   For example:*DISCUSSION_DROP_MIME_TYPES*=image/jpeg,image/jpg,text/xml
4. Add one or more header names to the remove headers filter.

   If an incoming email posting contains any of these headers, they will be quietly removed from the message before it is archived and before subscribers are notified.

   For example:*DISCUSSION_REMOVE_HEADERS*=precedence,x-no-archive,Return-Path
5. Add one or more header names to reject headers filter to be rejected or moderated (if discussion is moderated).

   Use regular expressions, each regular expression must match an entire header. The match of any of these headers in an incoming message (via email) will cause its rejection with appropriate notification to the posting user.

   For example:*DISCUSSION_REJECT_HEADERS*=(?s).*headername1:value2.*,(?s).*name2:value2.*
6. Add one or more entries for Reject content filter.

   Use regular expressions, each regular expression must match an entire entry. The match of any of these entries in discussion body and subject of an incoming message (via email) will cause its rejection with appropriate notification to the posting user.

For example: *DISCUSSION_REJECT_CONTENT*=(?s).*word.*,(?s).*spam.*

Note: The content entry is a case sensitive.

7. Review the variables you've changed, then save the `site-options.conf` file.
8. Restart the site.

Install project templates manually

Provide sample projects to help users get started quickly.

TeamForge comes with a sample template useful for agile development projects. Site administrators and project managers can use this template to jump-start a project without a lot of manual setup steps.

In the TeamForge installation directory, run the `install-project-templates.py` script.

```
cd /opt/collabnet/teamforge-installer/6.2.0.0
./install-project-templates.py -V
```

Use a site administrator user name and password. For a new site, these are `admin` and `admin`.

Tip: On some servers, it may take a few seconds for the SOAP server to be ready after installation. If `install-project-templates.py` returns an error, try waiting briefly and then running it again.

Let users see what's in a project template

Help your site's project administrators choose a project template by enabling them to see the contents of the templates that are available.

By default, only site administrators can see project template detail, but project administrators normally create a project from a project template. To choose the right template, a project manager may want to know if tasks, documents, wiki pages or other kinds of content are included in a given template.

Note:

1. Open the `site-options.conf` file.

   This is the master configuration file that controls your TeamForge site.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.0/conf/site-options.conf
   ```

   Note: `vi` is an example. Any *nix text editor will work.

2. Change the value of the SHOW_PROJECT_TEMPALTE_DETAIL_TO_NON_SITEADMINS variable to true.

   Note: Use the parameter name as given, including the typo.

3. Review the variables you've changed, then save the `site-options.conf` file.
4. Recreate the runtime environment.

   ```
   ./install.sh -V -r -d /opt/collabnet/teamforge
   ```

Provide a Perforce source control server

Enabling your users to integrate Perforce repositories into their TeamForge projects requires some extra configuration.

1. If you are adding Perforce support to an existing site, back up your site's data first. (If you are adding Perforce as part of installing a new site, skip this.)

   See *Back up CollabNet TeamForge data* on page 270.

2. Install Perforce, using the instructions in the *Perforce sysadmin documentation*.
3. Open the `site-options.conf` file.

   This is the master configuration file that controls your TeamForge site.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.0/conf/site-options.conf
   ```

   Note: `vi` is an example. Any *nix text editor will work.

4. Add these variables to your `site-options.conf` file, changing the values as appropriate:

   Note: In case of a multibox setup, modfiy the token *PERFORCE_PORT=0.0.0.0:1666* in the `site-options.conf` file in all the boxes where the service is distributed to get the correct status of the Perforce server.

   ```
   PERFORCE_PORT=localhost:1666
   PERFORCE_CLIENT=/usr/local/bin/p4
   PERFORCE_LICENSE_FILE=/tmp/license
   ```

5. Review the variables you've changed, then save the `site-options.conf` file.
6. If your Perforce server is running SuSE, remove the `perforce` user from the TeamForge server and bootstrap the site data. (If you are on Red Hat or CentOS, skip this.)

   ```
   userdel perforce
   ./bootstrap-data.sh
   ```

7. If you are adding Perforce support to an existing site, restore your site's data.

   See *Restore backed-up CollabNet TeamForge data* on page 270.

Protect your CollabNet TeamForge site

You can take various measures to maximize the security of your CollabNet TeamForge users.

Protect your TeamForge site with SSL

Use Secure Socket Layer (SSL) to run your Web server securely.

Set up SSL for your TeamForge site on RedHat

To force all TeamForge traffic to use SSL encryption (HTTPS), state that preference in your configuration file.

1. Open the `site-options.conf` file.

   This is the master configuration file that controls your TeamForge site.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.0/conf/site-options.conf
   ```

   Note: `vi` is an example. Any *nix text editor will work.

2. Set the options to enable SSL for the site.

   a) Set the *SSL* variable to on.

   b) Set the *SSL_CERT_FILE* variable to the location of the file that contains your site's SSL certificates.

   ```
   SSL_CERT_FILE=www.example.com.crt
   ```

   c) Set the *SSL_KEY_FILE* variable to the location of the file that contains your site's RSA private keys.

   ```
   SSL_KEY_FILE=www.example.com.key
   ```

   Important: Select a location for your cert file and your key file that is permanent across restarts. Don't use a temp directory that can be wiped out.

3. In the `site-options.conf` file, make sure the value of the *DOMAIN_localhost* variable matches that of your SSL certificate.
4. Rename the `/etc/httpd/conf.d/ssl.conf` file to `/etc/httpd/conf.d/ssl.conf.old`, if it exists.
5. If you are converting an existing site to use SSL (that is, if your site already has had users accessing it via HTTP and not HTTPS), you must update your site's publishing repository to use the new SSL settings.

   To do this, ask your CollabNet support representative for the `fix-publishing-repos-to-ssl.py` script.
6. Stop TeamForge.

   ```
   /etc/init.d/httpd stop
   /etc/init.d/postgresql-9.0 stop
   /etc/init.d/collabnet stop
   ```
7. Run the installer.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.0
   ./install.sh -r -I -V
   ```
8. Rename the `/etc/httpd/conf/httpd.conf.cn_new` file to `httpd.conf`, if it exists.
9. Start TeamForge.

   ```
   /etc/init.d/httpd start
   /etc/init.d/postgresql-9.0 start
   /etc/init.d/collabnet start
   ```

A new Apache configuration file is created with the information you provided in the `site-options.conf` file. The new file is named `httpd.conf.cn_new`. It contains `VirtualHost` sections for port 80 and port 443. All port 80 requests are redirected to port 443.

When you point your browser at CollabNet TeamForge, it should now automatically redirect to HTTPS.

Generate SSL certificates

To use https for web traffic, you will need to obtain a valid Apache SSL certificate.

When generating an Apache (mod_ssl) SSL certificate, you have two options:

- Purchase a SSL certificate from a certificate authority (CA). Searching the Web for "certificate authority" will present several choices.
- Generate a self-signed certificate. This option costs nothing and provides the same level of encryption as a certificate purchased from a certificate authority (CA). However, this option can be a mild annoyance to some users, because Internet Explorer (IE) issues a harmless warning each time a user visits a site that uses a self-signed certificate.

Regardless of which option you select, the process is almost identical.

1. Know the fully qualified domain name (FQDN) of the website for which you want to request a certificate.

   If you want to access your site through `https://www.example.com`, then the FQDN of your website is `www.example.com`.

   Note: This is also known as your common name.
2. Generate the key with the SSL `genrsa` command.

   ```
   openssl genrsa -out www.example.com.key 1024
   ```

   This command generates a 1024 bit RSA private key and stores it in the file `www.example.com.key`.

   Tip: Back up your `www.example.com.key` file, because without this file your SSL certificate will not be valid.

3. Generate the CSR with SSL `req` command.

   ```
   openssl req -new -key www.example.com.key -out www.example.com.csr
   ```

   This command will prompt you for the X.509 attributes of your certificate. Give the fully qualified domain name, such as `www.example.com`, when prompted for `Common Name`.

   Note: Do not enter your personal name here. It is requesting a certificate for a webserver, so the Common Name has to match the FQDN of your website.

4. Generate a self-signed certificate.

   ```
   openssl x509 -req -days 370 -in www.example.com.csr -signkey
   www.example.com.key -out www.example.com.crt
   ```

   This command will generate a self-signed certificate in `www.example.com.crt`.

You will now have an RSA private key in `www.example.com.key`, a Certificate Signing Request in `www.example.com.csr`, and an SSL certificate in `www.example.com.crt`. The self-signed SSL certificate that you generated will be valid for 370 days.

Prevent HTTPS cracking

To reduce the risk of HTTPS ciphers being cracked, allow only the strongest ciphers available.

Deploying an Apache SSL certificate and forcing https ensures that all data is encrypted. It does not, however, ensure that the encryption methods (also known as ciphers) that are used are strong. With the ever-increasing power of computers, many older or weaker ciphers can be cracked in a matter of days or even hours by a determined person with malicious intentions.

1. In the `/etc/httpd/conf.d/ssl.conf` file, find the headings *SSLProtocol* and *SSLCipherSuite*.

   Note: If they do not exist, add them below the *SSLEngine* line.

2. In each section, add the following two lines:

   ```
   SSLProtocol all -SSLv2 SSLCipherSuite
   RSA:!EXP:!NULL:+HIGH:+MEDIUM:-LOW
   ```

3. Save the file and restart Apache.

   ```
   apachectl restart
   ```

Protect integrations with SSL

If you have registered Secure Socket Layer (SSL) certificates, your site's users can use SSL when they set up an SCM integration server.

If you use certificates that are generated in-house, self-signed, or signed by a non-established Certificate Authority, they must be registered with each client system that will connect to the CollabNet TeamForge server. Registration consists of importing custom certificates into the Java runtime's global keystore on each server.

Important: This will affect any other Java applications on the server that use the same Java runtime.

1. Collect server certificates from all servers.

   On RHEL, CentOS and other RedHat-based distributions, these are contained in `/etc/httpd/conf/ssl.crt/server.crt`.

   Tip: Be sure to use exactly this path, as there are other files with similar names, plus server certificates are not really secret, but some other files are. So, files must be copied (e.g., via scp) to the same directory, and renamed if necessary to avoid clashes. We recommend that you use the short server name of the corresponding server for this.

2. **Locate the Java keystore.**

   This is `PATH_TO_JAVA/jre/lib/security/cacerts`.

   For example, this may be `/usr/local/j2sdk1.4.2_10/jre/lib/security/cacerts`.
3. Locate the Java `keytool` utility.

   This is `PATH_TO_JAVA/bin/keytool`

   For example, `/usr/local/j2sdk1.4.2_10/bin/keytool`.
4. Import each server certificate into the keystore.

   ```
   PATH_TO_JAVA/bin/keytool -import -keystore
   PATH_TO_JAVA/jre/lib/security/cacerts -file <server>.crt -alias <server>
   ```

   Note: Any value is accepted for server in -alias <server>.
5. At the password prompt, use `changeit`.

   Confirm that you trust the certificate by typing `yes`.
6. Verify that all your certificates are added.

   ```
   PATH_TO_JAVA/bin/keytool -list -keystore
   PATH_TO_JAVA/jre/lib/security/cacerts |less
   ```

   Note: The list will contain many more certificates. These are top-level CA certificates, provided with Java.
7. Update /etc/sourceforge.properties to enable secure communication.

   a) Set *sfmain.integration.listener_ssl* to true.

   b) Set *sfmain.integration.listener_port* to 443.
8. If you are running more than one separate server, repeat these steps for each server.
9. Restart TeamForge

Now you can check the **Use SSL** checkbox when creating an SCM integration.

Get information about a CollabNet TeamForge site

Use the `snapshot.py` utility to determine what processes are running on your CollabNet TeamForge site, how much free memory is available, and other information.

1. Log into the server.
2. Find the application in distress.
3. Run the `snapshot.py` script.

   ```
   /opt/collabnet/teamforge/runtime/scripts/snapshot.py
   ```

Snapshot gathers data from several processes running on the system, including:

- JBoss
- Tomcat
- James
- PostgreSQL
- Apache
- C6Migration

The information is written to `LOG_DIR/runtime/snapshot.log` and `LOG_DIR/apps/server.log`.

Note: `LOG_DIR` is the directory you defined as the logging directory in the `site-options.conf` file.

Rebuild runtime without the install directory

You should keep your `teamforge-installer` directory around after installing TeamForge in case you need it later. However, if you delete or lose the directory you can still rebuild the application runtime.

1. Make a copy of the `runtime-options.conf` to use as the new `site-options.conf` file.

   ```
   cp /opt/collabnet/teamforge/runtime/conf/runtime-options.conf
   /var/tmp/site-options.conf
   ```

2. Rebuild the application runtime using the `create-runtime.py` script.

   ```
   /opt/collabnet/teamforge/dist/scripts/create-runtime.py –d
   /opt/collabnet/teamforge/ –f /var/tmp/site-options.conf
   ```

Turn on site-wide reporting

To use the site-wide reporting functionality, you have to configure a collection of variables in the `site-options.conf` file.

Tip: For a view of what this looks like in action, see any of the advanced installation scenarios under *Install TeamForge the advanced way*.

Note: Site administrators can view the status of the ETL server in **System Tools** > **Server Status**. The status displays the following values:

- "OK" if enabled and running
- "N/A" when disabled
- "Could not connect" when enabled and not running

1. Open the `site-options.conf` file.
   This is the master configuration file that controls your TeamForge site.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.0/conf/site-options.conf
   ```

   Note: `vi` is an example. Any *nix text editor will work.

2. Comment out the default *HOST_localhost=app database subversion cvs* variable, then add (or uncomment) the variable that has the reporting services enabled:

   Note: If you want to run the ETL and datamart services on a separate box, see *Install TeamForge the advanced way* for details.

3. Add these variables (or uncomment them, if they are already present) and give them the appropriate values:

   ```
   REPORTS_DATABASE_NAME=ctfrptdb
   REPORTS_DATABASE_PASSWORD=ctfrptpwd
   REPORTS_DATABASE_USERNAME=ctfrptuser
   REPORTS_DATABASE_READ_ONLY_USER=ctfrptreadonly
   REPORTS_DATABASE_READ_ONLY_PASSWORD=rptropwd
   REPORTS_DATABASE_MAX_POOL_SIZE=30
   ```

4. If you want your datamart to use a different port than your site database, we recommend the following:

   - For small dataset customers: use the same instance as that of `ctfdb`; leave REPORTS_DATABASE_PORT commented.

- For medium to large dataset customers: use a separate instance by setting REPORTS_DATABASE_PORT=5632.

5. For ETL to function, add these variables:

   ```
   ETL_SOAP_SHARED_SECRET=<arbitrary_string>
   SOAP_ANONYMOUS_SHARED_SECRET=<arbitrary_string>
   ```

   Tip: For more information about configuring variables, see *site-options.conf* on page 359.

6. Set the time you want the reporting data to be collected, if different from the default 2:30 a.m. (local time).

   ```
   ETL_JOB_TRIGGER_TIME=<cron expression>
   ```

   Tip: This value is a cron expression, not a time value. See *ETL_JOB_TRIGGER_TIME* on page 371 for more.

7. Review the variables you've changed, then save the `site-options.conf` file.

Synchronize TeamForge source control integrations

Any time you upgrade your TeamForge site or a source control application, you must ensure that your users can still access their source code.

1. Click **Admin** in the CollabNet TeamForge navigation bar.
2. On the site administration navigation bar, click **Integrations**.
3. For each source control service you are supporting, verify that the right paths are specified.
   - **SOAP service host** should be `localhost` or the host name of the server on which you just installed TeamForge.
   - **Repository base URL** should be the URL for the top level of your source code server (which may be the same as your application server). For example, `http://<myscmbox>/svn/repos`
   - **SCM Viewer URL** should be the URL for the ViewVC application on your source control server. For example, `http://<myscmbox>/integration/viewvc/viewvc.cgi`
4. Select all your CVS integrations and click **Synchronize Permissions**.

   This updates the permissions on your code repositories so that users can access them from the new site.

Note: By default, the *DISABLE_CREATE_INTEGRATION_SERVERS* flag in the `site-options.conf` file is set to false, which allows users to create new external integrations. To suppress the ability to add integrations, change this setting to true and recreate the runtime environment before making the site available to users.

Provide more than one source control server

To run more than one source control server of the same type on your site, each integration must have its own unique name and data directory.

Note: No single server can host more than one source control integration of the same type. If you want to have more than one Subversion integration, they must run on separate machines. The same is true for CVS integrations.

1. Manually create the necessary directories on NetApp.

   Important: Each directory must have its own unique name. For example, if the first Subversion instance is named `svnroot`, you might name the second instance `svnroot_2`.

2. Set the permissions on the new directories to `ctf-admin:ctf-admin`

3. For each such directory on the NetApp, create a separate symlink in the local filesystem pointing to the NetApp mount folder.
   For example, assuming the NetApp mount is mounted on the `/shared` mount point in the local filesystem:

   ```
   sudo ln -s /svnroot /shared/svnroot_2
   ```

   👉 **Note:** Only one source code integration of any one type can run on a machine.

Upgrade Subversion on RedHat or CentOS

Use the yum package manager to upgrade to the latest supported Subversion release.

TeamForge6.2 supports Subversion 1.7.2.

1. Log in as `root` and stop all `collabnet` services.
2. Check that Subversion 1.7.2 is available for upgrade:

   ```
   yum list subversion
   ```

3. Upgrade Subversion.

   ```
   yum update subversion subversion-perl subversion-python mod_dav_svn
   ```

4. Verify the Subversion upgrade.

   ```
   rpm -qa | grep subversion
   svn --version | grep " version"
   ```

5. Change to the `runtime/scripts` directory.

   ```
   cd /opt/collabnet/teamforge/runtime/scripts
   ```

6. Start all `collabnet` services.

   ```
   /etc/init.d/collabnet start
   ```

Upgrade Subversion on SuSE

Use the zypper package manager to upgrade to the latest supported Subversion release.

TeamForge6.2 supports Subversion 1.7.2.

1. Login as `root` and stop all `collabnet` services.
2. Check that Subversion 1.7.2 is available for upgrade:

   ```
   zypper refresh
   zypper repos
   ```

3. Remove the older Subversion packages.

   ```
   zypper remove subversion subversion-server subversion-tools subversion-perl
   subversion-python
   ```

4. Upgrade Subversion.

   ```
   zypper install subversion subversion-tools subversion-perl subversion-python
   zypper install subversion-server
   ```

> **Note:** You may see a message like this: "There are some running programs that use files deleted by recent upgrade. You may wish to restart some of them. Run 'zypper ps' to list these programs". This message appears during a package upgrade which might cause library files to be overwritten -- if there any running processes using older library files, zypper warns you to restart those processes. You can ignore this message.

5. Verify the Subversion upgrade.

   ```
   rpm -qa | grep subversion
   svn --version | grep " version"
   ```

6. Change to the `runtime/scripts` directory.

   ```
   cd /opt/collabnet/teamforge/runtime/scripts
   ```

7. Start all `collabnet` services.

   ```
   /etc/init.d/collabnet start
   ```

Change your site's domain name

To change the domain name of your site, you must change the name in the file system, the database, and any integrated applications. TeamForge provides a script for each of these.

1. Make sure your site's database and file system are backed up.
2. In the `site-options.conf` file, update the domain name (and hostname if needed), then save the file.

   ```
   DOMAIN_<Host_Name>=<Domain_Name>
   JAMES_POSTMASTER_EMAIL=root@<Domain_Name>
   JAMES_MTA_HOST=<Domain_Name>
   ```

   For example:

   ```
   DOMAIN_mybox.supervillain.net=www.smileyface.com
   JAMES_POSTMASTER_EMAIL=root@www.smileyface.com
   JAMES_MTA_HOST=www.smileyface.com
   ```

3. Go to the TeamForge scripts directory.

   ```
   cd /opt/collabnet/teamforge/runtime/scripts/
   ```

4. Run the script to change the domain in the file system.

   ```
   ./domain_change_fs.pl --old=www.myoldsitename.net --new=www.mynewsitename.net
   > /tmp/domain_change_fs.out 2>&1
   ```

5. Run the script to change the domain in the database.

   ```
   ./domain_change_db.py --old=www.myoldsitename.net --new=www.mynewsitename.net
   > /tmp/domain_change_db.out 2>&1
   ```

6. If your site has Project Tracker integrated, run the script to change the domain in Project Tracker.

   ```
   ./domain_change_pt.py --oldDomain=www.myoldsitename.net
   --newDomain=www.mynewsitename.net > /tmp/domain_change_pt.out 2> &1
   ```

Specify DNS servers

Define the DNS servers with which you want CollabNet TeamForge to resolve URLs by listing them in the `resolv.conf` file.

1. In the `/etc/resolv.conf` file, list the servers you want to use for resolving Internet addresses.
2. Rebuild the runtime environment.

   ```
   ./install.sh -V -r -d /opt/collabnet/teamforge
   ```

3. Restart CollabNet TeamForge .

   ```
   /etc/init.d/httpd start
   /etc/init.d/postgresql-9.0 start
   /etc/init.d/collabnet start
   ```

Optimize PostgreSQL with vacuum

To optimize your PostgreSQL database, run a built-in utility called "vacuum."

Normal use of database software often creates data overhead that needs to be cleaned periodically in order to ensure optimal speed and stability. This overhead is usually the result of temporary files and indexes that the database creates (analogous to a fragmented hard disk.)

The vacuum utility runs on a live database and, like the backup command, can be scripted to run nightly or at minimal server load times.

1. To vacuum the CollabNet TeamForge database, run the `vacuum` command as the PostgreSQL user.

   ```
   vacuumdb -h `hostname` -U <DATABASE_USERNAME> -z <DATABASE_NAME>
   ```

   For example, using the default values in the `site-options.conf` file:

   ```
   vacuumdb -h `hostname` -U ctfuser -z ctfdb
   ```

2. To set up automatic vacuuming of the database based on activity statistics, set up auto-vacuuming according to these instructions:

   http://www.postgresql.org/docs/8.2/interactive/routine-vacuuming.html#AUTOVACUUM.

Change the location of a log file

To change where log files are written to, edit the `site-options.conf` file and restart the runtime environment.

1. Stop the site.

   ```
   /etc/init.d/collabnet stop all
   ```

2. In the `/opt/collabnet/teamforge-installer/6.2.0.0/conf/site-options.conf` file, change the value of the *LOG_DIR* variable to reflect the location where you want the log files to be written.
3. Recreate the runtime environment.

   ```
   ./install.sh -V -r -d /opt/collabnet/teamforge
   ```

4. Start the site.

   ```
   /etc/init.d/httpd start
   /etc/init.d/postgresql-9.0 start
   ```

```
/etc/init.d/collabnet start
```

All future Apache logs, mail logs, database logs, java logs, and other logs will be written to the new location.

Change the logging level on your site

Set the logging level appropriately to enable logging in `vamessages.log` and in `James` logs.

Use these instructions for TeamForge6.2 and later versions.

Note: Using these instructions enables debug logging only in `vamessages.log`.

1. Edit `$RUNTIME/jboss/server/default/deploy/logging.properties` to enable logging in `vamessages.log`.

   Note: You need to restart the site for JBoss to pick up these changes.

2. Locate the property names and modify the values as indicated in the table:

   Table 1: Property settings to enable debugging

Property Setting	Current Value	Modified Value	Description
logger.level	INFO	DEBUG	Root logger level
logger.com.vasoftware.level	INFO	DEBUG	Log handler for `VAFILE`
handler.VAFILE.level	INFO	DEBUG	Log for `VAFILE`

Note: To enable `James` logs such as `Mailet`, `James`, `SpoolManager` and so on, follow these steps:

- Edit `$RUNTIME/james/apps/james/SAR-INF/environment.xml` .
- Locate "categories" and set the log-level to DEBUG for the categories in which you wish to enable logging.
- Restart `James`.

Raise the logging visibility of selected database requests

For easier troubleshooting, you can dictate that certain database requests get logged in a handy central log file.

For example, database requests that run longer than 10 seconds are likely candidates for troubleshooting. You can have such requests automatically logged in the `vamessages.log` file for your inspection. The exact length of time after which a request becomes problematic depends on your environment.

How it works:

- All database queries are logged at DEBUG level by default.
- By default, the `vamessages.log` file is configured to include all events logged at the INFO level or higher.
- Database queries that run over a configurable time limit are logged at INFO rather than DEBUG, which causes them to appear in `vamessages.log`.

1. Stop TeamForge.

   ```
   /etc/init.d/httpd stop
   /etc/init.d/apache2 stop
   /etc/init.d/postgresql-9.0 stop /etc/init.d/postgresql stop
   /etc/init.d/collabnet stop
   ```

2. Open the `site-options.conf` file.

This is the master configuration file that controls your TeamForge site.

```
vi /opt/collabnet/teamforge-installer/6.2.0.0/conf/site-options.conf
```

Note: `vi` is an example. Any *nix text editor will work.

3. In the `site-options.conf` file, change the value of the *LOG_QUERY_TIME_THRESHOLD* variable to a value, in milliseconds, that makes sense for your environment.
4. Run the installer.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.0
   ./install.sh -r -I -V
   ```

5. Start TeamForge.

   ```
   /etc/init.d/httpd start
   /etc/init.d/httpd start
   /etc/init.d/apache2 start
   /etc/init.d/postgresql-9.0 start /etc/init.d/postgresql start
   /etc/init.d/collabnet start
   ```

Schedule data extraction for reporting

Set the interval at which you want yourTeamForge site's data extracted to the datamart from which reports are generated.

Each extract-transform-load (ETL) job consists of extracting the data from the production database, transforming it to support reporting, and loading it into the datamart.

By default, this is done every night at 2:30 a.m., by the host's local clock.

1. Open the `site-options.conf` file.
   This is the master configuration file that controls your TeamForge site.

   ```
   vi /opt/collabnet/teamforge-installer/6.2.0.0/conf/site-options.conf
   ```

   Note: `vi` is an example. Any *nix text editor will work.

2. Set the *ETL_JOB_TRIGGER_TIME* variable to the interval at which you want ETL jobs to run.
   For example, a value of `0 0/15 * * * ?` will run an ETL job every 15 minutes.
3. Review the variables you've changed, then save the `site-options.conf` file.

Back up and restore CollabNet TeamForge data

CollabNet TeamForge stores data in the database and on the file system. Back up all data comprehensively so that it can be restored in the event of unrecoverable failures.

Note: The items listed in this section address only the data that is either created by or a part of CollabNet TeamForge. Data that is not specific to TeamForge, such as operating system-based content, configuration files, and other third-party applications, will also require a backup and restoration routine to ensure that the entire server can be restored in the event of a catastrophic failure. Contact your application or operating system vendor for specific guidance on backup strategies for their products.

Back up CollabNet TeamForge data

Use the `backup-data.py` utility to compress a copy of your site data to a location where you can quickly retrieve it.

This backup method requires shutting down your site briefly. If you cannot tolerate a shutdown, you might consider another backup/restore method, such as the NetApp `Snapshot` utility.

1. Stop TeamForge.

   👉 **Note:** If TeamForge is running on multiple machines, stop all the machines.

   ```
   /etc/init.d/collabnet stop
   ```

2. Run the backup script.

   ```
   cd /opt/collabnet/teamforge/runtime/scripts
   ./backup-data.py --destination=<directory name>
   ```

   CollabNet TeamForge creates the directory and stores the following data in it, in compressed format:

   - Subversion repositories
   - CVS repositories
   - The data directory (`/var`)
   - The CollabNet TeamForge database.

3. Start TeamForge.

   ```
   /etc/init.d/httpd start
   /etc/init.d/httpd start
   /etc/init.d/apache2 start
   /etc/init.d/postgresql-9.0 start /etc/init.d/postgresql start
   /etc/init.d/collabnet start
   ```

Restore backed-up CollabNet TeamForge data

Use the `restore-data.py` utility to bring back site data that has been backed up.

1. Stop the CollabNet TeamForge application server.

   ```
   /etc/init.d/collabnet stop
   ```

2. Run the restore script.

   ```
   cd /opt/collabnet/teamforge/runtime/scripts
   ./restore-data.py --source=<directory name>
   ```

   where `<directory-name>` is the directory to which you backed up the data with the `backup-data.py` script.

   CollabNet TeamForge unpacks the backed-up Subversion and CVS repositories, the data directory, and the CollabNet TeamForge database.

3. Restart CollabNet TeamForge .

   ```
   /etc/init.d/collabnet start
   ```

Back up a PostgreSQL database

To back up a PostgreSQL database, use the `db.pl` script or the `pg_dump` command depending on your setup.

Note: You can use `db.py` to back up PostgreSQL data in all setups except the dedicated database server setup where `ctf` (TeamForge database) is not installed. In a dedicated database setup, you can back up the PostgreSQL database safely while it is online by using the native `pg_dump` command.

Using `db.py`:

- To back up the entire PostgreSQL database, run this command.

  ```
  ./db.py -a dump -f /tmp/backup/
  ```

- To back up only the `ctf` database, run this command.

  ```
  ./db.py -a dump -t ctf -f /tmp/backup/
  ```

- To back up only the datamart, run this command.

  ```
  ./db.py -a dump -t reporting -f /tmp/backup/
  ```

Using `pg_dump`:

- In a dedicated database setup, you can run one of these `pg_dump` commands:

  In this example, the database is dumped into a GNU tar formatted file or a .dmp file.

  - `pg_dump -Ft -b -o ctfdb > ctfdb.tar`
  - `pg_dump -Fc <dbname> -f ctfdb.dmp`
  - `pg_dump ctfdb > /tmp/backup_dir/teamforge_data_backup.dmp`

  Note: For this example, the name of the CollabNet TeamForge database is assumed to be ctfdb.

  Tip: See the PostgreSQL `pg_dump` man page for more information and examples.

Restore a PostgreSQL database

You can restore a PostgreSQL database with the native `pg_restore` or `psql` commands, or using the `db.py script.`

Note: You can use `db.py` to restore PostgreSQL data in all setups except the dedicated database server setup where dedicated database server setup where `ctf` (TeamForge database) is not installed. In a dedicated database setup, you can restore the PostgreSQL database using the `pg_restore` or `psql` command.

Using `db.py`:

- To restore the entire PostgreSQL database, run this command.

  ```
  ./db.py -a restore -f /tmp/backup/
  ```

- To restore only the `ctf` database, run this command.

  ```
  ./db.py -a restore -t ctf -f /tmp/backup/
  ```

- To restore only the datamart, run this command.

  ```
  ./db.py -a dump -t reporting -f /tmp/backup/
  ```

Using `pg_restore` or `psql`:

- In a dedicated database setup, you can use `pg_restore` or `psql`:

a) Locate the dump file you created when backing up the PostgreSQL database.

b) Shut down CollabNet TeamForge .

c) Create a database and user with the names used for CollabNet TeamForge .

```
createuser -U $CTFUSER createdb -E UNICODE -U $CTFUSER ctfdb
```

d) Restore the database using either the `pg_restore` or `psql` utility. Run one of these commands:

- `pg_restore -d ctfdb ctfdb.tar`
- `pg_restore -U <username> -d <dbname> ctfdb.dmp`
- `psql ctfdb < /tmp/backup_dir/teamforge_data_backup.dmp`

Note: This example assumes that the name of the CollabNet TeamForge database is `ctfdb`.

Tip: It may also be necessary to restore ownership of the restored tables to the `ctfuser` database user. Something like the following will work (again, assuming the database is called `ctfdb`):

```
for i in `echo "\d" | psql ctfdb | awk {'print $3'}` do echo "ALTER
TABLE $i OWNER TO $SFUSER;" | psql ctfdb done
```

See the PostgreSQL `pg_restore` man page for more examples and information.

Move the datamart to a separate box

TeamForge 6.2 supports a multi-box setup in all modes except for the dedicated database server mode. The setup with all services on one box includes having the datamart in the same PostgreSQL instance as TeamForge as well as running it in a separate instance. In either case, you can now move the datamart to a separate box.

Move the datamart (dedicated database server mode)

In this task, we move the PostgreSQL datamart from its own instance to a separate box in the dedicated database server mode.

1. Stop TeamForge on the `app` box.

If this is a multi-box scenario, stop TeamForge on all other boxes as well.

```
[RUNTIME_DIR]/scripts/collabnet stop
```

2. Do a dump of the PostgreSQL datamart. `su - postgres -c 'pg_dump -C -p <database-port > <reports-database-name > <path-to-dump-file>`

3. Create a new datamart instance using the `datamart-pgsql-setup.sh` or follow the instructions below in the database box.

```
su - postgres
```

```
initdb -D /var/lib/pgsql/9.0/reports
```

4. Set the `REPORTS_DATABASE_PORT` in `site-options.conf`

Note: The port should use the same value as specified in `postgresql.conf` as specified in the previous step. The recommended value is 5632.

5. Re-create the [RUNTIME_DIR]in all the boxes.

```
install.sh -r -d /opt/collabnet/teamforge
```

6. Restore the datamart into the new instance.

```
[RUNTIME_DIR]/scripts/db.py -a restore -t reporting -f <dump-location>
```

7. Copy the postgresql-9.0 script from runtime scripts and replace `/etc/init.d/postgresql-9.0`
8. Restore the datamart from the database box.

   ```
   su - postgres -c 'psql -p <reports-database-port> <path-to-dump-file>
   ```

   Note: Restart the Postgres service. If any warning messages are displayed, kill the service and start again.

9. Start the database in the database box.

   ```
   /etc/init.d/postgresql-9.0 start
   ```

10. Start the services in all boxes.

    ```
    [RUNTIME_DIR]/scripts/collabnet start all
    ```

11. Check if the existing data appears in charts.
12. Permanently remove the old datamart from the TeamForge instance.

    ```
    su - postgres -c 'dropdb <datamart-name> -p <database-port>'
    ```

Move the datamart (other modes)

In this task, we move the PostgreSQL datamart from its own instance to a separate box in all other modes, except dedicated database server mode.

1. Stop TeamForge on the `app` box.

   If this is a multi-box scenario, stop TeamForge on all other boxes as well.

   ```
   [RUNTIME_DIR]/scripts/collabnet stop
   ```

2. Do a dump of the PostgreSQL datamart. `[RUNTIME_DIR]/scripts/db.py -a dump -t reporting -f <dump-location>`
3. Create a new datamart instance using `datamart-pgsql-setup.sh` or follow the instructions below in the database box.

   ```
   su - postgres
   ```

   ```
   initdb -D /var/lib/pgsql/9.0/reports
   ```

4. Set the `REPORTS_DATABASE_PORT` in `site-options.conf`

   Note: This value should be different from the value of DATABASE_PORT. The recommended value is 5632.

5. Re-create the [RUNTIME_DIR]

   ```
   install.sh -r -d /opt/collabnet/teamforge
   ```

6. Restore the datamart into the new instance.

   ```
   [RUNTIME_DIR]/scripts/db.py -a restore -t reporting -f <dump-location>
   ```

7. Start the services in all boxes.

   ```
   [RUNTIME_DIR]/scripts/collabnet start all
   ```

8. Check if the existing data appears in charts.

9. Permanently remove the old datamart from the TeamForge instance.

   ```
   su - postgres -c 'dropdb <datamart-name> -p <database-port>'
   ```

Integrate TeamForge 6.2 with other tools

TeamForge 6.2 supports integrations with third-party tools for versioning, reviewing and searching source code.

Set up Black Duck Code Sight

TeamForge 6.2 supports the Black Duck Code Sight source code search engine.

To install Black Duck Code Sight, see the instructions specific to your platform.

Install Black Duck Code Sight on a separate server (RedHat)

Follow these instructions to install Black Duck Code Sight on a separate server, not the TeamForge `app` server.

To install TeamForge and Black Duck Code Sight on the same server, see the dedicated installation instructions for your platform: *Install TeamForge 6.2 the easy way*. While it is possible to run Black Duck Code Sight on the same server as TeamForge, the best practice is to have Black Duck on a separate server.

1. Install Red Hat Enterprise Linux 6.1 and log in as root.

   - The host must be registered with the Red Hat Network. See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
   - See *the Red Hat installation guide* for help.

   Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

   See *Set up networking for your TeamForge box* on page 8 for details.

3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.

4. Install Black Duck Code Sight.

   ```
   yum install teamforge-codesearch-6.2.0.0-224
   ```

5. Copy the master `site-options.conf` file from the `app` server and modify these tokens:

   ```
   HOST_my.host.name=codesearch
   DOMAIN_my.host.name=<mycodesearchbox.domain.com>
   HOST_<myappboxdomain.com>=app etl database datamart subversion cvs
   ```

   Note: If you have Black Duck Code Sight on SSL and the following external certificate tokens are not provided, the installer will generate a self-signed certificate.

   ```
   For valid SSL certificates, configure the following tokens:
   BDCS_SSL_CERT_FILE=
   BDCS_SSL_KEY_FILE=

   The ca.crt and chain files are optional -- leave out the tokens if you don't
   use the files.
   BDCS_SSL_CA_CERT_FILE=
   BDCS_SSL_CHAIN_FILE=
   ```

   You also have the following settings for advanced Black Duck Code Sight configuration:

Note: You can only configure the following tokens once, at the time you install Black Duck Code Sight.

```
Configuration that contains the path where the repositories enabled for
codesearch are checked out:
BDCS_SCAN_SOURCE_DIR_ROOT=/opt/collabnet/blackduck/scan

Configuration that contains the path where the codesearch software is installed:
BDCS_INSTALL_PATH=/opt/collabnet/blackduck

Configuration that contains the path where codesearch database is installed:
BDCS_PGSQL_HOME_DIR_ROOT=/opt/collabnet/blackduck/postgres

Configuration that specifies the port number for codesearch db server
BDCS_PGSQL_PORT=55435

Configuration that specifies the tomcat maximum heap memory size in megabytes.
BDCS_TOMCAT_MX_IN_MB=1024

Configuration that specifies the shutdown port number for codesearch tomcat
server
BDCS_TOMCAT_SHUTDOWN_PORT=9189
```

6. Review the variables you've changed, then save the `site-options.conf` file.
7. Run the installer.

   ```
   cd /opt/collabnet/teamforge-installer/6.2.0.0
   ./install.sh -r –I –V
   ```

8. To start the Black Duck Code Sight service, use:

   ```
   /etc/init.d/collabnet start tomcatcs
   ```

To install the license for Black Duck Code Sight, follow *these instructions*.

Note: To migrate TeamForge repositories follow *these instructions*.

Install Black Duck Code Sight on a separate server (CentOS)

Follow these instructions to install Black Duck Code Sight on a separate server, not the TeamForge `app` server.

To install TeamForge and Black Duck Code Sight on the same server, see *Install TeamForge 6.2 the easy way*. While it is possible to run Black Duck Code Sight on the same server as TeamForge, the best practice is to have Black Duck on a separate server.

1. Install CentOS 6.1 and log in as root.

   - See *Platform specification for TeamForge 6.2* on page 337 for the full platform requirements.
   - See *the Red Hat installation guide* for help.

   Important: Don't customize your installation. Select only the default packages list.

2. Check your basic networking setup.

   See *Set up networking for your TeamForge box* on page 8 for details.
3. Download the TeamForge 6.2 installation repository from *open.collab.net*. Copy it to `/etc/yum.repos.d/`.
4. Install Black Duck Code Sight.

   ```
   yum install teamforge-codesearch
   ```

5. Copy the master `site-options.conf` file from the `app` server and modify these tokens:

```
HOST_my.host.name=codesearch
DOMAIN_my.host.name=<mycodesearchbox.domain.com>
HOST_<myappboxdomain.com>=app etl database datamart subversion cvs
```

Note: If you have Black Duck Code Sight on SSL and the following external certificate tokens are not provided, the installer will generate a self-signed certificate.

```
For valid SSL certificates, configure the following tokens:
BDCS_SSL_CERT_FILE=
BDCS_SSL_KEY_FILE=

The ca.crt and chain files are optional -- leave out the tokens if you don't
use the files.
BDCS_SSL_CA_CERT_FILE=
BDCS_SSL_CHAIN_FILE=
```

You also have the following settings for advanced Black Duck Code Sight configuration:

Note: You can only configure the following tokens once, at the time you install Black Duck Code Sight.

```
Configuration that contains the path where the repositories enabled for
codesearch are checked out:
BDCS_SCAN_SOURCE_DIR_ROOT=/opt/collabnet/blackduck/scan

Configuration that contains the path where the codesearch software is installed:
BDCS_INSTALL_PATH=/opt/collabnet/blackduck

Configuration that contains the path where codesearch database is installed:
BDCS_PGSQL_HOME_DIR_ROOT=/opt/collabnet/blackduck/postgres

Configuration that specifies the port number for codesearch db server
BDCS_PGSQL_PORT=55435

Configuration that specifies the tomcat maximum heap memory size in megabytes.
BDCS_TOMCAT_MX_IN_MB=1024

Configuration that specifies the shutdown port number for codesearch tomcat
server
BDCS_TOMCAT_SHUTDOWN_PORT=9189
```

6. Review the variables you've changed, then save the `site-options.conf` file.
7. Run the installer.

```
cd /opt/collabnet/teamforge-installer/6.2.0.0
./install.sh -r –I –V
```

8. To start the Black Duck Code Sight service, use:

```
/etc/init.d/collabnet start tomcatcs
```

To install the license for Black Duck Code Sight, follow *these instructions*.

Note: To migrate TeamForge repositories follow *these instructions*.

Install the Black Duck Code Sight license

To set up Black Duck Code Sight for TeamForge 6.2, you need to install a license.

1. Get the MAC Address of your Black Duck Code Sight server.

```
cd /opt/collabnet/teamforge/runtime/scripts/codesearch/
sudo ./license-util.sh --listmacid
```

2. To receive the license, contact your CollabNet account manager or send an email request to info@collab.net.

   Note: A commercial TeamForge license is required; the TeamForge "free option license" does not qualify.

   a) Send the MAC Address of your Black Duck Code Sight server.
   You will receive the license file (in XML format).
   b) Preserve the license file for future use.
3. To install the license for Black Duck Code Sight, run these commands:

   ```
   cd /opt/collabnet/teamforge/runtime/scripts/codesearch/
   sudo ./license-util.sh --install <license_file_path>
   ```

   Type "Y" when prompted.

Bootstrap the Black Duck Code Sight instance

Follow these instructions to bootstrap the Black Duck Code Sight instance.

To bootstrap the Black Duck Code Sight instance:

1. Run the script in the command prompt.

   ```
   cd $RUNTIME_DIR/scripts/codesearch
   ./bootstrap.sh
   ```

   Note: Type "Y" to continue with the bootstrap process.

2. Run the TeamForge installer.

   ```
   ./install.sh -r -d /opt/collabnet/teamforge -V
   ```

3. Start the Black Duck Code Sight service.

   ```
   /etc/init.d/collabnet start tomcatcs
   ```

If the Black Duck Code Sight is running on a separate server, then run the TeamForge installer in the Black Duck Code Sight box.

Set up external applications for a TeamForge site

When you integrate an external application into your TeamForge site, the site administrator can make that application available to users as if it were a native TeamForge component.

Integrated application example: Pebble

Pebble is a blogging application that has been enhanced to support quick and easy integration with TeamForge.

Install Pebble

To see what you can do with an integrated application in TeamForge, start by installing Pebble, a blogging application that you can configure to work as part of your TeamForge site.

1. Get the Pebble installer package from *open.collab.net* and unzip it.
2. Modify these values in the `installer/install.conf` file to suit your installation environment.

Options	Description
pebble.base.dir	Path where you want Pebble to be installed on this host.

Options	Description
ctf.baseurl	Absolute URL of the TeamForge site that you want to associate to, such as `https://my.ctf.instance/`
tomcat.port	Pebble runs on Tomcat. This token indicates which port you want Tomcat to be running on. Make sure there are no other services running on that port.
domain	The base url to be used for Pebble, such as `my.ctf.instance`. (You don't need `http:` or `https:` here.)
timezone	The time zone Pebble will use to timestamp blog entries.
java_home	Path to a JDK 1.6.x instance.
protocol	`http` if SSL is not being used; `https` if SSL is being used.
data.dir	Path in the file system where Pebble blogs will be stored.

3. Run the installer.

   ```
   sudo python install.py -i -r
   ```

4. Set up the initial blog data.

   ```
   sudo python bootstrap-data.py
   ```

   This is known as "bootstrapping" the application.

   Tip: You can bootstrap again if you want to start from scratch, but any existing blogs will be deleted if you do.

5. Restart the Pebble application.

   ```
   /etc/init.d/pebbled stop
   /etc/init.d/pebbled start
   ```

   You should now have a working Pebble instance ready to work with TeamForge. The installer has created two configuration files: `installer/conf/pebble-app.xml` and `installer/conf/pebble-dep.xml`. See *Integrate Pebble into your TeamForge site* on page 278 for how to use them.

If you have installed Pebble with SSL, restart the TeamForge server before integrating Pebble with TeamForge. You can restart the TeamForge server using `/etc/init.d/collabnet restart all`

Integrate Pebble into your TeamForge site

When the sample Pebble blogging application has been installed on your site, you can make it available for projects on your TeamForge site.

Pebble must be installed and configured before you can integrate it into your TeamForge site. See *Install Pebble* on page 277.

When you have integrated Pebble, projects on your site can add Pebble to their set of collaboration tools. The blogs they create will share many of the core TeamForge features, such as authorization, authentication, go-urls, association, linkification, templating, Project Pages components, and source code management support.

1. Log into TeamForge as an admin user.
2. Click **Integrated Apps** in the Site Administration toolbar.
3. Click **Create**.
4. Use the **Browse** window to find the two configuration files that enable the Pebble application to work as a part of TeamForge:

   - `pebble-app.xml` (Application configuration file): Contains the text strings for the Pebble user interface.

- `pebble-dep.xml` (Deployment configuration file): Contains the data that Pebble needs to interact with TeamForge.

Click **Next**.

5. On the **Preview** screen, review the parameters you set in the configuration files.

   Note: You may have to revise one or more values to ensure they are valid.

6. Click **Save**.

The Pebble application is now available for all projects on your site. You can direct project administrators to *the project admin help* for instructions on adding it to their own project toolbars.

Note: You may need to adjust your site's look and feel to support your integrated application. See *the site admin help* for details.

Review Board

Review Board is a popular code review tool available with TeamForge 6.2 as a fully-integrated add-on.

Install Review Board 1.6.3

You can make Review Board available as an integrated application for project managers on your TeamForge site.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Download the `RBInstaller-1.2.0.0.138.zip` file from *http://collab.net/downloads/integrations#tab-1* and save it in the `/var/ops/` folder.
2. Unzip the `RBInstaller.zip` file.

   ```
   cd /var/ops/
   ```

   ```
   unzip RBInstaller-1.2.0.0.138.zip
   ```

3. Modify these values in the *`install.conf`* file to suit your installation environment.

   ```
   sudo vi /var/ops/RBInstaller-1.2.0.0.138/installer/install.conf
   ```

Options	Description
rb_dir=/u1/reviewboard	The location of the Review Board installation directory where the Review Board files and libraries needed by Review Board is installed.
rb_data_dir=/opt/collabnet/reviewboard/data	The path of the ReviewBoard data directory where Review Board's database file, review request files and attachments will be stored.
domain=cu064.cloud.maa.collab.net	The Review Board site information.
rb_database_password=<reviewboard_db_password>	The database password of Review Board.
ctf_base_url=https://cu064.cloud.maa.collab.net	The absolute URL of the TeamForge site that you want to associate to.
ctf_site_var_dir=/opt/collabnet/teamforge/var	The location of the rbctfevents.jar file.

4. Start the TeamForge application.

   ```
   sudo /etc/init.d/collabnet start all
   ```

5. Before installing Review Board, you must know the password for the scmviewer account. Run the below commands to get the password:

a) Run the grep command to get the encrypted password.

```
grep SCM_USER_ENCRYPTED_PASSWORD
/opt/collabnet/teamforge/runtime/conf/runtime-options.conf
```

b) You will be provided with a password after running the script.

```
sudo /opt/collabnet/teamforge/runtime/scripts/password_util.sh -decrypt
'<value of SCM_USER_ENCRYPTED_PASSWORD>'
```

6. Run the installer in the Review Board installer directory.

```
cd /var/ops/RBInstaller-1.2.0.0.138
sudo python ./install.py -i -r --auth-scmuser
```

If this is an "advanced" mode installation (with the database on the same box or another box), do this on the database server.

7. Configure the database access. Edit the `pg_hba.conf` as a postgres user and add the following entry at end of the file:

```
$ su - postgres
$ vi /var/lib/pgsql/9.0/data/pg_hba.conf
host ctfrbdb ctfrbuser <IP address of my.app.box>/32 md5
$ exit
```

8. Restart PostgreSQL.

```
$ /etc/init.d/postgresql-9.0 restart
```

9. Create the Review Board database and username.

```
$ su - postgres
$ createuser -P -S --no-createrole ctfrbuser
$ createdb -E UTF8 -O ctfrbuser ctfrbdb
$ exit
```

10. Restart PostgreSQL.

```
$ /etc/init.d/postgresql-9.0 restart
```

11. Set up the initial Review Board data. Run the script under the Review Board installer directory.

```
cd /var/ops/RBInstaller-1.2.0.0.138
sudo python ./bootstrap-data.py
```

12. Run the grep command to get the value of httpd_user:

```
grep httpd_user /etc/reviewboard.properties
sudo chown -R <httpd_user>:<httpd_user> /opt/collabnet/reviewboard/data
```

13. Restart the TeamForge application.

```
sudo /etc/init.d/collabnet stop all

sudo /etc/init.d/collabnet start all
```

You should now have a Review Board instance ready to work with TeamForge. The installer has created two configuration files: `installer/conf/rb-application.xml` and `installer/conf/rb-deploy.xml`. See *Integrate Review Board into your TeamForge site* on page 282 for more information.

☞ **Note:** Run the below scripts under the Review Board installer directory.

```
cd /var/ops/RBInstaller-1.2.0.0.138
```

To recreate the runtime, run the `sudo python ./install.py -r` command.

To uninstall Review Board run the `sudo python ./install.py -u` command.

To update the revised password for a scmviewer account, run the `sudo python ./install.py --auth-scmuser` command.

☞ **Note:** To change the scmviewer password, see *SCM_USER_ENCRYPTED_PASSWORD* on page 389

Upgrade Review Board to latest build from CollabNet

In this task, we upgrade Review Board to its latest build.

Do this on the main TeamForge application server. We'll call this `my.app.box`.

1. Download the `RBInstaller-1.2.0.0.138.zip` file from *http://collab.net/downloads/integrations#tab-1* and save it in the `/var/ops/` folder.
2. Uninstall the existing Review Board application.

   ```
   cd /var/ops/RBInstaller-1.2.0.0.135
   sudo python ./install.py -u
   ```

3. Unzip the `RBInstaller-1.2.0.0.138.zip`.

   ```
   cd /var/ops/

   sudo unzip RBInstaller-1.2.0.0.138.zip
   ```

4. Copy the old Review Board `install.conf` file to the new Review Board installer.

   ```
   cp /var/ops/RBInstaller-1.2.0.0.135/installer/install.conf
   /var/ops/RBInstaller-1.2.0.0.138/installer/
   ```

5. Start the TeamForge application.

   ```
   sudo /etc/init.d/collabnet start all
   ```

6. Before installing Review Board, you must know the password for the scmviewer account. Run the below commands to get the password:

   a) Run the grep command to get the encrypted password.

   ```
   grep SCM_USER_ENCRYPTED_PASSWORD
   /opt/collabnet/teamforge/runtime/conf/runtime-options.conf
   ```

   b) You will be provided with a password after running the script.

   ```
   sudo /opt/collabnet/teamforge/runtime/scripts/password_util.sh -decrypt
   '<value of SCM_USER_ENCRYPTED_PASSWORD>'
   ```

7. Run the installer in the Review Board installer directory.

   ```
   cd /var/ops/RBInstaller-1.2.0.0.138
   sudo python ./install.py -i -r --auth-scmuser
   ```

8. Restart the TeamForge application.

   ```
   sudo /etc/init.d/collabnet stop all

   sudo /etc/init.d/collabnet start all
   ```

Integrate Review Board into your TeamForge site

When the Review Board application has been installed on your site, you can make it available for projects on your TeamForge site.

Review Board must be installed and configured before you can integrate it into your TeamForge site. See *Install Review Board 1.6.3* on page 279.

Important: You must not create, edit or delete new user accounts while installing the Review Board application and integrating it with TeamForge.

When you have integrated Review Board, projects on your site can add Review Board to their set of collaboration tools.

1. Log into TeamForge as an admin user.
2. Click **Integrated Apps** in the Site Administration toolbar.
3. Click **Create**.
4. Use the **Browse** window to find the two configuration files that enable the TeamForge application to work as a part of TeamForge:

   - `rb-application.xml` (Application configuration file): Contains the text strings for the Review Board user interface.
   - `rb-deploy.xml` (Deployment configuration file): Contains the data that Review Board needs to interact with TeamForge.

   Click **Next**.
5. On the **Preview** screen, review the parameters you set in the configuration files.

   Note: You may have to revise one or more values to ensure they are valid.
6. Click **Save**.

The Review Board application is now available for all projects on your site. You can direct project administrators to *the project admin help* for instructions on adding it to their own project toolbars.

Note: You may need to adjust your site's look and feel to support your integrated application. See *the site admin help* for details.

TeamForge Review Board integration: Install FAQ

Questions about installing the TeamForge Review Board integration.

What are the software requirements for installing Review Board as an integrated application in TeamForge6.2?	The software requirements for installing Review Board are: • CentOS/RHEL 6.1 • PostgreSQL 9.0.7 database
Can I install TeamForge and Review Board on separate boxes?	No. Review Board must be installed on the same box with TeamForge, since Review Board runs on TeamForge Apache.
Can I integrate Review Board with TeamForge which runs on a Oracle database?	You cannot integrate Review Board with TeamForge that runs on a Oracle database.

TeamForge Review Board integration: General usage FAQ

General usage questions about the TeamForge Review Board integration.

Which version of Review Board does TeamForge 6.2 support?	TeamForge 6.2 supports Review Board 1.6.3.
Which repositories does Review Board support?	Review Board supports only Subversion repository in TeamForge 6.2.
How do I manage users in Review Board?	You can manage Review Board users from TeamForge. Whenever you create or edit users in TeamForge, they are synchronized automatically in Review Board.
Can I specify 'RB' as a prefix in my project?	No. You cannot specify 'RB' as a prefix in your project. The prefix for Review Board must be unique for every project.
Is it possible to grant TeamForge specific permissions as part of the system generated Review Board administrator?	No. It is not possible to grant TeamForge specific permissions as part of the system generated Review Board administrator (integrated application specific role).
Can I use the Review Board 'Search' feature after integrating Review Board with TeamForge?	No. TeamForge does not support the 'Search' feature of Review Board.
What are the additional features available in Review Board after you integrate Review Board with TeamForge?	Review Board uses some of the TeamForge features like object IDs, links, GO URLs, and SVN integration and associations. For more information, see *http://help.collab.net/topic/teamforge620/faq/iaf-link.html*
What are the other TeamForge features which Review Board does not support after you integrate Review Board with TeamForge?	Global Search, page component, recent history and project template features of TeamForge are not supported in Review Board.
Where can I find the documentation for Review Board?	You can find the documentation for Review Board here: *http://www.reviewboard.org/docs*

Set up the TeamForge Git integration

The TeamForge Git integration is supported on RedHat and Centos version 5.6 or later.

Note: This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

For the software required by the TeamForge Git integration, see *Requirements for the TeamForge Git integration* on page 288.

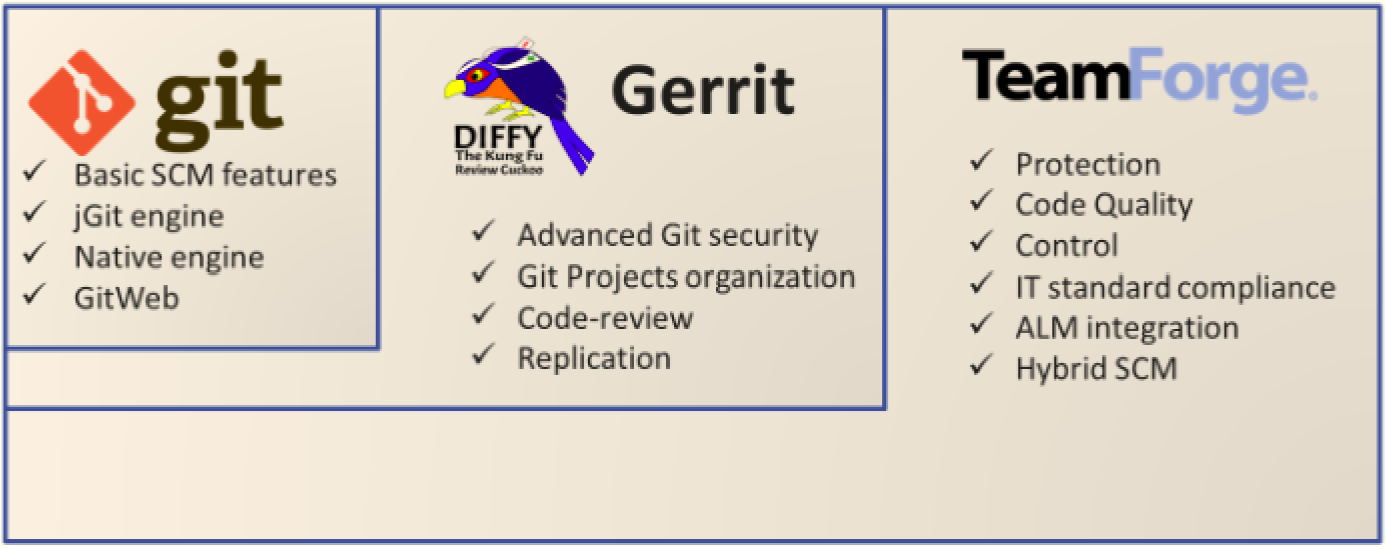
TeamForge Git integration

TeamForge 6.2 supports an integration with the Git distributed version control tool powered by Gerrit.

Note: This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

While Git is the world's leading distributed version control system, enterprise adoption for Git has been slow. Concerned with security breaches, compliance violations and lack of governance, many organizations have chosen to take a "wait and see" approach. With TeamForge, Git is ready for the enterprise. TeamForge lets you realize all the benefits of Git while ensuring the security, governance and manageability your business demands. And with TeamForge, you can even manage Git and Subversion together, within each individual project.

Gerrit is an open source code review system designed to work with Git. Gerrit supports various access control mechanisms. The TeamForge Git integration uses Gerrit as a vehicle to bring TeamForge project roles and permissions into Git. For this release, we ship a modified version of Gerrit based on Gerrit 2.1.8.



Highlights

- Easy Git repository management from TeamForge using TeamForge's role based access control
- Authentication using SSH keys stored in TeamForge and `http` using Gerrit's `http` passwords
- TeamForge artifact association with Git commits
- Git source code browsing and code search
- Single sign-on between TeamForge and the Gerrit web console
- Full support of Gerrit's APIs to connect with Continuous Integration systems like Jenkins

Install the TeamForge Git integration

You can install the integration in two modes: with TeamForge and the Git integration server on different machines (Remote mode) or both on the same machine (Local mode).

Note: This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

The Local (or co-hosted) mode is only supported when TeamForge is set up with the Postgres database running on the same machine. This mode is NOT supported when TeamForge uses the Oracle database or if the Postgres database is on a different machine. If the former conditions do not apply for your environment, you need to use a Remote mode configuration.

The Remote (or distributed) mode has two variants:

- Variant 1: The Git integration is hosted on an SCM integration server
- Variant 2: In this "free-form" mode, the Git integration is hosted on a regular RHEL machine

It is possible to set up multiple Git integration servers, but you can only install one in the co-hosted mode.

Before you install, make sure you have the *required software*.

Important:

- You need a dedicated TeamForge site administrator account that does not expire and cannot be locked. See *USERS_WITH_NO_EXPIRY_PASSWORD* on page 394 for more information.
- You also need to configure TeamForge to allow creating SCM integration servers: the DISABLE_CREATE_INTEGRATION_SERVER token in TeamForge's site options must be set to "false" (default value).

Perform the installation on the machine where the Git integration server is to be hosted. Follow the instructions while logged in as `root` or using `sudo`.

1. Get the TeamForge Git integration package, `ctf-git-integration.rpm`.

   Your CollabNet representative will be able to provide this; you'll need to accept the Git SCM server licensing terms.
2. Run the installer.

   ```
   sudo yum install ctf-git-integration.rpm --nogpgcheck
   ```

   The installer will create a `gerrit` system user and generate an SSH key pair under `/opt/collabnet/gerrit/.ssh`.
3. At the end of the installation, run the setup script when prompted:

   ```
   sudo /usr/sbin/ctf-git-integration-setup.sh
   ```

   This post-installation setup script will try to detect the required configuration parameters and auto-configure the Git integration. Unless you want to explicitly override the default values, go ahead and accept them. The following 3 parameters do not have default values and you will be asked to provide them:

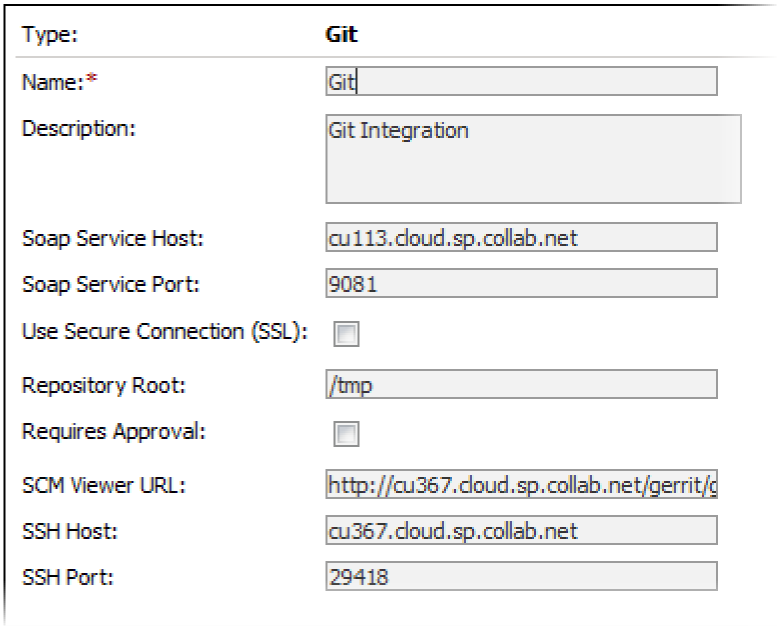
   - TF user name: the dedicated TeamForge site administrator account that does not expire and cannot be locked
   - TF password: the password for the above account
   - Gerrit DB password: the password to protect Gerrit's database from unauthorized access. Specify its value when you first run the post-install script. Make sure you note the value because you will be asked for it later.

   If you are running the installer in "free-form" mode (Remote mode, Variant 2), you will need to provide values for two additional settings:

   - CollabNet TeamForge hostname: the externally visible host name end users type into their browsers to reach TeamForge
   - SCM shared secret key: you can locate this from `/opt/collabnet/teamforge/runtime/conf/runtime-options.conf` on your TeamForge host

   The setup script will also allow you to select either Gerrit or TeamForge for rotating log files. To the question "Should Gerrit rotate its log files?", the default answer is "y". Answer "n" to have TeamForge rotate the logs -- check with your site's administrator whether this is the case.

The post-installation script automatically creates a Git SCM adaptor in TeamForge and sets it up. Here's an example of the **Admin** > **Integrations** > **SCM integrations** page in TeamForge:



Type:	**Git**
Name:*	Git
Description:	Git Integration
Soap Service Host:	cu113.cloud.sp.collab.net
Soap Service Port:	9081
Use Secure Connection (SSL):	☐
Repository Root:	/tmp
Requires Approval:	☐
SCM Viewer URL:	http://cu367.cloud.sp.collab.net/gerrit/g
SSH Host:	cu367.cloud.sp.collab.net
SSH Port:	29418

Important: You can adjust any configuration setting as required, except for the **Repository Root**. This parameter is set to "/tmp" - it is important that you NOT change it to some other directory path. It has to be set to this value for backward compatibility reasons and will not affect the actual repository root location in the file system.

Once the post installation script completes successfully, start the `gerrit` service and check the logs, `gerrit-synch.system_log` and `gerrit.system_log` under `/opt/collabnet/gerrit/logs/`, for error messages. In case you see error messages in the logs, you can *reconfigure Gerrit*.

- In TeamForge 6.2, Code Search functionality is available through integration with Black Duck Code Sight. To enable Black Duck Code Sight for Git, see *Set up Code Search for the TeamForge Git integration* on page 287.
- To access the Gerrit web interface directly from TeamForge, you need to *set it up as a linked application*. When that's done, you can log into the Gerrit console and *change access rights (or permissions)*, add internal Gerrit groups and users, and more.

Upgrade the TeamForge Git integration

To upgrade the integration, update the `ctf-git-integration.rpm` package.

Note: This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

Do the following while logged in as `root` or using `sudo`.

1. Update the TeamForge Git integration package.

   ```
   yum update ctf-git-integration.rpm --nogpgcheck
   ```

   During the update, the `gerrit` service will be shut down.
2. To upgrade the configuration settings, run this command:

   ```
   /usr/sbin/ctf-git-integration-setup.sh --upgrade
   ```

Reconfigure the TeamForge Git integration

After you've set up the TeamForge Git integration, it is possible to modify the settings.

Note: This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

Do the following as `root` or using `sudo`.

1. Stop the `gerrit` service.

   ```
   service gerrit stop
   ```

2. Run the setup script.

   ```
   /usr/sbin/ctf-git-integration-setup.sh
   ```

3. Start the `gerrit` service.

   ```
   service gerrit start
   ```

Uninstall the TeamForge Git integration

To uninstall the integration, use the YUM utility.

> ☞ **Note:** This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

Run this command as the `root` or `sudo` user:

```
yum remove ctf-git-integration
```

Uninstalling does not remove your Git repositories from the hard disk. The default location for the repositories is `/gitroot`.

On the TeamForge side, the TeamForge site administrator should also remove the **Git** SCM Integration. (Log into TeamForge, select **Admin** > **Integrations** > **SCM Integrations** and delete **Git**).

Set up Code Search for the TeamForge Git integration

To use TeamForge Code Search functionality for Git, manually grant the TeamForge Code Search user permissions to access all Git repositories.

> ☞ **Note:** This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

In TeamForge 6.2, Code Search functionality is available through integration with Black Duck Code Sight.

To be able to access the Gerrit console directly from TeamForge, you'll need to *set it up as a linked application*.

1. You need the root user's public key for SSH authentication on the Code Search server. Do the following:
   a) On the Code Search box, check whether the key is present at `/root/.ssh/id_rsa.pub`. If not, generate it by running the `ssh-keygen` command.
   b) Copy it to a temporary location (`/tmp`) on the TeamForge application server.
   c) Run the *`set_auth_key.py`* script for the `scmviewer` user on the TeamForge application server.

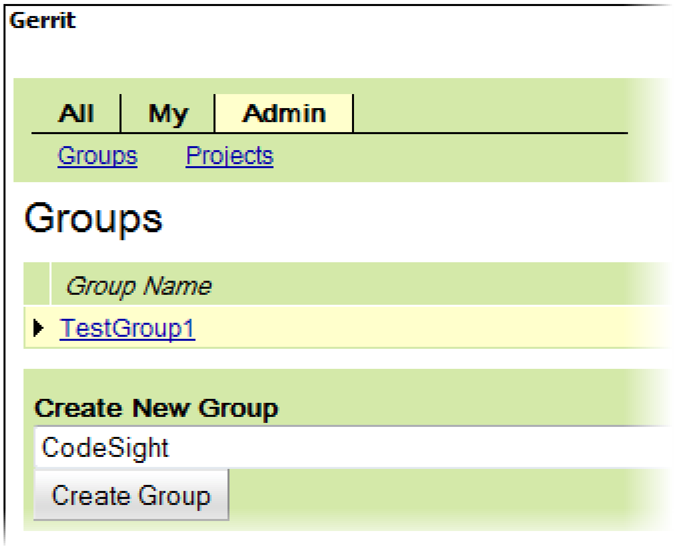
   ```
   cd /opt/collabnet/teamforge/runtime/scripts/codesearch/

   ./set_auth_key.py --authkey-file=/tmp/id_rsa.pub
   ```

2. Sync the `scmviewer` user to Gerrit by running the following command in a shell on the host where you installed the Git integration.

   ```
   curl http://localhost:9081/api/gerrit/users/scmviewer/sshkeys
   ```

3. Log into the Gerrit console as a Gerrit super user and create an internal Gerrit group, for example, "CodeSight Group".



CodeSight

4. Add the `scmviewer` user to the group.
5. Grant read access to the group.
   a) In the Gerrit project page that displays access rights, select **Read Access** for Category.
   b) For **Group Name**, enter the name of the internal group ("CodeSight" in the example) you created.
   c) Enter "refs/*" for **Reference Name**.
   d) Enter "+1:Read Access" for **Permitted Rage**.
   e) Click **Add Access Right**.
6. Log out from Gerrit.
7. Restart the Code Search server.

```
/etc/init.d/collabnet restart tomcatcs
```

Requirements for the TeamForge Git integration

This is the official list of software that you require for the TeamForge Git integration.

Note: This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

- RedHat Enterprise Linux or CentOS: 5.6 or later
- JRE: 1.6 or later (Oracle JRE only)
- Git: 1.7 or later
- PostgreSQL server: 9.0.x

  Note: You need permissions for the `gerrit` Unix user to connect to the `reviewdb` database from localhost.

- PostgreSQL client
- OpenSSH client
- Gitweb caching

  Note: For the "free-form" mode (Remote mode, Variant 2):

  For RHEL 6 and later, gitweb-caching is part of the native OS binary. If not, add the EPEL repository as follows:

  - 32-bit: $ rpm -ivh http://www.gtlib.gatech.edu/pub/fedora-epel/6/i386/epel-release-6-7.noarch.rpm
  - 64-bit: $ rpm -ivh http://www.gtlib.gatech.edu/pub/fedora-epel/6/x86_64/epel-release-6-7.noarch.rpm

For RHEL 5.6, add the EPEL repository as follows:

- 32-bit: $ rpm -Uvh http://dl.fedoraproject.org/pub/epel/5/i386/epel-release-5-4.noarch.rpm
- 64-bit: $ rpm -Uvh http://dl.fedoraproject.org/pub/epel/5/x86_64/epel-release-5-4.noarch.rpm

- Apache Web Server with proxy and rewrite modules enabled

In addition, you need to -

- Import the TeamForge host SSL certificate into the Git integration server's JVM trust store
- Import the Git SCM integration server host certificate into the TeamForge server's JVM trust store

If you are installing in Local mode or on an existing SCM integration server (Remote mode, Variant 1), the required packages are part of CollabNet's `yum` repositories. Additional requirements for Apache and PostgreSQL configuration are automatically fulfilled.

In the "free-form" mode, (Remote mode, Variant 2), you need to install the required packages yourself and modify the Apache/PostgreSQL configuration as appropriate.

Work with Gerrit

When you add Gerrit as a linked application to TeamForge, you can access the web console from TeamForge and update permissions and add internal groups and users.

Note: This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

Add Gerrit as a linked application

You can set up Gerrit as a linked application to TeamForge at the site or project level.

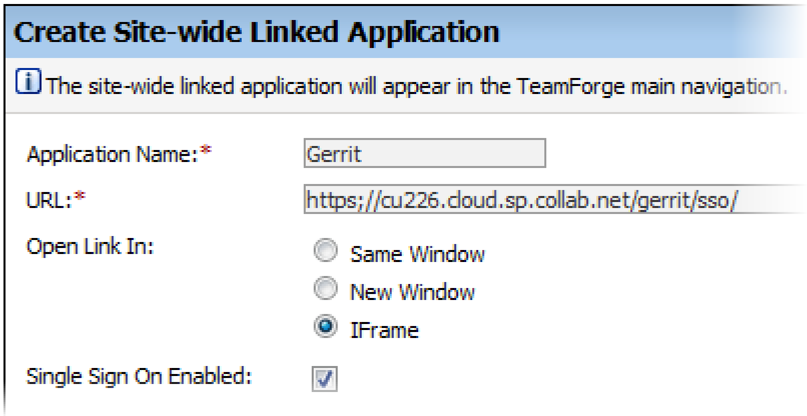
Note: This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

- Set up the URL `http://<TEAMFORGEHOSTNAME>/gerrit/sso/`.

  Note: The last "/" matters. Make sure you have it.

- For instructions on setting up a site-wide linked application, see *Create a site-wide linked application*.

  Here's an example for setting up Gerrit:



Create Site-wide Linked Application

The site-wide linked application will appear in the TeamForge main navigation.

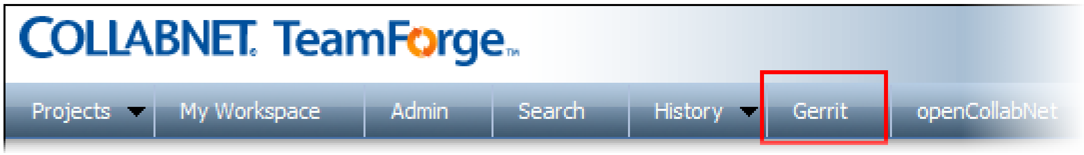
Application Name:* Gerrit

URL:* https://cu226.cloud.sp.collab.net/gerrit/sso/

Open Link In:
○ Same Window
○ New Window
● IFrame

Single Sign On Enabled: ☑

A link for Gerrit is added to your TeamForge navigation bar. Clicking the link displays the Gerrit console in the main TeamForge window.



- To set up Gerrit as a project-wide linked application, see *Link an external application*.
  A button for Gerrit is added to your project navigation bar.

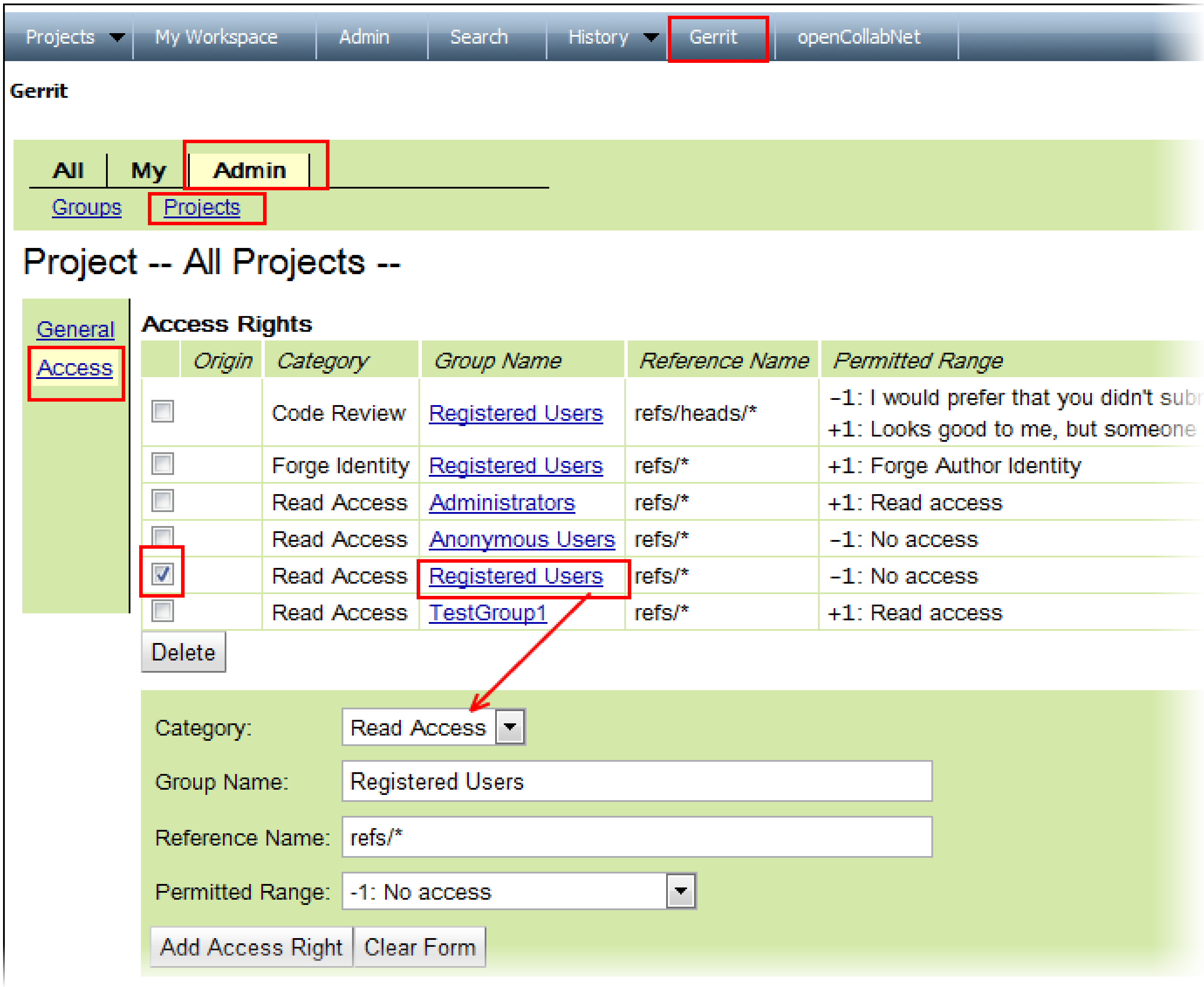
Update Git repository access permissions in Gerrit

By default, Gerrit projects (TeamForge Git repositories) are only visible to TeamForge users assigned a project role with SCM permissions. To grant additional permissions (for example, read access) to all registered users, or to TeamForge global groups, or to a custom subset of users (a Gerrit internal group), log directly into the Gerrit console and make those changes.

Note: This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

1. In your browser, bring up `http://<GITSCMSERVERHOSTNAME>/gerrit/`.
2. Log into Gerrit using the TeamForge site administrator username and password you provided while running the Git installer's configuration script.
3. Select the Admin tab and click **Projects**.
4. In the **All Projects** page, click **Access**.
   You will see a list of all default access rights.
5. To change an access right, select a group and specify its category.

   Here's an example where the group "Registered Users" is assigned the category "Read Access".



Gerrit

Project -- All Projects --

Access Rights

	Origin	Category	Group Name	Reference Name	Permitted Range
□		Code Review	Registered Users	refs/heads/*	-1: I would prefer that you didn't sub +1: Looks good to me, but someone
□		Forge Identity	Registered Users	refs/*	+1: Forge Author Identity
□		Read Access	Administrators	refs/*	+1: Read access
□		Read Access	Anonymous Users	refs/*	-1: No access
☑		Read Access	Registered Users	refs/*	-1: No access
□		Read Access	TestGroup1	refs/*	+1: Read access

Category:	Read Access
Group Name:	Registered Users
Reference Name:	refs/*
Permitted Range:	-1: No access

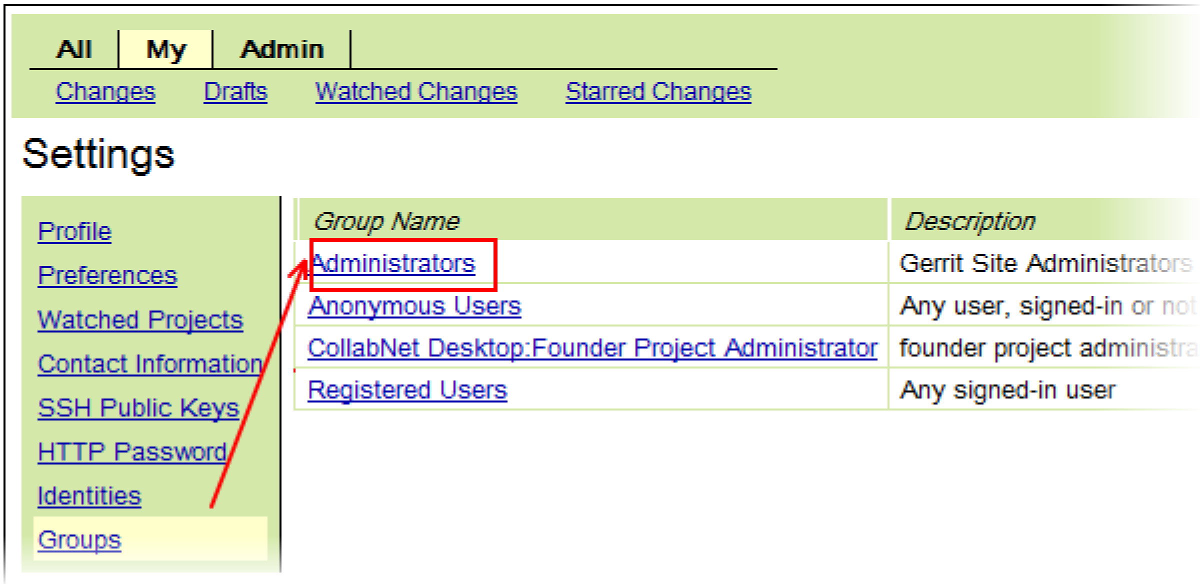
6. Click **Add Access Right**.

Grant Gerrit super user permissions

To grant additional TeamForge users Gerrit super user permissions, add the users to the Administrators group.

Note: This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

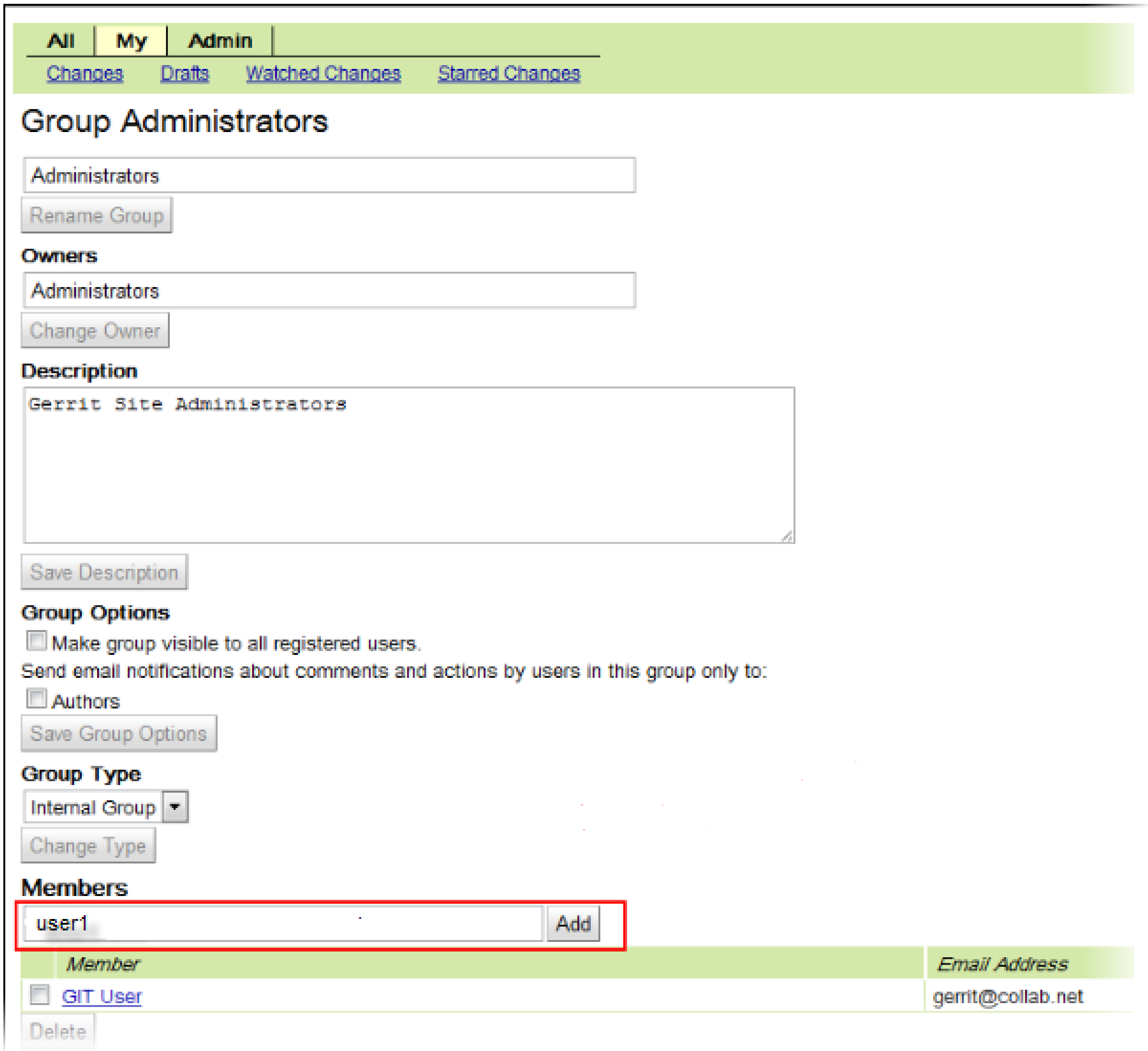
1. In your browser, bring up `http://<GITSCMSERVERHOSTNAME>/gerrit/`.
2. Log into Gerrit using the TeamForge site administrator username and password you provided while running the Git installer's configuration script.
3. In the My tab, click **Settings**.
4. In the left panel, click **Groups** and select **Administrators**.



Settings

Group Name	*Description*
Administrators	Gerrit Site Administrators
Anonymous Users	Any user, signed-in or not
CollabNet Desktop:Founder Project Administrator	founder project administra
Registered Users	Any signed-in user

5. Click **Administrators** and add new members to the group.



Group Administrators

Administrators

Owners

Administrators

Description

Gerrit Site Administrators

Group Options

□ Make group visible to all registered users.

Send email notifications about comments and actions by users in this group only to:

□ Authors

Group Type

Internal Group

Members

user1

	Member	*Email Address*
□	GIT User	gerrit@collab.net

The TeamForge users you add to the Administrators group will have Gerrit super user permissions. These users do not have to be site administrators in TeamForge.

Tip: If you want to assign additional permissions to a group of users, make use of Gerrit's internal group feature. See *Set up Code Search for the TeamForge Git integration* on page 287 for an example of how you can use this feature to grant a group of users read permissions to all Git repositories.

TeamForge Git integration: FAQ

Use this background information to set up, maintain, support and work with the TeamForge Git integration.

Note: This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

TeamForge Git integration: Install FAQ

Questions about installing the TeamForge Git integration.

Note: This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

What are the requirements for running the installer?

For the required software, see *Requirements for the TeamForge Git integration* on page 288.

Note: In addition, you will need the following:

- `root`/`sudo` access to the machine
- A non-expiring, non-lockable TeamForge user account with site administrator permissions

What does the installer consist of?

The TeamForge Git integration is available as an add-on for TeamForge 6.2. The installer is an RPM package which you can run using a simple `yum` command. It contains a post-installation script which allows you to configure the integration to work with TeamForge.

Do I need to shut down any TeamForge services to run the installer?

No.

TeamForge Git integration: Post-install FAQ

Post-install questions on the TeamForge Git integration.

Note: This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

Where can I locate the post-installation script?

After the installation finishes successfully, you will find the post-installation script at `/usr/sbin/ctf-git-integration-setup.sh`.

Where can I find logs for installation errors?

The logs are located under `/tmp/ctf-git-integration-setup.log`. For more on log files, see the README and *TeamForge Git integration reference* on page 299.

Why does the post-installation script ask for the TeamForge username and password? Is it safe to provide these values?

The TeamForge user credentials you supply are used to synchronize TeamForge project roles and permissions. The credentials are encrypted -- so it is safe to provide them.

How can I start and stop Git?

After you successfully run the post-installation script, you can start (and stop) the Git service by running the following commands on a shell as the `root` or `sudo` user:

```
$ service gerrit start
$ service gerrit stop
```

How can I reset the Gerrit role password in TeamForge 6.2?

You can reset the Gerrit role password by following the procedure below:

Login to the database, as a Postgres user.

```
psql -U postgres
```

Reset the password for gerrit role.

```
ALTER USER gerrit with password 'password' ;
```

Rerun the following script:

```
" sudo /usr/sbin/ctf-git-integration-setup.sh"
" sudo
/usr/sbin/ctf-git-integration-setup.sh--upgrade"
```

I provided some incorrect values while running the post-installation script. Can I change them?

You can run the post-installation script `/usr/sbin/ctf-git-integration-setup.sh` at any point. The script will walk you through all configuration values, one by one, and ask if you want to change them.

TeamForge Git integration: General usage FAQ

General usage questions about the TeamForge Git integration.

Note: This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

What are the next steps after the post-installation script runs?

After running the post-installation script, first create an SCM repository of type Git in your TeamForge project. Then add at least one project role with SCM permissions to access that repository and assign that role to one or more users. With the appropriate credentials (uploaded authorized keys) and the clone URL provided in the Source Code page, users will be able to clone the Git repository.

I am a site admin/project admin/have global SCM permissions/looking at a public project. Why can't I access a newly created repository from the TeamForge web interface or clone it using my Git client?

A new project role with source code permissions must exist. A user needs this role to access the repository from the TeamForge web interface. Project administrator rights, site administrator rights, global roles, and default access permissions for project membership are currently ignored by the Git integration.

I've created a Git repository but it does not show up in Gerrit. Why might this happen?

TeamForge repositories are synched only if there is at least one project role with SCM permissions in the corresponding TeamForge project. Once you create such a project role, the synch should happen, and the repository should appear as a project in Gerrit.

How can I log into Gerrit?

If your administrator has set up Gerrit as a linked application to TeamForge, you will automatically be logged into Gerrit (SSO) when you click its link. If not, access the URL `http(s)://<yourtfinstance>/scm integration server>/gerrit/ and provide your TeamForge credentials.`

What are the Git protocols that work with Git repositories managed by TeamForge?

The Git integration currently allows you to access a Git repository using SSH. That said, you must have generated an SSH key pair and uploaded the SSH public key to TeamForge in **My Settings** > **Authorized keys** .

Alternatively, you can use http(s) to clone and push to Git repositories.

Note: Use this option only if SSH is not available to you.

To enable http(s) access, log into Gerrit and generate an HTTP password (**Settings** > **HTTP Password** > **Generate Password**). This password will not match your TeamForge password; you'll need to provide it to your Git client whenever you perform an operation that requires accessing the Git server. The clone URL for http(s) access follows the this convention:

```
git clone https://$USERNAME@<yourtfinstance/scm integration
 server>/gerrit/p/<TFreponame>
```

How do I generate an SSH key pair?

You can generate an SSH key pair on a Unix machine by running the following shell command:

```
$ ssh-keygen -t rsa
```

(You will be asked to provide the location to store the key pair. The default is the home directory of the logged-in user.)

What happens if a TeamForge user account gets locked due to multiple failed attempts logging into TeamForge - will the user be able to access the Git repository via a Git client using SSH/HTTP(S)?

If a TeamForge user account gets locked, it will not affect the user's access to the Git repository via SSH or HTTPS. This is allowed because SSH is a completely different authentication protocol; if the user accesses Git using HTTPS, it's not TeamForge HTTP(S) authorization that's involved, but Gerrit's own HTTPS access which is different. However, this user cannot log into the Gerrit web interface or regenerate the Gerrit HTTP(S) password because this requires logging into the TeamForge interface (where the user is now locked out).

Will the Gerrit HTTP(S) password expire?

No, the Gerrit HTTP(S) password will never expire. However, it can be reset or disabled.

Who can reset the Gerrit HTTP(S) password? And how?

Only you, the user, can reset Gerrit's HTTPS password. This requires that you first log into the TeamForge interface using TeamForge credentials, and click on the Gerrit site-wide link (if available). Alternatively, you can access the URL `http(s)://<yourtfinstance/scm integration server>/gerrit/` and use TeamForge credentials. After that, go to **Settings** > **HTTP Password** , and click **Generate Password**. A new password will be generated. From now on, use the new password to access the Git repository via HTTP(s) using your Git client.

After installing a Git client, I am able to clone a Git repository into my local work directory. However, I am not able to "push" anything to the remote repository in spite of having view and commit permissions. What should I do ?

Right after you clone, but before you commit any changes locally, you will need to configure Git if you haven't already.

```
$ git config --global user.name "<TeamForge username>"
$ git config --global user.email "<email used in TeamForge
for the user>"
```

You should now be able to push your changes.

I've changed /appended my public key in TeamForge. Will I still be able to access

Yes, when you change your authorized key in TeamForge, it gets synced instantly with the Git integration. So you should be able to access you Git repository using a new key pair.

a Git repository using the new SSH key pair?

Is a commit association created in TeamForge after I push my commit to a remote Git repository?

Yes, when you push a local commit to the remote repository, an association will get created if the commit message contains a reference to a TeamForge item such as a tracker artifact, wiki or document.

Note: A commit association will not be created if you push your commit to Gerrit's "review branch" (push for review).

What happens if the TeamForge site is down or there are some network problems -- will the Git integration still work?

The Git integration will still work, but with the following limitations:

- If the TeamForge site is down, users will not be able to see commit associations created in TeamForge, but still be able to push commits to a Git repository.
- If the Git integration is hosted in LOCAL mode, network-related problems would definitely prevent changes being pushed to a Git repository.
- If the Git integration is hosted in REMOTE mode, the synchronization of roles and permissions will be cached during the period when TeamForge is down; Git will function with the roles and permissions synched already.

What is a "Jumbo Push"?

In contrast to Subversion, Git has the concept of local commits that stay in the local environment of a user, and at some point, get pushed to a remote repository all at once. This push checks in changes from all commits into the remote repository. For each of those commits, a commit object appears in the TeamForge (Source Code component). So, one push can have an unlimited number of commits and thus commit objects in TeamForge. You can, however, define the threshold for a single push based on how many commits should generate a commit object. A push' containing commits beyond that threshold is called a "Jumbo Push"'. You can configure the Jumbo Push threshold by running the post-installation script.

What objects and relationships are mapped between TeamForge and the Git integration?

See the README (APPENDIX, Relationship and Object mapping section) or *TeamForge Git integration reference* on page 299.

When are the objects and relationships synchronized between TeamForge and the Git Integration?

TeamForge project roles, project role SCM permissions, global groups, SCM repositories, and global group/project role membership are synched in two ways:

- Synchronously: after a regular interval (configurable using the post-installation script)
- Asynchronously: whenever there is a change related to roles or permissions within TeamForge, it triggers the sync between TeamForge and the Git integration.

TeamForge repositories are only synched if there is at least one project role with SCM permissions present in the corresponding TeamForge project.

TeamForge users are provisioned in Gerrit whenever you -

- Change their authorized keys in TeamForge
- Log into Gerrit by clicking the linked application link or using TeamForge username and password
- Access GitWeb (web interface for a Git repository) by clicking a Git repository link in the TeamForge Source Code page

Note: Changes in Gerrit are not synched back to TeamForge.

Where can I find system logs for the Git integration?

You can find the logs under `/opt/collabnet/gerrit/logs/`. For more on log files, refer to the README or *TeamForge Git integration reference* on page 299.

Can I bypass Gerrit and access a Git repository directly?

No, Gerrit is used to enforce TeamForge access permissions.

TeamForge 6.2 supports an integration with Black Duck Code Sight. Does this work with Git?

Yes. See *Set up Code Search for the TeamForge Git integration* on page 287 for more information.

I deleted a TeamForge Git SCM repository but the corresponding Gerrit project does not get deleted. What's wrong?

Currently, Gerrit does not allow removing projects that are created already (so that you don't easily lose source code). One implication of this behavior is that even though you deleted the corresponding TeamForge repository, you will not be able to create a new one with the same directory name.

How can I import an existing Git repository into Gerrit?

As long as all the commits in the repository are yours and there is a linear history, a force push should be sufficient. Otherwise, you would have to go into Gerrit and manually add permissions *to push commits authored by other individuals* and *merge commits*.

In the TeamForge web interface, I see the repository root parameter for Git set to "/tmp". Can I change that?

For backward compatibility reasons, this parameter has to be set to "/tmp". It does not affect where Gerrit actually stores its Git repositories -- this is at `/gitroot`.

Do we have default hook scripts available for Git in TeamForge?

Associating artifacts based on commit messages and blocking commits without a commit message is a core TeamForge mechanism that is supported by Git as well.

To add hook scripts, see *http://gerrit-documentation.googlecode.com/svn/Documentation/2.1.7/config-hooks.html*.

Do we have email alerts for Git in TeamForge? If yes, where do we configure it?

Email alerts based on TeamForge commits is a core TeamForge feature, independent of the SCM involved. In addition, Gerrit sends out review emails using the SMTP server specified during installation (it defaults to the TeamForge SMTP server). The mail template is explained in *http://gerrit-documentation.googlecode.com/svn/Documentation/2.1.7/config-mail.html*.

Do we have Role Based Access Control and Path Based Permissions for Git in TeamForge?

We support all SCM permission cluster options for TeamForge project roles. Only TeamForge project roles are considered; default access permissions, global roles, project membership, site admin and project admin permissions are ignored. Path-based permissions are not relevant in Git since a Git commit always contains all files. If we did not ship certain files this would result in a checksum error. Gerrit supports branch-based permissions but this feature is currently not directly exposed over the TeamForge web interface.

TeamForge Git integration: Upgrade and Uninstall FAQ

Questions on upgrading and uninstalling the TeamForge Git integration.

Note: This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

How do I upgrade the current version of my Git integration?

You can upgrade your current version of the Git integration after obtaining a new RPM `yum update` command on your shell. See *Upgrade the TeamForge Git integration* on page 286 for details.

How can I update the configuration of the Git integration after upgrading?

Run the post-installation script with the upgrade switch:

```
/usr/sbin/ctf-git-integration.sh --upgrade
```

Is there any downtime during the upgrade?

Only the amount of time it will take to upgrade the binary and change the configuration (if required).

How can I uninstall the Git integration?

You can uninstall the integration by running the `yum remove` command. See *Uninstall the TeamForge Git integration* on page 287 for details. On the TeamForge side, the TeamForge site administrator should also remove the **Git** SCM Integration. (Log into TeamForge, select **Admin** > **Integrations** > **SCM Integrations** and delete **Git**).

TeamForge Git integration: Technical concepts FAQ

Questions on some of the TeamForge Git integration's more technical aspects.

Note: This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

How are TeamForge SCM permissions mapped to Gerrit Access Rights?

The README describes how relationships (including permissions) are mapped between TeamForge and Gerrit -- see APPENDIX, relationship mapping or *TeamForge Git integration reference* on page 299 for more information. The mapping from TeamForge SCM permissions to Gerrit Access Rights is defined in `/opt/collabnet/gerrit/etc/gerritforge.mappings`. While you can modify this file as you see fit, CollabNet officially supports only the default configuration.

How can I fine tune access rights (read, write, review, submit) for certain users/groups in Gerrit?

Have a look at the README and the help at *Work with Gerrit* on page 289.

What does the directory structure look like for a Git integration?

See the README or *TeamForge Git integration reference* on page 299.

Where can I find more information about Gerrit?

For more information on Gerrit, see the *Gerrit Community Documentation* page.

Which ports does the Git Integration use? My organization has a strict firewall policy, and I need to know which ports to make available for the Git integration.

The Git integration uses 3 ports: 9080,9081, and 29418. See the README or *TeamForge Git integration reference* on page 299 for more information. For the integration, Git integration uses 3 ports(9080,9081,29418 follow details in README) Only port 29418 should be exposed by the firewall.

I get a delay whenever I do a Git push, but not when I do a Git fetch. What is wrong?.

When you do a Git push, Gerrit tries to do a reverse lookup of your IP address. If the nameserver configured for your Git integration server cannot do this reverse lookup, it will result in a timeout. You need to configure your nameserver list (`/etc/resolv.conf`) correctly. For further information, see *this core Java bug*.

I ran Gerrit manually (without the service script; now my secure `config` file is gone and Gerrit does not start up. What happened and how can I fix this?

If Gerrit is run with a different Unix user than `gerrit`, newly created and modified files may not belong to the `gerrit` user any longer. As a consequence, when you try to restart Gerrit using its services script (which switches to the `gerrit` user), Gerrit might not start up due to wrong file permissions. If Gerrit detects that the permissions of its secure `config` file have been tampered with, it even removes this file. You should, therefore, only run Gerrit using the service script provide, and reconfigure it by running the post-install script again. You can fix incorrect permissions by running the following (as sudo or root):

```
chown -R gerrit.gerrit /opt/collabnet/gerrit
```

I deleted the dedicated TeamForge Gerrit user account in TeamForge, and SCM permission synch is no longer

- The easy, and recommended, approach is to ask CollabNet's Professional Services to undelete the TeamForge user in question.

working. How can I recover from this situation?	• Otherwise, you would have to create a new dedicated site admin user in TeamForge, shut down Gerrit, re-run the post-install script and provide the credentials of that user. Then, you would have to start Gerrit again, and log in with as that new user in its Web UI. You will see that the user does not have any special admin permissions. If you still have a working user in Gerrit's administrator group, you could add the dedicated Gerrit user to that group using Gerrit's Web UI. If not, you would have to manually add the new user to the Gerrit administrator group by shutting down Gerrit, removing all files from its caching directory, inserting the user id of the new user into Gerrit's Postgres reviewdb DB group/user membership table, and starting Gerrit again. Since this probably requires you to consult CollabNet's Professional Services as well, we strongly recommend the previous option (undeleting the previously removed user).

TeamForge Git integration reference

Here's some reference information on Gerrit's scalability and hardware requirements, file/directory structure, database, ports and connectivity.

Note: This guide has instructions for setting up and working with the first version of the Git integration released with TeamForge 6.2. For subsequent releases of the integration starting with version 7.0.0, please see *this documentation*.

Scalability and hardware requirements

- For estimated requirements and availability assumptions, see *http://gerrit-documentation.googlecode.com/svn/Documentation/2.1.7/dev-design.html#_scalability*.
- For hardware considerations, see *http://code.google.com/p/gerrit/wiki/Scaling*.
- For a detailed description of performance-related settings, see *http://gerrit-documentation.googlecode.com/svn/Documentation/2.1.7/config-gerrit.html*.

Gerrit directory structure

Gerrit expects a standardized directory structure under the GERRIT_SITE directory: `/opt/collabnet/gerrit`, the `gerrit` user's home directory. The `/etc/default/gerritcodereview` file contains the GERRIT_SITE variable and points to `/opt/collabnet/gerrit`.

Sub-directories of GERRIT_SITE (`/opt/collabnet/gerrit`):

- GERRIT_SITE

- `.ssh`: contains the SSH key for the `gerrit` user; generated during installation and needs to be backed up.
- `bin`: binaries, startup script
- `gerrit.war`: the main Gerrit service
- `gerrit-sync.jar`: the Gerrit-TeamForge synchronization service
- `gerrit.sh`: SYSV-style init script; launches and shuts down; linked to `/etc/init.d/gerrit`
- `cache`: disk cache; does not need to be backed up; can always be re-generated on the fly; should be deleted after an upgrade or restore.

- `etc`: contains all configuration information; needs to be backed up.
- `gerrit.config`: the Gerrit configuration
- `secure.config`: obfuscated passwords and secrets
- `log4j.properties`: logging settings in log4j format
- `gerritforge.mappings`: defines how TeamForge access permissions are mapped to Gerrit access rights
- `lib`: libraries, potentially customer-specific extensions, treat like the `bin` directory

- `logs`: Gerrit log files; default configuration rotates logs daily, gzips old logs; debug files are rotated after they reach

10 MB; we keep 10 copies. You can make changes in Gerrit's `log4j.properties` file at `/opt/collabnet/gerrit/etc`.
- `audit.log`: audit events
- `system.log`: INFO-level logging
- `sshd.log`: logs connections to Gerrit's SSH port (not system shell SSH)
- `*.gc.log`: information on garbage collector usage

Note: In co-hosted mode, TeamForge log rotation behavior will be used as default.

- `/gitroot:` default location for Git repositories. The default location can be changed using the setting in `gerrit.config` or by symlinking the directory. You need to back up this directory.

Database

Gerrit stores runtime information about users, groups, code reviews and commits in a PostgreSQL database called `reviewdb` by default. You need to back up this database. If the Git integration is installed on the TeamForge server, it will use the same PostgreSQL install as TeamForge. If the integration is on a separate server, it will use a local PostgreSQL installation on that server. During installation, a new `gerrit` role and `reviewdb` schema get created. Note that Git does not, at any point, access TeamForge schema within the Postgres database.

To access `reviewdb` from Gerrit, the following line will be added by the installer to `/var/lib/pgsql/9.0/pg_hba.conf`:

```
host     reviewdb         gerrit          samehost         md5
```

In the "free-form" mode (Remote mode: Variant 2), we do not have full control over the Postgres installation and `hb_pga.conf` may contain the following conflicting line:

```
host       all     all              127.0.0.1/32      ident
```

If it exists, you need to comment it out (using #) to avoid clashing with this line inserted by installer:

```
host     reviewdb         gerrit          samehost         md5
```

Ports and connectivity

Gerrit opens three (TCP) ports: 9080, 9081 and 29418. You should expose only port 29418 outside localhost.

9080: the Gerrit Web interface	This port will be proxied by Apache `conf` (prefix `/gerrit`) and doesn't need to be externally accessible. Do not expose this port to the outside.
9081: Gerrit-sync web service (REST)	In the Local (or co-hosted mode), TeamForge talks to the Gerrit REST API over localhost. Gerrit talks to TeamForge over its default SOAP URL. The Git integration needs bidirectional connectivity to the TeamForge host. In the Remote (or distributed) mode, TeamForge talks to the Gerrit REST API over an Apache proxy rule (SSL-enabled if Apache is SSL-enabled on the integration server where Gerrit is running). Gerrit talks to TeamForge over its default SOAP URL. Do not expose this port to the outside.
29418: Gerrit SSH access	Developers use the SSH protocol to push and pull source code to and from Gerrit. This port needs to be open to users. **Note:** Gerrit ships its own SSH implementation and offers no shell access over this port.

Mapping

Objects and Relationships are mapped from TeamForge to Gerrit, not the other way.

TeamForge Object	**Gerrit Object**
SCM repository in TeamForge project (containing project roles with SCM permissions)	Project
Project Role	Group
User Group	Group
Project Role with SCM permission	Access right
User	User

TeamForge Relationship	**Gerrit Relationship**
SCM repository in TeamForge project with project roles with SCM permissions	SCM repository in TeamForge project with project roles with SCM permissions
User is part of a User Group that is assigned a Project Role	User is part of a Group (which corresponds to TeamForge Project Role)
User is part of a User Group	User is part of a Group (which corresponds to TeamForge User Group
Project Role is assoigned SCM Admin permission	Corresponding group is assigned Gerrit access rights (category code, lower range, upper range): READ,1,2 pHD,1,3 pHD,1,3,refs/tags/* pTAG,1,2 OWN,1,1
Project Role is assigned SCM Delete permission	Corresponding group is assigned these Gerrit access rights (category code, lower range, upper range): READ,1,2 pHD,1,3 pTAG,1,2
Project Role is assigned SCM View and Commit permission	Corresponding group is assigned these Gerrit access rights (category code, lower range, upper range): READ,1,2 pHD,1,2
Project Role is assigned SCM View Only permission	Corresponding group is assigned these Gerrit access rights (category code, lower range, upper range): READ,1,1
Project Role is assigned SCM No Access permission	Corresponding group is assigned these Gerrit access rights (category code, lower range, upper range): READ,-1,-1

TeamForge Relationship	**Gerrit Relationship**
Registered user in TeamForge who has logged into Gerrit at least once	Implicit access rights in all Gerrit projects (category code, lower range, upper range): CRVW, -1, 1 FORG, 1, 1

Note: In this release, project administrator rights, site administrator rights, global roles,and default access permissions for project membership are ignored.

Gerrit Category Code	**Gerrit Access Rights Category**
READ	Read Access
pHD	Push Branch
pTAG	Push Tag
OWN	Owner
CRVW	Code Review
FORG	Forge Identity
SUBM	Submit
VRIF	Verified

For more information about access control categories and their ranges in Gerrit, see *http://gerrit-documentation.googlecode.com/svn/Documentation/2.1.7/access-control.html*.

Frequently asked questions about administrating a TeamForge 6.2 site

Use this background knowledge to help you install, maintain and support a CollabNet TeamForge site.

General questions about using TeamForge

Common questions about using TeamForge.

When is your email address blacklisted in TeamForge?

Your email address is blacklisted in TeamForge when you perform certain restricted activites.

The system automatically blacklists any user email address that performs a bulk edit, mass update, or otherwise acts on several artifacts at once either through the web interface or the Windows client tool.

What does it take to install CollabNet TeamForge ?

To install CollabNet TeamForge , you download the software, make decisions about how you want the site to work, and set up data for the site to work with.

Before you begin the installation you will want to consider hardware requirements and other factors like supported software. For more information about installation see *Install Reference*.

Do I need an advanced TeamForge installation?

To choose between a dedicated installation and an advanced installation, consider how your site's database and source control services will be used and maintained.

Remote boxes

Many sites benefit from running some of the TeamForge services on one or more separate boxes. You can only do this with an advanced installation.

Hostname and domain name

The TeamForge installer can automatically set up your site so that users can find it at the `localhost` address. If you need to set a hostname other than `localhost`, you must edit the *HOST* variable in the site configuration file.

If you plan to have your users access your site by a URL that is different from the host name of the machine where the site is running, you will have to edit the *DOMAIN* variable in the site configuration file.

In either case, use the advanced install instructions.

Database

The database is where users' project pages, documents, tracker artifacts, tasks, discussions and other work products are stored and accessed. If you need to configure your database for your specific conditions of use, use the advanced install instructions.

Here are some reasons why you might want to customize the configuration of your site's database:

- Other applications are sharing the database instance with TeamForge.
- You plan to use an Oracle database. (The default option is PostgreSQL.)
- You plan to run your database on a separate standalone server.

Source control

Here are some reasons why you might want to customize the configuration of your site's source control service:

- You need to provide more than one Subversion server.
- You plan to run your source control service on a separate standalone server.
- You need to provide other source control services. (CVS and Perforce are supported.)

Security

- If you intend to have users access your site via SSL (using a URL that starts with `https`), you will need to edit the site configuration file. See *Protect your TeamForge site with SSL* on page 259 for information.
- If your site requires SELinux, you must configure your Apache service. See *Set up SELinux* for the recommended settings.

In either case, use the advanced install instructions.

How many servers do I need to run a CollabNet TeamForge site?

You can run CollabNet TeamForge on one server or split up its services among multiple servers.

CollabNet TeamForge functionality is delivered by five discrete services. Each service can run on its own machine or share a machine with one or more other services. You assign specific services to specific boxes when you customize your CollabNet TeamForge installation by editing the `site-options.conf` file.

CollabNet TeamForge core functionality	This is known internally as the `app` server. It implements JBoss and Apache services. One and only one instance of this application must be present.
Database	The `database` application handles site users' data. You set the type of database by setting the value of the *DATABASE_TYPE* token to oracle or pgsql. One and only one instance of this application must be present.
Subversion	Subversion can be used to provide source control functionality. It uses the Tomcat and Apache services. A site can have zero, one, or more than one instances of the `svn` application, running on an arbitrary number of machines.
CVS	CVS can be used to provide source control functionality. It uses the Tomcat service. A site can have zero, one, or more than one instances of the `cvs` application, running on an arbitrary number of machines.
etl	The reporting service.
datamart	A mirror of your site database for the reporting engine to work with.

In principle, services can be combined in any configuration, with some constraints, such as:

- Only one site database, datamart and reporting service.
- Multiple source control integration services, but only one per box.

In practice, CollabNet has identified five configurations as the most useful for a wide variety of site. You can follow the instructions here to set up your site in one of these configurations, or you can adapt one of them to your own conditions.

How does TeamForge handle third-party applications?

TeamForge relies on many third-party applications to augment or enhance functionality.

TeamForge integrates with additional third party applications, such as Microsoft Office and Microsoft Project. Support will always make an effort to provide assistance in using third party applications. However, for complete, end-to-end support, customers should consult the application vendor, as the vendor is best equipped to provide the support necessary to use their products.

CVS

Technical Support provides best-effort support for Subversion and CVS client usage issues. TeamForge is not shipped with CVS source control functionality. For best results, contact the vendor for assistance.

The CVS RPM that ships with RedHat Linux Enterprise Server 3 and RedHat Advanced Server 2.1 has a known bug that prevents users who have access to 32 or more CVS repositories from accessing the repositories that are alphabetically after the 31st. This is currently RedHat bug #131124 (*https://bugzilla.redhat.com/bugzilla/show_bug.cgi?id=131124*). Customers are advised to contact Red Hat for a solution to this bug for any case where users are members of 32 or more CVS repositories on a TeamForge CVS server.

Discussion forum threading

For TeamForge discussion forums to properly thread posts sent in via email, the email message must include either the `References` or `In-Reply-To` header. Email received without both of those headers cannot be threaded accurately and will most likely be treated as a new topic or thread in the discussion. While the lack of either of the headers is not an explicit RFC violation, the inclusion of such headers is considered compliance with section 3.6.4 of *RFC 2822*.

Microsoft Outlook and Lotus Notes are prone to sending mail without at least one of the required headers. There is evidence that Lotus Notes versions 6.5 and newer are capable of sending email that includes at least one of the two required headers. However, older versions of Lotus Notes either do not include the headers, or require special reconfiguration in order to do so.

Microsoft Outlook on its own does include the `In-Reply-To` header. However, mail is sent through a Microsoft Exchange server, that header is stripped off. There are no known versions of Microsoft Exchange server that do not strip these RFC headers from outbound email, and therefore there are no known workarounds.

Contact your IT group or the vendor of your email client with questions or concerns.

How does TeamForge manage security?

TeamForge is a secure, centralized, enterprise-grade solution for optimizing distributed development.

A number of factors go into ensuring security, for detailed information about TeamForge security management see *How does CollabNet SourceForge Enterprise 5.0 manage security?*

What are the minimum ports to keep open for a TeamForge site?

The components of a CollabNet TeamForge installation listen on a number of operating system ports. A small subset must be exposed externally to enable users to access TeamForge services. Any port that is not absolutely needed must be closed.

⚠ **Caution:** Expose only the JBOSS and Tomcat ports that are required for integration with another application, and open them only to that specific host IP address, even within your internal network.

You can select your open ports in one of these ways:

- Use the firewall configuration GUI tool that comes with your operating system. It's usually launched with a command like `system-config-selinux`.
- Open the `/etc/sysconfig/iptables` file and specify your open ports by hand.

Ports open to the Internet

Open the following operating system level ports. All other ports must be firewalled off to maintain security.

☞ **Important:** Do not open port 7080 or port 8080 to the Internet. These ports are only for communications between the TeamForge application and the source code integration service, when those two site components are running on separate boxes.

22 (SSH) Port 22 is the default port for the secure shell (SSH). This is required for basic SSH administrative functionality and for CVS, as all CVS transactions occur over SSH. If all Teamforge repositories are in SVN (the default for Teamforge), then this port should be closed to the public and only accessible to the system administrators.

If you have to expose SSH to the Internet, the best way to protect it is to require SSH keys and not allow password authentication, and do not permit root logins over SSH. If you must use local authentication for SSH, enforce regular password changes and password complexity.

Note:

- If you have to expose SSH internally, limit access to the port to a bastion host if you can; otherwise limit it to specific trusted hosts or subnets.
- Do not expose cvspserver (the TCP protocol over port 2401) either internally or to the Internet if there is any way you can avoid it.

25 (SMTP) Port 25 is the default port for SMTP (email). CollabNet TeamForge discussion forums include mailing list functionality that allows users to send email to the TeamForge server. The James mail server included with TeamForge listens on port 25 to accept this mail for processing.

80 (HTTP) Port 80 is the default port for Web data transfer. We strongly recommend that you set up SSL and use port 80 only to redirect to port 443.

443 (https) Port 443 is the default port for encrypted Web data transfer (HTTPS). The Apache web server should be configured to encrypt all data so that it cannot be compromised by a third party with malicious intent. Apache can be configured to force all traffic to be sent over HTTPS, even when a request is sent via port 80 (HTTP).

TeamForge can help you take care of this, if you tell it to. See *Set up SSL for your TeamForge site* for details.

Ports for internal use only

Ports 7080 and 8080 have special internal uses for your site, but should not be exposed externally.

7080 On the source code integration server, if it is a separate physical server from the TeamForge application server, expose a port by which the application server can communicate with the SCM integration server. The default is port 7080.

8080 If you are running the source code (CVS, Subversion, or Perforce) integration server on a separate physical server from the TeamForge application server, set port 8080 on the TeamForge application box to accept connections from the server where your source code integration service is running.

Important: Do not open port 7080 or port 8080 to the Internet. These ports are only for communications between the TeamForge application and the source code integration service, when those two site components are running on separate boxes.

Open the REPORTS_DATABASE_PORT if you are granting direct access to the datamart from specific IPs using the REPORTS_DB_ACCESS_HOSTS `site-options.conf` token.

How does CollabNet TeamForge help protect data access?

Access to data must be strictly controlled to meet the security requirements of the enterprise. Strict data access control is achieved through a combination of firewalls, authentication, and authorization.

Firewalls and network configuration

A firewall provides the first level of protection by restricting access to the private network from the Internet. Sophisticated firewall configuration can provide strong security for all enterprise resources.

All CollabNet TeamForge application server nor the backend servers should ever be exposed to the Internet.

The CollabNet TeamForge application to function effectively, the following conditions must be met.

- Across the firewall, clients (users) must have access to:
  - The web server through a secure protocol such as HTTPS (port 443). The web server typically handles both the browser requests as well as the SOAP requests and forwards them to the CollabNet TeamForge application server.
  - Send mail to CollabNet TeamForge mail server via SMTP (port 25).
  - The SCM server through a secure protocol such as SSH (port 22).
- The web server must have access to the application server (typically port 8080).

  Note: This port is not exposed outside the firewall.

- The web server must have access to the SCM server for repository browsing functionality.
- The application server must have access to the backend (SCM, database, mail, etc.) servers.
- The SCM server must be able to access CollabNet TeamForge for commit notifications.
- The mail server must be able to deliver messages across the firewall.

Authentication and authorization

To secure sensitive data, CollabNet TeamForge provides access control tools to restrict unauthenticated and non-member access.

User authentication is supported through verification of username and password during login. Project administrators can completely restrict access to authenticated members by marking projects as gated communities or private. A gated community is only accessible to unrestricted users, while a private project is only accessible to its members.

CollabNet TeamForge .

What user activities are tracked?

In case of a data security compromise, a record of who is performing what activities will help resolve some of the security issues.

Typically web servers log every page (or URL) being accessed, including the IP address of the user, date and time of access, etc. These logs are very useful in tracking the source of any security violations that may occur.

CollabNet TeamForge auditing tools are a powerful way to track unwanted and/or unauthorized changes within the system.

How does CollabNet TeamForge help protect my data?

Sensitive data must be protected from illegal access at various points in the system. Key areas where security is typically compromised include data transmission and data storage.

Data transmission

Network traffic is not encrypted by default. The HTTP protocol (non-SSL) does not protect data during transmission. HTTPS provides Strong Encryption using the Secure Socket Layer and Transport Layer Security protocols (SSL/TLS).

Note: The web server employed by a CollabNet TeamForge installation must be reconfigured to employ the HTTPS protocol.

Data storage

Sensitive data, such as credit card numbers, financial information, etc., must be stored securely. Usually this is done by encryption. In the context of an application like CollabNet TeamForge only stores password digests with an MD5 based cryptographic hash to guarantee adequate data protection.

MD5 is a one-way hash function that is used to verify data integrity through the creation of a 128-bit digest from data input. A one-way hash function is designed in such a way that it is hard to reverse the process, that is, to find a string that hashes to a given value. MD5 is currently a standard, Internet Engineering Task Force (IETF) Request for Comments (RFC) 1321. According to the standard, it is "computationally infeasible" that any two messages that have been input to the MD5 algorithm could have as the output the same message digest, or that a false message could be created through apprehension of the message digest.

J2EE Architecture and security

CollabNet TeamForge is a J2EE application that employs three-tier architecture to provide a secure environment for mission-critical data.

In a multi-tier architecture, access to each tier is restricted to the tier above it, effectively securing the tiers behind the firewall. For example, while clients (users accessing the system through a web) access the web server, they neither have access to the application and backend servers nor are they aware of their existence.

Similarly, the web server itself does not have access to the backend servers (database, SCM, mail etc.)

Exceptions to this rule include:

- Direct client access provided to the SCM servers. SCM servers are accessed across the firewall typically through SSH protocol (for CVS), or HTTP or HTTPS (for Subversion). SCM server data is also accessible in a view only mode through the web interface.
- Clients must have access to the mail server for posting messages to mailing lists.
- Mail server must have access to deliver messages across the firewall.

Clients can also access the SOAP APIs through the web server. The web server in turn forwards SOAP requests to the application server for processing.

What security tools come with CollabNet TeamForge ?

In addition to employing industry standard security protocols, CollabNet TeamForge provides an extensive access control model for fine-grained control and powerful tools to audit and track changes.

Note: Although CollabNet intends CollabNet TeamForge as a secure, commercial application as delivered, it is not verified for highly secure computing environments that exceed an industry standard level of business application security. CollabNet TeamForge can be extended to meet the specific needs of military, government or other highly secure facilities. Please contact CollabNet Professional Services if you have this requirement.

Cookies

CollabNet TeamForge requires browsers to support cookies. Cookies are used for the sole purpose of managing user sessions. CollabNet TeamForge uses session cookies for storing session ID information.

A transient cookie, sometimes called a session cookie, contains information about a user that disappears when the user's browser is closed. Unlike a persistent cookie, a transient cookie is not stored on your hard drive but is only stored in temporary memory that is erased when the browser is closed.

Session management

CollabNet TeamForge runs on the JBoss Application Server, with TomCat as the JSP/Servlet engine.

The JSP/Servlet engine is used for serving dynamic web pages and managing HTTP sessions. Servlet engines generate session IDs that are exchanged with the client browser as session (or transient) cookies.

TomCat generates Session IDs using the java.security.SecureRandom class. The java documentation for this class says:

> This class provides a cryptographically strong pseudo-random number generator (PRNG). A cryptographically strong pseudo-random number minimally complies with the statistical random number generator tests specified in FIPS 140-2, Security Requirements for Cryptographic Modules, section 4.9.1. Additionally, SecureRandom must produce non-deterministic output and therefore it is required that the seed material be unpredictable and that output of SecureRandom be cryptographically strong sequences as described in RFC 1750: Randomness Recommendations for Security.

A user session is established after CollabNet TeamForge authenticates a user's login information. A session is invalidated when one of following events occur:

- The user explicitly logs out of CollabNet TeamForge.
- When the user's session times out.

Dismissing the browser leaves the session unusable until it is eventually timed out and invalidated.

Passwords

CollabNet TeamForge only stores password digests with an MD5-based cryptographic hash to guarantee adequate data protection. MD5 is a one-way hash function. A one-way hash function is designed in such a way that it is hard to reverse the process, that is, to find a string that hashes to a given value.

Administrators can force CollabNet TeamForge to reject passwords that do not meet a minimum password length. This feature is useful to help stop people from using trivial passwords where security is an issue. Similarly, administrators can allow or reject dictionary-words, force passwords to expire, and enforce upper/lower case/special character combinations. Moreover, CollabNet TeamForge administrators can enforce password expiration and other policies.

Cross-site scripting (XSS) protection

CollabNet TeamForge is designed to protect the application against cross-site scripting (XSS) attacks. User-supplied text is encoded by clearing HTML markup before rendering it. Constant code reviews are performed to ensure that all fields are secured appropriately. High priority is given to fixing any oversights and issuing security patches as necessary.

What is a CERT advisory?

CollabNet Product Support monitors the CERT coordination center (http://www.cert.org/) for notification of vulnerabilities or exploits against applications that CollabNet TeamForge provides.

If CollabNet Technical Support identifies an advisory that may indicate potential challenges for users who have deployed CollabNet TeamForge , Support proactively releases a notification and a statement of action. CollabNet will provide product updates as it deems appropriate or necessary.

How does TeamForge authenticate CVS users?

CVS is treated as a special case when managed by a TeamForge site. It is not authenticated in the same way as SOAP API clients.

CVS relies on the Linux operating system to provide access and security. This includes permissions on individual repositories and access to the server itself. To add users, change passwords, create repositories, etc., the TeamForge integration simply changes the appropriate settings in the Linux operating system.

Users access CVS via an encrypted SSH session. To support this, TeamForge creates accounts on the Linux server that hosts the CVS repository. A typical CVS repository is created in the `/cvsroot` directory and is owned by root, with a group assigned by TeamForge. To gain access to a repository, TeamForge will add a user to the appropriate system group.

When TeamForge detects that a user's password has changed, it changes the password for that user on the Linux server too.

Users also have the option to use SSH keys or Kerberos tickets.

When a user is added to the Linux server, the login shell is `cvssh`, which limits their activities to CVS commands.

👉 **Important:** Do not expose cvspserver (the TCP protocol over port 2401) either internally or to the Internet if there is any way you can avoid it.

Password changes under internal authentication

To set the password for the user at the operating system level, TeamForge needs to have the clear-text version of the users password. The only time TeamForge has this is when the user uses the Change Password form in the Web UI. This is because the database-stored version, as an MD5 Password Hash, is a one-way encryption and can't be decrypted.

On a successful password update, TeamForge makes a SOAP call to the integration server that manages CVS. For this reason, the integration server must be SSL-enabled.

Password changes under external authentication

When a password change happens in an external authentication system, TeamForge does not immediately know that the password has changed. TeamForge needs a way to detect that the password has changed.

To accomplish this it keeps a copy of the last password the user successfully logged in with as an MD5 Password Hash in the same database table and field that it normally uses for Internal Authentication.

Now that TeamForge has a reference point, it still needs a clear-text copy of the password to make the change at the Linux operating system level. The only time this is available is when the user logs into TeamForge via the Web UI or SOAP API. So upon a successful login TeamForge compares the password to the encrypted one. If it is different it tells the Linux operating system to change the users password and then saves it in the database (as an MD5 Password hash).

Until the user logs into TeamForge, the CVS server will still have and accept the old password. There is no CVS server-side way to trigger a password update, unless an alternative method is used, such as LDAP or Kerberos.

Alternative Authentication

Because users use SSH to access a TeamForge-managed CVS server, it is possible to configure SSH to accept other authentication features such as SSH keys and Kerberos tickets. It is even possible to disable the use of passwords and require the use of other alternative methods.

- TeamForge supports SSH Keys natively. The user uploads their public key into their profile under “My Settings” in the TeamForge Web UI. The key will automatically be copied to each CVS server that TeamForge manages.
- If TeamForge is using External Authentication and the method is Kerberos, then SSH can be configured to use the same Kerberos server. This allows users to use Kerberos tickets for CVS operations.

LDAP

Linux supports LDAP as an authentication source. If TeamForge is using External Authentication and the source is LDAP, then SSH can also use that same source. When you do this, passwords and user account status are observed in real time instead of as a mirror of TeamForge.

How do I configure Subversion to authenticate against multiple LDAP domains?

For some configurations, a Subversion server may need to be authenticated against multiple LDAP domains. This is possible by modifying the Apache configuration.

This is now possible due to the mod_authn_alias module for Apache. The external link for the module contains multiple usage scenarios. You will need to confirm that your Apache has been compiled with the module enabled. (This is the case for CollabNet Subversion binary packages since 1.5.4). If it is compiled as a module, make sure it is enabled via the LoadModule directive in your Apache configuration.

Example configuration usage for authentication against three LDAP servers :

```
<AuthnProviderAlias ldap ldap-US>
    AuthLDAPBindDN cn=ldapuser,o=company
    AuthLDAPBindPassword password
    AuthLDAPURL
ldap://ldap-us.company.local/ou=Developers,o=company?sub?(objectClass=*)
</AuthnProviderAlias>

<AuthnProviderAlias ldap ldap-EU>
    AuthLDAPBindDN cn=ldapuser,o=company
    AuthLDAPBindPassword password
    AuthLDAPURL
ldap://ldap-EU.company.local/ou=Developers,o=company?sub?(objectClass=*)
</AuthnProviderAlias>

<AuthnProviderAlias ldap ldap-IN>
    AuthLDAPBindDN cn=ldapuser,o=company
    AuthLDAPBindPassword password
    AuthLDAPURL
ldap://ldap-in.company.local/ou=Developers,o=company?sub?(objectClass=*)
</AuthnProviderAlias>

<Location /svn>
    DAV svn
    SVNParentPath /opt/subversion/repos
    AuthType Basic
    AuthName "Subversion Repository"
    AuthBasicProvider ldap-US ldap-EU ldap-IN
    AuthzLDAPAuthoritative off
    Require valid-user
</Location>
```

How do I authenticate multiple LDAP via Apache?

If you need to add multiple OU= values in the LDAP url you must have separate LDAP urls and utilize AuthnProviderAlias to check both LDAP searches.

Use the following AuthnProviderAlias to check LDAP searches.

```
LoadModule authn_alias_module
modules/mod_authn_alias.so

<AuthnProviderAlias ldap ldap-alias1>
AuthLDAPBindDN cn=youruser,o=ctx
AuthLDAPBindPassword yourpassword
AuthLDAPURL ldap://ldap.host/o=ctx
</AuthnProviderAlias>

<AuthnProviderAlias ldap ldap-other-alias>
AuthLDAPBindDN cn=yourotheruser,o=dev
AuthLDAPBindPassword yourotherpassword
AuthLDAPURL ldap://other.ldap.host/o=dev?cn
</AuthnProviderAlias>

Alias /secure /webpages/secure
<Directory /webpages/secure>
Order deny,allow
Allow from all

AuthBasicProvider ldap-other-alias ldap-alias1

AuthType Basic
AuthName LDAP_Protected_Place
AuthzLDAPAuthoritative off
Require valid-user
</Directory>
```

After switching to ADS authentification, why did the Create button disappear from the user admin section?

When using external authentication such as LDAP, creating users from within the application is disabled. All users must be created via LDAP.

Does TeamForge work with LDAP?

Yes, you can have your TeamForge installation authenticate against an LDAP server. This is handy when users want to use a variety of different resources without having to maintain credentials for each one separately.

Overview

CollabNet TeamForge is a JBoss2 based application and relies on the JBoss JAAS service for user authentication. This enables a TeamForge site to authenticate users internally or externally.

Internal user authentication

Out of the box, TeamForge relies on its local database to manage user accounts. This includes username, password, full name, email address and a variety of other meta data values. Passwords are stored in the database using the standard MD5 Password hashing algorithm1. The database is only accessible by the application itself and a user with root access to the physical server. While running in this default configuration users are allowed to change their passwords in TeamForge, and any user with site administration privileges can create and approve new user accounts.

External user authentication

The JAAS service comes with several standard providers that allow TeamForge to be integrated with services such as LDAP, Active Directory and Kerberos. The JAAS service allows more than one source to be configured in the event several sources are needed.

Note: It is possible to use both types of authentication with a single TeamForge installation. See your CollabNet representative for details.

To ensure that you are not locked out of your site, the site administrator account is always validated by TeamForge, not by LDAP.

LDAP accounts must conform to the TeamForge rules for user names and passwords. For example:

- If a password is used in LDAP that is shorter than the minimum allowable password length in TeamForge, you cannot create the user in TeamForge.
- A user name that starts with a special character, such as an underscore, will not be accepted by TeamForge, even if it is valid in LDAP.

(For detailed TeamForge user name and password rules, see *Create a new user account*.)

How is life different for the user under external authentication?

- When you turn external integration on, every user account (except the site administrator account) must have a matching LDAP entry to log in. This may require changing some existing accounts to match their corresponding LDAP records. (Accounts created after LDAP is in place are validated with the LDAP server when they are created, so you don't have to worry about this.)
- Every login attempt (Web UI and SOAP access) is passed to the external provider. This means that any changes to the user status in the external system take effect immediately. Users who have already logged in and have valid sessions are not affected.
- When TeamForge is using internal authentication, a site administrator can change a user's password. This is disabled for external authentication.
- Under external authentication, passwords can't be changed in the TeamForge web UI. Users have to use the interface provided by the third-party authentication source to change their password. Such password changes are available immediately to TeamForge for the next login attempt.
- Site administrators can no longer create user accounts. The end user must create their own account by logging into TeamForge just like a user who already has an account. At that point TeamForge detects that a new account needs to be created and presents the new user with a registration form, which requests the user's password n the external authentication system. On submit, TeamForge verifies the user account with the external system, and only if the username/password is verified does TeamForge create the new account.
- Once a new user has created their account, TeamForge can optionally be configured to put every new account in a pending status so that a site administrator can approve the new account. By default, new users will have immediate access to the system.

LDAP for source control

LDAP is integrated into your TeamForge source control services.

- For Subversion, the integration server queries TeamForge as needed.
- CVS authentication is not managed directly by LDAP, but each TeamForge user's SCM password is synchronized automatically with the user's LDAP password upon logging into TeamForge.

What can go wrong?

When TeamForge is configured to authenticate against an LDAP server and the LDAP server is down, all TeamForge authentication is disabled until the LDAP server is restored.

If a user does not exist on the LDAP server, or is deleted from the server, that user cannot log into TeamForge.

Why do I get the "Invalid command 'AuthLDAPAuthoritative'" error when I try to set LDAP for SVN users?

The invalid command `AuthLDAPAuthoritative` error may occur if you need to upgrade Apache from version 2.0 to 2.2.

CollabNet Subversion 1.5 is bundled with the latest version of Apache (currently 2.2.x). It includes the module mod_authnz_ldap and does not include mod_auth_ldap. Hence compatibility issues arise due to missing directives. Upgrade your Apache version to 2.2 if you get the following error when trying to install CollabNet SVN:

```
 bash-3.00# /etc/init.d/collabnet_subversion start
    Starting CollabNet Subversion:
    Syntax error on line 29 of
        /etc/opt/CollabNet_Subversion/conf/collabnet_subversion_httpd.conf:
    Invalid command 'AuthLDAPAuthoritative',
        perhaps misspelled or defined by a module not included in the server
configuration
    FAILED
```

How does TeamForge handle multiple redundant LDAP servers?

When configuring LDAP authentication for a TeamForge instance, there may be a business need for using multiple LDAP servers. Follow the guidelines below for configuring.

The additional LDAP servers can be added to the java.naming.provider.url option in login-config.xml:

```
login-config.xml:
        <module-option name="java.naming.provider.url">
        ldap://primary/ ldap://secondary/</module-option>
```

Once the primary and secondary servers have been defined, they will be consulted in order of definition for every authentication request. First the primary, and if the primary fails, then the secondary. This prevents specifying multiple servers for round-robin handling of authentication, but it can still be used for redundancy needs.

Can the users be forced to change their passwords at first login?

Yes, as a site administrator you can configure the CollabNet TeamForge site options to force the users to change their passwords at first login.

Setting the `REQUIRE_USER_PASSWORD_CHANGE` attribute as `true` in the `site-options.conf` file enforces password change on first login into CollabNet TeamForge.

☞ **Tip:** You can not force password change on a user who had self-created the user account, or if a password-request had been raised for the user or if an administrator had reset the login password for that user.

Managing email in TeamForge

Questions about managing email in TeamForge.

How do I configure TeamForge to send mail on a specific network adapter in a multi-NIC configuration?

When a host has multiple NICs, James will try to do the right thing when sending mail. In some network setups, this is not correct, and manual configuration is needed.

James requires multiple changes to fully configure how it interacts with the network. Open the config.xml file, located in `$SF_HOME/apps/james/james-2.2.0/apps/james/SAR-INF/` for version 5.1.

Locate the `'<mailet match="All" class="RemoteDelivery">' section. add a subnode '<bind>$addr</bind>'` where $addr is the ip address that James should be sending mail from.

Near that area, there is a <servernames...></servernames> section. Confirm/change the two autodetect options (autodetect, autodetectIP) to false. Next, add the fully qualified host name, and the ip address that will be used, to their own <servername> entry.

After the changes are complete, save the config.xml and restart the application.

How can I check if port 25 is open?

If you know the mail server is up and running, check whether you can talk over port 25 to your mail server. This can be done using a one-line command: telnet <appserver name> 25 Substitute the <appserver name> with your own server.

Once you type this into your DOS window and hit return, you should see some sort of response from your mail server, as shown below:

Trying 208.75.196.84... Connected to cu190.cubit.sp.collab.net (208.75.196.84). Escape character is '^]'. 220 cu190.cubit.sp.collab.net SMTP Server (JAMES SMTP Server 2.2.0) ready Mon, 27 Jul 2009 06:38:20 -0700 (PDT)

How do I set up a local alias via James?

In situations where you need to obtain a SSL certificate for your domain, and your SSL certificate provider only permits you to use addresses related to your TeamForge domain, it may be necessary to generate an email alias from within TeamForge. Since there is currently no way to do this through the UI, you'll have to do it from the James administrative interface.

First, you'll need to connect to the James administrative interface on your system. If you've followed our best practices guide in our knowledgebase, you'll know that you should have port 4555 firewalled to everyone but localhost. SSH to your TeamForge server, and then issue the following command:

```
telnet localhost 4555
```

This will bring up the Remote Administration Tool:

```
[root@app1 root]# telnet localhost 4555
Trying 127.0.0.1... Connected to localhost (127.0.0.1).
Escape character is '^]'. JAMES Remote Administration Tool 2.2.0
Please enter your login and password
Login id: admin Password: (text is echoed locally)
Welcome admin. HELP for a list of commands
```

First, we'll need to add a new user:

```
adduser <username> <password>
```

Then, we'll need to set the forwarding address of that user

```
setforwarding <username> <email address where you want email to go>
```

finally, we'll exit the James administrative interface.

```
quit
```

Your changes should be in place.

How do I configure email notifications of Subversion commits in SourceForge 4.x?

For SourceForge release 4.x, email notifications are not available via the web UI, and will require extra commit hook scripts to be installed.

To implement commit email notifications on SourceForge 4.x, you must install extra commit hook scripts in the repository. For detailed information see the online Subversion documentation: *Hook Scripts*.

Note: This feature has been implemented in SourceForge 5.x. In the current release, a user can monitor a repository, much the same way they monitor a tracker for discussion forum.

Does TeamForge support using /etc/aliases for local mail delivery?

No, TeamForge uses the James SMTP server, which does not use the /etc/aliases file.

To enable local mail aliases, you will need to configure user mapping in the XMLVirtualUserTable in the `/opt/collabnet/teamforge/runtime/james/apps/james/SAR-INF/config.xml` file.

Note: Please note that while the James SMTP server is used as part of TeamForge, customizations such as these cannot be supported by CollabNet.

Should I upgrade to TeamForge 6.2 on a new box?

You can upgrade TeamForge on new hardware, or you can stick with the same box your current site is running on. To choose, consider how your members use your site and how you maintain it.

Upgrade on new hardware

Upgrading on new hardware is a little more complex, but provides more flexibility.

Do it this way if you want to:

- Change to a different operating system.
- Stage your upgraded site before moving it into production.
- Serve the site from a different data center.
- Support an expanded user base.
- Minimize downtime associated with the upgrade.

Upgrade on the same hardware

If you are OK with your current hardware setup and you don't want to rock the boat, you can run your new TeamForge site on the same box where your current site is running.

Do this if you want to:

- Keep your upgrade as simple as possible.
- Stick with a tested hardware setup.
- Use virtual hardware.
- Support a stable user base.

Should I move my TeamForge database to its own server?

If you expect your site to have heavy user traffic, you may want to run the site's database on its own server.

Note: Before moving your database to its own server, make sure you have access to someone with advanced skills in the database service you are using.

The advantage of hosting a service on a separate server is that it does not share CPU, RAM or I/O bandwidth with the server that is hosting the main TeamForge application.

Note: Each TeamForge site can have only one database server.

To help decide whether you need a separate database server, consider these approximate values:

	Shared TeamForge-database server	**Standalone database server**
Daily users	Fewer than 1000	More than 1000
Daily discussion forum entries	Fewer than 1000	More than 1000

Should I move my source control application to its own server?

If you anticipate heavy source code check-in and check-out traffic, consider setting up the source code application on its own server.

To host your source control services on their own server, you must set up a source code repository server and integrate it with TeamForge. You can integrate any number of source code servers with your TeamForge site.

The advantage of hosting a service on a separate server is that it does not share CPU, RAM or I/O bandwidth with the server that is hosting the main TeamForge application.

Note: If you need to move a source code integration, contact your CollabNet representative for help.

To help decide whether you need a separate source control server, consider these approximate values:

	Shared TeamForge-SCM server	**Standalone SCM server**
Daily source code commits	Fewer than 1000	More than 1000

What are the right PostgreSQL settings for my site?

Your site's PostgreSQL settings depend on the conditions your site is operating under, especially the number and size of projects and the number of users.

The default values in the `site-options.conf` file are designed for a TeamForge site running on a system with 8 GB of RAM. This table contains recommended values for systems with various amounts of RAM, based on testing carried out in CollabNet's performance lab. Use your discretion in selecting the right values for your environment.

Note: Remember to recreate the runtime environment after changing any value in the `site-options.conf` file.

	8GB RAM	16GB RAM	32GB RAM	64GB RAM	128GB RAM
PGSQL_COMMIT_DELAY	250	250	250	250	250
PGSQL_COMMIT_SIBLINGS	10	10	10	10	10
PGSQL_EFFECTIVE_CACHE_SIZE	512MB	1GB	2GB	4GB	8GB
PGSQL_MAINTENANCE_WORK_MEM	256MB	256MB	256MB	256MB	256MB

PGSQL_MAX_FSM_PAGES	500000	500000	500000	500000	500000
PGSQL_MAX_FSM_RELATIONS	500	500	500	500	500
PGSQL_SHARED_BUFFERS	240MB	480MB	960MB	1.5GB	3.5GB
PGSQL_WORK_MEM	64MB	128MB	256MB	512MB	512MB
PGSQL_VACUUM_COST_DELAY	50	50	50	50	50
PGSQL_WAL_BUFFERS	10MB	10MB	10MB	10MB	10MB

Is it possible to change artifact prefixes in TeamForge?

Artifact prefixes in Teamforge cannot be changed or customized, all artifacts across the site will have an artifact ID of artfXXXXXX.

Can I run other java applications in the same JBoss instance as CollabNet Team Forge?

It is recommended to create a separate instance of JBoss or tomcat and deploy your applications there. While it is possible to deploy other applications alongside CTF, you may encounter some errors.

In order to deploy an application into the CTF JBoss instance, you must place the war files into the deploy directory beneath the runtime directory. All directories beneath the runtime directory are recreated each time the application runtime is rebuilt, deleting your applications.

If your applications include the CTF SDK , you may receive class conflicts and errors such as "java.lang.reflect.InvocationTargetException" when attempting to connect to CTF.

Who is responsible for applying OS updates to the underlying VMware image?

CollabNet does not provide the OS updates. If there is a critical update that needs to be addressed within the VM Image, CollabNet will post instructions on how to update that on open.collab.net.

Concepts and terms in TeamForge

Descriptions of concepts and terms in TeamForge.

What does it mean to run CollabNet TeamForge on a virtual machine?

CollabNet TeamForge can run as a virtual machine image in a VMWare Player. You get all the functionality of CollabNet TeamForge with the ease of installation and maintenance that comes with VMWare.

To access CollabNet TeamForge , one user (generally the site administrator) must configure and run the CollabNet TeamForge application server in VMware Player. When the CollabNet TeamForge application server is running, other users can access it via a Web browser. These users do not need to run VMware Player.

The CollabNet TeamForge download may also run on some other VMware products, such as VMware Workstation 5.5. However, these instructions are only for using VMware Player.

What is a patch?

A patch is a package of code that fixes or adds to the functionality of a CollabNet product. Patches are also known as "component upgrades."

Things to know about patches

- Patches are cumulative. You don't need to apply multiple patches sequentially to get to the desired patch level. You can move up (or down) one or more patch levels with a single operation.

- The Level option (-l) allows you to downgrade or upgrade to any patch level (within the maximum available in the cumulative patch).
- The Rollback option (-r) allows you to revert the site to the previous patch level it was at, before the current patch was applied.
- The Uninstall option (-u) allows you to downgrade the patch level on the site by one.
- When a patch installation fails you can use the Force option (-F) to proceed, without manually uninstalling previous patches.
- The system displays a summary of what happens during the patch installation.
- Before proceeding with the patch installation, you can use the "dry run" mode (-t option) to see the summary of actions that will be performed during the installation.

Best practices

Before applying a patch, note the following principles.

- The upgrade scripts are usable only with an existing installation.
- No data migration will occur if any changes have been made to the database schema.
- You must use the `sudo` command or have an account that is equivalent to root in order to complete a patch installation successfully.

☞ **Important:** Before installing a patch, verify that it has been fully tested and qualified.

What is the look project?

The `look` project contains special files that can override your site's default appearance and content, such as the default icons, fonts, colors, and labels.

Unlike most projects, the `look` project has no members. It is only visible to users with site administration permission. Its only purpose is to control your site's look and feel, including such things as fonts, background colors, icons, and the wording of the onscreen labels that appear throughout your site.

Any project on your CollabNet TeamForge site can have one or more Subversion repositories associated with it. The `look` project has just one Subversion repository. That repository is named `branding`.

When a user requests a page from your site, CollabNet TeamForge checks the `branding` repository to see if any files there specify custom fonts, colors or text strings. If such specifications are found, CollabNet TeamForge displays the page according to those specifications. If not, the page displays according to the default design.

Having your custom look-and-feel specifications in a Subversion repository enables you to roll back changes, track contributions, and use all the other features of a source code versioning system.

What wiki engine does TeamForge use?

TeamForge currently uses the JSPWiki engine to render the wiki component pages in TeamForge. You can visit the JSPWiki homepage at the link below. Please keep in mind that TeamForge does restrict JSPWiki and not all functionality found on that site applies to the TeamForge wiki (plugins, for example).

Does CollabNet TeamForge support merge tracking?

The Subversion repositories that are installed with CollabNet TeamForge run on Subversion 1.5, which supports merge tracking.

Any Subversion 1.5 servers you have integrated with CollabNet TeamForge support merge tracking. If you need the merge tracking feature and your Subversion server is running a version earlier than Subversion 1.5, you must upgrade to Subversion 1.5 to get this functionality.

If you used `svnmerge.py` (*http://www.orcaware.com/svn/wiki/Svnmerge.py*) to do merge tracking before Subversion 1.5, and you want to convert your `svnmerge.py` data to the Subversion 1.5 merge tracking data format, CollabNet provides a migration tool, linked below.

What is a private IP address and what are the private IP ranges?

Any IP address that falls specified ranges is a private IP address and is non-routable on the Internet.

These addresses are reserved for use only within private/corporate network and cannot be seen outside the private networks. These private addresses are translated at the company's firewall into an external (public) IP address, which will be some address that does 'not' fall within these ranges.

10.0.0.0/8=10.0.0.0 – 10.255.255.255
192.168.0.0/16=192.168.0.0 – 192.168.255.255
172.16.0.0/12=172.16.0.0 – 172.31.255.255

An address is Private if it starts with:

10 or
192.168 or
172.[16-31]

It is possible for anyone to see their external (public) IP by going to any one of a number of sites that provide this information as a free service. One example that's easy to remember is http://whatismyip.com.

What is the vamessages.log used for?

TeamForge records just about everything it's doing to this file. You can use this log to debug startup issues, performance issues, system errors, exid backtraces, JVM issues, SQL issues, etc.

The log can be found at `/opt/collabnet/teamforge/log/vamessages.log`. Since this log contains so many different types of log messages, it grows extremely rapidly, so the file is automatically rotated by TeamForge when it reaches 100M, and TeamForge will keep the previous ten copies of the log. If you are having any kind of issue, this is probably the log to look at.

How do I use the TeamForge updater to manage backups of old versions of TeamForge?

You can safely delete the items in your <sourceforge_base_install_directory>/sourceforge_home/backups as long as you are comfortable with your version of TeamForge , and have no desire to go back. This directory may also be safely omitted from your backup plan.

How does TeamForge deliver activity reports?

The data in your reports comes from a special database that extracts live site data from the production database at intervals you specify.

You can specify the time at which the reporting data is refreshed from the production database. By default, the extraction takes place daily at 2:30 a.m. in the TeamForge application server's time zone.

The reporting database can be deployed on a separate machine to help channel load away from the application server. Historical data is available even if the application server no longer stores it.

Where does the reporting data come from?

An ETL application extracts data from the live production PostgreSQL or Oracle database where the TeamForge site stores most of its critical data. (Information about reporting configurations is also stored in the production database.) Some data is also gathered from the file system.

How is the production data converted into reporting data?

TeamForge extracts a snapshot of the production data, transforms it into a format that supports reporting requirements, and loads it into the datamart, which is optimized for fast retrieval. The Extract-Transform-Load (ETL) application is a Tomcat JVM running as a TeamForge service under the TeamForge integration server architecture.

Where is the reporting data kept?

After the ETL app collects and processes the live site data, it is stored in a separate database called the datamart. If the TeamForge site uses a PostgreSQL database, then the datamart is also a PostgreSQL database; likewise for Oracle. The datamart uses a Star Schema-based design for tables.

How are the reports shown in the TeamForge user interface?

The reports are rendered in the TeamForge UI using Adobe Flex.

Note: When a site is upgraded, there will be a delay before reporting data is available to users, until the scheduled ETL run has occurred. Performing a manual ETL run immediately after an upgrade is not advisable, since it could consume a lot of system resources leading to performance problems.

When do I run the Tracker initial load job?

You can run the Tracker initial load job any time after the site is upgraded to TeamForge 6.2 We recommend that you run it before you hand over the site to the users. This task might take few hours depending on the amount of artifact data in the site.

You can run the job when the site is in use. On an average, there is a ten percent degradation in the response time when the job is running. If the job is not run as a part of the upgrade, we recommend that you run it at a time when the site usage is relatively low.

How do I run the job?

```
$ [RUNTIME_DIR]/scripts/etl-client.py -r TrackerInitialJob
```

How do I check the status of the job?

Site administrators will be notified through mails if there is a job failure. The following command will help you identify whether a job is currently running or not.

```
$ [RUNTIME_DIR]/scripts/etl-client.py -a
```

What happens if there is a job failure?

An email will be sent to site administrators in case of a failure. The job should be re-triggered manually. Data will be harvested from the last completed milestone prior to the failure.

Is it mandatory to run the initial load job for a new site?

Yes, it is mandatory to run the initial load job for a new site.

What happens if I miss running the initial load during the installation or upgrade?

You can run this any time after the site is upgraded to TeamForge 6.2 However, the Tracker incremental data harvesting is blocked until the initial load is run. This is true for an existing site that is upgraded to TeamForge 6.2 as well as for a new site.

Why does the tracker_incremental_etl job fail?

The incremental load is made to fail if the initial load is not run. You can ignore this.

What is an integrated application?

An integrated application is a stand-alone application that can seamlessly integrate into any CollabNet TeamForge project.

You can use integrated applications to incorporate these types of applications into your TeamForge project:

- Third party applications
- Internally developed applications
- Integrations developed using the TeamForge SOAP APIs
- External websites

When you add an integrated application to your project, an icon is added to your project navigation bar. Clicking the icon displays the integrated application in the main TeamForge project window.

TeamForge site-administrators can register site-wide integrated applications that project administrators can opt to use across projects.

Site administrators or users with site-wide roles with the administration permissions for integrated applications can enable/disable integrated applications.

Tip: Disabling an integrated application restricts it from being added to projects. However, disabling an integrated application does not affect the projects where the integrated application might already be in use.

After your site administrator registers an integrated application on the site level, on adding it to your project, an icon is added to your project navigation bar. Clicking the icon displays the integrated application in the main CollabNet TeamForge project window.

Note: You can register and integrate as many applications per project as you wish. However, because each integrated application adds an icon to the project navigation bar, creating a large number of integrated applications can cause horizontal scrolling.

Can I control user access to an integrated application?

TeamForge can integrate the permissions scheme of a separate application into the TeamForge role-based access control system.

To look at how this works, we'll use the Pebble blogging tool as an example. Pebble is an application that you can quickly integrate with TeamForge.

Pebble brings with it a set of pre-determined roles that you can assign to project users. The roles are defined in the XML application configuration file.

Blog Reader	You can only read blogs and make comments, the comments are sent for moderation.
Blog contributor	You can add blog posts, but they will be sent for moderation.
Blog publisher	You can add blog posts, moderate comments and blog posts.
Blog owner	You can do all that a Blog publisher does as well as change the blog properties and security options.

Any site user with one or more of these roles can see the **Pebble Blog** button in their project toolbar. Clicking that button allows them to operate Pebble according to their access rights.

Note: Site Administrators don't need any specific permissions; they have all permissions on all projects on the site.

How does an integrated application interact with other TeamForge tools?

When you integrate an external application into your TeamForge site, the application can take full advantage of object IDs, links and Go URLs.

To look at how this works, we'll use the Pebble application as an example. Pebble is a blogging tool that you can quickly integrate with TeamForge.

Prefix

Object IDs uniquely identify a TeamForge object so that you can access and use it in different contexts. For example, to get to artifact `artf1234` quickly, you just enter `artf1234` in the Jump To ID box. In the Pebble tutorial application, the date of a blog post, in YYYYMMDD format, is used as the object ID.

A prefix is an alphanumeric string attached to the beginning of an object ID that TeamForge uses to manage object IDs from different tools. For example, in the Pebble app, `<prefix>_20100601` gets you a page showing all the blog posts in the project that were published on June 1, 2010.

The prefix can either be the one specified when an integrated application is added to a project by project administrator, or the one in the XML Application configuration file depending on the "require-per-project-prefix" setting. The "require-per-project-prefix" setting can be true or false. If it is false, each project integration would not need to provide a project prefix; so the one provided in the XML Application configuration file takes effect. If the "require-per-project-prefix" setting is true, a prefix needs to be provided by the user during every project association.

The amount of information the prefix carries depends on the kind of application you are integrating into your TeamForge site.

- With applications that use object IDs, such as Project Tracker and JIRA, you can identify the project that the object belongs to from its object ID.
- For applications that don't have uniquely identified objects, or don't have the notion of "project," such as MoinMoin or Review Board, you can choose a prefix that's specific to the project where the integrated tool is used.

Go URLs

Go URLs allow a user to get to a particular object ID with a short, handy URL. To use this for Pebble, construct a URL like this: `https://mysite.com/sf/go/<prefix>_<date in format YYYYMMDD>`.

For example, if the Pebble tool in your project has the prefix `PA`, and you want to send someone all the blog posts published on app June 1, 2010, send them this link: `https://mysite.com/sf/go/PA_20100601`.

Associations

The object ID can be used to associate objects with other TeamForge objects. For example, if you want to associate a document with the blogs published on June 1, 2010, go to the document's **Associations** tab and add an association to `PA_20100601` as the object ID.

Automatic links

When you type text of the format `<prefix> _<date in YYYYMMDDD>` in any TeamForge text field, the text is converted to a link. When you click the link you see the blog posts for that date, if any.

Common errors in TeamForge

Common problems and solutions in TeamForge.

Why won't my CollabNet TeamForge virtual machine installation start?

CollabNet TeamForge won't start, or you receive an error message when trying to access your site.

You may be encountering one of the following issues:

- The CollabNet TeamForge application server is not running.
- Your organization has exceeded your maximum number of licensed users for the CollabNet TeamForge download.
  - The free trial version supports up to 3 users at no charge.
  - The Team edition supports up to 25 users.

  To purchase additional licenses, visit *http://www.collab.net/products/sfee/buyit.html*

  .

- You are attempting to run CollabNet TeamForge on an unsupported VMware product. The following legacy VMware product versions are not supported:
  - VMware ESX Server 2.x
  - VMware GSX Server 3.x
  - VMware ACE 1.x
  - VMware Workstation 4.x

  For more information about VMware Player and similar products, see *http://www.vmware.com/products/player/*

Why does my CollabNet TeamForge site show a different time than the host machine it is running on?

In some cases it is possible for the clock in the CollabNet TeamForge VMware image to drift from that of the host machine. If you notice this issue, you can set the CollabNet TeamForge VMware image to synchronize time with an external NTP server.

A script is provided to enable you to configure time synchronization easily. The `configure-ntp.sh` script sets up a manual periodic time sync once per hour between the VMware image and the NTP server.

Important: Before running this script, your virtual machine must be able to access an external NTP server. If your virtual machine is running inside a firewall, and is unable to access an external public NTP server, you may need to talk to your system administrator to find an accessible NTP server within your network.

While logged into the virtual machine, run `/root/configure-ntp.sh <ntp server>`.

If you do not enter an NTP server, the script will try to use `pool.ntp.org`, a publicly available time service, by default.

Note: VMware advises against setting up the VMware image to use NTP directly because it can interfere with VMware's own built-in time syncing mechanism.

For detailed information about timekeeping in VMware, see *http://www.vmware.com/pdf/vmware_timekeeping.pdf*

Why does my CollabNet SourceForge Enterprise site show a different time than the host machine it is running on?

In some cases it is possible for the clock in the CollabNet SourceForge Enterprise VMware image to drift from that of the host machine. If you notice this issue, you can set the CollabNet SourceForge Enterprise VMware image to synchronize time with an external NTP server.

A script is provided to enable you to configure time synchronization easily. The `configure-ntp.sh` script sets up a manual periodic time sync once per hour between the VMware image and the NTP server.

Important: Before running this script, your virtual machine must be able to access an external NTP server. If your virtual machine is running inside a firewall, and is unable to access an external public NTP server, you may need to talk to your system administrator to find an accessible NTP server within your network.

While logged into the virtual machine, run `/root/configure-ntp.sh <ntp server>`.

If you do not enter an NTP server, the script will try to use `pool.ntp.org`, a publicly available time service, by default.

Note: VMware advises against setting up the VMware image to use NTP directly because it can interfere with VMware's own built-in time syncing mechanism.

For detailed information about timekeeping in VMware, see *http://www.vmware.com/pdf/vmware_timekeeping.pdf*

Why won't my CollabNet SourceForge Enterprise virtual machine installation start?

CollabNet SourceForge Enterprise won't start, or you receive an error message when trying to access your site.

You may be encountering one of the following issues:

- The CollabNet SourceForge Enterprise application server is not running.
- Your organization has exceeded your maximum number of licensed users for the CollabNet SourceForge Enterprise download.
  - The free trial version supports up to 3 users at no charge.
  - The Team edition supports up to 25 users.

  To purchase additional licenses, visit *http://www.collab.net/products/sfee/buyit.html*

  .
- You are attempting to run CollabNet SourceForge Enterprise on an unsupported VMware product. The following legacy VMware product versions are not supported:
  - VMware ESX Server 2.x
  - VMware GSX Server 3.x
  - VMware ACE 1.x
  - VMware Workstation 4.x

  For more information about VMware Player and similar products, see *http://www.vmware.com/products/player/*

Why don't the branding repo changes get rendered into UI?

It may be due to the property 'subversion_branding.repository_base' pointing to /sf-svnroot instead of the /svnroot directory, which is used by the scm-integration of the csfe installation.

First, check the location of the branding repository in subversion_branding.repository_base=/sf-svnroot' in `/opt/collabnet/teamforge/runtim/conf/sourceforge.properties`.

If it has to be /svnroot, then add an entry that states SUBVERSION_BRANDING_REPOSITORY_BASE=/svnroot

Then re-create a runtime and restart TeamForge.

How can I solve the PSQLException when starting the app server after changing my DB server IP address?

You might need to replace the old IP address with the new IP address in the `<connection-url>` block of the file sourceforge-ds.xml, located in `/opt/collabnet/teamforge/runtime/jboss/server/default/deploy`.

This issue may occur after changing the IP address of the database server and making the corresponding IP changes in pg_hba.conf, /etc/hosts and postgresql.conf files. The following error may appear when starting the application server though you are able to login to the DB server from the app server.

```
[JBossManagedConnectionPool] Throwable while attempting to get a new connection:
 null
org.jboss.resource.JBossResourceException: Could not create connection; - nested
throwable: (org.postgresql.util.PSQLException: Connection refused.
Check that the hostname and port are correct and that the postmaster is accepting
 TCP/IP connections.
```

Why am I not able to see the charts for tracker metrics?

You may not be able to see the charts for the tracker metrics if the tracker initial load is not running correctly.

The incremental data collection is disabled until the initial load is run. You can check if the initial load is completed successfully by executing the query below from the Ad-hoc reporting page against the datamart.

```
select status from etl_job where job_name='tracker_initial_etl';
```

You must get the status value as 1 if the initial load is completed successfully. Otherwise, you must trigger the job manually by executing the command: `[RUNTIME_DIR]/scripts/etl-client.py -r TrackerInitialJob`

Why am I getting a 'Not running' message when the Datamart service is stopped?

When TeamForge and Datamart are running in a single instance, the TeamForge database is stopped when you stop the Postgres services. The message, 'Not running' is displayed when you stop the Datamart service. You can ignore this message.

Why am I getting an email specifying that the ETL job has failed?

You are getting this email because one of the Extract transformation and load (ETL) jobs has failed during the run. You can see the etl.log for more details to find out the reason for the job failure.

The ETL job failure may happen because of the following reasons:

- Out of memory error.
- No response from the database.

If the ETL job failure is happening for the first time, you can restart the ETL (`[RUNTIME_DIR]/scripts/collabnet restart etl`) and check if the problem is occurring again. You can increase the JVM heap size by specifying the same in ETL_JAVA_OPTS if the problem keeps recurring. The default value is `-Xms160m -Xmx256m`. You can increase the heap size depending on the memory available in the box.

Check if both TeamForge and Datamart are up and responding to queries if there is no response from the database. Restart the ETL (`[RUNTIME_DIR]/scripts/collabnet restart etl`).

Contact the Collabnet support if the problem persists.

Why do search and email server show "Could not connect"?

Typically this means the tomcat container for James and the search service are not running. You can restart this with the commands shown below. You may need to set the JAVA_HOME environment variable to the location of your JDK.

```
sh /opt/collabnet/teamforge/dist/james/james-2.2.0/bin/phoenix.sh stop
sh /opt/collabnet/teamforge/dist/james/james-2.2.0/bin/phoenix.sh start
```

Why is the password and login shell changed for users on my cvs/svn server?

TeamForge uses local user accounts on the SCM server to provide access to CVS repositories via ssh. If any local user accounts on the SCM server match user names within TeamForge they will be changed.

If you are planning to use CVS in the SCM server, you should ensure that the local accounts do not conflict with the TeamForge user accounts. Adding a prefix to the local user accounts (local_username) would be one way to resolve this and prevent the usernames from conflicting. Alternatively, if you are not using CVS repositories, the CVS integration can be removed altogether.

Why am I not able to see the status of the Postgres in the collabnet startup script?

You may not be able to see the status of the Postgres if the host name of the *HOST_ token* is set to localhost in a SaaS multibox setup.

The Teamforge installer fails to add the IP address of the database box to the listen address in the `postgresql.conf` file if the host name of the *HOST_ token* is set to localhost in a SaaS multibox setup.

Note: You must add the IP address of the database box to the listen address in the `postgresql.conf` file.

JBoss crashed with out of memory error, how do I prevent this?

This can indicate that the JVM heap size is set too small. You can adjust this by changing the -Xms and -Xmx settings of the JBOSS_JAVA_OPTS token in site-options.conf and rebuilding runtime.

This will appear if the JBoss application server has crashed and you find this error in the server.log:

```
INFO [STDOUT] java.lang.OutOfMemoryError: Java heap space
```

The default maximum heap size of 640MB can cause issues on a heavily used site. If the CTF application is the only thing running on the server, you can increase this to half of the total physical ram on the machine. This should still allow enough memory for the OS and other necessary processes. If you are also running the app, database and scm on the same machine a maximum heap size of 1/4 or the total ram maybe a better setting. Determining the right JVM settings for your install will require testing with your particular usage patterns and database.

You can view the current memory usage under the JVM Environment section of the JBoss webconsole at `http://<CTF_SERVER>:8080/web-console/`. You will need to log in using the CTF admin password.

Why do I get a JBoss error - "failed to start in 240 seconds, giving up now" - while installing TeamForge?

You get this error when the system's RAM is less than the minimum recommended value of 4GB. However, it's most likely that JBoss will start within a few minutes.

To make sure that JBoss starts up, check the `service.log` file using this command:

```
tail -f /opt/collabnet/teamforge/log/apps/service.log
```

If you see messages like the following, the TeamForge application will start in a few minutes.

```
          Check Port Available PASSED: Port 4444 on localhost is available
          Check Port Available PASSED: Port 4445 on localhost is available
          Waiting for application server to start up.. this can take a few
minutes.
```

Why don't help links in TeamForge work after upgrade from SourceForge Enterprise 4.4?

After upgrading you may need to force the help links to point to the remote source. This can be done by uncommenting the following lines from site-options.conf and rebuilding runtime. `HELP_AVAILABILITY=remote REMOTE_HELP_URL=http://help.collab.net`

Why am I getting "Could not connect" status for my email and search server?

On the System Tools page, when you see "Could not connect status for search and email servers," you must stop and start your `phoenix.sh` process.

You may also need to set the *JAVA_HOME* environment variable to the location of your JDK.

The stop/start Phoenix commands:

```
sh /opt/collabnet/runtime/scripts/phoenix.sh stop
sh /opt/collabnet/runtime/scripts/phoenix.sh start
```

Why is my email taking a long time to arrive?

TeamForge uses the James MTA to send and parse all email coming to and from the system. In this case, the best course of action is to look in the james mailet logfile.

Your logfile will help you to determine what is going on with the emails that are being sent from your system. Your logfiles will look very similar to this:

```
07/02/07 07:54:43
INFO James.Mailet: ?RemoteDelivery:
Attempting delivery of Mail1170135534355-39088-to-domain.invalid to host
domain.invalid at 192.168.0.1 to
addresses [invalid.user@domain.invalid] 07/02/07 07:55:43
INFO James.Mailet: ?RemoteDelivery: Could not connect to SMTP host: 192.168.0.1,
 port: 25; nested exception
is: java.net.?ConnectException: connection to 192.168.0.1 timed out 07/02/07
07:58:43
INFO James.Mailet: ?RemoteDelivery: Storing message
Mail1170135534355-39088-to-domain.invalid into outgoing after 7 retries 07/02/07
07:58:43 INFO James.Mailet: ?RemoteDelivery: Attempting delivery of
Mail1170831482124-2756-to-company.com to host mx.company.com. at 127.0.0.1 to
addresses
[good.user@company.com]
```

As you can see, the James MTA stores outgoing emails to resend at a later time. These files can be located in this directory: `/opt/collabnet/teamforge/james/james-<ver>/apps/james/var/mail/outgoing/`

When you do a directory listing of the files, you will see a listing of files very similar to this:

```
4D61696C3131373038333231313431322.Repository.?FileObjectStore
4D61696C3131373038333231313431322.Repository.?FileStreamStore
```

The FileObjectStore is a binary file, but, the FileStreamStore can be viewed with an editor or your favorite paging program in order to determine the contents. Sometimes, the directory can grow to a large number, where you will not be able to use a standard bash expander to delete all of the files. In that case, use the following shell script:

```
for i in * ; do /bin/rm $i; done
```

to remove all of the objects from the outgoing directory.

Due to firewall restrictions I cannot send email from James. How can I resolve this?

If James is unable to send email directly due to firewall restrictions, or mail being rejected from the application servers IP address, you may have to configure it to use a gateway mail server to send outgoing messages through.

To do this, you will need to add the following to the `<mailet match="All" class="?RemoteDelivery">` directive in the james config file at `/opt/collabnet/teamforge/james/james-<version>/apps/james/SAR-INF/config.xml`:

```
<gateway>smtp.example.com</gateway>
<gatewayPort>25</gatewayPort>
```

You should find these commented out on line 362 of the config file. If your gateway mail server requires authentication to send email, you may also add the following directives:

```
<username>username</username>
<password>password</password>
```

Why do we have errors creating or altering repositories and adding or removing users?

The TeamForge SCM Integration server runs an instance of Tomcat and then launches TeamForge inside the Tomcat container. If you are experiencing issues creating or altering repositories or adding and removing users from repository access, and the other TeamForge integration logs are not providing any clues, you may wish to review the Tomcat log at: `/opt/collabnet/teamforge/log/integration/catalina.out`

Sometimes, OS-level errors will be flagged into this log and not others. In our experience, it is pretty rare to find something in this log that is not logged elsewhere.

Why does the SOAP service show "could not connect" on the Server Status page when everything else appears to work?

This can be caused by an incorrect host name in /etc/sourceforge.properties. Rebuilding runtime will correct this, assuming the hostname is set correctly in the site-options.conf file.

This issue can occur when using the restore.py script to restore data from a TeamForge instance with a different hostname.

Why do I get a server status error when I perform a search?

Occasionally, an exceedingly large or complex document causes the search indexing service to abort. This is typically when all searches in TeamForge return an exid to the user.

Check the server status page and see if the search server is listed as anything other than OK. If it is not OK, then you should restart the search service by logging into the TeamForge application server as root and issuing the following commands:

```
/opt/collabnet/teamforge/james/james-/bin/phoenix.sh restart
```

Check the server status page again in TeamForge and ensure that it shows a status of OK. If it shows OK, then searches should now work, and the site will slowly catch up on any indexing requests that were logged while the service was down. If you continue to get exids returned for all searches even with an OK status, then you probably have corrupt search index files and you should see the link below.

Why would some users not get email?

Check your dnsserver-<date and time>.log.

James records all errors related to resolving DNS for outbound mail to: `/opt/collabnet/teamforge/james/james-<version>/apps/james/logs/dnsserver-.log`. If you find that some of your TeamForge users are receiving email, but significant groups of others are not, you should consult this log to determine if James is experiencing difficulties in resolving their domain or MX records.

What does the "psql: could not connect to the server: No such file or directory" error message mean?

This error indicates that the PostgreSQL database server is not running. You need to restart the server.

Use the following command to start the server:

```
service postgresql start
```

Why do I get a proxy timeout when I try to view certain SCM pages?

If you are getting a proxy timeout error when you try to view a SCM page, you may need to configure the *Apache 2.2 Proxy Timeout* to 300 or less in the *httpd.conf* file.

If you get the following error while attempting to view a SCM page in SFEE:

```
The proxy server received an invalid response from an upstream server.
The proxy server could not handle the request
    GET
/integration/viewcvs/viewcvs.cgi/ibe-rules/tags/phases/ibe-rules_09.02.0-Ph-200902_test_20090105/
Reason: Error reading from remote server
```

Configure your *Apache 2.2 Proxy Timeout* to 300 or less in the *httpd.conf* file.

Why do I get a URL "not found" or "moved permanently" error after applying a patch/upgrade?

If you are experiencing a URL "NOT FOUND" or "MOVED PERMANENTLY" error after applying a patch or upgrade Apache ProxyPreserveHost token to on in the httpd.conf file.

If you have applied a patch or upgrade and are now receiving the following error:

```
<The document has moved <a href="https://www.<site>/sf/global/jsp/buildtime.html"

    format="html" scope="external">here</a>.</p>
<hr> <address>Apache/2.2.3 (Red Hat) Server at www.<site>.com Port 80</address>
 </body></html>
Not Found

```

```
The requested URL
/sf/sfmain/do/userPicker/projects.pftool//sfmain/do/listMonitoringUsers/projects.pftool/discussion.announcements
 was not found on this server
```

Or if you are trying to add users to a monitoring list, and are receiving the following error:

```
Not Found
The requested URL

/sf/sfmain/do/userPicker/projects.pftool//sfmain/do/listMonitoringUsers/projects.pftool/discussion.announcements

    was not found on this server.
```

Set the `ProxyPreserveHost` token to ON in the `httpd.conf` file.

Why can't TeamForge send my outbound mail?

If you are unable to send email directly due to *firewall* restrictions, or if mail is being rejected by the application server's IP address, configure TeamForgeto send outgoing messages through a gateway mail server.

Configure TeamForge to send outgoing message through a gateway mail server by adding the following to the `<mailet match="All" class="RemoteDelivery">` directive in the configuration file at `/opt/collabnet/teamforge/runtime/james/apps/james/SAR-INF/config.xml`:

```
<gateway>smtp.example.com</gateway>
<gatewayPort>25</gatewayPort>
```

If your gateway mail server requires authentication to send email, you may also add the following directives:

```
<username>username</username>
<password>password</password>
```

Why am I not getting any error messages when executing the Subversion upgrade script?

Error messages may come when Subversion is installed with a dependent package from an unknown source.

The Subversion working copy script assumes that Subversion is installed with the dependent packages from a proper source repository(RHEL/CollabNet). If you install any dependent packages from any unknown source that is not authorized by RHEL/CollabNet, it will result in inconsistency and this cannot be handled by the Subversion working copy script.

Why do I get a TeamForge system error in the project template creation page?

This may be because of a few stale permissions in the project in which you are trying to create the template. You can resolve this by identifying and deleting the stale records using this SQL.

```
select role_id from role_operation ro left outer join ia_project_association ia
```

```
on (ro.resource_value = ia.id) where ia.id is null and resource_value like
'%prpl%' ;
```

```
select role_id from operation_cluster ro left outer join ia_project_association
 ia
on (ro.resource_value = ia.id) where ia.id is null and resource_value like
'%prpl%' ;
```

Why does the the Yum installer display a warning message on Centos 6?

The yum installer displays a warning message on Centos 6 if you are not using the latest version update of Centos or if the new GNU Privacy Guard (GPG) keys are not in place.

On the Centos system, the new GPG keys are generally sent as an update before the expiry of the old keys. You must perform the version update regularly to receive the new GPG keys.

To avoid the warning message, use the "-nopgcheck option" in the yum install command.

```
yum install --nogpgcheck teamforge
```

Why am I getting a Yum repository filename conflict?

This means that you have created a repository filename starting with `collabnet`.

The repository file for the TeamForge installer begins with "collabnet-*.repo". If you have a customized repository with the same name, then the TeamForge installer renames the repository file with ".backup" as an extension and installs the repository file. It is better not to have any repository file name that begins with `collabnet` apart from the one that is installed by the TeamForge installer.

TeamForge roles and permissions

Questions about setting permissions and using roles in TeamForge.

Can I set permissions so that users can move documents but not delete them?

You cannot configure document management permissions so that a user can move documents but not delete them.

It is not possible to separate move and delete permissions, because a move is actually a copy/delete action. The document is not really moved, it is copied to the new location and then deleted from the original location.

Why can't Oracle connect to my TeamForge installation?

The simplest way to correct this is to overwrite the.jar included with TeamForge with the one from $ORACLE_HOME.

TeamForge uses the thick Oracle JDBC driver, which has two parts. One of these is provided by TeamForge, the other is in $ORACLE_HOME. If these two components are incompatible, TeamForge will be unable to make a connection to the database.

Follow these steps to overwrite the.jar included with TeamForge with the one from $ORACLE_HOME:

```
cp $ORACLE_HOME/jdbc/lib/ojdbc14.jar
        /opt/collabnet/teamforge/jboss/jboss-3.2.6/server/default/lib/
```

A restart of the application will be required to use the new.jar.

Are role-based permissions allowed for sub-folders in the TeamForge Documents?

Yes. The TeamForge Administrator can give permission to access sub folders in the TeamForge Documents based on the user roles, using the Roles option.

Tasks in TeamForge

Questions about performing specific tasks in TeamForge.

How do I change the time to run the ETL jobs?

The *ETL_JOB_TRIGGER_TIME* can be modified to specify a different time.

By default, the ETL job runs at 2:30 AM (local time) everyday. It is recommended to run this once daily to avoid any performance degradation of the Teamforge site. See *ETL_JOB_TRIGGER_TIME* on page 371 for more information.

How can I check the status of ETL?

The `[RUNTIME_DIR]/scripts/collabnet status etl` displays the status of the ETL process.

You can get additional information about the various ETL jobs that are configured using the command `[RUNTIME_DIR]/scripts/etl-client.py -a`

What happens when log files get too big?

Log files can grow very large over time. To maintain reasonable log file sizes, you can rotate logs on a schedule.

When you rotate logs automatically, live logs are archived every day at 00:00.

Archived logs are stored in compressed form in a directory alongside the live log. For example, if live logs are stored at `<LOG_DIR>/{apps, apache,...}`, then compressed log archives are stored at `<LOG_ARCHIVE_DIR>/{apps, apache,...}`.

The directory structure of the log directory is preserved in the log archive directory.

Note: Empty log files are not compressed.

What is the suggested log configuration for a production system?

To troubleshoot installation issues, the default log4j configuration is set to DEBUG. This can cause the log files to become quite large. Once your system is successfully installed and in use, you should drop the log levels down to INFO.

See *Change the logging level on your site* on page 268 for how to do this.

If you still have a problem with over-large log files, you may want to set up log rotation. See *Rotate TeamForge log files*.

How do I enable post-commit logging?

You do this by editing the post-commit.py file.

Edit the `/opt/collabnet/teamforge/runtime/sourceforge_home/integration/post-commit.py file.`

Search for log.setLogging(False) and modify the value from False to True.

How do I make the monitoring messages be sent from Forge Administrator?

You can change the default behavior for site options by changing the value from "false" to "true" in this statement: # MONITORING_EMAIL_FROM_ADMINISTRATOR=false

If the site option MONITORING_EMAIL_FROM_ADMINISTRATOR=true, then "From:" field is the Forge Administrator, else it is from the user who made the change that initialized the monitoring email.

How can I remove the RHEL test page after TeamForge installation?

You can modify the httpd.conf file to remove the RHEL test page that appears in place of the home page of TeamForge after installation.

Add COLLABNET CONFIGURATION to the /etc/httpd/conf/httpd.conf file. This includes the rewrite rules, which removes the RHEL test page.

How to reinstall a deleted installation directory?

You can reinstall an installation directory if it has been deleted inadvertently.

Before attempting to reinstall the deleted installation directory the remnants must be wiped out completely. Rather, remove the `collabnet-local.repo` file under `/ etc/yum.repos.d` before reinstallation. This is mandatory for a clean and complete installation.

How can I find the number of files in a repository without checking it out?

To list the files in a repository use the command: `svn ls -R file:///svnroot/REPONAME| wc -l` (Requires local access to server)

How do I connect to the Datamart?

You can use the *psql-reporting-wrapper* script to connect to the datamart.

Usage

Run this script as below:

```
sudo [RUNTIME_DIR]/scripts/psql-reporting-wrapper
```

How do I connect to the Teamforge Postgres database?

You can use the *psql-wrapper* script to connect to the TeamForge application database.

Usage

Run this script as below:

```
sudo [RUNTIME_DIR]/scripts/psql-wrapper
```

How do I generate a wiki table of contents?

You can create a table of contents from any heading text that you have in your wiki page.

For versions 5.2 and earlier, generating a wiki table of contents requires the Wiki TOC plugin, available through CollabNet Professional Services.

To enable TOC for a Wiki page, place the following in your Wiki page at the spot where you want the Table of Contents to appear.

```
%%insert-toc
%%
```

The Table of Contents is generated automatically based on the heading markers in the wiki page, e.g. `!!!Heading`

What is the correct procedure for modifying a hosted Lab Manager profile?

All profile modifications must be done through the Lab Management UI, under Administration > Manage Profiles. Lab Manager profiles should not be directly modified and changes should not be committed to subversion.

To modify your profile, follow these steps:

1. In the browser, login to https://mgr.cubit.domain.com/
2. Click on Administration
3. In the left pane, click on Manage Profiles
4. Click on the profile (your_profile_name)
5. Click on the Packages tab and choose your options

How do I configure the timeout for Apache in TeamForge?

This can be changed by editing the setting WWW_SERVER_TIMEOUT.

The timeout for Apache (httpd) can be configured in seconds. Default is 300 seconds. You must re-create the runtime for the change to take effect.

How do I back up TeamForge?

TeamForge has essentially four data components that require the System Admininstrator to proactively back up in case of system failure. These components are:

- the database
- the filestorage
- the search indexes
- the scm data

As with most large and complex applications, the recommended method of backing up TeamForge involves shutting down the application. While it is possible to back up the application while it is up, the backup itself will not provide 100 percent data consistency. You should undertake one of these live backups only as a last resort and only after ensuring all the potential consequences are fully understood.

If, for whatever reason, a full, offline backup is not possible, you should do the following to ensure that as little data is being changed as possible. While these steps won't completely replicate the offline backup, they can mitigate most of the issues w/ doing a live backup. Again, we do NOT recommend this. Offline backups are your friend. Just schedule the downtime and take the hit.

For the CVS repositories, you should use whatever normal filesystem backup method your company prefers, much like the FILESTORAGE section above. For SVN repos, it is highly advised that you use the 'svn dump' action to export them to normal files and then back up those dump files.

Please note that due the nature of SFEE, there are several interdependencies between these various data storage points. As such, you must take great care to ensure that all these components are backed up AT THE SAME TIME. You will NOT be able to use a database backed up yesterday morning with a filestorage from the night before.

Quieting the system

First, you'll want to turn off the web server so users can't get to the UI (assuming you are routing through Apache and not direct to JBOSS): `service httpd stop`

Second, on the SCM server, remove the execute bits on the SCM: `chmod -x /usr/bin/{cvs,svn}`. This will prevent anyone from executing 'cvs' or 'svn' for new checkins/checkouts/tags. Please note however, that it won't affect existing running processes. Either wait for them to finish, or kill them.

Finally, pause the search indexing engine: `touch /opt/collabnet/teamforge/var/searchIndexes/LOCK_INDEXES`

The database

The majority of TeamForge data is stored in the database. To back up the database, follow the recommended procedure from your db vendor. If you're using PostgreSQL, you can use this command: `pg_dump -Fc ctfdb > ctfdb.dump`

The file storage and search indices

Any documents uploaded to TeamForge, or attachments to an artifact or forum, as well as the search indices, are stored on the filesystem as normal system files. Please use whatever normal backup method you use to ensure filesystem restorability (tar, dd, cpio, Ghost, etc). You should back up the following directory and ALL its subdirectories: `/opt/collabnet/teamforge/var`

The SCM data

On the SCM box, you will also need to back up your SCM data. This data is contained in your companies various repositories which are located under: `/cvsroot` and `/svnroot`

Finishing

Once the backup is complete, remove the file: `/opt/collabnet/teamforge/var/searchIndexes/LOCK_INDEXES`

Turn on the execute permissions for the SCM binaries: `chmod +x /usr/bin/{cvs,svn}`

And restart Apache: `service httpd restart`

How do I move an existing CVS repository into TeamForge?

Use the steps below to import and manage an existing CVS repository with TeamForge.

1. Stop CVS access to the old repo

   ```
   chmod -x /usr/bin/cvs
   ```

2. Tar the old repo

   ```
   cd /cvsroot/old_repo
   tar zcvf /tmp/old_repo.tar.gz
   cd..
   mv old_repo /tmp
   ```

3. Restore CVS access

   ```
   chmod +x /usr/bin/cvs
   ```

4. Transfer the repo to the TeamForge CVS server
5. Create the new repo from within TeamForge

   ```
   Browse to your project
   Click the Source Code button
   Create your new repo
   ```

6. Untar the old repo

   ```
   cd /cvsroot/new_repo
   tar zxvf /tmp/old_repo.tar.gz
   ```

7. Synchronize permissions

   - Login as a TeamForge site admin
   - Click the Admin link
   - Click the Integrations button
   - Check the CVS integration you want
   - Click the Synchronize Permissions button

8. Verify the new repo
9. Remove the old repo

```
/bin/rm -r /tmp/old_repo
```

How do I move an existing SVN repository into TeamForge?

If you have an existing SVN repo that you would now like to manage with TeamForge, follow the steps below.

1. Stop SVN access to the old repo
2. Dump the old repo

```
svnadmin dump /svnroot/old_repo > /tmp/old_repo.dmp o mv /svnroot/old_repo
/tmp
```

3. Restore SVN access
4. Transfer the repo to the TeamForge SVN server
5. Create the new repo from within TeamForge
6. Browse to your project and click the Source Code button, then create your new repo
7. Load the old repo

```
cat /tmp/old_repo.dmp|svnadmin load /svnroot new_repo
```

8. Synchronize permissions

   - Login as an TeamForge site admin
   - Click the Admin link
   - Click the Integrations button
   - Select the SVN integration you want
   - Click the Synchronize Permissions button

9. Verify the new repo
10. Remove the old repo

```
/bin/rm -r /tmp/old_rep
```

Where do I configure my client proxy settings?

Configure proxy settings in the servers file (created when Subversion is installed on your system).

The server file is created when you install TortoiseSVN, Eclipse or command-line Subversion. Use the appropriate path from the installation folder to configure proxy settings:

CLI Unix/Linux	/home/<username>/.subversion/servers
CLI Windows	C:\Documents and Settings\<username>\Application Data\Subversion\servers
Eclipse	Window > Preferences > General > Network Connections
IE (6/7)	Tools > Options > Advanced Network > Connection Settings
Firefox	Tools > Internet Options > Connections tab > LAN Settings
TortoiseSVN	Windows Explorer > File > TortoiseSVN > Settings > Network (by default, TSVN uses browser proxy settings)

How do I make TeamForge work the same when the IP address of the server changes?

Update the /etc/hosts file on the server and the dns record(s) with the new IP address.

When the IP address of the server changes, update the /etc/hosts file on the server and the dns record(s) with the new IP address.

In addition, for TeamForge instance using PostgreSQL database, the IP address used by the PostgreSQL database needs to be changed in the following files:

- /var/lib/pgsql/9.0/data/pg_hba.conf - Change the IP of the host entry pointing to the SouceForge server.
- /var/lib/pgsql/9.0/data/postgresql.conf - Change the application server's IP for the listen_addresses variable. Restart Postgres service for the changes to take effect.

How do I capture the output of "top" command?

Top is the realtime monitor of the running processes in a Linux system. To log the top running processes, use the following command: `top -b -n 1`.

-b = Batch mode operation - Starts top in ’Batch mode’, which could be useful for sending output from top to other programs or to a file.

-n = Number of iterations limit as: -n number specifies the maximum number of iterations, or frames, top should produce before ending.

Reference information about TeamForge

Use this reference information to get deeper detail on configuration files, logs, scripts and other resources you use to administrate TeamForge.

Platform specification for TeamForge 6.2

This is the hardware and software platform that TeamForge 6.2 runs on.

Hardware requirements for CollabNet TeamForge 6.2

The following hardware is the minimum recommended for the server on which CollabNet TeamForge 6.2 is installed and the server on which the database is installed.

CollabNet TeamForge requires the following minimum server characteristics.

- 2 x CPU 2GHz
- 4 GB RAM (but 16 GB is good for large sites).
- 40GB hard drive

Required hard drive capacity depends on the estimated amount of document and file release uploads.

☛ **Tip:** Disk I/O makes a difference. Users in a variety of environments have reported that a high-performance disk subsystem improves the site's response more than additional RAM.

☛ **Note:** We strongly recommend running the CollabNet TeamForge application and its database on separate physical servers. Each server should meet the same dual-processor, 2-GHz standard.

Supported software for CollabNet TeamForge 6.2

This is the official list of software that is compatible with CollabNet TeamForge 6.2.

Operating systems

CollabNet TeamForge has been tested on these operating systems:

Operating system	Version	Architecture	Restrictions
Red Hat Enterprise Linux	6.1	32-bit	Must have RHN or equivalent.
Red Hat Enterprise Linux	6.1	64-bit	Must have RHN or equivalent.
CentOS	6.1	32-bit	
CentOS	6.1	64-bit	
SuSE Linux Enterprise Server	11 SP1	32-bit	Must be registered with Novell.
SuSE Linux Enterprise Server	11 SP1	64-bit	Must be registered with Novell.

☛ **Note:** Red Hat Enterprise Linux machines must have access to the Red Hat Network or equivalent (satellite server, spacewalk, or RHN proxy). For more information, see *www.redhat.com*.

Package managers

- The `yum` package manager is supported up to and including version 3.2.22.

- The `zypper` package manager is supported up to and including version 1.3.7.

Databases

These database products have been tested with CollabNet TeamForge:

- PostgreSQL 9.0
- Oracle 11 (R1 and R2)
- Oracle Client 11g

  Note: The Express Edition is not supported.

Browsers

These browsers have been tested with CollabNet TeamForge:

- Mozilla Firefox 12
- Microsoft Internet Explorer 8, 9
- Google Chrome 6.2

Software configuration management tools

These software configuration management (SCM) tools have been tested with TeamForge 6.2:

- Subversion 1.7.2 (FSFS)
- CVS 1.11.x
- ViewVC 1.1.10
- Git 1.7 or later.

Integration tool

This is the official list of software that you require for the TeamForge Review Board integration:

- CentOS/RHEL 6.1
- PostgreSQL 9.0.7 database

Java

This Java infrastructure has been tested with TeamForge 6.2:

- Java SDK 1.6.0_26
- JBoss Application Server 6.1.0
- Tomcat 7.0.22

Note: For larger installs, the max JVM heap size should be increased to 1024MB (or larger), depending on available resources on the box.

Microsoft applications

These Microsoft applications have been tested with CollabNet TeamForge:

- Microsoft Project 2002 (with Service Pack 1) on WinXP Service Pack 2 and Win2000 Service Pack 4
- Microsoft Project 2003 (with Service Pack 1) on WinXP Service Pack 2 and Win2000 Service Pack 4
- Microsoft Office XP (with Service Pack 3) on WinXP Service Pack 2 and Win2000 Service Pack 4
- Microsoft Office 2003 (with Service Pack 1) on WinXP Service Pack 2 and Win2000 Service Pack 4

LDAP (Lightweight Directory Access Protocol) application

OpenLDAP 2.3.27-5 has been tested with CollabNet TeamForge.

Event handling

- Quartz (scheduling tool for synchronous event handling): version 1.8.3

Versions of RPM packages in RedHat and CentOS installations

Make sure that you have installed the correct versions of these required packages.

Note: These are the minimum required versions of packages.

createrepo	0.4.11 or later
cvs	1.11.22
cx_Oracle	5.0.4
httpd	2.2.3
jdk	1.6.0_26
mod_dav_svn	1.6.17
mod_python	3.2.8
mod_ssl	2.2.3
neon	0.28.4 or later
neon_devel	0.28.4 or later
oracle-instantclient11.2-basic	11.2.0
postgresql	postgresql90-libs - 9.0.4 postgresql90 - 9.0.4 postgresql90-server - 9.0.4 postgresql90-docs - 9.0.4 postgresql90-python - 4.0 or later
python	python-fpconst - 0.7.2 python-lxml - 2.0.11 python-chardet - 1.0.1-0.pm.1 python-curl - 7.15.5
rcs	5.7
subversion	subversion - 1.7.2 subversion-python - 1.6.17 subversion-perl - 1.6.17 subversion-devel - 1.6.17

yum	yum - 3.2.22 yum-metadata-parser - 1.1.2 yum-security - 1.1.16

	yum-updatesd - 0.9
	yum-rhn-plugin - 0.5.4
	yum-downloadonly - 1.1.16
	yum-utils - 1.1.16
ZSI	2.0 or later

Versions of RPM packages in SuSE installations

Make sure that you have installed the correct versions of these required packages.

Note: These are the minimum required versions of packages.

apache2	2.2.10
apache2-mod_python	3.3.1
apache2-worker	2.2.10
createrepo	0.4.11 or later
cvs-stable	1.11.23
cx_Oracle	5.0.4 or later
jdk	1.6.0_26
libapr1	1.3.3 or later
libapr-util1	1.3.4 or later
libneon27	0.28.3 or later
neon	0.28.3 or later
oracle-instantclient11.2-basic	11.2.0 or later
postgresql	postgresql-libs - 9.0.4 postgresql - 9.0.4 postgresql-server - 9.0.4 postgresql-docs - 9.0.4
python	python-fpconst - 0.7.2 python-lxml - 2.1.2 python-chardet - 1.0.1 python-curl - 7.19.0
PyGreSQL	4.0
SOAPpy	0.11.6
subversion	subversion - 1.6.17 subversion-python - 1.6.17 subversion-perl - 1.6.17 subversion-devel - 1.6.17
ZSI	2.0 or later

Scripts installed with TeamForge 6.2

System administrators can use these utilities to control the behavior of the application.

bootstrap-data.sh

The `bootstrap-data.sh` script prepares application and database data for new installations. Preparing application and database data is referred to as "bootstrapping" the data.

Overview

Important: This script is only for new installations. If you run it on a site that already has data, all data will be wiped.

This script resides in the `<installation_source>` directory and calls the `wrapper-bootstrap-data.py` script when run. The `[log_file_directory]/runtime/bootstrap.log` file is created when this script is run. All success and error messages from this script are written to this log file.

Usage

Run this script as follows:

```
cd <installation_source>

  ./bootstrap-data.sh -d /opt/collabnet/teamforge
```

Example

The following command forces a bootstrap of the data, showing all actions on the screen:

```
  ./bootstrap-data.sh -n -F -V -d /opt/collabnet/teamforge
```

Options

The following options are available for the `bootstrap-data.sh` script:

-d | --directory Specify installation directory. This argument is required.

-h | --help Provides a list of all available options for this script.

-n | --non-interactive Runs the script in a non-interactive mode. The script will fail with an error message when used with this option if an existing `[DATA_DIR]` is located. You can use the -F option to force bootstrapping on sites that have an existing `[DATA_DIR]`.

-F | --force This option is only valid when the -n option is used. This option forces the bootstrapping of data when a `[DATA_DIR]` exists.

-V | --verbose Writes all script actions to the screen. Without this option the script runs silently and logs messages to the `[log_file_directory]/runtime/bootstrap.log` file.

-q | --quiet Do not show script output.

-f | --site-options=[filename] Points to the `site-options.conf` configuration file for the site. This argument is optional.

Cluster location

This script runs on the application server machine.

bootstrap-reporting-data.sh

The `bootstrap-reporting-data.sh` script prepares the datamart data for new installations.

Overview

Important: This script is only for new datamart installations. If you run it on a site that already has reporting data, all data will be wiped.

The success and error messages from this script are written to the `[log_file_directory]/runtime/bootstrap.log` file.

Usage

Run this script as follows:

```
cd /opt/collabnet/teamforge/runtime/scripts
./bootstrap-reporting-data.sh
```

Options

The following options are available for the `bootstrap-data.sh` script:

-h | --help Provides a list of all available options for this script.

-n | --non-interactive Runs the script in a non-interactive mode. The script will fail with an error message when used with this option if an existing `[REPORTS_DATA_DIR]` is located. You can use the -F option to force bootstrapping on sites that have an existing `[REPORTS_DATA_DIR]`.

-F | --force This option is only valid when the -n option is used. This option forces the bootstrapping of data when a `[DATA_DIR]` exists.

-V | --verbose Writes all script actions to the screen. Without this option the script runs silently and logs messages to the `[log_file_directory]/runtime/bootstrap.log` file.

-q | --quiet Do not show script output.

Cluster location

This script runs on the application server machine.

The collabnet script

Run this script to start or stop TeamForge, or to get the status of the application or a component.

Overview

You can use this script to start or stop the application as a whole or to start and stop an individual service. You can also use it to determine the status of an individual service.

Important: On production sites, this script must be invoked by the root user.

Usage

Run this script as follows:

```
/opt/collabnet/teamforge/runtime/scripts/collabnet [--verbose|-V] [--service|-s
serviceName] <command>
```

For example, the following command checks the status of the jboss component:

```
<SITE_DIR]/runtime/scripts/collabnet -s jboss status
```

Parameters

Command	Action to perform. The supported commands are:	
	start	Starts the application / service
	stop	Stops the application / service
	status	Provides the status of the service(s)
	restart	Restarts the application / service
help	Prints this message and exits.	
-s | service serviceName	Perform the command for the service serviceName	
verbose	Print debug messages	
-q | --quiet		
-F | --force	Force option to perform the specifed operation forcefully	
-S | --silent	To perform the operation silently without providing the output	

Logging

`collabnet` writes entries to the following logs:

- `log/runtime/service.log`: The master service log.
- `log/{service}/service.log`: Log entries from starting up individual services end up in the `service.log` file of the corresponding service log folder (e.g. `log/apps/service.log`)

datamart-oracle-setup.sh

This script is used for setting up the Oracle datamart in CTF advanced mode installation.

Usage

You can run this script from the command line as follows:

```
[RUNTIME_DIR]/scripts/datamart-oracle-setup
```

The datamart-oracle-setup.sh is an interactive script and does not take any parameters.

Comment

[SCRIPTS_DIR]/set-reports-readonly-user-permission.py script needs to be executed after bootstrap or migration to complete the datamart setup.

datamart-pgsql-setup.sh

This script is used for setting up the PostgreSQL datamart in CTF advanced mode installation.

Usage

You can run this script from the command line as follows:

```
sudo [RUNTIME_DIR]/scripts/datamart-pgsql-setup
```

The datamart-pgsql-setup.sh is an interactive script and does not take any parameters.

Comment

[SCRIPTS_DIR]/set-reports-readonly-user-permission.py script needs to be executed after bootstrap or migration to complete the datamart setup.

db.py

The `db.py` script can be used to dump and restore a PostgreSQL database.

Overview

This script can be used only for the PostgreSQL service. Don't run this script on a remote database. Execute the script only when the database is up and running.

Usage

Run this script as follows:

```
./db.py --action=<action> --path=<destination directory>
```

Options

Required options:

**`-a	--action`**	Values: dump or restore
**`-f	--path`**	Path where the database backup file will be created. Must be a directory owned by the postgresql user (usually `/var/lib/pgsql/9.0/`). Can be a new directory.

Optional options:

**`-t	--type`**	Specifies the type of database (ctf or reporting).
**`-h	--help`**	Print this usage message and exit.

Note: The options -a and -f are mandatory.

domain_change_db.py

The `domain_change_db.py` script handles all the steps required to change the domain name in the site database. It does not change anything in the file system.

Note: Changing the domain through any other mechanism may cause problems.

Usage

Execute this script with a command like this:

```
[RUNTIME_DIR]/domain_change_db.py [--debug] [--dir] --old={domain_name}
--new={domain_name}
```

Note: The new domain name must match the value defined for the DOMAIN token in the `site-options.conf` file.

Options

The `domain_change_db.py` script provides the following parameters:

--help	Show this message

--debug	Include debugging output
--old	Old domain
--new	New domain
--dir	Run domain change in this directory only. You must specify the full path. Use this feature to do a subset of the data directory. This instructs the script to do a recurse in the specified directory looking for the old `domain_name` and replacing it with the new `domain_name`. . **Note:** Without this option, only HTML, text, and VM files are modified.

domain_change_fs.pl

The `domain_change_fs.pl` script handles all the steps required to change the domain name under the file system data directory. It does not change database contents.

Overview

By default, only .s?html?(.[a-z][a-z])?(,v)?, .txt(,v)?, and .vm(,v)? files are modified, unless `--dir` is specified.

Note: Changing the domain through any other mechanism may cause problems.

Usage

Execute this script with a command like this:

```
[RUNTIME_DIR]/domain_change_fs.pl [--debug] [--dir] --old={domain_name}
--new={domain_name}
```

Note: The new domain name must match the value defined for the DOMAIN token in the `site-options.conf` file.

Options

The `domain_change_fs.pl` script provides the following parameters:

--help	Show this message
--debug	Include debugging output
--old	Old domain
--new	New domain
--dir	Run domain change in this directory only. You must specify the full path. Use this feature to do a subset of the data directory. This instructs the script to do a recurse in the specified directory looking for the old `domain_name` and replacing it with the new `domain_name`. . **Note:** Without this option, only HTML, text, and VM files are modified.

domain_change_pt.py

THIS IS A STUB FILE, TO BE REPLACED BY REAL INFORMATION ABOUT DOMAIN_CHANGE_PT.PY

environment_check.sh

The `environment_check.sh` script verifies whether all environment packages required for installing CollabNet TeamForge are present.

Overview

Use the `environment_check.sh` script to verify that you have all required environment packages for installing SourceForge.

You will be prompted to run the `install-missing-packages.sh` script if one or more required packages are missing from your system.

Note: You may be prompted to manually remove any older packages identified on your system before running the `install-missing-packages.sh` script.

Usage

From the <INSTALLATION_SOURCE> directory, run this script as follows:

```
./environment_check.sh
```

etl-Client.py

The etl-Client.py script allows you to access the Extract, Transform and Load (ETL) scheduler and check the status of the jobs configured. The script also supports triggering jobs manually.

Parameters

The following parameters are available for the etl-Client.py script:

-s | --status	Prints the status of all the jobs configured in ETL service.
-a | --status-all	Prints the status of incremental and historical jobs configured in ETL service.
-v| --verbose	Chronicles the process of requested operation a bit more.
-r| --run=	Triggers a job manually for a given job.

install.sh

The `install.sh` script handles all operations related to installing and removing the application.

Options

-a | --all

Performs these operations in sequence - Install, create runtime and setup initscripts (equivalent to: -I -r -i)

-b | --bootstrap

Sets up initial site data.

-C | --cleanup

Stop/Kill the application processes, wipes out application packages and site directory.

Caution: THIS OPTION WILL WIPE OUT THE SITE DATA.

-c | --conf-file

The environment configuration file (usually of the form environment-<platform>.conf), used to identify the platform.

Note: This is not to be confused with the the `site-options.conf` file.

-d | --directory type='str', argname='installation_base_dir',

Path where the site would get installed.

-E | --check_environment

Check if the system environment is suitable for this installation.

-F | --force

Force the operation that is performed wherever appropriate (e.g. install/uninstall).

-f | --siteoptionsfile

Path to the site configuration file (default: ./conf/site-options.conf).

-I | --initscript

Start application services on reboot.

-i | --install

Install application packages.

-n | --noninteractive

Used to run the installer in non-interactive mode.

-R | --internalruntime

Create the internal runtime instance using the site configuration file.

-r | --runtime

Create the runtime instance using the site configuration file. (Also does configuration for Apache and PostgreSQL.).

-S | --startnow

Start application services after completing the other operations (if possible).

-s | --startup

Start application services on reboot and start it now: equivalent to -I -S.

-u | --uninstall

Uninstall application packages.

-V | --verbose

Show all output in noninteractive mode.

pbl.py

The `pbl.py` utility enables you to upload files to the Project Build Library and perform various operations on them.

Options

`--help|-h`	Print out a help message and exit.
`--api-user|-u username`	Your TeamForge Lab Management login name. Required for all upload operations.

`--api-key|-k key`
Your TeamForge Lab Management API key. Required for all upload operations.

`--api-url|-l url`
The URL to the TeamForge Lab Management API's. Will generally be `https://$external_host/cubit_api/1`. Required for all upload operations.

`--comment|-c "your comment"`
Print out a comment on this operation. The comment is always optional. The comment string will be logged in the audit log, but is not recorded in the PBL. For example, if you are deleting some files, you might want to use a comment to explain why you were deleting those files, for future auditing purposes.

`--verbose|-v`
Print out more detail on what the `pbl.py` is doing.

`--xml-server-output|--xml`
If this option is not specified, the `pbl.py` client reads in the XML returned from the server and presents the results to you in nicely formatted text. If you'd like to instead see the raw XML returned from the server, select this option.

`--no-auth-cache`
As a convenience, the `pbl.py` function caches the value of the `--api-user` and `--api-key` parameters in your home directory, in a subdirectory named `.cubit`, the first time a successful authentication is performed against the server. This is analogous to the Subversion client's use of the `.subversion` directory to store authentication credentials. Selecting the `--no-auth-cache` option turns off this caching.

`--project|p projname`
The TeamForge Lab Management project in which the file you are operating on is located.

`--type|t {pub|priv}`
The visibility type of the file, either `pub` (the file is in the public area of the PBL) or `priv` (the file is in the private area of the PBL).

`--remotepath|r path`
The remote path on the server, excluding the base directory, the project, and the visibility type. Examples are below.

password_util.sh

The `password_util.sh` script is used to get the encrypted or decrypted password value for the user `scmviewer`.

Usage

To encrypt:

```
sudo /opt/collabnet/teamforge/runtime/scripts/password_util.sh -encrypt
'teamforge'
```

```
[root@xx scripts]# ./password_util.sh -encrypt 'teamforge'
Input String:teamforge
Encrypted password:VBxJJvzbXb5tNx2SxR26egA==
```

To decrypt:

```
sudo /opt/collabnet/teamforge/runtime/scripts/password_util.sh -decrypt
'VBxJJvzbXb5tNx2SxR26egA=='
```

```
[root@xx scripts]# ./password_util.sh -decrypt 'VBxJJvzbXb5tNx2SxR26egA=='
```

```
Input String:VBxJJvzbXb5tNx2SxR26egA==
Decrypted password:teamforge
```

postinstall_62p1.py

The `postinstall_62p1.py` script is used to remove unwanted entries in the TeamForge database.

This script cleans up invalid planning folder ranks in the `item_rank` table and aged entries in the `recent_access` table.

Prerequisites

This script requires the TeamForge database to be up and running.

Usage

Run this script, located in the `[RUNTIME_DIR}/scripts` directory, after you recreate the runtime environment, while installing TeamForge 6.2 Patch 1.

Note: Make sure that:

- You are logged in as `root`
- You run the command only on the TeamForge application box

```
cd /opt/collabnet/teamforge/runtime/scripts
./postinstall_62p1.py
```

Options

-h | --help	Prints the help information.
-s | --silent	Does not print progress message on console.

psql-wrapper

The `psql-wrapper` script is used to connect to the TeamForge application.

Usage

Run this script as below:

```
sudo [RUNTIME_DIR]/scripts/psql-wrapper
```

Comments

- Run this script as a sudo user.
- Run this script with the postgres backend.
- You have full write access to the database for executing queries.

Note: This script is not supported in the Oracle backend.

psql-reporting-wrapper

The `psql-reporting-wrapper` script is used to connect to the datamart.

Usage

Run this script as below:

```
sudo [RUNTIME_DIR]/scripts/psql-reporting-wrapper
```

Comments

- Run this script as a sudo user.
- Run this script with the postgres backend.
- You have full write access to the datamart for executing queries.

☞ **Note:** This script is not supported in the Oracle backend.

SearchReindex.py

The `SearchReindex.py` script allows you to reindex the entire TeamForge data.

Overview

You can use this script to reindex the entire TeamForge data or you can choose to reindex the subset of data types.

Usage

Run this script as follows:

```
./SearchReindex.py --<component name>
```

Example

To perform a search reindex for the tracker, run this command:

```
./SearchReindex.py --trackers-only
```

To perform a search reindex for the wiki, run this command:

```
./SearchReindex.py --wiki-only
```

To perform a search reindex for documents run this command:

```
./SearchReindex.py --documents-only
```

Options

`--single-item itemId, | -i` Schedules a re-index for just the given item. If the item id is for a project the scheduling results in the server re-indexing all of the project data.

`---force-index | -f` Force indexing (doesn't check if item is searchable already).

`--artifacts only | -a` Reindex all artifacts on the site that are currently not searchable or all artifacts if option f is selected.

`--documents only | -d` Reindex all documents on the site that are currently not searchable or all artifacts if option f is selected.

`---posts only` Reindex all posts on the site that are currently not searchable or all artifacts if option f is selected.

`---trackers only` Reindex all trackers on the site.

`---document_folders-only` Reindex all document folders on the site.

`---topics-only` Reindex all topics.

`---forums-only` Reindex all forums on the site.

`---news-only` Reindex all news.

`---project_pages-only` Reindex all project pages.

`---packages` Reindex all packages.

`---commits-only` Reindex all commits.

`---frs_files-only` Reindex all frs files.

`---releases-only` Reindex all releases.

`---wikis-only` Reindex all wikis.

`--project-id projectID | -p` Limit the re-indexing to data for single project when re-indexing only artifacts and or documents.

`--verify | -x` Searches for each item that is scheduled for re-indexing. There is a one minute wait limit for each item to be re-indexed by the server.

`--dryrun | -r` Executes all the steps for scheduling a re-index without actually sending any re-index requests to the server. This provides a list of items that need re-indexing.

`output-file filePath, | -o` Prints the output for the given file.

`--verbose | -v` Chronicles the process of scheduling the re-index a bit more.

set_auth_key.py

The `set_auth_key.py` script sets the authorized key to the scmviewer user profile.

Overview

The script accepts the authorized key file, reads the key from the file and sets it to the scmviewer user profile.

```
$ sudo /opt/collabnet/teamfoge/runtime/scripts/codesearch/set_auth_key.py
--help
```

Usage

Run this script as follows:

```
./set_auth_key.py --authkey-file=<path_of_authkey_file>
```

When you run the script, you will be prompted to enter the TeamForge site-admin credentials to update the key for the scmviewer user.

set-reports-readonly-user-permission.py

This script grants read-only access to the datamart for those users specified by the REPORTS_DATABASE_READ_ONLY_USER token.

Note: This script is executed automatically when runtime is created, after bootstrap or migration is completed.

Usage

You can run this script from the command line as follows:

```
sudo runtime/scripts/set-reports-readonly-user-permission.py
```

Comment

You can use this script only in advanced mode.

snapshot.py

Use this script as a debugging tool to troubleshoot system errors. It records a snapshot of the current state of the machine.

Overview

Run this script manually to generate debugging information before restarting the instance.

Usage

Run this script as follows:

```
/opt/collabnet/teamforge/runtime/scripts/snapshot.py
```

Options

The following options are available for the `snapshot.py` script:

-h|--help Provides information on using the script.

--extra An arbitrary command whose output should be placed in the generated log file. For example, you can have `snapshot.py` execute the `lsof` command like this:

```
--extra '/usr/sbin/lsof -n -P -b -i -U'
```

Enclose commands with options in quotes.

-v|--verbose Provides output on the actions performed by the script.

Note: The output from `snapshot.py` is written to a log file in the `[LOG_DIR]/runtime` directory. Use the output (snapshot.log) to troubleshoot any system or CollabNet related errors.

Cluster location

Important: The `snapshot.py` script generates a log file for the node on which it is run. When a CollabNet site is deployed on a cluster and you need information to troubleshoot problems, it is recommended that you run this script on all the nodes.

upgrade-site.sh

With this script, you can perform a cumulative patch upgrade or downgrade on a running instance.

Overview

This is a wrapper for the `upgrade.py` script.

The script verifies the following:

- The user invoking the script is the equivalent of a root user.
- The specified directory has a valid SourceForge installation.

It performs the following actions depending on the options specified:

- Displays a summary of what would happen during the patch installation.
- Downgrades or upgrades the site to the specified patch level.
- Reverts the site to the previous patch level it was at, before the current patch was applied.
- Downgrades the patch level on the site by one.
- Starts SourceForge after successfully installing the patch.
- Allows a test "dry run" of the patch installation.

Usage

Run this script as follows:

```
./upgrade-site.sh -d <INSTALL_DIR> [-r] [-u] [-t] [-l level] [-f file] [-n]
[-h] [-V] [v]
```

Example

To perform a component upgrade from a base SourceForge installation (patch level 0) to patch level 2, use this command:

```
sudo ./upgrade-site.sh -t -d /opt/collabnet/teamforge -l 2
```

Options

-f [manifest] | --file [manifest]
The manifest file with the appropriate information for this upgrade.

-d [INSTALLATION_DIR] | --directory [INSTALLATION_DIR]
The directory where the application is installed.

Note: This option is required.

-r | --rollback
Rolls back the previous (most recently applied) patch. For example, if you upgrade the site from patch level 1 to patch level 4, and then run `upgrade-site.sh` with this option, the resulting patch level on the site is patch 1.

-l [level] | --level [level]
The patch level to which the SourceForge site must be upgraded (or downgraded).

-V | --verbose
Displays script output including traceback errors. If this option is not used, the script displays error messages but not the actual traceback errors.

-v | --version
Displays the script version.

-n | --noninteractive
Non-interactive mode.

-t | --testrun
Displays a summary of the actions that will be performed as part of the upgrade or downgrade. Use this option to view a description of what would take place during a patch upgrade (or downgrade) before you actually apply the patch.

Note: You must use this option along with the `l`, `r`, `u`, or `f` options.

-u | --uninstall
Decrements the patch level on the site by one. For example, if you upgrade the site from patch level 1 to patch level 4, and then run `upgrade-site.sh` with this option, the resulting patch level on the site is patch 3.

-h | --help
Prints usage information.

Note: Do not use the following combinations of options in the same command:

- -u (uninstall) with -r (rollback)
- -f (manifest) with -l (level)
- any combination of -u, -r, -l, -f

If you do, the script exits with a corresponding error message.

projecttracker.py

The `projecttracker.py` utility provides a command line interface to control a Project Tracker integration on a TeamForge site.

Overview

You can run this script as the root user to start, stop and get the status of a Project Tracker instance that is integrated into your site.

Usage

Run this script as follows:

```
sudo /etc/init.d/projecttracker [command]
```

For example, use the following command to start the Project Tracker integration:

```
sudo ./projecttracker start
```

Commands

The following commands are available for the `projectracker.py` script.

Note: "Catalina" is the code name for the integrated Project Tracker feature.

debug -security	Debug Catalina with a security manager
jpda start	Start Catalina under JPDA debugger
run	Start Catalina in the current window
run -security	Start in the current window with security manager
start	Start Catalina in a separate window
start -security	Start in a separate window with security manager
stop	Stop Catalina
stop -force	Stop Catalina (followed by kill -KILL)
version	What version of tomcat are you running?
restart	Stop and Start Catalina
status	Indicate whether Catalina is running

wmt-wrapper.sh

The `wmt-wrapper.sh` script is used to invoke `wmt.java` by using `wmt.jar`. This script is a wrapper script for the `wmt.sh` script.

Overview

The wmt tool converts the CEE Moinmoin Wiki data to TeamForge JspWiki data. The `wmt-wrapper.sh` script is used to execute the wmt tool. For more information on WMTool, click *https://forge.collab.net/sf/wiki/do/viewPage/projects.sf_engine/wiki/WMTool*

Usage

Run this script for all projects:

```
$ <WMT_BUILD_DIR>/wmt-wrapper.sh -a
```

Run this script for a particular project:

```
$ <WMT_BUILD_DIR>/wmt-wrapper.sh -s.
```

For detailed information on running this script, click *Run the wmt-wrapper.sh script*

Location

- Click the following URL to check the wmt source code: *https://forge.collab.net/svn/repos/ce/trunk/cee_dump_load/releng/components/CEE-CTF6-Wiki-Migration-Tool*
- Click the following URL to download the latest build file. Ensure to find the latest build date: *https://mgr.cloud.sp.collab.net/pbl/releng/pub/downloads/unqualified/CTF/6.2/CEE-CTF6-Wiki-Migration-Tool*. The build file contains the libraries (including wmt.jar), wmt.bat, and wmt.sh.

Options

Options that are available for this script:

-a | -- All projects	Runs the script for all the projects.
-s | -- Specific project	Runs the script for specific projects by mentioning the project name.

Log files in TeamForge 6.2 on Red HatCentOSSuSEVMware Player

System administrators can use logs to debug problems and ensure that the application is performing to expectations.

JBoss logs

The JBoss application server writes several different logs under the <SOURCEFORGE_INSTALL_DIR>/log directory.

`boot.log`
Lgs the JBoss startup and shut down notifications. This log is overwritten each time JBoss is (re)started.

`localhost_access`
The Records access to the application from a remote host, similar to the Apache access_log. This log is rotated each day, and the files have a date stamp appended to their name, such as localhost_access2004-11-26.log.

`server.log`
Logs all the activities of the application server, including any exceptions. This log is the best place to begin debugging CollabNet TeamForge server error exception ids (exid).

`session-info.log`
Records when new sessions are created. This log is overwritten each time JBoss is (re)started.

`vamessages.log`
Records CollabNet TeamForge -specific actions, including some SQL queries that are sent to the backend database. This log is rotated each time it reaches 100MB in size. When rotated the older files have a number appended to the end, such as `vamessages.log.1` and `vamessages.log.2`.

Oracle logging

The most important Oracle log is the `alert` log, which is found in `$ORACLE_HOME/admin/$SID/bdump/alert_$SID.log` .

An Oracle database performs logging on a wide array of functionality. The majority of the logs that are generated are stored under `$ORACLE_HOME/admin/$SID/`. Many logs are stored under this directory hierarchy, but `alert` is the most important. This log records all database activity, including serious problems.

The `alert` log is not rotated or overwritten, and can become quite large over time, especially on an active database.

Additional logs are created under the same directory hierarchy, for specific incidents. If a problem is recorded in the alert log, the other logs should be inspected for additional details.

For more information, as well as support in the maintenance of an Oracle database, contact Oracle Support or Oracle's *Metalink* site.

SCM (CVS, Subversion, and Perforce) logs

Software configuration management (SCM) servers generate several logs from the CollabNet TeamForge ; however, in the interest of completeness they are all documented here.

`catalina.out` This log contains information on the startup and runtime activities of the Tomcat server. This log is not rotated, nor is it overwritten, and is appended continuously over the lifetime of the server.

`localhost_log` This log contains a record of CVS or Subversion browsing URL construction. When a user attempts to browse a CVS or Subversion repository in his or her web browser, the URL construction process is documented in this log. This log is rotated for each date that there is activity.

`localhost_admin_log` This log contains a record of the initial startup and deployment of the managed integration server. A new date stamped log is generated each time the integration server is started.

`vaexternalintegration.log` This log contains information on the operations that are being executed by the managed integration server. This log is stored in <SOURCEFORGE_INSTALL_DIR>/log.

Email logs

Both the CollabNet TeamForge email and search backends are managed from a parent daemon known as Phoenix. If the mail backend is not operating properly, the first troubleshooting step is to check the phoenix.log to see if it encountered difficulties starting up.

Overview

The Phoenix daemon logs its activities to the `phoenix.log` file, which is stored under `SOURCEFORGE_INSTALL_DIR/james/james-2.2.0/logs`. This log is overwritten each time Phoenix is (re)started. Phoenix is run as part of the CollabNet TeamForge standalone server init script.

CollabNet TeamForge email is handled by the `JAMES` server. `JAMES` logs all of its activities under `SOURCEFORGE_INSTALL_DIR/james/james-2.2.0/apps/james/logs`. A new log is created for each date when there is activity, and additional logs are created if james is restarted on a date when there is activity. The date is embedded in the log name (such as james-2005-04-28-01-00.log).

Active logs

Sixteen different logs are created by `james` for different components of its functionality. This topic describes only the ones that are used actively by CollabNet TeamForge .

`james-$date.log` The James log records the overall mail handling behavior of the James server.

`mailet-$date.log` The mailet log records how each piece of email is handled. If there is a mail delivery problem, this log is the best place to begin investigation.

`mailstore-$date.log` The mailstore log records the behavior of mail spools, and the storage of mail. This log should normally not contain errors unless James is unable to write or read mail to or from the file system.

`smtpserver-$date.log` The smtpserver log records all inbound mail handling results. If email to discussion forums is not posting, or is getting rejected, this log would be the best place to begin investigation.

`spoolmanager-$date.log` The spoolmanager log records the processing of mail spools. This log could be of value in troubleshooting mail delivery or handling problems.

Search logs

Both the CollabNet TeamForge search and email backends are managed from a parent daemon known as Phoenix. If the search backend is not operating properly, the first troubleshooting step is to check the `phoenix.log` file to see if it encountered difficulties starting up.

The Phoenix daemon logs its activities to the `phoenix.log` file, which is stored under `SOURCEFORGE_INSTALL_DIR/james/james-2.2.0/logs`. This log is overwritten each time Phoenix is (re)started.

Phoenix is run as part of the CollabNet TeamForge standalone server init script.

Once started successfully, the search server waits for new content to be indexed or searches to be performed. The search server logs its activities under `SOURCEFORGE_INSTALL_DIR/james/james-2.2.0/apps/search/logs`. The logs that are created are all named `default` with the date stamp appended to them (such as `default-20041126.log`). A new log is created for each date that there is indexing activity.

If the search server is not running, or expected search results are not being provided, the default log is the best place to investigate further.

Project Build Library audit log

You can use this screen to view the complete list of actions performed in the Project Build Library.

Contents

Information about the following types of actions is displayed in this screen:

- Change a File Description
- Create a Directory
- Delete a File or Directory
- Download a File
- Move a File or Directory
- Upload a File

Note: The value displayed in the **Event** field is the value passed in the --comment parameter from the Project Build Library client.

Getting there

On the project home page, click **Build Library** in the left navigation bar and select the **Audit Log** tab.

Access

This screen is accessible for all users who have at least the view permission for the project.

Profile audit log

Use this screen to view the complete list of actions performed on a profile.

Getting there

On the **Profile Library** screen, click the **Audit Log** tab.

Access

This screen is accessible for all users who have at least the view permission for the project to which the profile is allowed.

x

Example

When a user updates any of the profile fields on the **Profile Admin** screen, the following details are displayed in this screen:

- The old value for the field.
- The new value for the field.
- The name of user who updated the field.
- The time when the change occurred.

User Audit Log

You can use this screen to view the list of actions performed by the user in the TeamForge Lab Management system.

> For example, when a user logs into the web interface of the TeamForge Lab Management system, the event is displayed in this screen.

Access

This screen is accessible to all users who have at least the Domain Administrator role.

Getting there

On the **Administration** tab, click **User Audit Logs** in the left navigation bar.

Host audit log

You can use this screen to view the complete list of actions performed on a host.

Getting there

On the TeamForge Lab Management Host home page, click the **Audit log** tab.

Access

This screen is accessible for all users who have at least the view permission for the project to which the host is assigned.

Example

When the IP address for the host is changed, the following details are displayed in this screen:

- The old IP address.
- The new IP address.
- The name of user who changed the IP address.
- The time when the change occurred.

Project audit log

The **Project audit log** screen shows the complete list of changes applied to a project.

Getting there

On the TeamForge Lab Management Project home page, click **Audit Logs** in the left navigation bar.

Access

This screen is accessible for all users who have at least the view permission for the project.

Example

When a profile is added to the list of buildable profiles for this project, the following information appears on this screen:

- The action that was taken.
- The user who performed the change.
- The time when this change occurred.

etl.log

This file contains information from extract-transform-load runs, including data transformation warnings and errors.

👉 **Note:** Transformation errors do not constitute a failed ETL run. For example, if a corrupt row of data in one of the source tables causes transformation errors, this is treated as a "skipped record" and gets logged.

Configuration files in TeamForge 6.2 on Red HatCentOSSuSEVMware Player

Edit these configuration files to get the behavior you want.

site-options.conf

CollabNet TeamForge is controlled by settings in a master configuration file called `site-options.conf`. Some of the most useful configuration settings you can specify in the `site-options.conf` file are described here.

The `site-options.conf` file resides in the installer directory. (The default installer directory is `/opt/collabnet/teamforge-installer/6.2.0.0/conf`.)

When TeamForge starts, it reads and implements the instructions provided as values to the variables in this file.

The basic procedure for configuring your TeamForge site, then, is to edit the `site-options.conf` file, supply a valid value for the variable of interest, save the file, and restart the TeamForge runtime environment.

TeamForge has a number of configuration files that can be used to improve site performance. You can configure the `site-options-small.conf`, `site-options-medium.conf` and `site-options-large.conf` files to suit the needs of small, medium and large systems. Each of these sample configuration files has information about the load it supports and the hardware (CPU and memory) required.

ACTIVITY_LINKS_CUSTOMIZATION

When the *ACTIVITY_LINKS_CUSTOMIZATION* variable is set to true, the TeamForge Activity Chart and the Most Active Projects List do not appear on the main page before the user logs in.

Values

true or false

Default

false

ADMIN_EMAIL

The *ADMIN_EMAIL* variable specifies a valid email address for the site administrator.

The mail account specified must be hosted on a separate server from the TeamForge site server.

The *SYSTEM_EMAIL*, *ADMIN_EMAIL*, and *JAMES_POSTMASTER_EMAIL* variables can specify the same address.

☞ **Important:** In TeamForge 6.x, the sender name and address for system-generated emails is taken from the value of the *SYSTEM_EMAIL* variable. Therefore, changing the admin user's full name or email address does not affect the sender details of system-generated emails. This is different from TeamForge 5.x, in which the sender name and address for system-generated emails is derived from the admin user's full name and email address.

Values

Email address specification

Default

root@{__APPLICATION_HOST__}

ALLOW_USERNAME_IN_PASSWORD

The *ALLOW_USERNAME_IN_PASSWORD*, when set to true, allows users to set a password that includes the string that they use for their user name on the site.

Values

true, false

Default

true

APPLICATION_LOG_DIR

The *APPLICATION_LOG_DIR* specifies the directory to which the application writes its log files.

Values

Path specification

Default

/opt/collabnet/teamforge/log/apps

APPROVE_NEW_USER_ACCOUNTS

The *APPROVE_NEW_USER_ACCOUNTS* variable specifies whether a site administrator must approve the requests to join the site.

Values

true or false

Default

true

ARTIFACT_LIST_LIMIT

The *ARTIFACT_LIST_LIMIT* variable specifies the maximum number of artifacts that are displayed from a single tracker in the reports or export lists.

Values

Integer

Default

5000

ARTIFACT_DESC_EDITOR

The *ARTIFACT_DESC_EDITOR* variable allows you to choose the type of text that can be used for artifact description using the editor tool.

Values

Rich Text/Plain Text

Default

Rich Text

Comments

You can use the RichText format only when you select the **WYSIWYG editor** from the Select Editor. This format is not supported when you choose the Plain Editor.

BDCS_ADMIN_USERNAME

The *BDCS_ADMIN_USERNAME* variable specifies the admin username to be created in the Black Duck Code Sight application.

Values

20 bytes, case-sensitive, alphanumeric, '_'. should begin with alpha

Default

sysadmin

BDCS_ADMIN_PASSWORD

The *BDCS_ADMIN_PASSWORD* variable specifies the password to be set in the Black Duck Code Sight application.

Values

15 Bytes, case-sensitive, alphanumeric, '_!@&*%'

Default

blackduck

CLEARCASE_INTEGRATION_ENABLED

The *CLEARCASE_INTEGRATION_ENABLED* variable specifies whether the site supports ClearCase source repositories.

Values

true or false

Default

false

DATABASE_HOST

The *DATABASE_HOST* variable is a special case of the *HOST* variable that specifies the host name of the server where the database is running.

Values

Hostname specification

Default

None

Comments

The database host is specified by adding `database` to an existing *HOST_localhost* property, or adding a *HOST_localhost* property if it is not already there.

Example

This site has the database running on the same box as all other services:

```
HOST_localhost=app cvs subversion database
```

This site has the database running on its own separate box:

```
HOST_localhost=app cvs subversion
HOST_<database_host>=database
```

DATABASE_NAME

The *DATABASE_NAME* variable specifies the name of the site's database.

Values

Alphanumeric string

Default

ctfdb

DATABASE_PASSWORD

The *DATABASE_PASSWORD* variable is the password for the Unix user that is authorized to read from and write to the site's database.

Values

Alphanumeric string

Default

ctfpwd

DATABASE_TYPE

The *DATABASE_TYPE* variable specifies the type of database in which the TeamForge site's data is stored.

Values

postgresql or oracle

Default

postgresql

DATABASE_USERNAME

The *DATABASE_USERNAME* variable specifies the Unix user that is authorized to read from and write to the site's database.

Values

Alphanumeric string

Default

ctfrptuser

Comments

For some advanced operations, you may need to log into the database as the database user. However, under normal conditions only the TeamForge site process itself needs to access the database.

DEDICATED_INSTALL

If the *DEDICATED_INSTALL* variable is set to true, the TeamForge site is installed automatically, with the default configuration and minimal user intervention.

Values

true or false

Default

true

Comment

The dedicated install option is appropriate for TeamForge sites where:

- All services (the TeamForge application, the database, and Subversion) run on a single box.
- No other services run on the TeamForge box.

DEFAULT_LOCALE

The *DEFAULT_LOCALE* variable specifies the language in which automated email messages from the site are generated.

Values

Default

`en`

DEFAULT_PROJECT_ACCESS

The *DEFAULT_PROJECT_ACCESS* variable specifies the type of access that is assigned to a project when it is created. A project can be private, public, or gated.

Values

private, gated, public

Default

private

DISABLE_CREATE_INTEGRATION_SERVERS

The *DISABLE_CREATE_INTEGRATION_SERVERS* token specifies whether the creation of new SCM integrations is allowed.

Values

true or false

Default

false

Comments

When this token is set to its default value of "false", you can add SCM integration servers to your TeamForge site. Also, the **Discover Subversion Edge Servers** option, which enables you to find and connect to Subversion Edge servers on your LAN, is available.

DISABLE_USER_SELF_CREATION

The *DISABLE_USER_SELF_CREATION*variable restricts users from creating their own accounts on the TeamForge home page.

Values

true or false

Default

true

DISCUSSION_DROP_MIME_TYPES

The *DISCUSSION_DROP_MIME_TYPES* variable allows you to delete the mime types submitted by email that contain arbitrary strings.

Values

image/jpeg,image/jpg,text/xml

Default

Regular expression

Example

DISCUSSION_DROP_MIME_TYPES=image/jpeg,image/jpg,text/xml

Comments

Add one or more mime types to the Drop mime types filter. The presence of any of these mime types in an incoming message (via email)causes its deletion with appropriate notification to the posting user.

Note: If a mime type is specified in both the Reject and Drop mime filters, then the Reject mime type filter must take higher precedence than the Drop mime type filter.

DISCUSSION_EMAIL_MONITORING

The *DISCUSSION_EMAIL_MONITORING* variable determines which users can monitor a forum on the site.

Values

Value	Description
0	Allow only forum admins.
1	Users with role permissions.
4	All logged in users.
5	Allow all site users and guests.

Default

1

Example

DISCUSSION_EMAIL_MONITORING=4

Comments

This setting applies to the site as a whole. Project owners can choose to be more restrictive in their own project by selecting a lower value on the project administration page.

DISCUSSION_EMAIL_POSTING

The *DISCUSSION_EMAIL_POSTING* variable determines which users on your site can post to forums by e-mail.

Values

Value	Description
0	Allow only forum admins.
1	Users with roles and permissions.
4	All logged in users.
5	Allow known email addresses only.
6	Allow all site users and guests.

Default

1

Example

DISCUSSION_EMAIL_POSTING=4

Comments

This setting applies to the site as a whole. Project owners can choose to be more restrictive in their own project by selecting a lower value on the project administration page.

DISCUSSION_FORUM_EDITOR

The *DISCUSSION_FORUM_EDITOR* variable allows you to choose the type of text that can be used in discussion forum description using the editor tool.

Values

Rich Text/Plain Text

Default

Rich Text

Comments

You can use the RichText format only when you select the **WYSIWYG editor** from the Select Editor. This format is not supported when you choose the Plain Editor.

DISCUSSION_MAX_ATTACHMENT_SIZE

The *DISCUSSION_MAX_ATTACHMENT_SIZE* variable sets an upper limit to the size of files that users can attach to an email message sent to any discussion forum on the site.

Values

Integer (Megabytes)

Default

blank

Comment

A value of zero or less specifies that there is no limit, which is the same as the default behavior without the variable.

DISCUSSION_POST_EDITOR

The *DISCUSSION_POST_EDITOR* variable allows you to choose the type of text that can be used for posting in discussion forums using the editor tool.

Values

Rich Text/Plain Text

Default

Rich Text

Comments

You can use the RichText format only when you select the **WYSIWYG editor** from the Select Editor. This format is not supported when you choose the Plain Editor.

DISCUSSION_REJECT_CONTENT

The *DISCUSSION_REJECT_CONTENT* variable allows you to block the discussion messages submitted by email that contain arbitrary strings.

Values

Regular expression

Default

None

Example

DISCUSSION_REJECT_CONTENT=(?s).*word.*,(?s).*spam.*

Comments

Add one or more entries. Each regular expression must match an entire entry. The match of any of these entries in the body or subject of an incoming message (via email) causes its rejection, with appropriate notification to the posting user.

Note: The content entry is case sensitive.

DISCUSSION_REJECT_HEADERS

The *DISCUSSION_REJECT_HEADERS* variable allows you to block different headers submitted by email that contain arbitrary strings.

Values

Regular expression

Default

None

Example

DISCUSSION_REJECT_HEADERS=(?s).*headername1:value2.*,(?s).*name2:value2.*

Comments

Add one or more header names. Each regular expression must match an entire header name. The match of any of these headers in an incoming message (via email)causes its rejection, with appropriate notification to the posting user.

DISCUSSION_REJECT_MIME_TYPES

The *DISCUSSION_REJECT_MIME_TYPES* variable allows you to delete the mime types submitted by email that contain arbitrary strings.

Values

Application/PDF,text/xml

Default

Regular expression

Example

DISCUSSION_REJECT_MIME_TYPES=application/pdf,text/xml

Comments

Add one or more mime types to the Reject MIME types filter. The presence of any of these mime types in an incoming message (via email) will cause its deletion with appropriate notification to the posting user.

DISCUSSION_ADD_HEADERS

The *DISCUSSION_ADD_HEADERS* variable allows you to add custom headers to the emails posted in the forum.

Values

You can choose to add or remove headers by specifying the particular information you want to be added or dropped from the header. For example, if you add <#d#> in the Add header field, the URL of that discussion will be added to the header of all the available messages in that discussion.

Default

None

Example

DISCUSSION_ADD_HEADERS=headername1:value1, name2: value2 , post-id:<#n#>, forum-url:<#d#>, message-url:<#m#>, domain:<#h#>, list-name:<#l#>, list-address:<#l#>@<#h#>

Comments

Add one or more header names. The match of any of these headers in an outgoing message (via email) causes its addition with appropriate notification to the posting user.

DISPLAY_TIMEZONE

The *DISPLAY_TIMEZONE*variable specifies the time zone displayed in the site, which may be different from the time zone of the server on which the site is running.

Values

The ID for a timezone can be either a full name such as "America/Los_Angeles", or a custom ID in the form GMT[+|-]hh[[:]mm] such as "GMT-08:00". It can also be in the form of a three letter abbreviation such as "PST".

Default

The default timezone of the JVM, if it is undefined.

DOCUMENT_MAX_FILE_UPLOAD_SIZE

The *DOCUMENT_MAX_FILE_UPLOAD_SIZE* variable sets an upper limit to the size of the documents that can be attached.

Values

Integer (Megabytes)

Default

blank

Comment

A value of zero specifies that there is no limit, which is the same as the default behavior without the variable.

DOCUMENT_TEXT_EDITOR

The *DOCUMENT_TEXT_EDITOR* variable allows you to choose the type of text that can be used for the document description using the editor tool.

Values

Rich Text/Plain Text

Default

Rich Text

Comments

You can use the RichText format only when you select the **WYSIWYG editor** from the Select Editor. This format is not supported when you choose the Plain Editor.

DOMAIN_localhost

The *DOMAIN_localhost* variable links the URL at which users can access the TeamForge site to the hostname of the machine where the site is running.

Values

Host and domain specification

Default

None

Example

DOMAIN_appbox.supervillain.org=worlddomination.supervillain.org

Comments

The *DOMAIN_localhost* variable consists of two options. One option identifies the host name of the machine where the TeamForge application is running, and the other specifies the URL through which users will access the services running on that machine.

- To identify the host machine, replace the localhost portion of the *DOMAIN_localhost* variable with the hostname of the machine where the TeamForge application runs.
- To specify the URL, set the value of the variable to the publicly accessible domain name of the site.

Note:

- The localhost portion of the *DOMAIN_localhost* variable must match the localhost portion of the *HOST_localhost* variable.
- If the site has its services distributed on multiple machines, the localhost portion of the variable must match the host to which the app option is assigned.

ENABLE_UI_FOR_CUSTOM_EVENT_HANDLERS

When the *ENABLE_UI_FOR_CUSTOM_EVENT_HANDLERS* variable is set to true, site administrators can use the web interface to add custom event handlers to a site.

Values

true or false

Default

true

ENFORCE_MINIMUM_USERNAME_LENGTH

The *ENFORCE_MINIMUM_USERNAME_LENGTH* variable determines the minimum length that can be set for usernames.

Values

0-31

Default

0

ETL_BUILTIN_TOMCAT

The *ETL_BUILTIN_TOMCAT* variable specifies the type of Tomcat (internal or external) used for the ETL service.

Values

true or false

Default

true

Comment

If ETL_BUILTIN_TOMCAT=true, the internal Tomcat is used for the ETL service. If the token is set to false, it is mandatory to specify the home directory of the Tomcat's install directory in the token *EXTERNAL_TOMCAT_INSTALL_DIR*

ETL_JOB_THREAD_COUNT

The *ETL_JOB_THREAD_COUNT* variable specifies the number of Extract, Transform and Load (ETL) jobs that can be run simultaneously.

Values

1-100

Default

2

Comments

If you only have a few jobs to be triggered few times a day, then 1 thread is sufficient. If you have tens of thousands of jobs, that needs to be triggered every minute, then you probably require thread counts like 50 or 100 (this depends on the nature of the work that your jobs perform, and your systems resources).

ETL_JOB_TRIGGER_TIME

The *ETL_JOB_TRIGGER_TIME* variable specifies the time and date for recurrent Extract, Transform and Load (ETL)jobs.

Values

Cron expression.

Default

0 30 2 * * ?

Comments

This variable takes a cron expression for a value, and not an absolute time value. The default value evaluates to 2.30 a.m. local time. For help with cron expressions, see *http://en.wikipedia.org/wiki/Cron*.

ETL_SOAP_SHARED_SECRET

The *ETL_SOAP_SHARED_SECRET* variable enables users to access site-wide reporting data via a SOAP client.

Values

String (possibly encrypted).

Default

mightyetlsoapsecret

EXTERNAL_TOMCAT_INSTALL_DIR

The *EXTERNAL_TOMCAT_INSTALL_DIR* variable specifies the path to a valid Tomcat installation directory.

Values

Path specification.

Default

None

Comment

If either of these tokens, INTEGRATION_BUILTIN_TOMCAT/ETL_BUILTIN_TOMCAT are set to false, then it is mandatory to specify the home directory of the Tomcat install directory in the token EXTERNAL_TOMCAT_INSTALL_DIR

FORBIDDEN_PASSWORD

The *FORBIDDEN_PASSWORD* variable restricts specified words from being used as passwords.

Values

Comma-separated strings

Default

None

HELP_AVAILABILITY

The *HELP_AVAILABILITY* variable specifies whether context-sensitive online help is served from a network location or from a copy of the content stored on the TeamForge application server. (Context-sensitive help is what the user sees upon clicking the **Help** link in the TeamForge web UI.)

Values

remote, local

Default

remote

HOST_localhost

The *HOST* variable identifies which of the TeamForge site's services are to run on a given machine.

Values

One or more of: app, database, cvs, subversion, etl, datamart

Default

app database cvs subversion etl datamart

Comments

Multiple applications can be assigned to a host. List the applications in space-separated format.

Important:

- app (the main TeamForge application) must be assigned to one host only.
- database (the PostgreSQL or Oracle application) must be assigned to one host only.

Examples

Here are some possible variations on the *HOST_* variable when configured on the box where the main TeamForge application is running.

- This host has been assigned the main application, the database, and the Subversion and CVS source control services:

  ```
  HOST_localhost=app database subversion cvs
  ```

- This is a two-box setup with a database running on a separate machine:

  ```
  HOST_localhost.example.com=app subversion cvs etl datamart
  HOST_mydatabase.mydomain.net=database
  ```

- This is a three-box setup with Perforce and the TeamForge application running on one machine, the database on another and the reporting services on a third:

  ```
  HOST_localhost=app perforce
  HOST_mydatabase.mydomain.net=database
  HOST_myreportingbox.mydomain.net=etl datamart
  ```

- This is a three-box setup with the TeamForge application and reporting engine on one machine, both databases on another machine, and the source control services on a third machine.

  ```
  HOST_localhost=app etl
  HOST_mydatabase.mydomain.net=database datamart
  ```

- This is a four-box setup:

  ```
  HOST_localhost.com=app database
  HOST_myreportingbox.mydomain.net=etl datamart
  HOST_mycvs.mydomain.net=cvs
  ```

Note: Observe that when the source control integrations run on a separate box from the main application, no *HOST_* variable is needed on the application box to point to the source control box. The source control machine needs to know how to find the main application box, but the application box does not need to know where the source code integration box is.

HTTPD_LOG_DIR

The *HTTPD_LOG_DIR* variable specifies the path where information about the activity of the TeamForge site's Apache service is written.

Values

Path specification

Default

```
{__LOG_DIR__}/httpd
```

INCLUDE_ORGANIZATION_USER_FIELD

The *INCLUDE_ORGANIZATION_USER_FIELD* variable controls whether the organization entry is displayed while creating a user account.

Values

true or false

Default

true

INITIAL_PASSWORD_CHANGE_ACTIVATION_CODE_TIMEOUT

The *INITIAL_PASSWORD_CHANGE_ACTIVATION_CODE_TIMEOUT* variable sets the duration of the validity of the password ticket.

Values

true or false

Default

true

INTEGRATION_BUILTIN_TOMCAT

The *INTEGRATION_BUILTIN_TOMCAT* variable specifies the type of Tomcat (internal or external) used for SCM integrations.

Values

true or false

Default

true

Comment

If INTEGRATION_BUILTIN_TOMCAT=true, the internal Tomcat is used for SCM integrations. If the token is set to false, it is mandatory to specify the home directory of the Tomcat install directory in the token EXTERNAL_TOMCAT_INSTALL_DIR

INTEGRATION_JAVA_OPTS

The *INTEGRATION_JAVA_OPTS* variable specifies the memory settings for the Java virtual machine that supports the site's integrated source control services.

Values

Java specifications

Default

-Xms160m -Xmx160m -server -XX:+HeapDumpOnOutOfMemoryError -XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails -Dsun.rmi.dgc.client.gcInterval=600000 -Dsun.rmi.dgc.server.gcInterval=600000

INTEGRATION_LOG_DIR

The *INTEGRATION_LOG_DIR* variable specifies the path where information about the activity of the TeamForge site's source code integrations is written.

Values

Path specification

Default

```
{__LOG_DIR__}/integration
```

JAMES_GATEWAY_HOST

The *JAMES_GATEWAY_HOST* variable specifies a mail server with Internet access, separate from the TeamForge server.

Values

Email address specification

Default

None

Comments

Specifying a gateway host assures delivery of site email to users if your TeamForge server cannot connect to a DNS server or cannot get outside connections over port 25.

The mail account specified must be hosted on a separate server from the TeamForge site server.

The *SYSTEM_EMAIL*, *ADMIN_EMAIL*, and *JAMES_POSTMASTER_EMAIL* variables can specify the same address.

Note: Specify the gateway host by its fully qualified domain name, not a host name.

JAMES_LOG_DIR

The *JAMES_LOG_DIR* variable specifies the path where information about the activity of the TeamForge site's email component is written.

Values

Path specification

Default

```
{__LOG_DIR__}/james
```

JAMES_POSTMASTER_EMAIL

The *JAMES_POSTMASTER_EMAIL* variable specifies a valid email address for the person or machine that handles email for the domain, such as postmaster@supervillain.org.

Values

Email address specification

Default

root@{__APPLICATION_HOST__}

Comments

The mail account specified must be hosted on a separate server from the TeamForge site server.

The *SYSTEM_EMAIL*, *ADMIN_EMAIL*, and *JAMES_POSTMASTER_EMAIL* variables can specify the same address.

JAVA_HOME

The *JAVA_HOME* variable specifies the path where the JBoss JVM is running.

Values

Path specification

Default

`/usr/java/jdk1.5.0_12`

JBOSS_JAVA_OPTS

The *JBOSS_JAVA_OPTS* variable specifies the memory settings for the JBoss Java virtual machine.

Values

Java specifications

Default

-Xms1024m -Xmx1024m -XX:MaxPermSize=512m -server -XX:+HeapDumpOnOutOfMemoryError -XX:HeapDumpPath=/tmp - verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails -Dsun.rmi.dgc.client.gcInterval=600000 -Dsun.rmi.dgc.server. gcInterval=600000

JBOSS_ALARM_TIMEOUT

The *JBOSS_ALARM_TIMEOUT* variable specifies the time duration within which the JBoss service is expected to respond to requests sent by jboss_watchdog.

Values

Integer

Default

20

LOGIN_ATTEMPT_LOCK

The *LOGIN_ATTEMPT_LOCK* variable specifies the maximum number of times an user can attempt to access the site.

Values

1-3

Default

3

LOG_DIR

The *LOG_DIR* variable specifies the path where information about the TeamForge site's activity is written.

Values

Path specification

Default

`{__SITE_DIR__}/log`

LOG_QUERY_TIME_THRESHOLD

The *LOG_QUERY_TIME_THRESHOLD* variable enables you to log database requests at INFO level if they run longer than a given period.

By default, database requests are logged at DEBUG level. Configuring a value for *LOG_QUERY_TIME_THRESHOLD* causes requests that run for a period greater than that value to be logged at the INFO level, which makes them show up in `vamessages.log`.

Set the value to zero to log all database queries at INFO.

Values

Integer (in milliseconds)

Default

1000

LOGIN_CONFIG_XML

The *LOGIN_CONFIG_XML* variable specifies the path to the LDAP configuration file.

Values

Path specification

Default

{__DATA_DIR__}/etc/login-config.xml

MAX_WWW_CLIENT

The *MAX_WWW_CLIENT* variable specifies the maximum number of Tomcat request processing threads to be created by the HTTP connector.

Values

Integer

Default

220

MIGRATION_LOG_DIR

The *MIGRATION_LOG_DIR* variable specifies the path where information about the conversion of site data is written during an upgrade.

Values

Path specification

Default

`{__LOG_DIR__}/runtime`

MINIMUM_USERNAME_LENGTH

The *MINIMUM_USERNAME_LENGTH* variable sets the shortest username that the system allows when a user account is created.

Values

Integer (number of characters)

Default

3

MINIMUM_PASSWORD_LENGTH

The *MINIMUM_PASSWORD_LENGTH* variable sets the shortest password that the system allows when a user account is created.

Values

Integer (number of characters)

Default

6

MIRROR DATABASE HOST

The *MIRROR_DATABASE_HOST* variable is a TeamForge database token that specifies the host of the database. This variable allows to extract the reporting data from the mirror TeamForge database through the Extract, Transform and Load (ETL) process.

Values

Alphanumeric string

Default

The MIRROR_ token takes the value of DATABASE_ token.

Comment

Example: Enter *MIRROR_DATABASE_HOST*=cu349.cloud.sp.collab.net (server name)

Add this token to the `site-options.conf` only if you setup a mirror database.

MIRROR_DATABASE_NAME

The *MIRROR_DATABASE_NAME* variable is a TeamForge database token that specifies the name of the TeamForge database. This variable allows to extract the reporting data from the mirror TeamForge database through the Extract, Transform and Load (ETL) process.

Values

Alphanumeric string

Default

The MIRROR_ token takes the value of DATABASE_ token.

Comment

Example: Enter *MIRROR_DATABASE_NAME*=ctfdb

Add this token to the `site-options.conf` only if you setup a mirror database.

MIRROR_DATABASE_PASSWORD

The *MIRROR_DATABASE_PASSWORD* variable is a TeamForge database token that specifies the password of the database. This variable allows to extract the reporting data from the mirror TeamForge database through the Extract, Transform and Load (ETL) process.

Values

Alphanumeric string

Default

The MIRROR_ token takes the value of DATABASE_ token.

Comment

Example: Enter *MIRROR_DATABASE_PASSWORD*=ctfpwd

Add this token to the `site-options.conf` only if you setup a mirror database.

MIRROR_DATABASE_PORT

The *MIRROR_DATABASE_PORT* variable is a TeamForge database token that specifies the port number of the database. This variable allows to extract the reporting data from the mirror TeamForge database through the Extract, Transform and Load (ETL) process.

Values

Port specification

Default

The MIRROR_ token takes the value of the DATABASE_ token.

Comment

Example: Enter *MIRROR_DATABASE_PORT*=5432.

Add this token to the `site-options.conf` only if you setup a mirror database.

MIRROR_DATABASE_USERNAME

The *MIRROR_DATABASE_USERNAME* variable is a TeamForge database token that specifies the database user's name. This variable allows to extract the reporting data from the mirror TeamForge database through the Extract, Transform and Load (ETL) process.

Values

Alphanumeric string

Default

The MIRROR_ token takes the value of the DATABASE_ token.

Comment

Example: Enter *MIRROR_DATABASE_USERNAME*=ctfuser

Add this token to the `site-options.conf` only if you setup a mirror database.

MODPAGESPEED_ENABLED

The *MODPAGESPEED_ENABLED* variable is used to enhance the performance of the web pages.

Values

true or false

Default

true

ORGANIZATION_EDITABLE

The *ORGANIZATION_EDITABLE* variable allows or prevents editing the organization value of a user account.

Values

true or false

Default

true

INCLUDE_ORGANIZATION_USER_FIELD

The *INCLUDE_ORGANIZATION_USER_FIELD* variable controls whether the organization entry is displayed while creating a user account.

Values

true or false

Default

true

PASSWORD_DELETE_PERIOD

The *PASSWORD_DELETE_PERIOD* variable specifies the time frame within which a disabled user account is automatically deleted.

Values

Integer (number of days)

Default

60

Note: The *PASSWORD_DELETE_PERIOD* can be disabled by setting the value to zero.

PASSWORD_DISABLE_PERIOD

The *PASSWORD_DISABLE_PERIOD* variable specifies the time frame within which a user (soft-expired) is turned into a disabled user.

Values

Integer (number of days)

Default

30

Comments

A value of zero will disable this feature.

PASSWORD_EXPIRY_PERIOD

The *PASSWORD_EXPIRY_PERIOD* variable specifies the number of days after which the users' password expires.

Values

Integer (number of days)

Default

90

Note: You cannot disable the *PASSWORD_EXPIRY_PERIOD* by setting the value to zero.

PASSWORD_REQUIRES_MIXED_CASE

The *PASSWORD_REQUIRES_MIXED_CASE* variable specifies that the user password must contain mixed case letters.

Values

true or false

Default

true

PASSWORD_REQUIRES_NON_ALPHANUM

The *PASSWORD_REQUIRES_NON_ALPHANUM* variable specifies that the user password must contain a non-alphanumeric character.

Values

true or false

Default

`true`

PASSWORD_REQUIRES_NUMBER

The *PASSWORD_REQUIRES_NUMBER* variable specifies that the user password must atleast contain one number.

Values

true or false

Default

`true`

PERFORCE_LOG_DIR

The *PERFORCE_LOG_DIR* variable specifies the path where information about the activity of the TeamForge site's Perforce source control integration, if any, is written.

Values

Path specification

Default

`{__LOG_DIR__}/perforce`

PERFORCE_CLIENT_DIR

The *PERFORCE_CLIENT_DIR* variable specifies the path where the Perforce client is installed.

Values

Path specification

Default

`/usr/local/bin/p4`

PERFORCE_LICENSE_FILE

The *PERFORCE_LICENSE_FILE* variable specifies a path to a file on the server where Perforce is installed, containing the license data for that Perforce installation.

Values

Path specification

Default

`/tmp/license`

PERFORCE_PORT

The *PERFORCE_PORT* variable specifies the port on which Perforce listens for requests.

Values

Port specification

Default

`localhost:1666`

PGSQL_COMMIT_DELAY

The *PGSQL_COMMIT_DELAY* variable specifies the time delay between writing a commit record to the write ahead log (WAL) buffer and flushing the buffer out to disk.

Values

Integer (in microseconds)

Default

`250`

Comments

Together with the *PGSQL_COMMIT_SIBLINGS* option, this option allows a group of otherwise unrelated transactions to be flushed to disk at the same time, with possible significant performance gain.

PGSQL_COMMIT_SIBLINGS

The *PGSQL_COMMIT_SIBLINGS* variable sets the minimum number of concurrent open transactions to require before performing the delay specified by the *PGSQL_COMMIT_DELAY* option.

Values

Integer

Default

`10`

Comments

Together with the *PGSQL_COMMIT_DELAY* option, this option allows a group of otherwise unrelated transactions to be flushed to disk at the same time, with possible significant performance gain.

PGSQL_EFFECTIVE_CACHE_SIZE

The *PGSQL_EFFECTIVE_CACHE_SIZE* variable specifies the size of the OS data cache that is available to PostgreSQL. PostgreSQL can use that data to select the optimal way to execute requests.

Values

Default

Comments

The right value for this variable depends in part on the available RAM on the server where your site is running. Set this value at the highest amount of RAM that you expect to be always available to PostgreSQL.

CollabNet recommends these settings:

8GB RAM	16GB RAM	32GB RAM	64GB RAM	128GB RAM
512MB	1GB	2GB	4GB	8GB

PGSQL_LOG_DIR

The *PGSQL_LOG_DIR* variable specifies the path where information about the activity of the TeamForge site's PostgreSQL database is written.

Values

Path specification

Default

`{__LOG_DIR__}/pgsql`

PGSQL_MAINTENANCE_WORK_MEM

The *PGSQL_MAINTENANCE_WORK_MEM* variable specifies the maximum amount of memory to be used in maintenance operations such as `VACUUM`.

Values

Integer (in MB)

Default

`64`

Comments

For most sites, CollabNet recommends that you set this to 256MB.

PGSQL_MAX_CONNECTIONS

The *PGSQL_MAX_CONNECTIONS* variable determines the number of concurrent connections available to the database server.

Values

Integer

Default

`135`

PGSQL_MAX_FSM_PAGES

The *PGSQL_MAX_FSM_PAGES* variable tells the `vacuum` process how many pages to look for in the shared free-space map.

Values

Integer

Default

`500000`

Comments

Each FSM page uses 6 bytes of RAM for administrative overhead, so increasing FSM substantially on systems low on RAM may be counter-productive.

PGSQL_MAX_FSM_RELATIONS

The *PGSQL_MAX_FSM_RELATIONS* variable specifies how many relations (tables) will be tracked in the free space map.

Values

Default

`500`

PGSQL_MAX_STACK_DEPTH

The *PGSQL_MAX_STACK_DEPTH* variable specifies the maximum safe depth of the server's execution stack.

Values

Integer

Default

`5120`

PGSQL_SHARED_BUFFERS

The *PGSQL_SHARED_BUFFERS* variable defines a block of memory that PostgreSQL will use to hold requests that are awaiting attention from the kernel buffer and CPU.

Values

Integer, in MB

Default

`240MB`

Comments

The right value for this variable depends in part on the available RAM on the server where your site is running. For optimal performance, consider these settings:

8GB RAM	16GB RAM	32GB RAM	64GB RAM	128GB RAM
240MB	480MB	960MB	1.5GB	3.5GB

PGSQL_VACUUM_COST_DELAY

The *PGSQL_VACUUM_COST_DELAY* variable controls the length of time that an I/O process will sleep when the limit set by *vacuum_cost_limit* has been exceeded.

Values

Integer (milliseconds)

Default

`50`

PGSQL_WAL_BUFFERS

The *PGSQL_WAL_BUFFERS* variable specifies the number of buffers available for the Write Ahead Log.

Values

Default

`10MB`

Comments

If your database has many write transactions, setting this value bit higher than default may result better usage of disk space.

PGSQL_WORK_MEM

The *PGSQL_WORK_MEM* variable specifies the amount of memory to be used by internal sort operations and hash tables before switching to temporary disk files. .

Values

Integer (in MB)

Default

`64MB`

Comments

The right value for this variable depends in part on the available RAM on the server where your site is running. For optimal performance, consider these settings:

8GB RAM	16GB RAM	32GB RAM	64GB RAM	128GB RAM
64MB	128MB	256MB	512MB	512MB

PHOENIX_JAVA_OPTS

The *PHOENIX_JAVA_OPTS* variable specifies the memory settings for the Java virtual machine that supports the site's ability to send and receive email and to index data for search.

Values

Java specifications

Default

-Xms256m -Xmx256m -server -XX:+HeapDumpOnOutOfMemoryError -XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails -Dsun.rmi.dgc.client.gcInterval=600000 -Dsun.rmi.dgc.server.gcInterval=600000

PHOENIX_JAVA_OPTS

The *PHOENIX_JAVA_OPTS* variable specifies the memory settings for the Java virtual machine that supports the site's ability to send and receive email and to index data for search.

Values

Java specifications

Default

-Xms256m -Xmx256m -server -XX:+HeapDumpOnOutOfMemoryError -XX:HeapDumpPath=/tmp -verbose:gc -XX:+PrintGCTimeStamps -XX:+PrintGCDetails -Dsun.rmi.dgc.client.gcInterval=600000 -Dsun.rmi.dgc.server.gcInterval=600000

PLANNING_FOLDER_DISCUSSION_EDITOR

The *PLANNING_FOLDER_DISCUSSION_EDITOR* variable allows you to choose the type of text that can be used in the planning folder description using the editor tool.

Values

Rich Text/Plain Text

Default

Rich Text

Comments

You can use the RichText format only when you select the **WYSIWYG editor** from the Select Editor. This format is not supported when you choose the Plain Editor.

REMOTE_HELP_URL

The *REMOTE_HELP_URL* variable specifies the location from which context-sensitive help content is served, if the *HELP_AVAILABILITY* variable is set to remote.

Values

Fully qualified domain name

Default

None

Example

None

REPORTS_DATABASE_NAME

The *REPORTS_DATABASE_NAME* variable specifies the name of the site's reporting database, also known as the datamart.

Values

Alphanumeric string

Default

ctfrptdb

Comments

It is OK for this variable to have the same value as *DATABASE_NAME*, because they are running in separate pgsql processes.

REPORTS_DATABASE_PASSWORD

The *REPORTS_DATABASE_PASSWORD* variable is the password for the Linux user that is authorized to read from and write to the site's reporting database.

Values

Alphanumeric string

Default

ctfrptpwd

Comments

It is OK for this variable to have the same value as *DATABASE_PASSWWORD*, because they are running in separate PostgreSQL processes.

REPORTS_DATABASE_PORT

The *REPORTS_DATABASE_PORT* variable defines a separate port for the reporting database (aka datamart). Using a separate port can improve site performance when database utilization is high.

Values

Port specification

Default

5632

Comments

As of TeamForge 6.1, only port 5632 is supported.

REPORTS_DATABASE_USERNAME

The *REPORTS_DATABASE_USERNAME* variable specifies the Linux user that is authorized to read from and write to the site's reporting database.

Values

Alphanumeric string

Default

ctfuser

Comments

For some advanced operations, you may need to log into the database as the database user. However, under normal conditions only the TeamForge site process itself needs to access the database.

It is OK for this variable to have the same value as *DATABASE_USERNAME*, because they are running in separate PostgreSQL processes.

REPORTS_ENABLE_REPORT_GENERATION

The *REPORTS_ENABLE_REPORT_GENERATION*variable is used to enable or disable the Reports tab in the UI.

Values

true or false

Default

true or false

Comments

Datamart is enabled by adding the 'datamart' service to the HOST_<hostname>token. The service is disabled if datamart is not added. The default value of the REPORTS_ENABLE_REPORT_GENERATION token is based on this service.

REQUIRE_PASSWORD_SECURITY

The *REQUIRE_PASSWORD_SECURITY* variable specifies the password policy for security reasons.

Values

true or false.

Default

true

Comment

This variable can be useful when an organization's security policy prohibits users from entering passwords without any restrictions.

REQUIRE_USER_PASSWORD_CHANGE

The *REQUIRE_USER_PASSWORD_CHANGE* variable determines if the user password needs to be changed during the first login instance.

Values

true or false.

Default

true

Comment

Setting a value true makes the new system force users to change password during first login and false otherwise.

RUNTIME_LOG_DIR

The *RUNTIME_LOG_DIR* variable specifies the path where information about the activity of the TeamForge site's runtime environment is written.

Values

Path specification

Default

```
{__LOG_DIR__}/runtime
```

SCM_DEFAULT_SHARED_SECRET

The *SCM_DEFAULT_SHARED_SECRET* variable allows SCM Integrations to securely communicate with the TeamForge app server.

Values

- Alpha-numeric
- Special characters like '~!@#$%^&*'
- 16-24 byte length

Default

The default value is automatically generated during runtime.

SCM_USER_ENCRYPTED_PASSWORD

The *SCM_USER_ENCRYPTED_PASSWORD* variable is used to store the password of the scmviewer in the encrypted format.

Values

- Alpha-numeric
- Special characters like '~!@#$%^&*'

Default

The default value will be in the encrypted format. See *password_util.sh* on page 348 for more information.

SEARCH_LOG_DIR

The *SEARCH_LOG_DIR* variable specifies the path where information about the activity of the TeamForge site's Lucene search component is written.

Values

Path specification

Default

`{__LOG_DIR__}/james`

SEARCH_MAX_FILE_SIZE

the *SEARCH_MAX_FILE_SIZE* variable sets an upper limit to the size of files that are indexed for search.

Values

Integer (bytes)

Default

10M

Comment

A value of zero or less specifies that there is no limit, which is the same as the default behavior without the variable.

SEARCH_SUPPRESS_ARCHIVE_SUB_DOCS

The *SEARCH_SUPPRESS_ARCHIVE_SUB_DOCS* variable prevents archive files from being indexed for search.

Archive files include `zip`, `gzip`, `tar`, and similar file types. They also include document files that are stored in archive format, such as `docx` files from Microsoft Word 2007.

Values

true, false

Default

`true`

SESSION_COOKIES_ONLY

the *SESSION_COOKIES_ONLY* variable restricts the persistence of all cookies to the user's current session.

If *SESSION_COOKIES_ONLY*=true, then all cookies created during the user session expire automatically when the user closes their browser. If it is false, the cookie expires according to the system logic for that particular cookie.

Values

true or false

Default

false

Comment

This variable can be useful when an organization's security policy prohibits cookies that persist across user sessions.

SITE_DIR

The *SITE_DIR* variable specifies the path where the TeamForge application is installed.

Values

Path specification

Default

```
/opt/collabnet/teamforge
```

Comments

- Must match the -d | --directory option to the installer.
- Spaces are not allowed.

SOAP_ANONYMOUS_SHARED_SECRET

The *SOAP_ANONYMOUS_SHARED_SECRET* variable allows users to have an anonymous login to the TeamForge site through SOAP.

Values

String (possibly encrypted)

Default

None

Comment

The variable must be configured to a non-empty value if users need to have an anonymous login to the site through SOAP. A value must be provided if site-wide reporting is enabled.

SOAP_ARTIFACT_LIST_LIMIT

The *SOAP_ARTIFACT_LIST_LIMIT* variable is used to limit the number of artifacts returned via SOAP calls.

Values

Integer

Default

-1: this means that the artifact list retrieved via SOAP is unlimited

Comments

In TeamForge releases earlier than 6.1.1, SOAP calls returned everything that was asked for, and that is the default behavior in Teamforge 6.1.1 as well. However, sites with performance and stability issues (OutOfMemory errors) in returning a large number of artifacts can now limit the number using this token. Changing this value requires a recreate-runtime and thus a site restart.

Important: Increasing the number of artifacts beyond the optimal 20,000 - 25,000 range might cause a heap dump.

SSL

The *SSL* variable activates Secure Socket Layer encryption for the TeamForge site.

Values

on or off

Default

on

SSL_CERT_FILE

The *SSL_CERT_FILE* specifies the path to the file where the TeamForge site's Secure Socket Layer certificate is stored.

Values

Path specification

Default

None

SSL_CHAIN_FILE

The *SSL_CHAIN_FILE* variable specifies the path to the file where the TeamForge site's SSL certficate chain file is stored.

Values

Path specification

Default

None

SSL_KEY_FILE

The *SSL_KEY_FILE* specifies the path to the file where the TeamForge site's RSA private key is stored when Secure Socket Layer encryption is in effect.

Values

Path specification

Default

None

SUBVERSION_BRANDING_URI

The *SUBVERSION_BRANDING_URI* variable specifies the path component of the data repository URL.

Values

BDB or FSFS

Default

BDB

SUBVERSION_REPOSITORY_BASE

The *SUBVERSION_REPOSITORY_BASE* variable specifies the path to the root directory for the site's Subversion repositories. You can use this variable to put your source code repositories at a custom location on your site's server or on the network.

Values

Path specification

Default

/svnroot

SYSTEM_EMAIL

The *SYSTEM_EMAIL* variable specifies a valid email address for the system administrator responsible for this site.

System administrators can use this email address to set up outage alerts and other notifications.

The mail account specified must be hosted on a separate server from the TeamForge site server.

The *SYSTEM_EMAIL*, *ADMIN_EMAIL*, and *JAMES_POSTMASTER_EMAIL* variables can specify the same address.

Important: In TeamForge 6.x, the sender name and address for system-generated emails is taken from the value of the *SYSTEM_EMAIL* variable. Therefore, changing the admin user's full name or email address does not affect the sender details of system-generated emails. This is different from TeamForge 5.x, in which the sender name and address for system-generated emails is derived from the admin user's full name and email address.

Values

Email address specification

Default

root@{__APPLICATION_HOST__}

USE_BROWSER_CACHE_PASSWORD

The *USE_BROWSER_CACHE_PASSWORD* variable restricts the storage of password in the browser when you login to the site.

Values

true/false

Default

true

USE_EXTERNAL_USER_AUTHENTICATION

The *USE_EXTERNAL_USER_AUTHENTICATION* variable specifies whether users can authenticate through a separate system, such as OpenLDAP 2.3.27-5.

Values

true or false

Default

false

USER_ACCOUNT_RESTRICTED

The *USER_ACCOUNT_RESTRICTED* variable determines whether newly created users are "restricted" or "unrestricted" users by default.

- Restricted users can access only public projects and projects of which they are members.
- Unrestricted users can access all projects except private projects of which they are not members.

Values

true or false

Default

true

USER_NEED_PERMISSION_TO_VIEW_FULL_USER_DETAILS

The *USER_NEED_PERMISSION_TO_VIEW_FULL_USER_DETAILS* variable restricts users from viewing other users' organization information.

Values

true or false

Default

false

USERS_WITH_NO_EXPIRY_PASSWORD

The *USERS_WITH_NO_EXPIRY_PASSWORD* variable specifies the users for whom there is no expiry of password.

Values

Specify the usernames (for the user accounts) for which there is no expiry of password.

Default

admin, nobody, system, scmviewer (for SaaS and BTF)

Comment

The variable is enabled by default and available in all the `site-options.conf` files.

Using multi-line blocks for site options

The multi-line block configuration is generally used by old SFEE sites. To define a `site-options.conf` token with a multi-line block value, you need to follow a certain syntax.

- Declare the token name with the value "START_MULTILINE_BLOCK". Syntax: <TOKEN_NAME>=START_MULTILINE_BLOCK
- Specify the multi-line values beneath the token.
- Complete the multi-line block with "END_MULTILINE_BLOCK" after all the multi-line values are specified. Syntax: END_MULTILINE_BLOCK

Example

```
SOURCEFORGE_CONFIGURATION_PROPERTIES_APPEND=START_MULTILINE_BLOCK
email.suppress.project_member_added=true
email.suppress.scm_user_password_synchronized=true
END_MULTILINE_BLOCK
```

c6migrate.conf variables

These are the configuration settings you can specify in the `c6migrate.conf` file.

Name	Description	Default	Values	Comm
LOG_LEVEL	When set to "INFO", the log is not verbose.	INFO	DEBUG, INFO, WARN, ERROR	
CEE_SITE_DIR	The path to the CEE site directory, for example, `/u1/sourcecast`.			
PROJECT_TRACKER_XML_FILE	The path to the PT XML file, for example, `/u3/PTInstaller-1.0.45/installer/conf/pt.xml`.			
PROJECT_CREATION_DATE	This fall-back date is used when a project's or role's creation/modification date is not found in the audit log.	2000-01-01\ 00:00:00		

httpd.conf

These are the changes you must make to the `/etc/httpd/conf/httpd.conf` file.

```
##
# SFEE configuration
##
# mod_deflate for improving performance
DeflateFilterNote Input instream
DeflateFilterNote Output outstream
DeflateFilterNote Ratio ratio
LogFormat '"%r" %{outstream}n/%{instream}n {%{ratio}n%%}' deflate
<Location />
 AddOutputFilterByType DEFLATE text/html
 # Netscape 4.x has some problems...
 BrowserMatch ^Mozilla/4 gzip-only-text/html
 # Netscape 4.06-4.08 have some more problems
 BrowserMatch ^Mozilla/4\.0[678] no-gzip
# NOTE: Due to a bug in mod_setenvif up to Apache 2.0.48
 # the above regex won't work. You can use the following
 # workaround to get the desired effect:
 BrowserMatch \bMSI[E] no-gzip
 # Don't compress images
 SetEnvIfNoCase Request_URI \
  \.(?:gif|jpe?g|png)$ no-gzip dont-vary
 # Make sure proxies don't deliver the wrong content
 Header append Vary User-Agent env=!dont-vary
</Location>

# mod_expires for even better performance
ExpiresActive On
ExpiresDefault "access plus 0 seconds"
ExpiresByType image/gif "access plus 1 days"
ExpiresByType image/jpeg "access plus 1 days"
ExpiresByType image/png "access plus 1 days"
ExpiresByType text/css "access plus 7 days"
ExpiresByType text/javascript "access plus 7 days"
ExpiresByType application/x-javascript "access plus 7 days"
ExpiresByType image/x-icon "access plus 7 days"

# SFEE rewrites to make the app 'live' on port 80 and not 8080
```

```
RewriteEngine on
RewriteLog logs/rewrite
RewriteLogLevel 1
# Added to supress http trace for security reasons
RewriteCond %{REQUEST_METHOD} ^TRACE
RewriteRule .* - [F]
# make '/' redirect to SFEE
RewriteRule ^/$ http://%{SERVER_NAME}/sf/ [R]
# now pass the URL to the actual SFEE application server
RewriteRule ^/sf$ http://localhost:8080/sf [P]
RewriteRule ^/sf/(.*) http://localhost:8080/sf/$1 [P]

# Pass ScmListener SOAP requests
RewriteCond %{REQUEST_URI} ^/ce-soap50/services/ScmListener
RewriteRule ^/ce-soap50/(.*) http://localhost:8080/ce-soap50/$1 [P]
#Pass all non-listeners SOAP requests. Delete next 4 lines if you don't use SOAP
 APIs.
RewriteCond %{REQUEST_URI} !^/ce-soap50/services/[^/]*Listener
RewriteRule ^/ce-soap50/(.*) http://localhost:8080/ce-soap50/$1 [P]
RewriteRule ^/ce-soap5042/(.*) http://localhost:8080/ce-soap5042/$1 [P]
RewriteRule ^/ce-soap5043/(.*) http://localhost:8080/ce-soap5043/$1 [P]

# route SCM requests to the SFEE integration server
RewriteCond %{REQUEST_URI} !^/integration/services
RewriteCond %{REQUEST_URI} !^/integration/servlet
RewriteRule ^/integration/(.*) http://localhost:7080/integration/$1 [P]
ProxyPassReverse / http://localhost:8080/
ProxyPassReverse / http://localhost:7080/
##
# end SFEE configuration
##
```

pebble-app.xml

The `pebble-app.xml` file, also known as the Pebble application configuration file, contains the text that the Pebble application displays in the TeamForge user interface.

This is an example of a default (unedited) `pebble-app.xml` file. To create your own integrated application config file, copy this one into a new file and replace the values with the values appropriate for the application you are integrating.

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE integrated-application
  PUBLIC "-//CollabNet, Inc.//DTD Integrated Application Descriptor 1.0//EN"

"http://schema.open.collab.net/sfee50/dtd/sf-pluggable-application-descriptor_1_0.dtd">
<integrated-application>
    <name>Pebble Blog</name>
    <description>l10n.application.description</description>
    <permissions>
        <permission dapMappedTo="View">Blog Reader</permission>
        <permission>Blog Contributer</permission>
        <permission>Blog Publisher</permission>
        <permission>Blog Owner</permission>
    </permissions>
    <prefix>PB</prefix>
    <id-pattern></id-pattern>
    <require-per-project-prefix>true</require-per-project-prefix>
    <require-scm-integration>true</require-scm-integration>
    <!-- Page components for Integrated apps is not implemented for Alpha -->
    <page-component>
      <require-page-component>true</require-page-component>
      <page-component-details>
```

```
        <inputtype>text</inputtype>
        <resultformat>html</resultformat>
        <description>l10n.pce.description</description>
        <title>l10n.pce.title</title>
      </page-component-details>
    </page-component>
    <config-parameters>
        <!-- Pebble Configuration Parameters -->
        <param>
            <title>l10n.blogname.title</title>
            <name>blogName</name>
            <description>l10n.blogname.description</description>
            <defaultvalue>My Blog</defaultvalue>
            <displaytype valuetype="String" maxlength="25">TEXT</displaytype>
            <editable>false</editable>
        </param>
        <param>
            <title>l10n.blogdescription.title</title>
            <name>blogDescription</name>
            <description>l10n.blogdescription.description</description>
            <defaultvalue>My Awesome Blog</defaultvalue>
            <displaytype valuetype="String" maxlength="40">TEXT</displaytype>
            <editable>true</editable>
        </param>
        <param>
            <title>l10n.richtexteditor.title</title>
            <name>richTextEditorEnabled</name>
            <description>l10n.richtexteditor.description</description>
            <defaultvalue>checked</defaultvalue>
            <displaytype valuetype="String">CHECKBOX</displaytype>
            <editable>true</editable>
        </param>
        <param>
            <title>l10n.noofrecentblogentries.title</title>
            <name>recentBlogEntries</name>
            <description>l10n.noofrecentblogentries.description</description>
            <defaultvalue>3</defaultvalue>
            <displaytype valuetype="String">SELECT</displaytype>
            <option name="3">l10n.three.value</option>
            <option name="5">l10n.five.value</option>
            <option name="7">l10n.seven.value</option>
            <option name="9">l10n.nine.value</option>
            <editable>true</editable>
        </param>
    </config-parameters>
    <bundles>
        <bundle locale="en">
            <key name="l10n.application.description">Pebble Blog App</key>
            <key name="l10n.pce.description">Display Blog Title for Given
Date.</key>
            <key name="l10n.pce.title">Enter Blog Date (in yyyy-mm-dd)</key>
            <key name="l10n.blogname.title">Blog Name</key>
            <key name="l10n.blogname.description">Please provide a name for the
 Blog. This appears on all blog pages</key>
            <key name="l10n.blogdescription.title">Blog Description</key>
            <key name="l10n.blogdescription.description">Please provide a
description for the Blog. This appears below blog name on all pages</key>
            <key name="l10n.richtexteditor.title">Rich Text Editor</key>
            <key name="l10n.richtexteditor.description">Enable Rich Text Editor
 for comments and Blog entries?</key>
          <key name="l10n.noofrecentblogentries.title">Recent Blog Entries</key>

            <key name="l10n.noofrecentblogentries.description">How many recent
blog entries do you want to see in the home page?</key>
```

```
            <key name="l10n.three.value">3</key>
            <key name="l10n.five.value">5</key>
            <key name="l10n.seven.value">7</key>
            <key name="l10n.nine.value">9</key>
        </bundle>
    </bundles>
</integrated-application>
```

pebble-dep.xml

The `pebble-dep.xml` file, also known as the Pebble deployment configuration file, contains the data that Pebble needs to interact with the TeamForge site.

This is an example of a default (unedited) `pebble-dep.xml` file.

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE integrated-application
  PUBLIC "-//CollabNet, Inc.//DTD Integrated Application Descriptor 1.0//EN"

"http://schema.open.collab.net/sfee50/dtd/sf-pluggable-deploy-descriptor_1_0.dtd">
<integrated-application>
    <name>Pebble Blog</name>
    <baseurl>https://cu064.cloud.sp.collab.net:13001/pebble/index.jsp</baseurl>

    <gourl>https://cu064.cloud.sp.collab.net:13001/pebble/gourl/%p/%o</gourl>
<endpoint>https://cu064.cloud.sp.collab.net:13001/pebble/services/rest/ctfapi</endpoint>

 <servicetype>REST</servicetype>
</integrated-application>
```

How is an integrated application described?

An integrated application is described using two XML files - a deployment configuration file and an application configuration file - that provide information to TeamForge about the configuration options exposed by the application.

In TeamForge version 6.1.1 and later, you have the ability to configure some integrated application settings using the user interface. You can also export these settings in XML format and make changes. To edit configuration settings, you would upload the XML file containing the updates.

Integrated application settings

Note: Some of the tags are internationalized so that the application will display languages based on the browser locale. See *Internationalize your integrated application* for more information.

<name>
This is the title of the integrated application. When the integrated application is added to a project, the button that appears on the project pages has this name. This name must be unique -- you cannot use it for any other integrated application on the same TeamForge server.

This tag is used in both deployment and application configuration files.

<adminurl>
When an application has an administration screen for configuring its parameters, this field contains that URL. It is optional.

This tag is used in the deployment configuration file.

<baseurl>

This is the URL to which a user will be directed on clicking the integrated application button in a project.

This tag is used in the deployment configuration file.

<endpoint>

This is the SOAP endpoint for the integrated application. The endpoint contains the various methods exposed by the integrated application that are called during the lifecycle of TeamForge.

This tag is used in the deployment configuration file.

<gourl>

This indicates which URL must be used when an object id for an integrated application is specified (either via Jump_to_id or on the URL as /sf/go/<objectid>). This URL can support a couple of dynamic parameters.

- `%o` -- The object id entered by the user will be dynamically replaced here
- `%p` -- The project id for the object entered will be dynamically replaced here.

For example, if the Go URL is `http://go.tourl.com/tracking?id=%o` and the object ID entered is `XYZ123`, then the URL will be replaced and redirected to `http://go.tourl.com/tracking?id=XYZ123`.

This tag is used in the deployment configuration file.

<config-parameters>

There can be any number of configuration parameters for an integrated application and they are displayed when associating the application to a project. These parameters are filled in by the project administrator and are available in the integrated application SOAP interface as configuration parameters. The integrated application gets a chance to validate these parameters and indicate back to TeamForge whether this project association is successful by passing in a "TRUE". It can return a "FALSE" if it doesn't want this project association to succeed. Each configuration parameter is placed inside the "param" tag, which can contain multiple elements to describe the parameter.

<title>	The internationalized title that appears for a project administrator to fill in while associating the integrated application to a project.
<name>	The Java variable under which the value for this parameter will be available on the integrated application.
<description>	The internationalized description that appears when a project administrator fills in or enters a configuration parameter.
<default value>	The default value for the parameter that will appear in the user interface during the association of an integrated application to a project.
<display type>	This is the type of display control used for the configuration parameter. We support "TEXT" for text fields, "CHECKBOX" for checkbox type controls, "RADIO" for radio buttons, and "SELECT" for select dropdowns. This field can also take an attribute that says what the value type for the field should be -- whether it should be an "Integer", "String" and so on. So if the field is expecting numbers, then entering "foo" as a value will throw a validation failure.
<option>	If the display type is "RADIO" or "SELECT", then these fields contain the individual options available for the display controls. This will contain a "name" attribute that will be sent to the integrated application when that option is selected from the UI. The value of this option should be an internationalized field as it is the value visible to the user.
<editable>	This specifies whether the configuration parameter should be editable once the integrated application is associated to a project. These configuration parameters are available when you add or edit an integrated project. If a parameter should not be "edited" post association, setting this to "false" will make it non-editable.

This tag is used in the application configuration file.

<description>
This is an internationalized string for the integrated application's description. It contains information for TeamForge project and site administrators to know what the application does.

This tag is used in the application configuration file.

<id-pattern>
When trying to link to an integrated application id, this regular expression gets used for mapping. By default (if no value is provided), it looks for alphanumerical characters; in case you need specific characters to be matched (for example, JIRA, which has hyphens in ids), this value is used.

This tag is used in the application configuration file.

<page-component>
These settings are used for Project Content Editors. The integrated application content can become part of the standard Page Component data that appears in project home pages. The settings indicate the type of information that will be available from the integration application.

<input-type>	This is the input type control for an integrated app Page Component. We only support 2 types now. Either "select" so that the inputs can be shown from a "SELECT" dropdown and the users will be able to pick a value from there. Else, it can be a "text" where a simple "text" field will be entered for taking the user input.
<result-format>	This is the format in which the output of Page Component is returned. This can be a "list" which indicates that it will be a Table like output. The integrated app will send the results in an XML format and the Integrated app framework converts this into a list of records. The other option is "html", where the output from the Integrated application is just displayed on the screen.
<page-component-description>	The description that will appear when you add an Integrated application Page Component (Link to the page where " Add component" is available)
<page-component-title>	The title that will appear when adding an Integrated application Page Component (Link to the page where "PCE Add component" is available)

This tag is used in the application configuration file.

<permissions>
This is a collection of permissions that are exposed by the integrated application. There could be any number of such permissions. These permissions will appear as a part of the project's roles (existing ones, as well as ones newly added) and can be assigned along with other tool permissions. You can map one of these permissions with a "dapMappedTo" attribute -- this indicates the permission to be used when a user logs in without authentication (for example, for public projects). Typically, this is the permission to read data so that it doesn’t need a login name; it varies from one application to another.

This tag is used in the application configuration file.

<prefix>
If the "require-per-project-prefix" attribute is false, the value of this tag is used for identifying the integrated application in Go URLs, associations, and linkifications. If the "require-per-project-prefix" attribute is true, the value is used only for the "Host" project. Each project must fill in its value as part of adding the integrated application. (Refer to the doc on how to add an integrated application to a project).

This tag is used in the application configuration file.

<require-perprojectprefix>

An integrated application can indicate to TeamForge whether the object ids that it generates are uniquely identifiable across the entire application (if yes, the value for the attribute is "false") or whether they need to be project-specific (in this case, the value for the attribute is "true"). If an integrated application needs per-project prefix, you must enter the prefix value when the integrated application is added to a project.

This tag is used in the application configuration file.

<require-scm-integration>

This indicates whether SCM commits need to be vaildated. Some applications might have business rules which indicate that a commit can be made only if certain conditions are met. If the integrated application has any such rules, the value for the attribute should be "true". There are also a couple of methods to be implemented in the SOAP endpoint.

This tag is used in the application configuration file.

<require-page-component>

Some integrated applications choose not to expose details as Page Components. For those that don't, set this tag to "false" and for those that do, set it to "true". If the value is "true", you must provide the "page-component-details" tags aw well.

This tag is used in the application configuration file.

<servicetype>

TeamForge 6.1.0 and earlier releases supported only SOAP as the mechanism to talk from TeamForge to the integrated application. TeamForge 6.1.1 and later support REST calls. The servicetype tag indicates whether the protocol used for communication is REST or SOAP.

This tag is used in the application configuration file.

For examples of how these tags are used in the integration of the Pebble bogging application, see *pebble.dep.xml* and *pebble.app.xml*

install.conf

The `install.conf` file contains the data needed to manage the Pebble installer.

This is an example of a default (unedited) `install.conf` file. To create your own Pebble installer config file, copy this one into a new file and replace the values with the values appropriate for the application you are integrating.

```
#Location of the Pebble Blog
pebble.base.dir=/u1/pebble
#CTF Information
ctf.baseurl=http://cu073.cubit.maa.collab.net/
#Tomcat Information
tomcat.port=13000
domain=cu073.cubit.maa.collab.net
timezone=Asia/Calcutta
java_home=/usr/java/jdk1.6.0_26/
protocol=http
java_opts=-Xms512m -Xmx512m
# This where the Pebble Blogs are stored
data.dir=/u1/pebble-data
secretkey=mistywasacat
```

install.conf

The `install.conf` file contains the data needed to manage the Review Board installer.

This is an example of a default (unedited) `install.conf` file. To create your own Review Board installer config file, copy this one into a new file and replace the values with the values appropriate for the application you are integrating.

```
#Location of the Review Board installation directory
rb_dir=/u1/reviewboard
#Location of the Review Board data directory
rb_data_dir=/opt/collabnet/reviewboard/data
#Review Board site information
domain=cu064.cloud.maa.collab.net
rb_database_password=<reviewboard_db_password>

#CTF Information
ctf_base_url=https://cu064.cloud.maa.collab.net
ctf_site_var_dir=/opt/collabnet/teamforge/var
```

iptables

This is the `/etc/sysconfig/iptables` output that will enforce the recommended security configuration.

```
# Firewall configuration written by redhat-config-securitylevel
# Manual customization of this file is not recommended.
*filter
:INPUT ACCEPT [0:0]
:FORWARD ACCEPT [0:0]
:OUTPUT ACCEPT [0:0]
:RH-Firewall-1-INPUT - [0:0]
-A INPUT -j RH-Firewall-1-INPUT
-A FORWARD -j RH-Firewall-1-INPUT
-A RH-Firewall-1-INPUT -i lo -j ACCEPT
-A RH-Firewall-1-INPUT -p icmp --icmp-type any -j ACCEPT
-A RH-Firewall-1-INPUT -p 50 -j ACCEPT
-A RH-Firewall-1-INPUT -p 51 -j ACCEPT
-A RH-Firewall-1-INPUT -m state --state ESTABLISHED,RELATED -j ACCEPT
-A RH-Firewall-1-INPUT -m state --state NEW -m tcp -p tcp --dport 443 -j ACCEPT
-A RH-Firewall-1-INPUT -m state --state NEW -m tcp -p tcp --dport 25 -j ACCEPT
-A RH-Firewall-1-INPUT -m state --state NEW -m tcp -p tcp --dport 80 -j ACCEPT
-A RH-Firewall-1-INPUT -m state --state NEW -m tcp -p tcp --dport 22 -j ACCEPT
-A RH-Firewall-1-INPUT -j REJECT --reject-with icmp-host-prohibited
COMMIT
```

login-config.xml

This is the sample `application-policy` block that you can copy into your `login-config.xml` file to support LDAP authentication.

Notes

Replace the default `application-policy` block of the `login-config.xml` file with this code, then make the modifications specified in *Set up LDAP integration for the CollabNet TeamForge site* on page 250. Option values that must be modified are highlighted in bold.

- When the username is passed to the login module from TeamForge, it is translated into a DN for lookup on the LDAP server. The DN that is sent to the LDAP server is `<principalDNPrefix><username><principalDNSuffix>`.
- In this example `application-policy` block, the username is stored in the `People` organizational unit in the `dev.sf.net` domain. This is represented as `,ou=People,dc=dev,dc=sf,dc=net`
- This example contains a single `login-module` section. If you are authenticating against multiple LDAP servers, include one `login-module` section per LDAP server, with the required option values modified appropriately for each one. If the same username exists in more than one LDAP server, the instance on the first LDAP server will be used.

Sample code

```
        <application-policy name="SourceForge">
          <authentication>
            <login-module code="org.jboss.security.auth.spi.LdapLoginModule"
flag="sufficient" >
              <module-option name="allowEmptyPasswords">false</module-option>
              <module-option name="principalDNPrefix">uid=</module-option>
              <module-option
name="principalDNSuffix">,ou=People,dc=dev,dc=sf,dc=net</module-option>
              <module-option
name="java.naming.factory.initial">com.sun.jndi.ldap.LdapCtxFactory</module-option>

              <module-option
name="java.naming.provider.url">ldap://util.dev.sf.net:389/</module-option>
              <module-option
name="java.naming.security.authentication">simple</module-option>
            </login-module>
          </authentication>
        </application-policy>
```

Sample code for Active Directory integration

Active Directory is not supported. However, these sample lines in the `login-config.xml` file may help you make it work for a simple AD setup, without complex directory structures requiring additional search parameters.

Set the values of `java.naming.provider.url`, `principalDNSuffix` and `rolesCtxDN` as appropriate to your site.

For more detailed instructions, see *http://www.jboss.org/community/wiki/LdapLoginModule*.

```

        <login-module code="org.jboss.security.auth.spi.LdapLoginModule"
flag="required" >
            <module-option
name="java.naming.provider.url">ldaps://<server_name>:636/</module-option>
            <module-option name="allowEmptyPasswords">false</module-option>
           <module-option name="principalDNSuffix">@foo.bar.com</module-option>

          <module-option name="rolesCtxDN">dc=Foo,dc=Bar,dc=Com</module-option>

            <module-option name="matchOnUserDN">true</module-option>
            <module-option name="uidAttributeID">sAMAccountName</module-option>

            <module-option name="roleAttributeID">memberOf</module-option>
            <module-option name="roleAttributeIsDN">true</module-option>
            <module-option name="roleNameAttributeID">name</module-option>
        </login-module>
```

The patch manifest file

The patch manifest file contains all the information about the patch.

Overview

The manifest file for each patch is named `manifest-[patch#]`. The manifest file is a text file containing a set of configuration tokens.

Note: The first patch is named `manifest-1`.

Contents

The manifest file contains these tokens:

PATCH_LEVEL	The patch level which this patch provides. **Note:** The *PATCH_LEVEL* value is used (along with information in `[DISTRIBUTION_DIR]/version/core-version.txt`) to fill in `[DISTRIBUTION_DIR]/conf/patches` with the current release and patch level. If `[DISTRIBUTION_DIR]/conf/patches` does not exist, it is created.
PATCH_DESCRIPTION	A description of the patch.
UNINSTALL_LIST	A list of RPMs to uninstall (using relative paths, comma separated).
INSTALL_LIST	A list of RPMs to install (using relative paths, comma separated).

Note: Comments in the manifest file are identified by a leading hash (#).

postresql.conf

The `/var/lib/pgsql/9.0/data/postresql.conf` file controls the behavior of the PostreSQL database.

Shared port

- If the database and the datamart are using the same port (port 5432), this configuration file supports both.
- If the database and the datamart are on separate boxes, identical copies of this configuration file must exist in `/var/lib/pgsql/9.0/data` on both boxes.

```
# -----------------------------
# PostgreSQL configuration file
# -----------------------------
#
<snip>

#------------------------------------------------------------------------------
# CONNECTIONS AND AUTHENTICATION
#------------------------------------------------------------------------------

# - Connection Settings -

#listen_addresses = 'localhost'  # what IP address(es) to listen on;
     # comma-separated list of addresses;
     # defaults to 'localhost', '*' = all
     # (change requires restart)

listen_addresses = '127.0.0.1,<database_host_ip>'  # what IP address(es) to
listen on;
#port = 5432 # (change requires restart)


<snip>
```

Separate ports

If the database and the datamart are on the same box but using separate ports, copies of this configuration file must exist in both `/var/lib/pgsql/9.0/data` and `/var/lib/pgsql/9.0/reports`. Each copy must identify a different port.

This file is in `/var/lib/pgsql/9.0/data`.

This copy of the file is in `/var/lib/pgsql/9.0/reports`. Note the different port number.

```


# -----------------------------
# PostgreSQL configuration file
# -----------------------------
#
<snip>

#------------------------------------------------------------------------------
# CONNECTIONS AND AUTHENTICATION
#------------------------------------------------------------------------------

# - Connection Settings -

#listen_addresses = 'localhost'  # what IP address(es) to listen on;
     # comma-separated list of addresses;
     # defaults to 'localhost', '*' = all
     # (change requires restart)

listen_addresses = '127.0.0.1,<database_host_ip>'  # what IP address(es) to
listen on;
#port = 5632 # (change requires restart)


<snip>
```

CollabNet TeamForge 6.2 release notes

Last Revision: June 2012

Look here for information about changes in CollabNet software, such as new features, fixes and late-breaking updates.

TeamForge 6.2 Patch 1 was released in January 2013. For details, see *TeamForge 6.2 Patch 1 release notes*.

New features in TeamForge 6.2

TeamForge 6.2 adds these new features.

Highlights

The *TeamForge integration with Git* backed by Gerrit lets you realize all the benefits of Git while ensuring the security, governance and manageability your business demands.
With the integration with *Black Duck Code Sight*, TeamForge 6.2 enables developers to easily search source code. • You can see the status of the Black Duck Code Sight server in the TeamForge **Server Status** page. • When indexing is turned on for an existing trunk or path, the specific path alone is indexed. If the path does not exist, the entire repository is indexed. • Branding or publishing repositories are not considered for Code Search indexing by default.
The *Review Board* code review tool is available as a fully integrated add-on.
TeamForge 6.2 adds these features for Dynamic Planning (Agile): • The ability to use arbitrary effort units • An option to view burndown charts using story points
TeamForge 6.2 supports JBoss 6.1
• Enhancements to TeamForge's ETL architecture now populate the datamart with tracker artifact data. • You can configure ETL to extract data from a TeamForge mirror database if the setup is available. • The artifacts history maintained for ETL is cleaned up after a delay of 30 days.
Project activity reports: The reports page in TeamForge 6.2 projects includes SCM and tracker activity specific to the project.
Usability improvements include keeping buttons visible on tables and adding multiple artifact attachments.
Improvements to Role Based Access Control (RBAC) include using wildcards in path-based Subversion permissions and applying access permissions to document folders at any level.
In the Role Admin section, for Teamforge Documents, you can now give permission to access the sub folders and also limit the access to the root folder.

Issues resolved in CollabNet TeamForge

CollabNet TeamForge 6.2 resolves these issues.

Discussions

artf51264	Anonymous online posts are now validated by a WEB Captcha.

artf109488	It was not possible to access the sub-folders in documents.

Planning

artf110065	It was not possible to view the average velocity of a planning folder.

Code Search

artf114922	Conditional indexing is supported based on existence of trunk.

artf110066	Reported In and Fixed In fields are available for tracker search.

Tracker

ID	**Description**
artf63003	Story points can be used in burndown charts.
artf108327	The effort value can be expressed in the form of units using the tracker tool.
artf108316	Unit configuration for the effort field was not available in TeamForge tracker.

Reporting

ID	**Description**
artf97181	Site administrators can see the number of artifacts created across all projects at the site level.
artf97182	Site administrators can view the number of artifacts closed across all projects at the site level.
artf119103	Site-wide tracker reports do not include the count from project templates at the site level.

Wiki

artf96156	On wiki pages, you can add multiple attachments.

IAF

artf96156	It was not possible to access the Integrated Application Framework (IAF) site when the port was changed.

artf108328	Project templates can be installed by default during installation.

Known issues in CollabNet TeamForge

The following known issues in CollabNet TeamForge 6.2 will be addressed in upcoming patches or releases. Some of them have workarounds.

TeamForge Git integration

In the TeamForge web interface, the repository root parameter for Git is set to "/tmp". For backward compatibility reasons, this parameter should not be changed. It does not affect where Gerrit actually stores its Git repositories -- this is at `/gitroot`.

Access (RBAC)

artf73649	Users without project group admin rights are able to view the project group role's popup.
artf106416	The View drop-down is not displayed in the Assigned User Groups tab for a global or direct role in a subproject.
artf106449	A system error is displayed in TeamForge when you log in after a session timeout and edit the site-wide role permissions.

Administration

artf123188	When you click the Back button on a Firefox browser, a 'Document Expired' error screen may be displayed due to browser issues.

Discussions

artf80385	Email posters do not receive any undelivered email notifications while trying to post or subscribe by email to non-privileged discussions.
artf80670	An anonymous user is not added as a trusted poster to a discussion.
artf102046	Disabled users are listed when you add a user to the Users Monitoring This Item (Find a User) list.
artf88884	If pagination is enabled for posts, the collapse or expand option should act only over the posts in the current page.
artf105223	When a deleted user is added or enabled, the user is not displayed in the moderators and trusted posters user picker list, when filtered.
artf105603	The topic summary page for a discussion does not specify the subscription type for which the user has subscribed.
artf71771	Forums were spammed with non-project related MIME mails and header content.

Documents

artf126219	The reorder option is not working in the document manager.

I18N

artf106820	The tool tip is displayed in English instead of Chinese, Japanese and Korean languages when you create a new wiki page.

Monitoring

artf66488	An "Unexpected System Error Occurred" message is displayed when the user monitoring folder is clicked while searching for a tracker.

Migration

artf122545	Deprecation warning messages are displayed during Project Tracker migration and can be ignored.

Other

ID	**Platform & Dependency Packages**
artf110122	The following dependancy packages are used in Subversion 1.7.2 For RHEL/CentOS • apr - 1.3.12-1.el5 • apr-util - 1.3.9-1.el5 • sqlite - 3.6.20-1.el5 For SLES • libreadline6-6.2-95.1 • libsqlite3-0-3.6.23-4.1 • sqlite3-3.6.23-4.1

Planning

artf122367	A "Page not found" error message is displayed in the TeamForge planning folder.

Project Admin

artf106580	It is possible to edit direct roles in a locked project.
artf122999	Names are displayed in alphabetical order in the User-Role Matrix.

Reporting

artf119793	Incorrect data is displayed in the artifact_transaction_fact when a tracker is deleted and field values are edited.

Review Board

artf117327	The system-generated Review Board Administrator role does not have SCM permission by default.
artf122172	TeamForge application features like Global Search, Page component, Recent history and Project Template are not supported in the Review Board Integrated Application.
artf119509	Review requests assigned to a group are not displayed in the Dashboard section of the Incoming Reviews page.
artf122109	It is possible to create review requests in locked projects.
artf118356	• In the Groups page, the count of the pending review requests and group members is displayed incorrectly. • The count of the members list is displayed incorrectly when you click the group.

SOAP

artf93618	The "getForumList2" soap call does not retrieve moderators and trusted users of moderated discussions.

SCM

artf99556	The site navigation bar and the project navigation bar in Source Code are always displayed in English.

Search

artf102410	Global Search by attachment content retrieves a document even if the "Search attachment" box is unchecked.

Security

artf105108	There are XSS vulnerabilities in project pages.

Tracker

artf107850	The total number of artifacts was displayed incorrectly under Saved Tracker Searches.
artf108179	Tracker search results vary when the pagination link is selected or when the items displayed in a page are modified.
artf122793	Users were able to create a tracker unit with a value of zero in the Conversion field.
artf122095	It is not possible to create a tracker unit if the unit name count of the user is more than 200.

Wiki

artf113517	SCD Type-2 tables in the datamart will have a default row with the key field having a value of 0. This row will not have any fact records and should be ignored from any dimension-only queries.
artf99553	Japanese font face generated from wiki pages is incorrect in the PDF.

artf99904	It is not possible to edit the wiki table content in the WYSIWYG editor.
artf100027	No interWiki reference is defined in properties for the "sf" wiki.
artf123520	There is a concurrency issue in the Wiki home page.

artf107614	When a user clicks on the Help for this Page link from the View VC pages, a blank page is displayed.

CollabNet TeamForge 6.2 Patch 1 Release Notes

Last Revision: January 2013

Look here for information about changes in TeamForge, such as new features, fixes and late-breaking updates.

TeamForge 6.2 Patch 1 notes

While upgrading to TeamForge 6.2 Patch 1, you need to run a post-install script, `postinstall_62p1.py`, to remove redundant information from the TeamForge database.

For more information, see *postinstall_62p1.py* on page 349.

Highlights

TeamForge 6.2 Patch 1 resolves a number of issues. See the complete list here: *Issues resolved in TeamForge 6.2 Patch 1* on page 413

Apply TeamForge 6.2 Patch 1

Note:

TeamForge add-on packages can remain installed when a patch for TeamForge 6.2 is applied. No updates are required. However, you should verify the compatibility of Add-ons applied to your site as some may be more specific to your site.

The most common Add-ons and their TeamForge compatibility are published here: *https://ctf.open.collab.net/sf/go/page1363*

To determine the compatibility of Add-ons specific to your site or any other query that may not be published on the page, run this command on your TeamForge server:

```
cd /opt/collabnet/teamforge/add-ons
grep sfee-version */package.properties
```

If you have any questions regarding compatibility or updating a specific add-on, contact CollabNet Support for more details.

If you have TeamForge 6.2 and are applying this patch, see the specific instructions for your operating system:

- *Patch CollabNet TeamForge 6.2 on Red Hat* on page 240
- *Patch CollabNet TeamForge 6.2 on CentOS* on page 242
- *Patch CollabNet TeamForge 6.2 on SuSE* on page 244

You can also upgrade directly to TeamForge 6.2 Patch 1 if you are running a version prior to TeamForge 6.2. See these instructions for your operating system:

- *Upgrade to TeamForge 6.2 on Red Hat* on page 133
- *Upgrade to TeamForge 6.2 on CentOS* on page 168
- *Upgrade to TeamForge 6.2 on SuSE* on page 203

JBOSS_ALARM_TIMEOUT

This is a new `site-options.conf` token. It allows you to specify the time within which the `jboss_watchdog` script expects the JBoss service to respond to its requests. For more information, see *JBOSS_ALARM_TIMEOUT* on page 376.

Issues resolved in TeamForge 6.2 Patch 1

CollabNet TeamForge 6.2 Patch 1 resolves these issues.

Discussions

ID	Description
artf132026	Attachments to posts were not displayed properly.

Documents

ID	Description
artf132034	In projects containing a large number of document folders, there were performance issues with editing user-roles.
artf132041	In the Document Manager, the folder order was not the same as that in the Order Edit window. Changing the order of the folders did not take effect.

Email

ID	Description
artf132608	Email notification of new assignments was not sent to users appropriately via a mass update.

Planning

artf132921	Planning folder updates created invalid entries in the ranking table.
artf132684	When you tried to change the planning folder for an artifact, TeamForge generated an exception and prevented the move.

Review Board

ID	Description
artf132612	Review creation failed with patches created with Subversion 1.7.x if they included a property change. TeamForge now incorporates a Review Board solution for this issue. See *http://code.google.com/p/reviewboard/issues/detail?id=2359*
artf132424	Review Board retrieved an incorrect list of file diffs.

Runtime

ID	Description
artf132052	The `snapshot.py` `doApache()` call sometimes did not respond, and restricted further gathering of other statistics.

Search

ID	Description
artf132028	Temporary files were not deleted in the configured `java.io.tmpdir` directory of the Phoenix JVM.

Security

ID	Description
artf132030	An XSS alert message was displayed in wiki pages when certain CSS expressions were used inside a %%style%% class.
artf132035	Incorrect session handling in TeamForge ViewVC caused issues with multiple user access to the same project files.
artf132057	Open sessions were cleared when an exception occurred in the Session Manager.
artf132044	There were cross-site scripting issues while using GNU diff in the ViewVC viewer.

Simbel

ID	Description
artf132691	There were issues with Simbel using SQL commands, SQL string characters, and open cursors.
artf132692	Simbel import failed when the length of "TransitionRequired Field" was more than 32 characters.
artf132032	Restoring the "HTML type" failed via Simbel.

Subversion

ID	Description
artf132053	"Max Keep Alive Requests" had to be increased in `httpd.conf` for better performance.

SOAP

ID	Description
artf132055	Updating `Tracker Field Name` via SOAP API resulted in a "Null Pointer Exception" on the server.
artf132054	An "Invalid destination path" error occurred while using the `taskApp.moved` task via CLI and SOAP API.

Tracker

ID	Description
artf132027	Accessing the `listTrackers` request took a long time to process.
artf132036	While using the **Plan For** option on the artifact list page to change the planning folders for a set of artifacts, the monitoring mails do not refer to the actual user who currently changed the planning folder; it refers instead to a user who previously modified it.

UEX

ID	Description
artf132046	Lengthy names of planning folders created alignment issues.
artf132047	There were browser compatibility issues affecting the scroll bar in these pages: • Tracker and Planning Folders. • User-Role Matrix and Group-Role Matrix. • Project Dashboard. • Forum.

Wiki

ID	Description
artf132682	Occasionally, blank pages were displayed in Wiki due to exceptions generated by the JSPWiki2.8.3 code. This occurred during concurrent requests to the wiki page during server start-up. TeamForge now instantiates the wiki engine while starting JBoss.

Miscellaneous

ID	Description
artf132050	The "My Recent History" page showed artifacts that were not really "recent".Now, the entries in the `recent_access` table that are older than 40 days will be deleted.
artf132031	There were issues accessing some of the CEE-type URLs in TeamForge.
artf132049	Irrespective of tracker settings, "Select User(s)" fields displayed all site users rather than project members.
artf132048	With huge data-sets, adding a user displayed an "Out of Memory" error.

Known issue in CollabNet TeamForge

The following known issue in CollabNet TeamForge 6.2 Patch 1 will be addressed in upcoming patches or releases.

Tracker

ID	Description
artf135340	The order of document sub-folders is not same in the List Documents and Create/Edit role pages for folders that were not ordered earlier to SFEE 5.0. Reordering the document sub-folders resolves the issue.
artf132053	This change, "extending the support for subversion - new versions (serf) and increasing the performance of MaxKeepAliveRequests to 10000" has to be manually set for SUSE.