Installing Teaming on Linux

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1.1 Teaming Installation Overview

In order to successfully install Teaming 2.0, you need to understand the Teaming system requirements and the system environment where you are installing the Teaming software. For your convenience, the Teaming Installation program includes many default settings that can be accepted during a typical Basic installation.

The Basic installation shown in this demonstration assumes that the Teaming software, the database server, and the data indexing server are all installed on the same physical server. Other configurations are possible when you perform an Advanced installation.

This demonstration uses the company name of Greenergy Power, a fictional company that operates in the green power space. Its corporate Internet domain name is greenergy.com.

1.2 Meeting Teaming System Requirements

The Teaming 2.0 software can run on a 32-bit processor or a 64-bit processor. Use a 64-bit processor for a large Teaming site. A 32-bit processor is adequate for a small to medium Teaming site.

You can run Teaming 2.0 on Linux or Windows. If you prefer Linux, you can choose the Linux version of Novell® Open Enterprise Server 2 or you can use SUSE® Linux Enterprise Server 10 or 11. If you prefer Windows, you can choose Windows Server 2003 or 2008.

Teaming 2.0 supports three types of database servers. On both Linux and Windows, you can use MySQL or Oracle. On Windows, Microsoft SQL is also supported.

Teaming can import user information from two directory services, eDirectory™ or Active Directory:

Teaming also requires a Java Developer Kit or “JDK”. You can use the JDK from Sun or from IBM.

Complete system requirements are listed in the *Teaming 2.0 Installation Guide*.

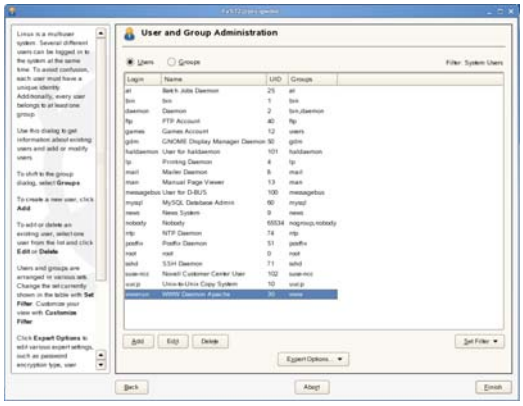
For your convenience, the *Teaming Installation Guide* provides a summary sheet where you can gather the system requirements and system environment information that the Teaming Installation program prompts you for.

1.3 Preparing for Installation

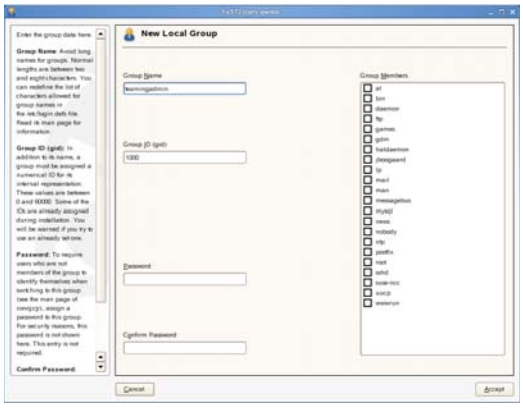
This demonstration presents the planning, setup, and testing of a Teaming site where the Teaming software is being installed on a Novell Open Enterprise server with a 32-bit processor and 4 GB of memory. The MySQL database server and the Sun JDK have already been installed and configured.

For security reasons, it is highly recommended that you do not run Teaming as the Linux `root` user. You might want to create a `teamingadmin` Linux user to run the Teaming software and a `teamingadmin` Linux group for this user to belong to.

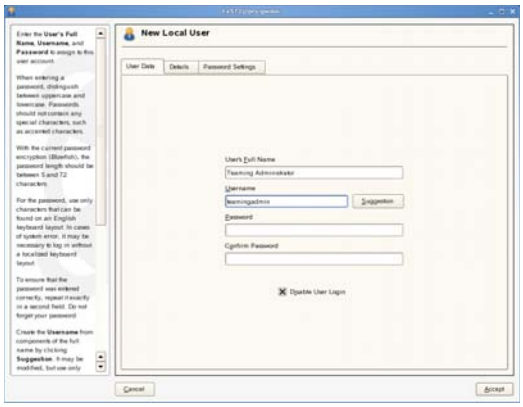
If you are familiar with the `wwwrun` user and the and the `www` group in SUSE versions of Linux, you can use those, rather than creating a new Linux user and group for Teaming. The `wwwrun` user is typically used to run the Apache Web server and is therefore a good candidate for running Teaming.



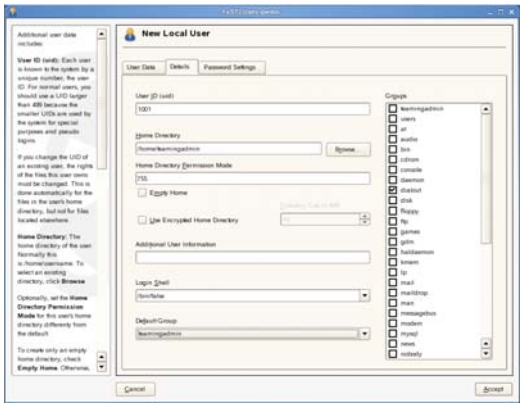
If you decide to create a user and group, it's easiest if you create the Teaming Linux group first. The group does not need a password.



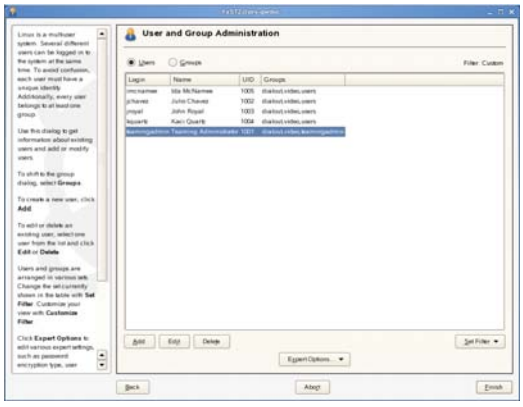
Next, you create the Teaming Linux user. This user should be configured with *Disable User Login* selected, because you want it to be like a system user. The Teaming Linux user does not need a password, but YaST requires you to provide one.



To make this user as much like a system user as possible, you need to change two settings on the *Details* tab. In the *Login Shell* drop-down list, select */bin/false*, because you don't ever log in as this user. In the Default Group drop-down list, select the `teamingadmin` group you created. Then click *Accept*. YaST does require you to provide a password before it will add the user. You can avoid that annoyance by creating the user and group on the command line, if you'd prefer.



When the Teaming Installation program installs the Teaming software and creates the Teaming data store, the directories and files are created with `teamingadmin` user and group ownership and permissions. In addition, the `teaming` startup script is customized to start the Teaming software as the `teamingadmin` user.



Before you start the Teaming Installation program, be sure to complete the following tasks:

- If a Web server is already running on the Teaming server, stop it. Teaming includes Tomcat as a standalone Web server.
- Create the Linux user and group for Teaming, or make sure that you know the password for the `wwwrun` user.
- Increase the Linux open file limits to meet the needs of Teaming. The default file limits are insufficient.

1.4 Running the Teaming Installation Program

When you have the prerequisites in place, you can start the Teaming Installation program.

1. In a terminal window on the Linux server, change to the Linux `root` user, then provide the `root` password. `root` permissions are required to install the Teaming software, but should not be used when you run the Teaming software.

```
jchavez@teaming1:~> su -
Password:
teaming1:/home/jchavez #
```

2. Next, change to the directory where you downloaded and extracted the Teaming software. In this demonstration, we use `/home/teamingsoftware`.

```
jchavez@teaming1:~> su -
Password:
teaming1:~ # cd /home/teamingsoftware
teaming1:/home/teamingsoftware #
```

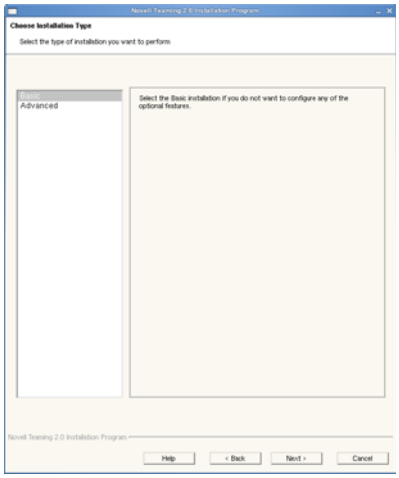
3. Now use the following command to start the Teaming Installation program.

```
jchavez@teaming1:~> su -
Password:
teaming1:~ # cd /home/teamingsoftware
teaming1:/home/teamingsoftware # ./installer-teaming.linux
```

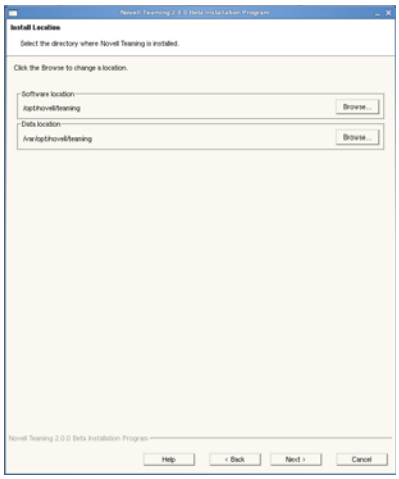
4. Accept the License Agreement, then click *Next*.

5. Again, click *Next* to accept the default of *New installation*.

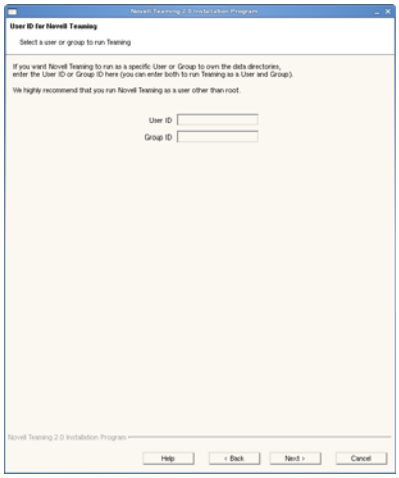
6 A *Basic* installation gets your Teaming site installed and running as quickly and easily as possible, so click *Next* once again to accept the default of a Basic installation.



7 In a Basic installation, you can choose where you want to install the Teaming software and where you want to create the Teaming data store. The Teaming data store holds files that you import into your Teaming site, plus information associated with those files, such as thumbnails and HTML renderings, and the data search engine index. This means that the Teaming data store is a big consumer of disk space. In this demonstration, go ahead and click *Next* to accept the default locations of `/opt/novell/teaming` and `/var/opt/novell/teaming`.

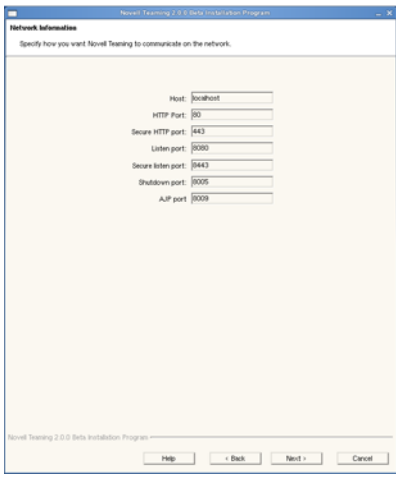


8 Because you shouldn't run Teaming as the Linux `root` user, you provide a non-`root` user and group, then click *Next*.



9 Ensuring that the network information is correctly specified is a very important part of the Teaming installation process. The hostname of the server where you install Teaming is required in order for other programs, such as the GroupWise® Windows client, to access the Teaming site. The HTTP port and the secure HTTP port are the port numbers that your Web browser expects to use when no port is specified in a URL. When you use the default HTTP ports of 80 and 443, users do not need to include the port number when they provide the Teaming site URL in their Web browsers.

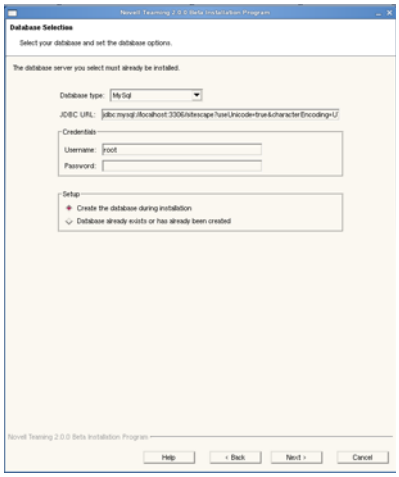
The listen port and the secure listen port are the port numbers that Teaming uses internally for Tomcat to listen on. Because Teaming runs as a non-`root` user, it cannot access port numbers less than 1024. After installation, you set up port forwarding, so that when a Web browser sends a request to port 80 or 443 by default, the request is automatically forwarded to Teaming on listen port 8080 or 8443. A default certificate is provided for use with the secure ports. The Teaming Installation program fills in the correct defaults, so click *Next* to continue.



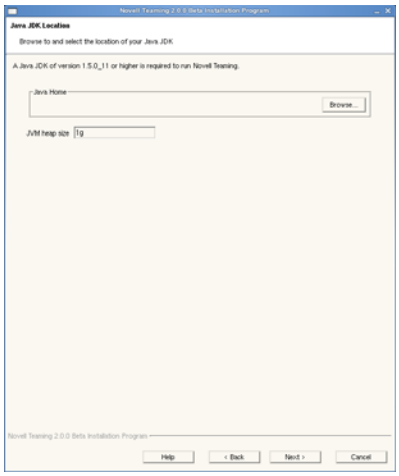
10 As mentioned earlier, you can use MySQL or Oracle on Linux. For this demonstration, we use the default of MySQL.

The JDBC URL enables Teaming to locate the MySQL database server. Because the database server is on the local server in this demonstration, we can keep the default of `localhost`. For the MySQL database server credentials, the Teaming Installation program uses `root` as the database server username, because that is the standard default username for MySQL. Be aware that the MySQL `root` username is not the same as the Linux `root` user.

You or your database administrator must set the database server password when you install MySQL, because the Teaming Installation program needs the database server password. When you perform a Basic installation, the easiest approach is to let the Teaming Installation program create the initial database for you. Specify the database server password, then click *Next*.



11 Unless you have already set the JAVA_HOME environment variable in the terminal window where you started the Teaming Installation program, you need to browse to and select the directory where you installed the JDK, then click *Next*.



12 E-mail messages can be sent from the Teaming site for several reasons.

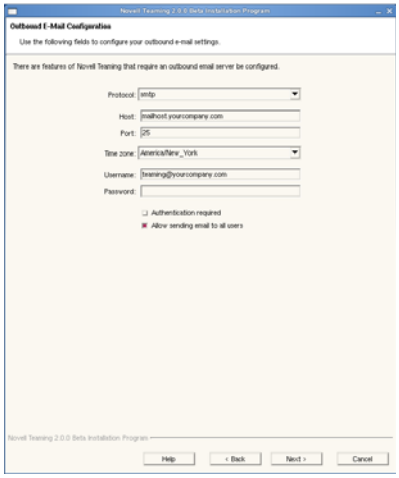
- Teaming users can subscribe to e-mail notifications, so they automatically receive a message whenever a workspace or folder changes.
- From the Teaming site, users can send e-mail messages to individual users or to teams.
- If your e-mail client is iCal-enabled, appointments created in a Teaming Calendar folder can be sent to your e-mail client for posting in your e-mail client Calendar.

Teaming includes basic SMTP mail host functionality. Teaming can use either SMTP or secure SMTP to send outbound messages. In order to send messages, Teaming needs to know some information about an existing SMTP mail host.

In the *Host* field, specify the fully qualified hostname of a server where the GroupWise Internet Agent is running. Teaming can also be configured to use Microsoft Exchange or Lotus Notes as its e-mail system.

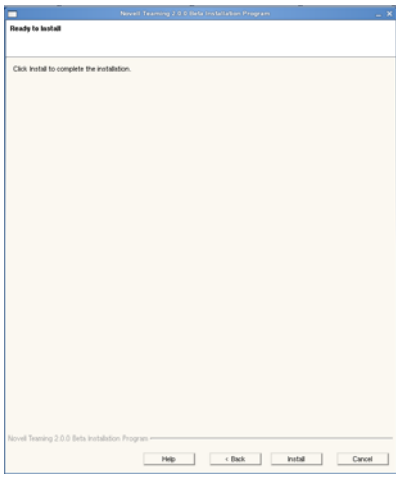
In the *Username* field, specify the e-mail address of a valid GroupWise user. You might want to create a separate GroupWise account for receiving e-mail from the Teaming site, for example, `teamingadmin`.

What you put in the *Username* and *Password* fields when you install Teaming depends on the requirements of your e-mail system. Authentication might or might not be required. Now, click *Next* to continue.

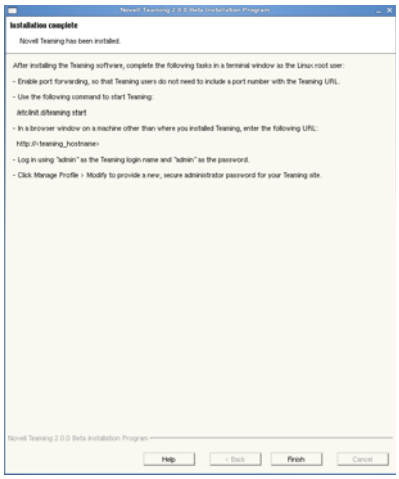


13 By enabling inbound e-mail, you enable users to post to Teaming folders from their e-mail clients for folders that have been configured with e-mail addresses. The default configuration information provided by the Teaming Installation program is typically appropriate, so you can enable inbound e-mail, then click *Next*.

14 The Installation program now has all the information it needs, so you can click *Install*.



15 Installation takes only a few seconds.



16 When the installation is complete, review the instructions about what to do next., then click *Finish*.

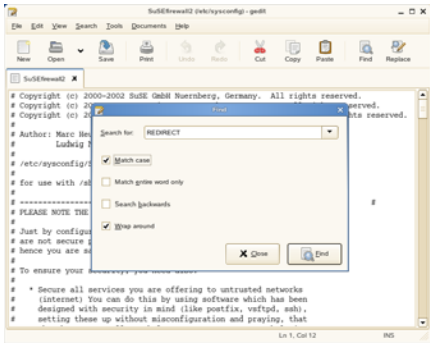
```
jchavez@teaming1:~> su -
Password:
teaming1:~ # cd /home/teamingsoftware
teaming1:/home/teamingsoftware # ./installer-teaming.linux
teaming1:/home/teamingsoftware #
```

1.5 Setting Up Port Forwarding

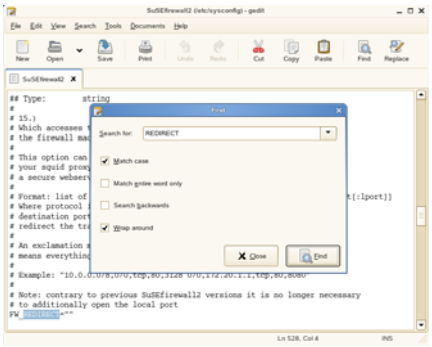
1 Next, you need to enable port forwarding, so Teaming users don't need to include a port number with the Teaming URL. The easiest way to enable port forwarding for SUSE Linux is by editing the `SuSEfirewall2` file.

```
teaming1:~ # cd /etc/sysconfig
teaming1:/etc/sysconfig # gedit SuSEfirewall2
```

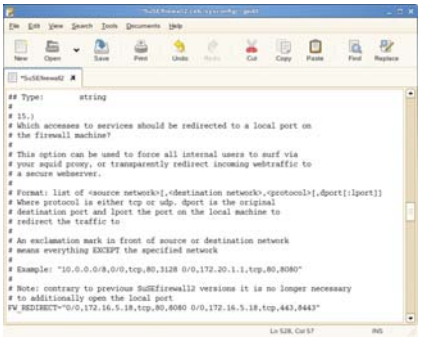
2 In the `SuSEfirewall2` file, find the line you need by searching for `REDIRECT`. Remember to match the case.



3 The first instance is the one you want.



4 The Teaming Installation Guide provides a sample string that you can paste between the double quote marks on the `FW_REDIRECT` line. Now we just need to change the *ip_address* variable to the IP address of the Teaming server.



5 Now save the changes and exit the text editor to return to the command line.

```
teaming1:~ # cd /etc/sysconfig
teaming1:/etc/sysconfig # gedit SuSEfirewall2
teaming1:/etc/sysconfig #
```

6 After editing the `SuSEfirewall2` file, the firewall must be restarted.

```
teaming1:~ # cd /etc/sysconfig
teaming1:/etc/sysconfig # gedit SuSEfirewall2
teaming1:/etc/sysconfig # /sbin/SuSEfirewall2 start
```

7 You see some status messages indicating that the firewall has restarted successfully.

```
teaming1:~ # cd /etc/sysconfig
teaming1:/etc/sysconfig # gedit SuSEfirewall2
teaming1:/etc/sysconfig # /sbin/SuSEfirewall2 start
SuSEfirewall2: Warning: ip6tables does not support state matching. Extended IPv6
 support disabled.
SuSEfirewall2: Setting up rules from /etc/sysconfig/SuSEfirewall2 ...
SuSEfirewall2: Warning: no interface active
SuSEfirewall2: batch committing...
SuSEfirewall2: Firewall rules successfully set
teaming1:/etc/sysconfig #
```

8 Next, you use the `iptables-save` command to show that the ports have been successfully redirected. On other types of Linux besides SUSE Linux, `iptables` commands can be used to accomplish the same result.

```
teaming1:/etc/sysconfig # iptables-save | grep REDIRECT
-A PREROUTING -d 172.16.5.18 -p tcp -m tcp --dport 80 -j REDIRECT --to-ports 8080
-A PREROUTING -d 172.16.5.18 -p tcp -m tcp --dport 443 -j REDIRECT --to-ports 8443
teaming1:/etc/sysconfig #
```

1.6 Starting Teaming

1 Log out as the Linux root user. Now, you can start Teaming. You are prompted for the password of the Teaming administrator user.

```
teaming1:/etc/sysconfig # exit
logout
jchavez@teaming1:~> /etc/init.d/teaming start
Password:
```

2 Some Tomcat status messages show that Teaming has started.

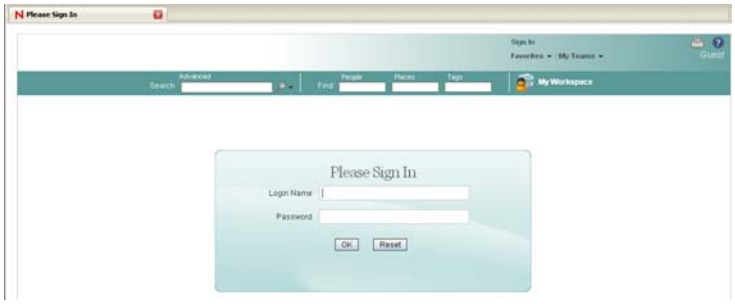
```
jchavez@teaming1:~> /etc/init.d/teaming start
Password:
Using CATALINA_BASE:   /opt/novell/teaming/apache-tomcat-6.0.18
Using CATALINA_HOME:   /opt/novell/teaming/apache-tomcat-6.0.18
Using CATALINA_TMPDIR: /opt/novell/teaming/apache-tomcat-6.0.18/temp
Using JRE_HOME:       /usr/java/jdk1.5.0_17/jre
jchavez@teaming1:~>
```

1.7 Accessing the Teaming Site

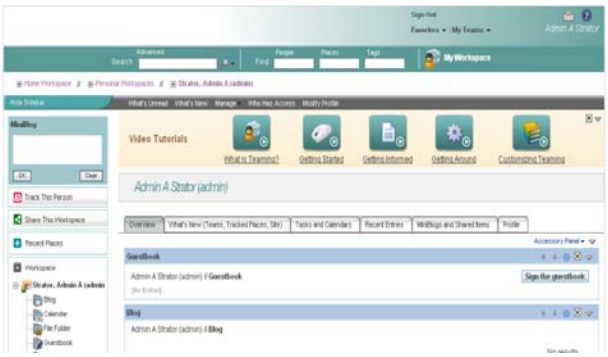
1 In a Web browser on a workstation, provide the Teaming site URL, which is simply the hostname of the Teaming server. Thanks to port forwarding, you don't need to include a port number.

```
http://teaming1
```

2 The first time you log in, you use `admin` as the username and `admin` as the password.



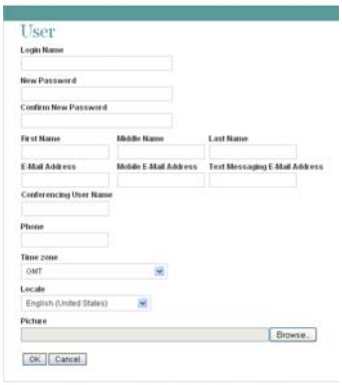
3 The personal workspace for the Teaming administrator appears.



4 You should immediately reset the `admin` password. Click Modify Profile, then provide your own password for the admin user. You can give your Teaming administrator user a name as well. Then click *OK*.

1.8 Setting Up Teaming Users

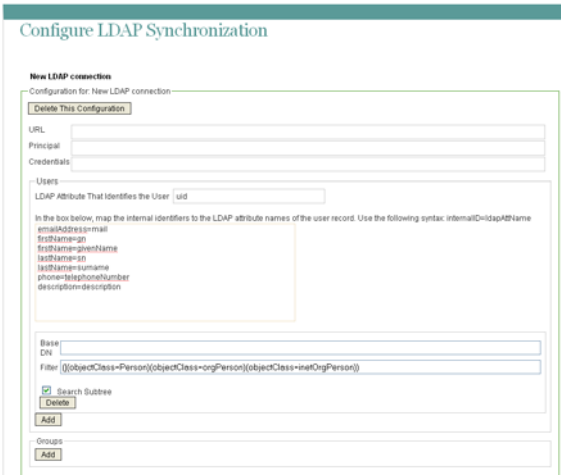
1 Now, let's create a new Teaming user. Start by clicking *Manage* > *Site Administration* > *Add User*. Of course, this approach is appropriate only for a very small Teaming site, but we'll show you how to create multiple users in a minute.



2 For the single user, provide a username, password, first name, last name, and e-mail address, then click *OK*.

3 Now we'll show you how to add users from an existing directory service such as Novell eDirectory or Microsoft Active Directory. To create Teaming users based on a directory service, LDAP authentication is used to obtain user information from the directory. Again, click *Manage* > *Site Administration*, but this time, click *Configure LDAP*.

4 Next, click *Add a New LDAP Connection*.



5 In order to fill in the fields on this page, you need to gather the following information about your directory service:

- The URL of the LDAP server where your directory service is located, including the port number on which Teaming can communicate with your directory service.
- The username and password that Teaming can use to access the directory service, in the format expected by the directory service (for example, `cn=admin,ou=users,o=greenergy`).

- The LDAP attribute that your directory service uses for usernames. eDirectory and Active Directory both use `cn`.
- A directory context where Teaming User objects are located (for example, `ou=users,o=greenergy`).

6 You also need to make some decisions about how you want LDAP synchronization to work, such as when to perform synchronization and what specifically to synchronize. The *Teaming Installation Guide* helps you decide how to configure LDAP to meet the needs of your Teaming site.

After you have installed the Teaming software and created Teaming user accounts, you are ready to set up your Teaming site.