Administration Guide

Novell®
Teaming

2.0

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Contents

About This Guide

The *Novell Teaming 2.0 Administration Guide* provides administration information for Novell®
Teaming. The guide contains the following sections:

- Part I, "Site Setup," on page 11
- Part II, "Site Maintenance," on page 73
- Part III, "Site Security," on page 109

Audience

This guide is intended for Novell Teaming administrators.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation
included with this product. Please use the User Comments feature at the bottom of each page of the
online documentation, or go to www.novell.com/documentation/feedback.html and enter your
comments there.

Documentation Updates

For the most recent version of the *Novell Teaming 2.0 Administration Guide* and other
documentation, visit the Novell Teaming 2.0 Documentation Web site (http://www.novell.com/
documentation/teaming2).

Additional Documentation

You can find more information in the Novell Teaming documentation, which is accessible from
links within Novell Teaming:

- Novell Teaming Help system
- *Novell Teaming Quick Start*
- *Novell Teaming User Guide*
- *Novell Teaming Advanced User Guide*
- *Novell Teaming Installation Guide*
- *Novell Teaming Developer Guide*

To access the Novell Teaming Help system, log in to the Teaming site, then click the *Help* icon
(question mark), then click a yellow Help spot for context-sensitive help.

To access the Novell Teaming guides from within Teaming, click the *Help* icon (question mark),
then click *Teaming Manuals*.

Documentation Conventions

In Novell documentation, a greater-than symbol (>) is used to separate actions within a step and
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When a single pathname can be written with a backslash for some platforms or a forward slash for other platforms, the pathname is presented with a backslash. Users of platforms that require a forward slash, such as Linux* or UNIX*, should use forward slashes as required by your software.

Site Setup

Logging In as the Teaming Site Administrator

1

When you first install Novell® Teaming, the Teaming administrator username is `admin` and the password is `admin`. When you first log in to the Teaming site as the administrator, you should change the administrator password from the default password to a secure password of your own choosing. If you followed the instructions in "Accessing Your Basic Teaming Site as the Site Administrator" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*, you have already completed this very important task.

If you have not already reset the Teaming administrator password:

1 In your Web browser, specify one of the following URLs, depending on whether or not you are using a secure SSL connection:

`http://`*teaming_hostname*
`https://`*teaming_hostname*

where *hostname* is the hostname of the Teaming server. If you configured the HTTP ports correctly during installation, you do not need to include the port number in the Teaming URL.

2 Log in using `admin` as the login name and `admin` as the password.

The Teaming administrator's personal workspace displays.
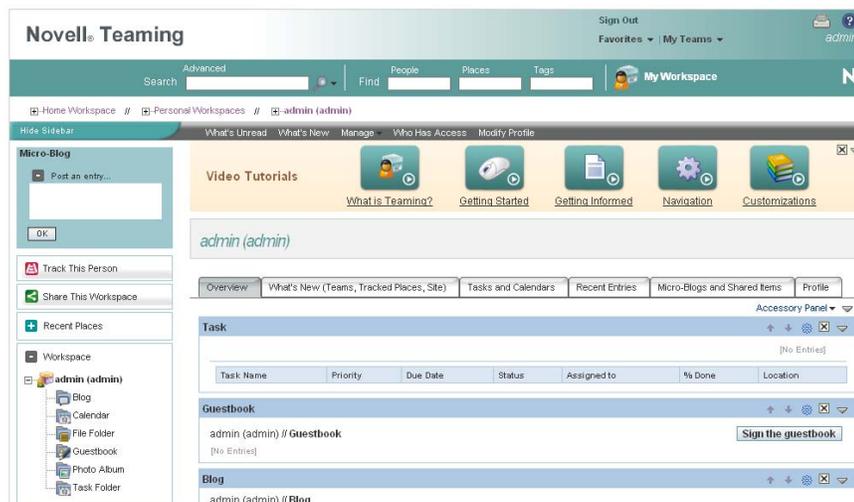
3 Change the default administrator password to a secure password:

    3a On the Workspace toolbar, click *Modify Profile*.

    3b Specify your own password for the Teaming administrator in the *New Password* and *Confirm New Password* fields.

    3c (Optional) Provide useful information in the additional fields of the Teaming administrator's profile.

    3d Click *OK* to return to the administrator's workspace.

Planning User Access to Workspaces and Folders

2

As the Novell® Teaming site administrator, you are responsible for setting up and controlling user access across the entire Teaming site. Even though workspace and folder owners are responsible for controlling user access in their individual workspaces and folders, you as the Teaming administrator have the ability to create new roles, modify existing roles, and change default access control settings for all types of workspaces.

- Section 2.1, "Understanding Access Control," on page 15
- Section 2.2, "Understanding the Implications of Access Control," on page 15
- Section 2.3, "Controlling User Access in Workspaces," on page 16
- Section 2.4, "Controlling User Access across the Teaming Site," on page 18
- Section 2.5, "Managing Roles to Refine Access Control," on page 19

2.1 Understanding Access Control

Before you begin configuring access control settings for your Teaming site, it is important that you understand how access control works in Novell Teaming.

For background information about Teaming access control, see "Understanding Access Control" in the *Novell Teaming 2.0 Advanced User Guide*.

2.2 Understanding the Implications of Access Control

In simplest terms, access control settings determine what users can see and do in each workspace or folder. However, because your Novell Teaming site is a hierarchy of workspaces and folders and because access control settings can be inherited (or not), access control settings affect a variety of Teaming features:

- Section 2.2.1, "Inheritance," on page 15
- Section 2.2.2, "Navigation," on page 16

2.2.1 Inheritance

When you create a new workspace, it defaults to the inheritance setting of its parent workspace.

- If you create a new workspace under an existing workspace that is inheriting its access control settings from its parent, the new workspace continues the inheritance chain. If you change any access control settings above the new workspace at a later time, the access control settings for the new workspace also change. Global workspaces inherit access control settings from the parent workspace by default.

- If you create a new workspace under an existing workspace that has locally defined access control settings, the new workspace retains those locally defined settings.

If you move a workspace that is inheriting its access control settings from its original parent workspace, it inherits the access control settings of the new parent workspace into which it is moved. If the new parent workspace has different settings than the original parent workspace, then the access control settings for the moved workspace change accordingly.

2.2.2 Navigation

Sub-workspaces and sub-folders should not permit access to users or groups that do not have access to the higher-level workspaces, for the following reasons:

- Users cannot see the workspace, even though they have appropriate rights.

  Users browsing in the Workspace tree (or in a Workspace Tree accessory) for the sub-workspace or sub-folder that they have been granted access to are not able to see the workspace, because Teaming does not permit them to see the parent workspace that they do not have access to. Users can still access the workspace using the Find or Search feature.

- Users can see the name of a higher-level workspace, even though they do not have appropriate rights.

  Users who use the Find or Search feature to locate the sub-workspace or sub-folder that they have been granted access to, then view the sub-workspace or sub-folder, are then able to see the name of the parent workspace, which they otherwise would not be able to see. However, they can see only the workspace name, not the contents of the workspace.

2.3 Controlling User Access in Workspaces

The access control settings on each workspace determine who can see the workspace and how different types of users can participate in each workspace.

2.3.1 Controlling User Access to Personal Workspaces

By default, personal workspaces are created with the following access:

User or Group	Access Role	Role Description
Workspace Owner (user)	Administrator	Can create, modify, or delete workspaces or folders; moderate participation (modify or delete the entries of others); design entries and workflows; and can perform Participant tasks.
All Users group	Participant	Can create and modify entries, plus perform the Visitor tasks.
	Visitor	Has read-only and comment-only access.

Teaming users can adjust the access control for their personal workspaces, as described in "Controlling User Access" in the *Novell Teaming 2.0 Advanced User Guide*.

2.3.2 Controlling User Access to Team Workspaces

By default, new team workspaces created under the main Team Workspace are visible only to members of the team workspace. Following are some of the default access control options:

User or Group	Access Role	Role Description
Workspace Owner (team creator)	Administrator	Can create, modify, or delete workspaces or folders; moderate participation (modify or delete the entries of others); design entries and workflows; and can perform Participant tasks.
All Users group	Participant	Can create and modify entries, plus perform the Visitor tasks.
	Visitor	Has read-only and comment-only access.

After you create a new team workspace, you can configure different access control settings for it.

1 Select the new team workspace, then click *Manage > Access Control*.

2 Select *No* in the Inheritance box.

3 Click *Apply* to activate the Access Control table:

4 Adjust the access control settings for the new team workspace as needed, as described in "Controlling User Access" in the *Novell Teaming 2.0 Advanced User Guide*.

2.3.3 Controlling User Access to Global Workspaces

By default, the Global Workspace immediately under the Home Workspace inherits the access control settings of the Home Workspace, which are:

User or Group	Access Role	Role Description
Workspace Owner (admin)	Administrator	Can create, modify, or delete workspaces or folders; moderate participation (modify or delete the entries of others); design entries and workflows; and can perform Participant tasks.

User or Group	Access Role	Role Description
All Users group	Participant	Can create and modify entries, plus perform the Visitor tasks.
	Visitor	Has read-only and comment-only access.
All Applications group	Visitor	Has read-only and comment-only access. For information about application groups, see "Managing Remote Applications" in the *Novell Teaming 2.0 Advanced User Guide*.

When you create a new global workspace under the main Global Workspace, the new global workspace by default inherits the access control settings of the main Global Workspace, as listed above. After you create a new global workspace, you can configure different access control settings for it.

1 Select the new global workspace, then click *Manage > Access Control*.

2 Select *No* in the Inheritance box.

3 Click *Apply* to activate the Access Control table:

4 Adjust the access control settings for the new global workspace as needed, as described in "Controlling User Access" in the *Novell Teaming 2.0 Advanced User Guide*.

2.4 Controlling User Access across the Teaming Site

To assign a user to a particular role for every place on the Novell Teaming site:

1 In the Folder or Workspace toolbar, click *Manage > Site Administration*, then click *Access Control for Zone Administration Functions*.

A basic Teaming site consists of a single zone. Novell Teaming allows you to set up multiple zones in a single Teaming site. This feature is not available in Kablink Teaming. For more information about creating multiple zones, see Chapter 8, "Setting Up Zones (Virtual Teaming Sites)," on page 57.

2 Add the user to whom you want to grant the site-wide role to the Access Control table.

For information on how to add users to the Access Control table, see "Adding Users to the Access Control Table" in the *Novell Teaming 2.0 Advanced User Guide*.

3 Add the role that you want to grant to the Access Control table.

For information on how to add roles to the Access Control table, see "Adding Roles to the Access Control Table" in the *Novell Teaming 2.0 Advanced User Guide*.

4 Click *Save Changes*, then click *Close*.

2.5 Managing Roles to Refine Access Control

Novell Teaming uses role-based access control. By default, there are six roles, and each role contains specific rights. If you want a particular user to have certain rights, then you can assign that user to the appropriate role. For a list of all the default access roles that are included in Teaming, see "Default Roles" in the *Novell Teaming 2.0 Advanced User Guide*.

If you find that the existing roles do not meet the needs of your organization, you can modify them or create new ones. This can be particularly useful if you want to delegate the administration of sub-workspaces and sub-folders, and if you do not want to grant all of the privileges that come with the Workspace and Folder Administration role.

Teaming also enables you to delete roles that are no longer useful to your organization.

- Section 2.5.1, "Defining a New Role," on page 20
- Section 2.5.2, "Modifying Existing Roles," on page 20
- Section 2.5.3, "Deleting Existing Roles," on page 21

2.5.1 Defining a New Role

1 Log in to the Teaming site as the Teaming administrator.

2 On the Workspace toolbar, click *Manage > Site Administration*, then click *Configure Role Definitions*.
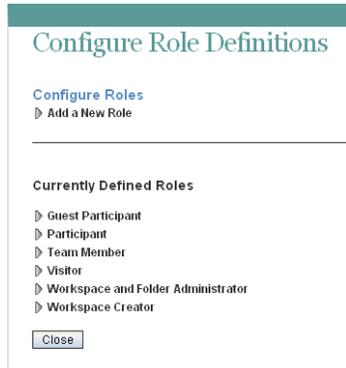
3 Click *Add a New Role*.
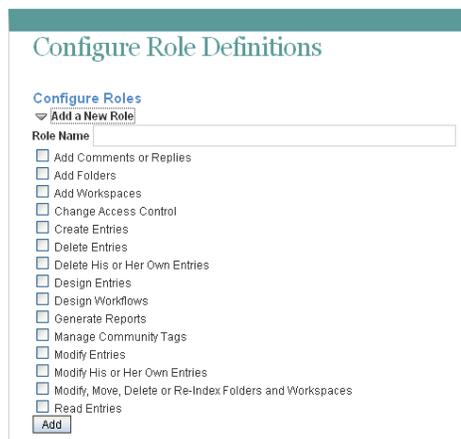
4 In the *Role Name* field, specify a name for the new role, then select all of the rights that you want members of this role to be able to perform.

5 Click *Add*, then click *Close*.

The role is added to the list of existing roles, and you can now add this role to the Access Control table.

2.5.2 Modifying Existing Roles

1 Log in to the Teaming site as the Teaming administrator.

2 In the Workspace toolbar, click *Manage > Site Administration*, then click *Configure Role Definitions*.

3 In the *Currently Defined Roles* section, select the role that you want to modify.

4 Select the rights that you want members of this role to be able to perform, and deselect the rights that you don't want them to be able to perform.

5 Click *Apply*, then click *Close*.

2.5.3 Deleting Existing Roles

1 Log in to the Teaming site as the Teaming administrator.

2 In the Workspace toolbar, click *Manage > Site Administration*, then click *Configure Role Definitions*.

3 In the *Currently Defined Roles* section, select the role that you want to delete.

4 Click *Delete*, then click *Close*.

Setting Up Initial Workspaces

3

Proper organization of workspaces is critical to building an effective Novell® Teaming site.

See also .

3.1 Understanding Workspaces

Your Novell Teaming site consists of seven types of workspaces:

- **Personal workspaces:** When you add users to your Teaming site, as described in "Adding Users to Your Teaming Site" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*, a personal workspace is established for each user. Users can customize their personal workspaces, as described in "Setting Up Your Personal Workspace" in "Getting Started" in the *Novell Teaming 2.0 User Guide*.

- **Team workspaces:** Teaming users, along with you as the Teaming administrator, can create team workspaces for groups of people who work together regularly, as described in "Setting Up Your Personal Workspace" in "Getting Started" in the *Novell Teaming 2.0 User Guide*. You, as the Teaming administrator, need to decide how you want to organize team workspaces before you let users start creating them.

- **Team Workspace Root workspaces:** Team Workspace Root workspaces are the optimal type of workspace if you want to create a library of team workspaces as sub-workspaces.

  For more information on Team Workspace Root workspaces, see "Creating and Managing a Team Workspace Root Workspace" in the *Novell Teaming 2.0 Advanced User Guide*.

- **Project Management Workspaces:** Project Management workspaces include special accessories that help leaders track the progress of task completion for potentially large projects. Project Management workspaces focus on project completion.

  For more information on Project Management workspaces, see "Creating and Managing a Project Management Workspace" in the *Novell Teaming 2.0 Advanced User Guide*.

- **Discussions workspaces:** The Discussions workspace can be the home page for a set of discussion forums. You can also use the Discussions workspace to house other types of folders. Discussions workspaces can be particularly useful for site administrators who are responsible for creating the overall structure of the Teaming site.

  For more information on how you can use Discussions workspaces, see "Creating and Managing a Discussions Workspace" in the *Novell Teaming 2.0 Advanced User Guide*.

- **Basic workspaces:** Like other types of Teaming workspaces, basic workspaces in Novell Teaming can be used to organize information inside of existing workspaces, creating different levels of hierarchy within a workspace.

For more information on basic workspaces, see "Creating and Managing a Basic Workspace" in the *Novell Teaming 2.0 Advanced User Guide*.

- **Global workspaces:** Global workspaces contain information that is of interest to all Teaming users. You, as the Teaming administrator, decide what type of information needs to be globally available on your Teaming site.

  For more information on Global workspaces, see Section 3.4, "Establishing Global Workspaces," on page 31.

3.2 Setting Up Users' Personal Workspaces

- Section 3.2.1, "Understanding Personal Workspaces," on page 24
- Section 3.2.2, "Customizing the Default Personal Workspace View," on page 26
- Section 3.2.3, "Customizing the Default View of the Profile Tab," on page 27
- Section 3.2.4, "Adding LDAP Elements to the Profiles Tab," on page 29

See also Section 2.3.1, "Controlling User Access to Personal Workspaces," on page 16.

3.2.1 Understanding Personal Workspaces

When you create your Novell Teaming site, a workspace named Personal Workspaces is automatically created.

Initially, when you expand it, Personal Workspaces includes only two personal workspaces, even after you have created Teaming users, as described in "Adding Users to Your Teaming Site" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*.

Users' workspaces appear in the Workspace tree after the users log in for the first time. However, you can still see what users have been added to the Teaming site by clicking *Personal Workspaces*.
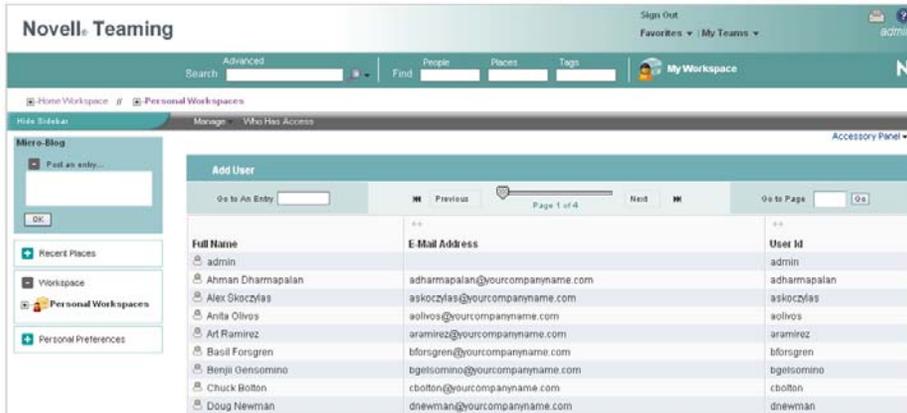
You can manually add Teaming users from this user list, as described in Section 13.2, "Listing Teaming Users," on page 76.

You can also create new Teaming users by using the method described in "Creating a User" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*.

As the Teaming administrator, you can access any user's personal workspace by clicking on it in the user list. Before the user has logged in, the user's personal workspace includes only very basic information.

After the user has logged in, more information displays in the personal workspace; it is ready for the user to personalize.
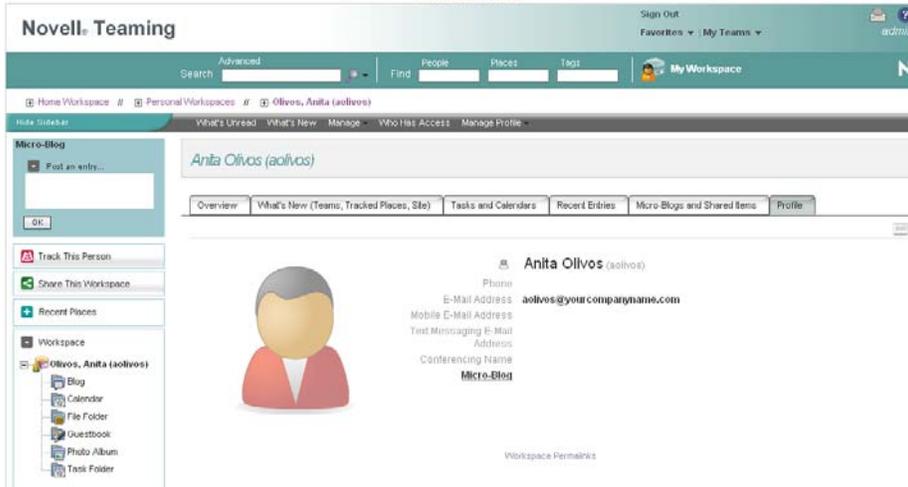
For information on how users can customize and populate their personal workspaces, see "Setting Up Your Personal Workspace" in the *Novell Teaming 2.0 User Guide*.

3.2.2 Customizing the Default Personal Workspace View

As a Novell Teaming administrator, you have the ability to customize the default view for all personal workspaces in your Teaming site.

- "Customizing the Default View for Existing and Future Personal Workspaces" on page 26
- "Customizing the Default View for Future Personal Workspaces" on page 27

Customizing the Default View for Existing and Future Personal Workspaces

1 In the Workspace or Folder toolbar, click *Manage > Site Administration*, then click *Form and View Designers*.
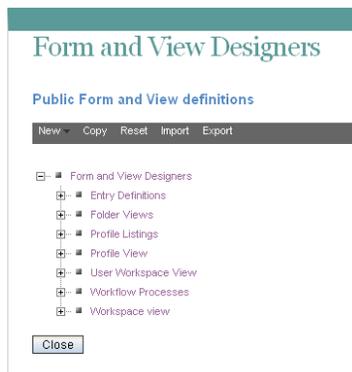
2 Expand *User Workspace View*, then click *User Workspace*.
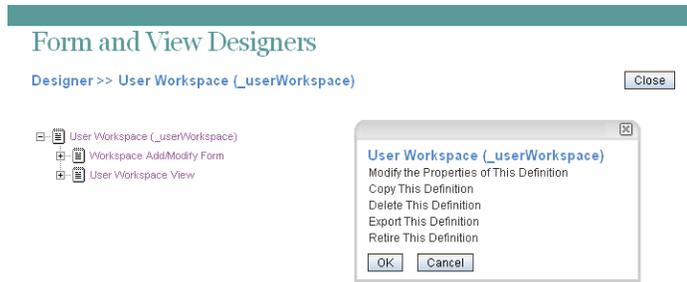
3. Add the form and view elements that you want your existing and future personal workspaces to contain by default.

   For information on the kinds of elements that you can add and how to add them, see "Designing a Custom Folder Entry Form" in the *Novell Teaming 2.0 Advanced User Guide*.

Customizing the Default View for Future Personal Workspaces

The procedure in this section affects only future personal workspaces (workspaces that have not yet been created). For information on how to change the default view for existing workspaces as well as future workspaces, see "Customizing the Default View for Existing and Future Personal Workspaces" on page 26.

1. In the Workspace or Folder toolbar, click *Manage > Site Administration*, then click *Manage Workspace and Folder Templates*.

2. Click *User workspace*.

3. For information on the types of modifications that you can make to the User Workspace template, see Section 15.1, "Modifying Workspace and Folder Templates," on page 83.

3.2.3 Customizing the Default View of the Profile Tab

You can customize the default user profile view. This is the view that appears in the *Profile* tab of a user's personal workspace. This view determines what information is displayed in all user profiles.

Figure 3-1 *User Profile Tab*

To modify what information is displayed in the *Profile* tab:

1 In the Workspace or Folder toolbar, click *Manage > Site Administration*, then click *Form and View Designers*.
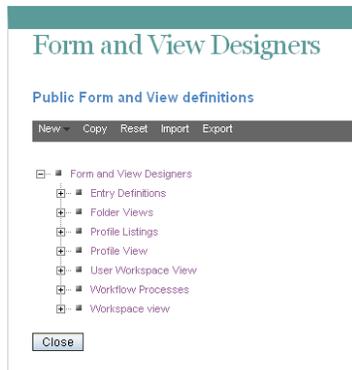
2 Expand *Profile View*, then click *User*.

The User Designer page is displayed.
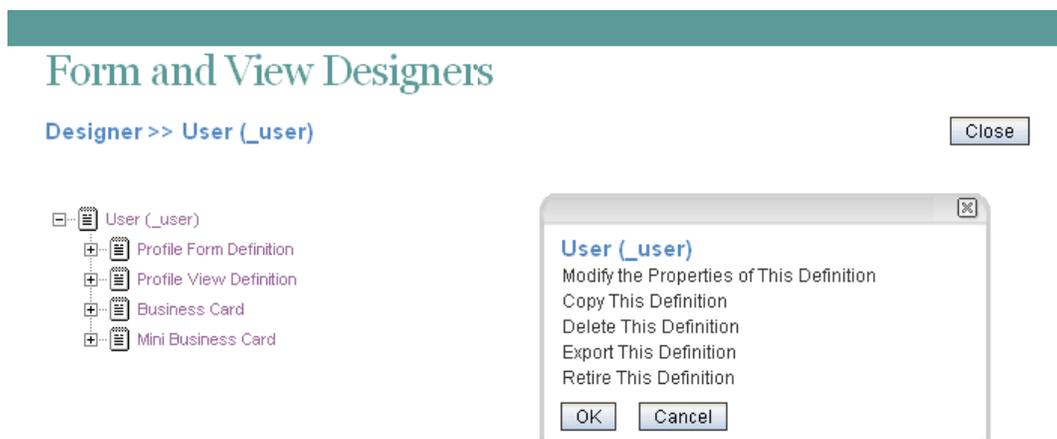
3 Depending on how extensively you want to customize the information in the *Profile* tab, continue with either of the following sections:

◆ "Adding Elements to the Profile Tab" on page 28
◆ "Adding, Deleting, and Modifying Elements in the Profile Tab" on page 29

Adding Elements to the Profile Tab

If you are mostly satisfied with the layout and elements that are included in the *Profile* tab, and simply want to add additional elements to the current view (elements that you add must appear after the default elements), then you can add elements to the profile view in the same way that you add elements to any other view.

For information on how to add form and view elements, see "Designing the Workspace View" in the *Novell Teaming 2.0 Advanced User Guide*.

If you want to change the order of the elements, delete elements, or change the layout of the profile view, follow the instructions in "Adding, Deleting, and Modifying Elements in the Profile Tab" on page 29.

Adding, Deleting, and Modifying Elements in the Profile Tab

If you want to modify the profile view in any of the following ways, then you must follow the instructions in this section:

- ◆ Delete elements
- ◆ Modify elements
- ◆ Modify the layout of elements

To modify the profile view:

1 Expand *Profile Form Definition*, then click *Form*.

2 In the *Form* window on the right side of the page, click *Modify*.
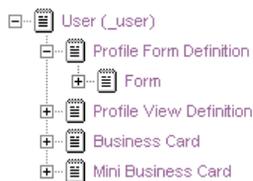
3 In the *Type* section, select *Profile Form with Nothing Included*, then click *OK*.

4 Modify the elements and layout option of the profile view to suit your needs.

For information on how to add form and view elements, see "Designing the Workspace View" in the *Novell Teaming 2.0 Advanced User Guide*.

3.2.4 Adding LDAP Elements to the Profiles Tab

If there is information in your LDAP source that does not have a corresponding element in Teaming, and you want that information to be displayed in the Teaming *Profile* tab, then you can create an element in the profile view as described in Section 3.2.3, "Customizing the Default View of the

After you have created the element, you can synchronize that element with the corresponding information from LDAP, as described in

3.3 Organizing Team Workspaces

See also

3.3.1 Understanding Team Workspaces

When you create your Novell Teaming site, a workspace named Team Workspaces is automatically created.

You as the Teaming administrator are responsible to determine how team workspaces should be organized. Without guidance, Teaming users will inevitably create chaos under the Team Workspaces directory.

You might want to organize team workspaces to parallel your business organization. If appropriate, you might have a level for geographical areas. You would typically want a level for departmental areas, and perhaps even for projects within departments. In addition, you must decide which teaming users need what kind of access to which teams. Creating groups, as described in Section 4.2, "Creating Groups of Users," on page 40, facilitates creating teams because you do not need to add users to teams individually.

In the Team Workspaces directory that is automatically created when you install Teaming, you can create other Team Workspace Root workspaces. A Team Workspace Root workspace is designed to contain multiple team workspaces, so use this type of workspace if you want to create additional team workspaces as sub-workspaces to this workspace.

3.3.2 Creating a Team Workspace Root Workspace

After you have planned the hierarchical organization of the team workspaces for your Novell Teaming site, you can start to implement it by creating Team Workspace Root workspaces, as described in "Creating and Managing a Team Workspace Root Workspace" in the *Novell Teaming 2.0 Advanced User Guide*.

3.3.3 Creating a Team Workspace

In the Team Workspaces directory, or in the Team Workspace Root workspaces that you have created:

1 Create each team workspace, as described in "Creating a Team Workspace" in "Getting Started" in the *Novell Teaming 2.0 User Guide*.

2 Set the access controls on the team workspace, as described in Section 2.3.2, "Controlling User Access to Team Workspaces," on page 17.

3.4 Establishing Global Workspaces

A global workspace is intended to present very high-level information that would be of interest to all Novell Teaming users. It might include a Frequently Asked Questions (FAQ) workspace to help new Teaming users find their way around in the organization of team workspaces that you have set up. It might provide a place to post company-wide news. All global workspaces must be created under *Home Workspace > Global Workspaces* on the Teaming site.

You might want to use geography to organize your company's global information, and then use departmental categories (*Engineering*, *Human Resources*, *Marketing*) to further organize the information. Or, depending on your organization, you might want to reverse the order (function followed by geography), or use some other organizational scheme.

We strongly recommend that you limit the creation of global workspaces. First, organic team creation is the more effective use model for this product. Second, we have worked with a significant number of customers who duplicated complex organizational charts in the structure of global workspaces, and users found them to be confusing and unusable. Instead, populate the global area with a minimal amount of information, and let users guide you as to a useful structure and content in this area.

3.5 Establishing Workspace and Folder Templates

Templates in Novell Teaming are a powerful way to create consistent custom folders and workspaces. If you are not satisfied with the way default workspaces and folders behave, you can either modify the current templates, or create new templates.

- Section 3.5.1, "Understanding Templates," on page 31
- Section 3.5.2, "Understanding Default Workspace and Folder Templates," on page 32
- Section 3.5.3, "Creating Workspace and Folder Templates," on page 35

3.5.1 Understanding Templates

Workspace and Folder Templates are a powerful and efficient way to manage your Novell Teaming site. They enable you to customize the default features, default layout, and default access control settings of the workspaces and folders throughout your Teaming site.

For example, the Team Workspaces template is used when any team workspace is created. By default, the access control settings for the Team Workspaces template specify that only team members are able to view the team workspace. However, if you want to run a more relaxed Teaming site and allow all Teaming users to view any team workspace, you can simply modify the access control settings for the Team Workspaces template.

For information about the specific access control roles that you can assign to various users in Teaming, see "Understanding Access Control" in the *Novell Teaming 2.0 Advanced User Guide*.

- ◆ "Creating Templates or Modifying Existing Templates" on page 32
- ◆ "Templates vs. Form and View Designers" on page 32

Creating Templates or Modifying Existing Templates

You can modify existing templates, like the Team Workspaces template, or you can create your own custom templates. When you create a new template, all teaming users have access to that template when they create new workspaces or folders. When you modify existing templates, users who create new workspaces and folders see only the modified template.

For more information on the default templates that are included in Novell Teaming, see Section 3.5.2, "Understanding Default Workspace and Folder Templates," on page 32.

Templates vs. Form and View Designers

Novell Teaming provides two methods of customizing the default features and default layout of workspaces and folders in your Teaming site. Depending on your situation, you might want to use either of these methods.

- ◆ **Templates:** If users have not yet started using your Teaming site, use templates to create and modify custom folder and workspace views. Typically, templates are easier to work with than the Form and View Designers tool; however, changes that you make to templates affect only those workspaces and folders that are created after the template was modified.
- ◆ **Form and View Designers Tool:** If users have already started using your Teaming site, you might want to use the Form and View Designers tool to create and modify folder and workspace views. When you modify folder and workspace views by using the Form and View Designers tool, all modifications are displayed in existing workspaces and folders.

  For information on using the Form and View Designers tool to create new workspace and folder views, see "Creating Custom Workspace Views" and "Creating Custom Folder Views" in the *Novell Teaming 2.0 Advanced User Guide*.

3.5.2 Understanding Default Workspace and Folder Templates

By default, Novell Teaming provides basic default templates for various types of workspaces and folders. If the default workspace and folder templates are not sufficient for your needs, you can either modify these templates, as described in Section 15.1, "Modifying Workspace and Folder Templates," on page 83, or create new templates, as described in Section 3.5.3, "Creating Workspace and Folder Templates," on page 35.

The following sections outline the default workspace and folder templates that are provided in Teaming:

Default Workspace Templates

- Discussions Workspace
- Project Management Workspace
- Team Workspace
- Workspace (Basic)
- Landing Page
- User Workspace

Following are some examples of default workspace templates:

Team Workspace

Figure 3-2   *Team Workspace Template Example*
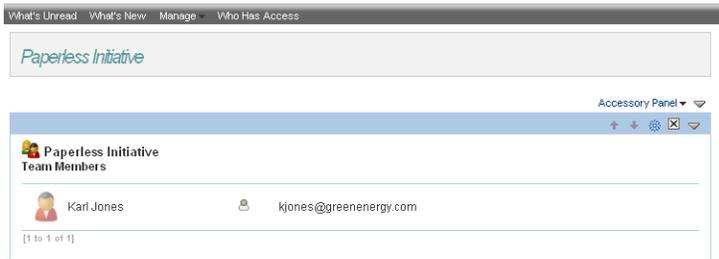
User Workspace

Figure 3-3   *User Workspace Template Example*
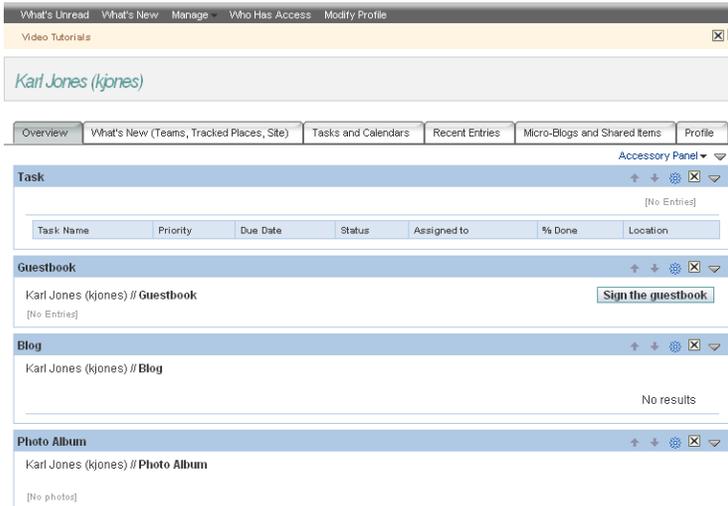
Default Folder Templates

- Discussion
- Blog
- Calendar
- Guestbook
- File Folder
- Milestone Folder
- Micro-Blog
- Mirrored File Folder
- Photo Album
- Survey Folder
- Task Folder
- Wiki

Following are some examples of default folder templates:

-
-

Discussion Folder

Figure 3-4   *Discussion Folder Template Example*

Calendar Folder

Figure 3-5   *Calendar Folder Template Example*
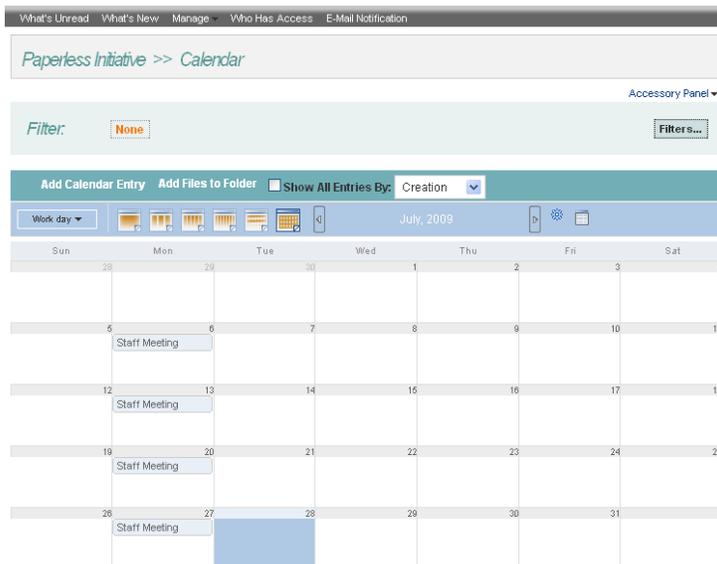
3.5.3 Creating Workspace and Folder Templates

Novell enables you to create templates based on existing workspaces and folders; or, you can create new templates. You can also modify existing templates.

- ◆ "Creating Templates Based on Existing Workspaces and Folders" on page 35
- ◆ "Creating New Templates" on page 37
- ◆ "Modifying Existing Templates" on page 37

Creating Templates Based on Existing Workspaces and Folders

1 In the Workspace or Folder toolbar, click *Manage > Site Administration*, then click *Manage Workspace and Folder Templates*.
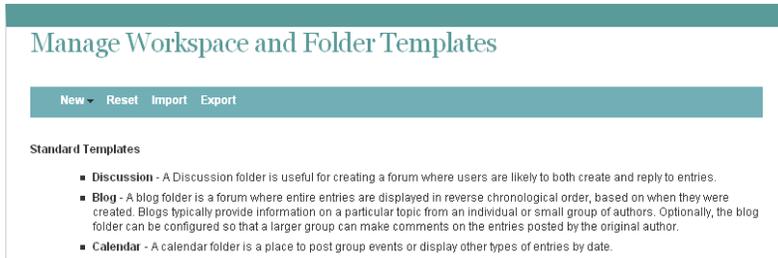
2 Click *New > Create a New Template from an Existing Workspace or Folder*.
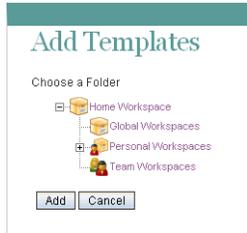
3 Use the Workspace tree to navigate to and select the folder or workspace whose template you want to modify.

4 Click *Add*.
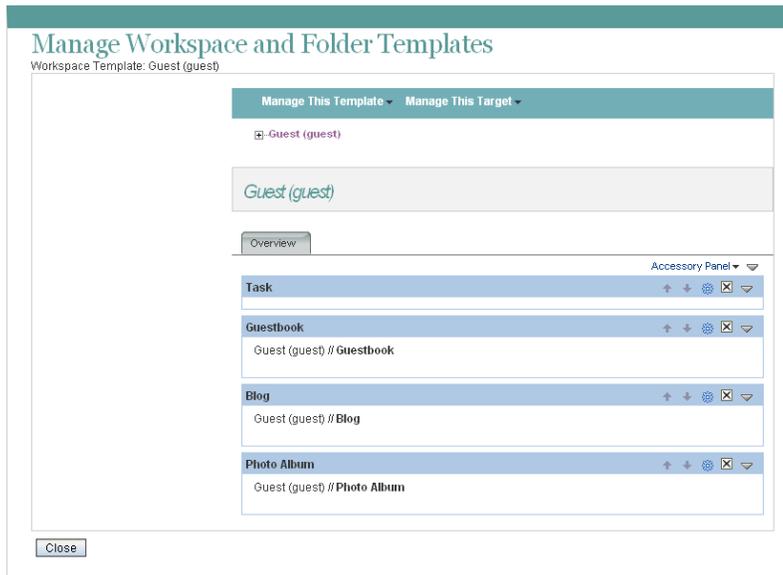
5 Modify the template as desired.

For information on how to modify a template after you have created it, see Section 15.1, "Modifying Workspace and Folder Templates," on page 83.

Creating New Templates

Teaming enables you to design completely new custom workspace or folder templates.

1 In the Workspace or Folder toolbar, click *Manage > Site Administration*, then click *Manage Workspace and Folder Templates*.
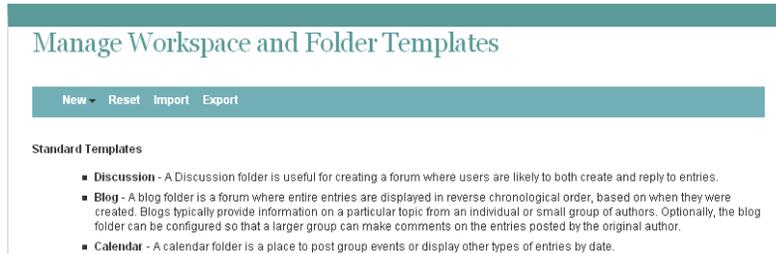
2 Click *New > Folder* or *Workspace*, depending on which type of template you want to create.
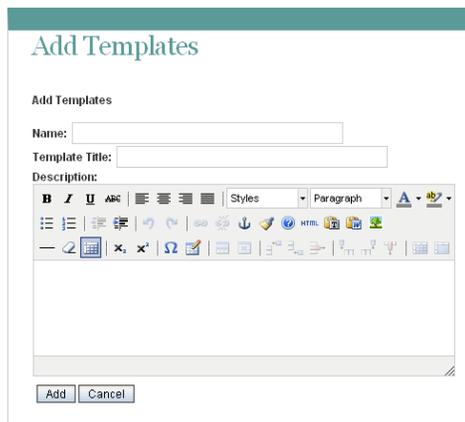
3 Fill in the following fields:

Name: Internal name of the template

For example, `custom_template`.

Template Title: Visible name of the template.

For example, `Custom Template`.

Description: Description of the template.

4 Click *Add > OK*.

The template is created.

5 Set up the template as desired.

For information on how to set up a template after you have created it, see Section 15.1, "Modifying Workspace and Folder Templates," on page 83.

Modifying Existing Templates

Teaming enables you to modify default templates or custom templates that you have created.

For information on how to modify existing templates, see Section 15.1, "Modifying Workspace and Folder Templates," on page 83.

Setting Up User Access to the Teaming Site

<div style="text-align: right">4</div>

Adding existing users to your new Novell® Teaming site was part of the installation process, as described in "Adding Teaming Users from Your LDAP Directory" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*.

However, as time passes, you need to add new users. Depending on the needs of your Teaming site, you might want to allow people to access the site even if they do not have Teaming user accounts in the Teaming system.

- Section 4.1, "Adding New Users to Your Teaming Site," on page 39
- Section 4.2, "Creating Groups of Users," on page 40
- Section 4.3, "Allowing Guest Access to Your Teaming Site," on page 41
- Section 4.4, "Allowing Web Crawler Access to Your Teaming Site," on page 45

4.1 Adding New Users to Your Teaming Site

Novell Teaming pulls user information from your LDAP directory service on the schedule that you set under *Manage > Site Administration > Configure LDAP*. The LDAP synchronization schedule was initially set up during installation, as described in "User Synchronization Options" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*. Therefore, to add new users to your Teaming site, you add the users to your LDAP directory, in a context from which Teaming synchronizes information.

NOTE: If you change user information on the Teaming site, the changes are not transferred back to your directory service.

To list all the users on your Teaming site, click *Personal Workspaces* in the Workspace tree.
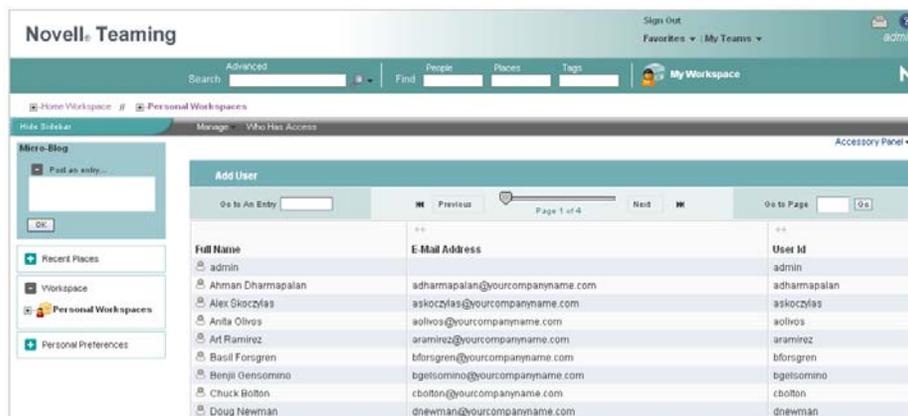
Navigation controls enable you to scroll through a long list. If you want to add a user who is not in your LDAP directory, click *Add User*, then provide the user's information. A user who is added in this manner is a local Teaming user and is not added to your LDAP directory.

4.2 Creating Groups of Users

You might have chosen to synchronize groups of users from your LDAP directory to your Novell Teaming site, as described in "User Synchronization Options" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*.

In addition, you can create additional groups to facilitate access control on your Teaming site. For background information on access control, see "Controlling User Access" in the *Novell Teaming 2.0 Advanced User Guide*. Groups also facilitate team creation, as described in "Creating a Team Workspace" in "Getting Started" in the *Novell Teaming 2.0 User Guide*.

Users are responsible for access control in their personal workspaces and any team workspaces that they create. You as the Teaming site administrator are responsible for access control in public locations such as global workspaces. By creating groups of users who have attributes in common, you and other Teaming users can set access controls and create teams without listing users individually. Groups can be nested within groups, so create small groups first, then build larger groups from your smaller groups.

1 Log in to the Teaming site as the Teaming administrator.

2 Click *Manage > Site Administration*.

3 Click *Manage Groups*, then click *Add a New Group*.

4 Fill in the fields:

Group Name: Specify the unique name under which the group is stored in the Teaming database. The first character must be an alphabetic character (a-z, A-Z). For the rest of the name, legal characters are alphanumeric characters (a-z, A-Z, 0-9), hyphens (-), and underscores (_).

Group Title: Specify the group name that displays to users on the Teaming site. This string can include any characters that you can type.

Group Description: Describe what the members of this group have in common.

5 Click *Add* to create the group.

6 Click the new group in order to add users to it.

7 In the *Users* field, start typing the first or last name of a user.

A drop-down list displays possible matches.

8 Click a user to add the user to the group.

9 Repeat Step 7 and Step 8 for each user who you want to add to the group.

After you have created one or more small groups, you can use the *Groups* field to create larger groups from smaller groups. Also, if there's a place in your Teaming site that displays users that you want to create a group for, you can collect the users on the Teaming clipboard, as described in "Using the Teaming Clipboard" in "Connecting With Your Co-Workers" in the *Novell Teaming 2.0 User Guide*, then use *Clipboard User Names* to add the users on the Teaming clipboard to the group that you are creating.

10 When you are finished adding users to the group, click *Apply > Close*.

4.3 Allowing Guest Access to Your Teaming Site

When a person arrives at the Novell Teaming site URL, the person is considered as a Guest user on the site, as indicated by the username displayed in the upper right corner of the page:
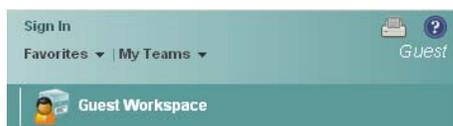
This page is also the main Teaming login page. Users with Teaming usernames can log in to their personal workspaces, and from there they can access any other locations where they have been granted access.

- Section 4.3.1, "Understanding the Guest User," on page 42
- Section 4.3.2, "Setting Up Guest Access," on page 42
- Section 4.3.3, "Monitoring Guest User Access," on page 45

4.3.1 Understanding the Guest User

You as the administrator can choose whether you want people who do not have Novell Teaming usernames to be able to access information on the Teaming site as the Guest user. When people visit your Teaming site as the Guest user, they can have some or all of the following experiences, depending on the access controls that you set for the Guest user:

 ◆ Any user that knows the Teaming site URL can click *Guest Workspace* on the Login page to display the Guest workspace.

 ◆ The Relevance Dashboard in the Guest workspace displays only the information that the Guest user has been specifically granted access to see.

 ◆ A Guest user can find out what is accessible on the Teaming site by pressing the down-arrow in the *Find Places* field.

 ◆ If a Guest user uses the Search feature, the only information returned is information that the Guest user has been granted access to see.

 ◆ When a Guest user adds a folder entry, the entry form requests the user's name and e-mail address. This information is displayed like a signature when the folder entry is viewed. Providing the name and e-mail address is optional.

 ◆ If you grant User Participant rights to the Guest user, people who access the Teaming site as the Guest user can modify and delete entries and comments posted by other people who have accessed the Teaming site as the Guest user.

The Guest user functionality must be purchased as an additional license for your Novell Teaming site. For more information, see Section 19.1.6, "License Report," on page 104.

NOTE: Guest access is not possible if you are using Novell Access Manager to provide single sign-on functionality. For more information about Novell Access Manager, see "Configuring Single Sign-On with Novell Access Manager" in "Advanced Installation and Reconfiguration" in the *Novell Teaming 2.0 Installation Guide*.

4.3.2 Setting Up Guest Access

1 Log in to the Teaming site as the Teaming administrator

2 Click *Manage > Site Administration > Configure Guest Access*.

3 Make sure that *Allow Guest Access* is selected, then click *Close*.

Even though this option is selected by default, the Guest workspace is initially inaccessible because the default user access control settings do not allow access.

4 Click *Close* again to close the Site Administration page.

5 Click *Personal Workspaces* to expand the list, then enter `Guest` in the *Go to an Entry* field to display the Guest user's personal workspace.

6 Set the user access control settings on the Guest user's workspace:

6a Click *Manage > Access Control*.

6b Change the user access control settings as needed:

Workspace Owner: By default, the Teaming site administrator owns the Guest user's workspace. Click *Edit* to specify a new owner, select whether this change applies to folders under the Guest user's workspace, then click *OK*.

Role Membership Inheritance By default, role membership is not inherited. Keep this setting.

7 Add the roles that you want the Guest user to be able to perform in the Guest workspace:

7a Click *Add User,* start typing `Guest`, then select the Guest user to add Guest to the User section of the Access Control table.

7b Select one or more roles that you want the Guest user to be able to perform on the Teaming site, for example:

Visitor: The Guest user can read entries and add comments or replies in folders in the Guest user workspace.

Participant: In addition to Visitor activities, the Guest user can also create new entries, and modify or delete his or her own entries.

For more information about the additional access control options, see "Controlling User Access" in the *Novell Teaming 2.0 Advanced User Guide*.

7c Click *Save Changes*, then click *Close*.

8 (Conditional) If you want users in addition to the Teaming administrator to be able to grant Guest access to locations in your Teaming site:

8a Click *Manage > Site Administration*, then click *Access Control for Zone Administration Functions*.

A basic Teaming site consists of a single zone. Novell Teaming allows you to set up multiple zones in a single Teaming site. This feature is not available in Kablink Teaming. For more information about zones, see Chapter 8, "Setting Up Zones (Virtual Teaming Sites)," on page 57.

8b Click *Add a User*, start typing the user's name, then select the user from the drop-down list to add the user to the Access Control table.

8c Select *Allow Adding Guest Access* for the user.

8d Repeat Step 8b and Step 8c for each user who you want to be able to grant Guest access to locations on your Teaming site.

8e Click *Save Changes*, then click *Close*.

8f Notify the users who are allowed to grant Guest access.

9 Set up the Guest user's personal workspace with whatever information you want to present to people who visit your Teaming site without logging in.

For general suggestions on creating useful workspaces, see "Managing and Using Workspaces" in the *Novell Teaming 2.0 User Guide*.

10 (Conditional) If you want the Guest user to be able to access content elsewhere on the Teaming site, add the Guest user to the Configure Access Control page for those workspaces or folders.

11 Notify people who might be interested in accessing your Teaming site about your Teaming site URL.

12 (Conditional) If you want information on your Teaming site to be searchable on the Internet, see Section 4.4, "Allowing Web Crawler Access to Your Teaming Site," on page 45.

4.3.3 Monitoring Guest User Access

As the Novell Teaming site administrator, you can create a report of all locations on the Teaming site that the Guest user can access. For instructions, see Section 19.1.3, "User Access Report," on page 100.

4.4 Allowing Web Crawler Access to Your Teaming Site

If you allow Guest access to your Novell Teaming site, as described in Section 4.3, "Allowing Guest Access to Your Teaming Site," on page 41, you can provide Internet search engines (such as Google) with the Teaming permalinks for workspaces and folders that you would like to make publicly available on the Internet. A Teaming permalink is the complete URL that someone outside of your Teaming site and outside of your organization, such as a Web crawler (http://en.wikipedia.org/wiki/Web_crawler), could use to access a specific location on your Teaming site.

1 To determine the permalink of a workspace, click *Workspace Permalinks* at the bottom of a workspace page.

or

To determine the permalink of a folder, click *Folder Permalinks* at the bottom of a folder page.

Configuring E-Mail Integration

5

Initial e-mail configuration is performed when you install Novell® Teaming. Additional aspects of e-mail handling are configured on the Teaming site.

- ◆ Section 5.1, "Enabling/Disabling Outbound E-Mailing of Folder Digests," on page 47
- ◆ Section 5.2, "Disabling/Enabling Inbound E-Mail Postings," on page 48

5.1 Enabling/Disabling Outbound E-Mailing of Folder Digests

During installation, you configured Novell Teaming to communicate with your e-mail system, as described in "Gathering Outbound E-Mail Information" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*. As a result, Teaming users can send e-mail messages to other Teaming users and to anyone whose e-mail address they know. They can also send e-mail notifications when they create workspaces, add folder entries, and so on.

In addition to this basic e-mail functionality, you can configure your Teaming site so that users can receive folder digests of site activity that are created and sent to the users who have subscribed to the folders.

1 Log in to the Teaming site as the Teaming administrator.

2 Click *Manage > Site Administration*, then click *Configure E-Mail*.

3 Select *Enable Outgoing E-Mail*.

By default, folder digests are compiled and sent daily at fifteen minutes after midnight.

4 Adjust the schedule as needed to meet the needs of the majority of your Teaming users.

Users can turn the digests on and off for individual folders, but they cannot change the e-mail schedule that you establish.

5 Click *Apply* to save the settings, then click *Close*.

For information about the options that users have for receiving e-mail notifications, see "Subscribing to a Folder or Entry" in "Getting Informed" in the *Novell Teaming 2.0 User Guide*.

5.2 Disabling/Enabling Inbound E-Mail Postings

During installation, you configured Novell Teaming to include an internal SMTP mail host for receiving e-mail postings to folders, as described in "Enabling Inbound E-Mail" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*. Your selection during installation carries over into the configuration of your Teaming site. Therefore, you can disable incoming e-mail if necessary, and then enable it again on the Teaming site. Relaying is permanently disabled on the internal SMTP mail host.

1 Log in to the Teaming site as the Teaming administrator.

2 Click *Manage > Site Administration > Configure E-Mail*.

3 Select or deselect *Enable Incoming E-Mail Using the Embedded E-Mail Server and Simple URLs*.

4 Click *Apply > Close* to save the setting.

For information about how to configure folders to receive e-mail postings, see "Enabling Folders to Receive Entries through E-Mail" in "Managing Folders" in the *Novell Teaming 2.0 Advanced User Guide*. Failed e-mail postings are listed in the Tomcat log file. For background information about the Tomcat log file, see Section 19.2.2, "Tomcat Log File," on page 105.

Configuring Real-Time Communication Tools

6

From the Teaming site, Teaming users can communicate with each other in various ways.

6.1 Integrating Conferencing with Teaming

Novell® Teaming enables you to integrate with Novell Conferencing, so that Teaming users can easily set up instant conferencing meetings with other Teaming users, as described in Using Novell Conferencing with Novell Teaming in "Connecting With Your Co-Workers" in the *Novell Teaming 2.0 User Guide*.

For setup instructions, see "Configuring Presence" in "Advanced Installation and Reconfiguration" in the *Novell Teaming 2.0 Installation Guide*.

6.2 Integrating Skype with Teaming

Novell Teaming enables you to integrate with Skype*, so that Teaming users can easily contact other Teaming users directly from the Teaming interface using Skype.

Before users are able to make Skype phone calls from inside Teaming, you first need to configure Teaming to support Skype. You do this by modifying the user profile form to include a *Skype Name* field.

1 Log in to Teaming as the Teaming administrator.

2 In the Folder or Workspace toolbar, click *Manage > Site Administration*.

3 On the Site Administration page, click *Form and View Designers*.

The Form and View Designers page is displayed.

4 Expand *Profile View*, then click *User*.

5 On the Form and View Designers User page, expand *Profile Form Definition*, then click *Form*.

6 In the Form window on the right side of the page, click *Add*.

7 In the Form window, in the *Standard Form Elements* section, click *Skype Name*.

8 Click *OK*.

Users are now able to specify a Skype name in their personal profiles.

For more information on how you can use Skype to contact other Teaming users from inside Teaming, see "Using Skype From within Teaming" in "Connecting With Your Co-Workers" in the *Novell Teaming 2.0 User Guide*.

Setting Up Mirrored Folders

7

Initial setup of mirrored folder resource drivers is done during Novell® Teaming installation, as described in "Configuring Mirrored Folder Resource Drivers" in "Advanced Installation and Reconfiguration" in the *Novell Teaming 2.0 Installation Guide*.

The Teaming Installation program enables you to set up as many as three mirrored folder resource drivers. If you need more than three, you must manually edit the `installer.xml` file, then update your Teaming installation. After you set up the mirrored folder resource drivers by using the Installation program, you must perform additional mirrored folder configuration on the Teaming site.

◆ Section 7.1, "Manually Setting Up More Than Three Mirrored Folder Resource Drivers," on page 51

◆ Section 7.2, "Creating a Mirrored File Folder for a Mirrored Folder Resource Driver," on page 54

7.1 Manually Setting Up More Than Three Mirrored Folder Resource Drivers

◆ Section 7.1.1, "Editing the installer.xml File," on page 51

◆ Section 7.1.2, "Updating Your Teaming Site Configuration," on page 53

7.1.1 Editing the installer.xml File

The Novell Teaming Installation program enables you to set up three mirrored folder resource drivers. However, there is no limit to the total number of mirrored folder resource drivers that you can set up. A useful strategy is to set up resource drivers for root directories, then set up Mirrored File folders for root directories and subdirectories as needed, as described in Section 7.2, "Creating a Mirrored File Folder for a Mirrored Folder Resource Driver," on page 54.

When you run the Teaming Installation program, it creates the `installer.xml` file in the directory where you run it. The `installer.xml` file stores the information you provided during installation. You can also edit it manually, then update your Teaming installation.

1 Make a backup copy of your existing `installer.xml` file.

2 Open the `installer.xml` file in a text editor.

3 Search for `mirrored`.

4 Scroll down until you reach the three existing mirrored folder resource drivers.

5 Block and copy the mirrored folder resource driver that is most like the one you want to create, then paste it between the `<MirroredFolder>` and `</MirroredFolder>` tags.

The Teaming Installation program only displays the first three mirrored folder resource drivers, so you might want to place new resource drivers at the top of the list in order to double-check the information when you run the Teaming Installation program to implement your changes.

6 Set the parameters as needed for the file system location that you want to mirror in your Teaming site:

Tag	Setting
enabled=	true
type=	file or webdav
id=	The unique internal name for the mirrored folder resource driver. Use only alphanumeric characters. Do not include spaces, extended characters, or double-byte characters.
title=	The name of the mirrored folder resource driver that displays on the Teaming site. The title can include any characters.
rootPath=	For the file mirrored folder type, the absolute path to the directory from the point of view of the Teaming server.
	For the webdav mirrored folder type, the path to the directory after the WebDAV server hostname, and optionally, the port number, as specified by the hostUrl= parameter. The path should start with a slash (/), because it is appended to the setting of the hostUrl= parameter. For example, if the full WebDAV server location is:
	http://webdavserver/archive/docs
	the rootPath= setting would be:
	/archive/docs
readonly=	true or false
zoneId=	For a multi-zone Teaming site, the ID of the zone where you want the mirrored folder resource driver to be available. For information about Teaming zones, see Chapter 8, "Setting Up Zones (Virtual Teaming Sites)," on page 57. For a single-zone Teaming site, leave this parameter empty.
AllowedUsers idList=	A list of Teaming user IDs that can access the mirrored folder resource driver and create mirrored folders. Use a semicolon (;) between user IDs.
AllowedGroups idList=	A list of Teaming groups that can access the mirrored folder resource driver and create mirrored folders. Use a semicolon (;) between group IDs.

7 (Conditional) If you are setting up a webdav mirrored folder, set the following additional parameters:

Tag	Setting

`hostUrl=`	The hostname, and optionally, the port number for the WebDAV server. For example:
	
	`http://webdav_hostname[:port]`
	`https://webdav_hostname[:port]`
	
	Do not include the directory path to the data. Use the `rootPath=` parameter to specify the path to the directory on the WebDAV server. For example, if the full WebDAV server location is:
	
	`http://webdavserver/archive/docs`
	
	the `hostUrl=` setting would be:
	
	`http://webdavserver`

`user=`	The username that Teaming can use to connect to the WebDAV server. The WebDAV server must support HTTP Basic Authentication (http://en.wikipedia.org/wiki/Basic_access_authentication).
`password=`	The password for the username specified by the `user=` parameter.

8 Repeat Step 5 and Step 6 for each mirrored folder resource driver that you want to create.

9 Save the `installer.xml` file, then exit the text editor.

7.1.2 Updating Your Teaming Site Configuration

After you edit the `installer.xml` file, you must run the Novell Teaming Installation program to update the configuration of your Teaming site. If you need assistance with any of the following steps, refer to the appropriate platform-specific instructions in "Setting Up a Basic Teaming Site" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*.

1 Stop Teaming.

2 Start the Teaming Installation program.

The Teaming Installation program reads the updated `installer.xml` file. If your edits inadvertently changed the syntax of the file, the Installation program cannot start. If this happens, correct the problem in the `installer.xml` file, or return to your backup copy and try your edits again.

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

4 Select *Reconfigure Settings*, then click *Next*.

5 Select *Advanced*, then click *Next*.

6 Click *Next* until you reach the Mirrored Folder Resource Driver Configuration page.

The Teaming Installation program displays the first three mirrored folder resource drivers listed in the `installer.xml` file.

7 (Conditional) If you placed the new resource drivers at the top of the list, review the information that you added, and make corrections if necessary.

8 Click *Next*.

9 Click *Install* to implement the new mirrored folder resources.

10 Start Teaming.

7.2 Creating a Mirrored File Folder for a Mirrored Folder Resource Driver

After you have set up one or more mirrored folder resource drivers in the Novell Teaming Installation program, you need to create a Mirrored File folder for each resource driver in order to make the data accessible to users on your Teaming site.

1 Navigate to the workspace where you want to create a mirrored folder.

2 Create a new File folder:

2a Click *Manage > Add New Folder*.

2b Specify a name for the folder that reflects the type of data that is available in the mirrored location.

2c Select *Mirrored File Folder*, then click *OK*.

3 Configure the new Mirrored File folder to access the resource driver:

3a Select the new folder, then click *Manage > Modify This Folder*.

3b Scroll down to the mirrored folder options at the bottom of the page.

3c Set the mirrored folder options as needed:

Resource Driver: Select the name of the mirrored folder resource driver, as specified in the *Title* field on the Mirrored Folder Resource Driver Configuration page in the Teaming Installation program or using the `title=` tag in the `installer.xml` file.

Resource Root Path: Displays the pathname you specified in the Teaming Installation program or the `installer.xml` file.

Resource Path Relative to the Root Path: (Optional) Add a subdirectory path to restrict the scope of the files available in the Mirrored File folder.

> **IMPORTANT:** After you configure a Mirrored File folder with a resource driver, you cannot edit any of the mirrored folder settings except for the subdirectory path. If you need to change other settings, you can delete the Mirrored File folder and create a new one with different settings.

  3d Click *OK* to save the mirrored folder settings.

4 Display the Mirrored File folder, then click *Manage > Manually Synchronize* to create the initial metadata for the mirrored folder.

5 Set up a synchronization schedule to keep the metadata current:

  5a Click *Manage > Schedule Synchronization*.

6 Select *Enable Scheduled Synchronization*.

7 Set schedule options as needed.

You can choose to have mirrored folder synchronization performed every day, or you can select specific days of the week when you want it performed (for example, on Monday, Wednesday, and Friday). You can choose to have it performed once a day at a specified time (for example, at 2:00 a.m.), or you can set a time interval, so that it is performed multiple times each day (for example, every four hours). The smallest time interval you can set is .25 hours (every 15 minutes).

8 Click *Apply > Close* to save the synchronization schedule options for the mirrored folder.

9 Click the new Mirrored File folder to display the directories and files in the mirrored location.

> **WARNING:** If you set up multiple Mirrored File folders that point to the same files, and if Teaming users have been granted write access to those files, multiple Teaming users can gain write access to the same mirrored file at the same time. File locking is associated with each Mirrored File folder entry, not with the physical source files. Make sure that all Teaming users have access to mirrored files through the same Mirrored File folder.

10 Set appropriate access controls on the Mirrored File folder, as described in Chapter 2, "Planning User Access to Workspaces and Folders," on page 15.

Setting Up Zones (Virtual Teaming Sites)

8

You can set up multiple virtual Novell® Teaming sites within a single physical Teaming site by setting up Teaming zones. Each Teaming zone is completely independent. Each zone has its own unique URL, and data files for each zone are stored in a separate subdirectory of the Teaming file repository, so that no searching across zones is possible.

- Section 8.1, "Creating a New Teaming Zone," on page 57
- Section 8.2, "Configuring DNS to Support the New Zone," on page 58
- Section 8.3, "Accessing the New Zone," on page 59
- Section 8.4, "Setting Up Access Control for the New Zone," on page 59

8.1 Creating a New Teaming Zone

1 Log in to the Teaming site as the Teaming administrator.

2 Click *Manage > Site Administration > Manage Zones*.

The default zone name is `kablink`. It represents your initial Teaming site, from which all other zones can be managed.

3 Click *Add a New Zone*, then fill in the fields.
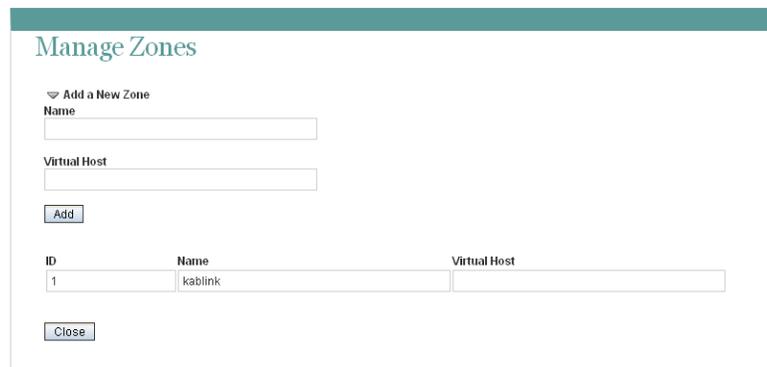
Name: Specify a unique name to describe the zone. The name can include alphanumeric characters, periods, and underscores. Do not include spaces, extended characters, or double-byte characters.

Virtual Host: Specify the hostname for the zone. You can use any hostname that does not conflict with an existing hostname.

4 Click *Add*, then click *Close* to create the zone.

8.2 Configuring DNS to Support the New Zone

The new zone URL has the following format:

```
http://virtual_hostname[:port]
```

All zones use the same port number as the physical Teaming site. If you have the Teaming site configured to listen on your browser default port, you do not need to include the port number in the zone URL. How you configure your Teaming site to listen on the browser default port varies by platform.

Linux:	See "Setting Up Port Forwarding" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*.
Windows:	Specify the desired port numbers when you run the Teaming Installation program, as described in "HTTP/HTTPS Ports" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*.

1 To perform an initial test of the Teaming zone, add the zone URL to the `hosts` file on your local workstation where you run your browser. The location of the `hosts` file and the format of the line to add vary by platform:

Linux　　　　　`/etc/hosts`

```
    ip_address     teaming_zone_url          hostname
    172.16.5.18    www.myteamingsite.com     teaming1
```

Windows　　　`C:\Windows\system32\drivers\etc\hosts`

```
    ip_address     teaming_zone_url
    172.16.5.18    www.myteamingsite.com
```

2 Specify the zone URL in your Web browser.

```
http://www.myteaminsite.com
```

3 Log in to the new zone using the default administrator username (`admin`) and password (`admin`).

From this, you can see that each zone has its own site administrator that has administrative rights only within that particular zone.

4 Immediately change the site administrator password to a secure password of your own choosing, as described in "Accessing Your Basic Teaming Site as the Site Administrator" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*.

5 After you can access the new zone successfully by changing the `hosts` file on your local workstation, have your network administrator make comparable changes to DNS so that the zone URL is recognized across your company or across the Internet as needed.

8.3 Accessing the New Zone

As with your original Novell Teaming site, the Teaming administrator username is `admin`, and the password is `admin`. For the security of the new zone, you should immediately change the zone's administrator password.

1 In your Web browser, specify one of the following URLs, depending on whether or not you are using a secure SSL connection:

```
http://zone_hostname
https://zone_hostname
```

where `hostname` is the zone hostname that you have set up in DNS.

2 Log in using `admin` as the login name and `admin` as the password.

3 Change the default zone administrator password to a secure password:

3a On the Workspace toolbar, click *Modify Profile*.

3b Specify your own password for the zone administrator in the *New Password* and *Confirm New Password* fields.

3c (Optional) Provide useful information in the additional fields of the zone administrator's profile.

3d Click *OK* to return to the zone administrator's workspace.

IMPORTANT: The zone can only be administered by accessing the zone URL and by logging in using the zone administrator password. The zone cannot be administered from the main Teaming site, even when you are logged in as the main Teaming administrator.

8.4 Setting Up Access Control for the New Zone

After you log in to the zone as the zone administrator, you can set access controls for the zone.

1 Click *Manage > Site Administration*, then click *Access Control for Zone Administration Functions*.

2 (Conditional) If you want to have more than one zone administrator:

   2a Click *Add a User*, start typing the user's name, then select the user from the drop-down list.

   2b Select the check box in the Zone Administration column.

   2c Click *Save Changes*.

3 (Optional) Add roles, as described in Section 2.5, "Managing Roles to Refine Access Control," on page 19.

4 (Optional) Set other access controls for the zone, as described in "Controlling User Access" in the *Novell Teaming 2.0 Advanced User Guide*.

Adding Software Extensions

9

You can customize your Novell® Teaming site through the use of software extensions. Teaming administrators or Teaming developers can create custom extensions (add-ons) that enhance the power and usefulness of the Teaming site. This section discusses how to add software extensions that have already been created.

◆ Section 9.1, "Creating a Software Extension," on page 61
◆ Section 9.2, "Deploying a Software Extension," on page 61

9.1 Creating a Software Extension

For information on how to create a custom software extension for Novell Teaming, see "Packaging Extensions for Deployment" in the *Novell Teaming 2.0 Developer Guide*.

9.2 Deploying a Software Extension

After a software extension has been created, you need to deploy it into the Novell Teaming site.

◆ Section 9.2.1, "Prerequisites," on page 61
◆ Section 9.2.2, "Deploying the Extension," on page 61

9.2.1 Prerequisites

Before you deploy the software extension, ensure the following:

◆ You must have access to the software extension's WAR file.
◆ You must have access to the host operating system where you will copy the WAR file.

9.2.2 Deploying the Extension

1 Change to the following directory:

Linux: `/opt/novell/teaming/apache-tomcat-version/`
                    `webapps/ssf/WEB-INF/classes/config`

Windows: `c:\Program Files\Novell\Teaming\apache-tomcat-version\`
                    `webapps\ssf\WEB-INF\classes/config`

2 Open the `ssf-ext.properties` file in a text editor.

3 Locate the following line:

`data.extension.root.dir=directory`

4 Make a note of the directory.

5 Close the `ssf-ext.properties` file without saving it.

6 Change to the directory listed in the `ssf-ext.properties` file, then change to the `extensions` subdirectory.

The `extensions` subdirectory has a subdirectory for each zone in your Teaming system. The default zone name for a Teaming 2.0 system is `kablink`.

7 Place the `WAR` file in the subdirectory for zone where you want the extension to be available.

For more information about zones, see Chapter 8, "Setting Up Zones (Virtual Teaming Sites)," on page 57.

Using Remote Applications on Your Teaming Site

10

A remote application is a program that runs on a remote server and delivers data for use on your Novell® Teaming site (for example, data from a remote database).

10.1 Creating a Remote Application

For information on how to create and build a remote application, see "Remote Applications" in the *Novell Teaming 2.0 Developer Guide*.

10.2 Adding a Remote Application to Your Teaming Site

After you or a developer have created a remote application, you need to make it available on your Novell Teaming site.

1 As the Teaming site administrator, click *Manage > Site Administration*, then click *Manage Applications*.

2 Click *Add a New Application*.

3 Fill in the following fields:

Title: Specify a unique title for the remote application. Teaming site users who add the remote application to a form or view can select the title from the list of available remote application.

Name: Specify a unique name for the remote application. The name is for internal use in the Teaming database. The first character must be an alphabetic character (a-z, A-Z). For the rest of the name, legal characters are alphanumeric characters (a-z, A-Z, 0-9), hyphens (-), and underscores (_).

Description: Provide a description of what the remote application does.

Trusted: Select *Trusted* if the application is extremely trustworthy (for example, you write, maintain, and run the application on the same server that runs Teaming). If you select *Trusted*, Teaming applying access control only according the viewing user's access control settings. For complete information about access control, including the advantages and disadvantages of using the *Trusted* setting, see "Managing Remote Applications" in the *Novell Teaming 2.0 Advanced User Guide*.

Post URL: Specify the URL of the remote application. Teaming posts requests for information, along with the requesting user and a security token for use by Teaming Web services, to this URL, then waits to receive the requested HTML snippets for posting on the Teaming site.

Post Timeout: Specify the number of seconds that Teaming should wait for a response from the remote application before it assumes that the remote application is not available. The default is 60 (1 minute). If Teaming does not receive a response from the remote application, it displays the page requested by the user without any input from the remote application.

Maximum Idle Time: Specify the number of seconds that Teaming maintains idle connections through Teaming Web service with a remote application. The default is 3600 (1 hour). After the maximum idle time as elapses, Teaming closes idle connections.

Same Address Policy: Select this option if interactions with the Teaming site are initiated by the remote application, and if the remote application must communicate with Teaming through the same Teaming Web services machine using the same security token for the entire communication.

4 Click *Add* to add the remote application to the list of remote applications that are available on your Teaming site, then click *Close*.

Users now see the new remote application in the list of tools within the designers and the tool used to create accessories.

10.3 Creating an Application Group

If you create a number of remote applications for your Novell Teaming site, you can create application groups for remote applications that all could be assigned the same roles in the Access Control table. For example, you might have a group of remote applications that are allowed to perform administrative tasks and another group of remote applications that are granted only read access.

1 As the Teaming site administration, click *Manage > Site Administration*, then click *Manage Application Groups*.

2 Click *Add a New Application Group*.

3 Fill in the following fields:

Application Group Title: Specify a unique title for the remote application group. Teaming site users who need to set access controls for a remote application can select the title from the list of available remote application groups.

Application Group Name: Specify a unique name for the remote application group. The name is for internal use in the Teaming database. The first character must be an alphabetic character (a-z, A-Z). For the rest of the name, legal characters are alphanumeric characters (a-z, A-Z, 0-9), hyphens (-), and underscores (_).

Application Group Description: Provide a description of the types of remote applications that the application group includes.

4 Click *Add* to add the application group to the list of application groups that are available on your Teaming site, then select the new application group in order to add remote applications to it.

5 Fill in the following fields:

Applications: Start typing the title of a remote application, the select the remote application. Repeat for each application that you want to add to the application group.

Application Groups: Start typing the title of an existing application group that you want to nest in the new application group, then select the application group. Repeat for each application group that you want to nest in the application group.

6 Click *Apply* to save the application group membership, then click *Close*.

10.4 Implementing Remote Applications on Your Teaming Site

After you as the Novell Teaming administrator have added remote applications to the Teaming site, users can implement them in custom forms and views, in workspaces and as accessories. For instructions, see "Managing Remote Applications" in the *Novell Teaming 2.0 Advanced User Guide*.

Customizing Your Teaming Site by Editing Teaming Properties

11

Most customization of your Novell® Teaming site can be done while viewing the Teaming site in your browser. A few useful customizations must be done by editing properties files.

- Section 11.1, "Increasing the File Upload Size Limit," on page 67
- Section 11.2, "Changing Global File Associations for Edit in Place Applications," on page 67

11.1 Increasing the File Upload Size Limit

The default size limit for uploading files into your Teaming site is 2 GB. You can change this limit by editing the `applicationContext.xml` file.

1 Change to the following directory:

Linux: `/opt/novell/teaming/apache-tomcat-version/`
`webapps/ssf/WEB-INF/context`

Windows: `c:\Program Files\Novell\Teaming\apache-tomcat-version\`
`webapps\ssf\WEB-INF\context`

2 Open the `applicationContext.xml` file in a text editor.

3 Search for `FileUpload`.

This brings you to a comment line followed by a JavaBean definition.

4 Copy the comment line and the complete Java bean definition to the clipboard of your text editor.

5 Open the `applicationContext-ext.properties` file, which is located in the same directory as the `applicationContext.xml` file.

6 Paste the block of lines you copied at the end of the `applicationContext-ext.xml` file.

7 Edit the `maxUploadSize` value as needed for your Teaming site.

You must specified the size in bytes.

8 Save and close the `applicationContext-ext.xml` file.

9 Close the `applicationContext.xml` file without saving it.

10 Stop and restart Teaming to put the new upload size limit into effect for your Teaming site.

11.2 Changing Global File Associations for Edit in Place Applications

When calling applications with the Edit in Place feature, Novell Teaming uses standard file associations. If your organization uses different file associations, you can reconfigure Teaming to use the preferred file associations.

1 Change to the following directory:

Linux: `/opt/novell/teaming/apache-tomcat-`*version*`/`
                              `webapps/ssf/WEB-INF/classes/config`

Windows: `c:\Program Files\Novell\Teaming\apache-tomcat-`*version*`\`
                              `webapps\ssf\WEB-INF\classes\config`

2 Open the `ssf.properties` file in a text editor.

3 Search for `Edit in place` to move to the block of lines that control the Edit in Place feature.

4 Review the subsequent comment lines to become more familiar with how the Edit in Place feature works.

5 Scroll down to locate the line for the file association that you want to change.

6 Copy that line to the clipboard of your text editor.

7 Open the `ssf-ext.properties` file, which is located in the same directory as the `ssf.properties` file.

8 Paste the line you copied at the end of the `ssf-ext.properties` file.

9 Edit the file association as needed.

10 (Optional) Copy additional lines from the `ssf.properties` file to the `ssf-ext.properties` file as needed.

11 Save and close the `ssf-ext.properties` file.

12 Close the `ssf.properties` file without saving it.

13 Stop and restart Teaming to put the modified file associations into affect for your Teaming site.

Managing a Multi-Language Teaming Site

12

12.1 Accommodating Multiple Languages

12.1.1 Understanding the Teaming Site Default Language

There can be only one default language for the entire Novell® Teaming site. You select the default language when you install Teaming, as described in "Accommodating Multiple Languages" in the *Novell Teaming 2.0 Installation Guide*.

When you create Teaming users, you can select a locale for each user, which determines the language of each personal workspace. However, when users who speak various languages work together on a Teaming site, they can often see interface text that is not in their preferred language. Examples include:

- Standardized text such as *Home Workspace*, *Global Workspaces*, *Personal Workspaces*, and *Team Workspaces* at the top of the Teaming Home page
- Standardized group names, such as All Users
- Login page

Although you cannot change standardized group names, such as All Users, you can rename the standardized workspaces to include multiple languages. Although the Teaming login page can be displayed in only one language, you can change the page's default language. You must be logged in as the Teaming administrator in order to perform these tasks.

12.1.2 Setting Up a Multilingual Workspace Name

1 Browse to the workspace.
2 Click *Manage* > *Modify This Workspace*.
3 In the *Title* field, add text in another language, then click *OK*.

12.1.3 Changing the Default Language on the Login Page

The language of the Novell Teaming login page is decided by the Guest user account. Because of this, you can display in the login page only one language for your entire Teaming site.

To change the language of the Guest user account, and therefore change the language that is displayed on the Teaming login page:

1 Navigate to the Guest workspace.

2 In the Workspace toolbar, click *Manage Profile > Modify*.

The User page is launched.

3 In the *Locale* drop-down list, select the language that you want to be displayed on your login page.

Users who log in as Guest view the Teaming site in the language that you select.

4 Click *OK*.

12.2 Adding a New Language

12.2.1 Current Language Availability

Novell Teaming is currently translated into 15 languages. Each language is identified by a language code in the Teaming software. Directory names and filenames include the language codes to identify the languages of directories and files.

◆ Chinese-Simplified (zh_TW)

◆ Chinese Traditional (zh_CN)

◆ Danish (da)

◆ Dutch (nl)

◆ English (en)

◆ French (fr)

◆ German (de)

◆ Hungarian (hu_HU)

◆ Italian (it)

◆ Japanese (ja)

◆ Polish (pl)

◆ Portuguese (pt_BR)

◆ Russian (ru_RU)

◆ Spanish (es)

◆ Swedish (sv)

Kablink Teaming is an open source project where additional languages can be contributed by interested members of the open source community.

12.2.2 Text to Translate

- "Software Interface Text and Pop-Up Text" on page 71
- "Help Topics" on page 71

Software Interface Text and Pop-Up Text

The files that contain the text strings in the Novell Teaming interface
(`messages_language_code.properties`) and in mouse-over pop-ups (`help-messages_language_code.properties`) are located in the following directory:

Linux:	`/opt/novell/teaming/apache-tomcat-version/` `webapps/ssf/WEB-INF/messages`
Windows:	`c:\Program Files\Novell\Teaming\apache-tomcat-version\` `webapps\ssf\WEB-INF\messages`

1 Identify the file in the language that you want to translate from.

2 Identify the language code for the language that you want to translate into.

Lists of standard language codes (http://en.wikipedia.org/wiki/Language_code) are available on the Internet.

3 Create a copy of the file that you want to translate, and name it with the appropriate language code.

4 Edit the file to translate in a text editor.

Useful information for translators is provided at the top of each file (in English).

5 Locate the following line:

`Teaming.Lang=`

6 Replace the existing language code with the language code for the language that you want to translate into.

The lines in the file have the following format:

`tag=string`

7 In each line, replace the text after the equal sign (=) with your translation for the string.

8 Save your translated file along with the other translated files.

9 Configure Teaming to recognize the new language, as described in Section 12.2.3, "New Language Implementation," on page 72.

Help Topics

The language directories for the files that contain help topics are located in the following directory:

Linux:	`/opt/novell/teaming/apache-tomcat-version/webapps/ssf/help_doc`
Windows:	`c:\Program Files\Novell\Teaming\apache-tomcat-version\` `webapps\ssf\help_doc`

1 Create a new directory for the language you want to translate into, named for its language code.

2 Copy the contents of an existing language directory that you want to translate from, into the new directory.

Each language directory contains a set of `.html` files and two subdirectories (`css` and `images`). You need to translate all the `.html` files. You do not need to translate anything in the two subdirectories.

3 Open each `.html` file in a text editor.

4 Specify your language code in the following lines:

```
<html xml:lang="language_code" lang="language_code">
<meta http-equiv="Content-Language" content="language_code" />
```

5 Carefully translate the text between the HTML tags, being careful to leave the HTML tags undisturbed.

6 Save each `.html` file, then display it in a Web browser to ensure that the HTML tags are still working correctly.

7 If you have not already done so, configure Teaming to recognize the new language, as described in New Language Implementation.

12.2.3 New Language Implementation

1 Change to the following directory:

Linux: `/opt/novell/teaming/apache-tomcat-version/`
`webapps/ssf/WEB-INF/classes/config`

Windows: `c:\Program Files\Novell\Teaming\apache-tomcat-version\`
`webapps\ssf\WEB-INF\classes/config`

2 Open the `ssf.properties` file in a text editor.

3 Locate the following line:

```
i18n.locale.support=en,da,de,es,fr,hu_HU,it,ja,nl,pl,pt_BR,ru_RU,sv,
                                                          zh_CN,zh_TW
```

4 Block and copy that line to the clipboard of your text editor.

5 Open the `ssf-ext.properties` file, located in the same directory with the `ssf.properties` file.

6 Paste the line you copied at the end of the `ssf-ex.properties` file.

7 Type a comma (,) at the end of the line, followed by your language code.

8 Save and close the `ssf-ext.properties` file.

9 Close the `ssf.properties` file without saving it.

10 Stop and restart Teaming.

Site Maintenance

II

Managing Users

<div style="text-align: right; font-size: large;">13</div>

As time passes on your Novell® Teaming site, users come and go, resulting in the need for periodic maintenance activities.

13.1 Synchronizing Users and GroupWise from an LDAP Directory

13.1.1 Adjusting LDAP Synchronization of Users and Groups

When you initially set up your Novell Teaming site, your main consideration for LDAP synchronization is to add users and groups from your LDAP directory into your Teaming site. As time passes, deletion of obsolete users and groups from your Teaming site becomes a larger concern. Periodically review the LDAP synchronization options described in "LDAP Synchronization Options" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide* to ensure that obsolete users and groups are being managed properly.

13.1.2 Synchronizing Additional LDAP Attributes

By default, Teaming synchronizes the following attributes from the LDAP directory:

- First name
- Last name
- Phone number
- E-mail address
- Description

This information displays on each user's *Profile* tab. You can synchronize additional LDAP attributes by modifying the *Profile* tab view and then reconfiguring LDAP synchronization to include the additional attributes.

1 Follow the instructions in Section 3.2.3, "Customizing the Default View of the Profile Tab," on page 27 to create fields on the *Profile* tab for displaying the LDAP attributes that you want to add.

2 On the Workspace toolbar, click *Manage > Site Administration*, then click *Configure LDAP*.

The *Users* box lists the LDAP attributes that are currently being synchronized.

The items in the list have the following format:

```
teaming_field_name=ldap_attribute name
```

3 Add a new line to the list, specifying the Teaming field name to the left of the equal sign (=) and the LDAP attribute name to the right of the equal sign.

4 Repeat Step 3 for each LDAP attribute that you want to add to the *Profile* tab.

5 Select *Run Immediately*, then click *Apply*.

The status box shows the LDAP attribute information being added to Teaming users.

13.2 Listing Teaming Users

On the Teaming site, you can view a comprehensive list of all the Novell Teaming users.

1 In the Workspace tree, expand *Home Workspace*, then click *Personal Workspaces*.

All of the users are displayed in the main viewing window.

You can use this page in the following ways:

- Section 13.2.1, "Navigating through the User List," on page 76
- Section 13.2.2, "Adding Local Users," on page 77
- Section 13.2.3, "Modifying the Title, Description, and Branding," on page 77

13.2.1 Navigating through the User List

You can navigate through the user list by using the tools in the Entry Listing toolbar.

For information on the navigation tools provided in this toolbar, see "Listing Entries and Pages"in the *Novell Teaming 2.0 User Guide*.

13.2.2 Adding Local Users

A local user is a Novell Teaming user, and is not added to your LDAP directory. You can use this page to add new users to your Teaming site.

If you want to add users through your LDAP directory service, see Section 4.1, "Adding New Users to Your Teaming Site," on page 39.

1 Click *Add User*.

The User page is displayed.

2 Provide the user's information in the User page, then click *OK*.

13.2.3 Modifying the Title, Description, and Branding

By default, the workspace that contains all of the personal workspaces is named *Personal Workspaces*, the brand for this workspace is inherited from the parent workspace, and there is no workspace description. However, Novell Teaming enables you to modify the name, brand, and description of the workspace.

1 In the Workspace toolbar, click *Manage > Modify This Workspace*.

Use this page to change the title, description, and brand of the workspace.

13.3 Renaming a Teaming User

Teaming users are identified by name (first, middle, last) and by user ID. User names are used to identify personal workspaces. User IDs are used for logging in. You can change users' names, but not their user IDs. How you change users' name depends on how you created the user.

- Section 13.3.1, "Renaming a Teaming User from LDAP," on page 77
- Section 13.3.2, "Renaming a Local Teaming User," on page 78

13.3.1 Renaming a Teaming User from LDAP

If you are synchronizing user information from an LDAP directory, as described in "Adding Teaming Users from Your LDAP Directory", in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*, change a user's first, middle, or last name by updating it in the LDAP directory. The updated information then synchronizes to the Teaming site on the schedule you have established for LDAP synchronization. If you change a user's first, middle, or last name by updating that information on the Teaming site, the change is not synchronized back to the LDAP directory, so the two sources of user information get out of sync.

NOTE: Once you have set up a user in Teaming, you must not change the user's user ID in the LDAP directory. If you do, the association between the original LDAP user ID and new LDAP user ID is lost from the perspective of the Novell Teaming site. A new Teaming account and workspace would be created for the new user ID when LDAP synchronization took place. Although it is possible to move folders from the user's old workspace to the new workspace, any entries created using the old user ID cannot be associated with the new user ID; this approach is not recommended.

13.3.2 Renaming a Local Teaming User

If you manually create Teaming users on the Teaming site, rather than synchronizing user information from an LDAP directory, you can change users' names (first, middle, last) on the Teaming site.

When a user logs in to the Novell Teaming site for the first time, that user's personal workspace is created. Before a user logs in, that user does not have a personal workspace. Teaming enables site administrators to manually rename both types of users.

- ◆ "Renaming Users Who Have Logged In to Teaming" on page 78
- ◆ "Renaming Users Who Have Not Logged In to Teaming" on page 78

NOTE: Teaming does not allow you to change a user ID after that user account has been created.

Renaming Users Who Have Logged In to Teaming

If you want to rename a user who has previously logged in to the Novell Teaming site and therefore has a personal workspace:

1 Navigate to the user's personal workspace.

2 In the Workspace toolbar, click *Manage Profile > Modify*.

The User page is displayed.

3 Modify the *First Name*, *Middle Name*, and *Last Name* fields as desired.

4 Click *OK*.

Renaming Users Who Have Not Logged In to Teaming

If you want to rename a user who has not previously logged in to the Novell Teaming site and therefore does not have a personal workspace:

1 In the *Find* section, in the *People* field, type and select the name of the user that you want to rename.

The user's profile page is displayed.

2 Click *Modify*.

The User page is displayed.

3 Modify the *First Name*, *Middle Name*, and *Last Name* fields as desired.

4 Click *OK*.

13.4 Deleting a Teaming User

When users no longer need access to your Novell Teaming site, you should delete their Teaming user accounts. How you delete the user depends on how you originally created the user.

When you delete a user, the entries and information that the deleted user contributed is preserved.

13.4.1 Manually Deleting a User

When a user logs in to the Novell Teaming site for the first time, that user's personal workspace is created. Before a user logs in, that user does not have a personal workspace. Teaming enables site administrators to manually delete both types of users.

Deleting Users Who Have Logged In to Teaming

If you want to delete a user who has previously logged in to the Novell Teaming site and therefore has a personal workspace:

1 Navigate to the user's personal workspace.

2 In the Workspace toolbar, click *Manage Profile > Delete*.

3 (Optional) You can select to also delete the user workspace, all of its folders, sub-folders, and entries, including the source content of any mirrored folders.

4 Click *OK*.

Deleting Users Who Have Not Logged In to Teaming

If you want to delete a user who has not previously logged in to the Novell Teaming site and therefore does not have a personal workspace:

1 In the *Find* section, in the *People* field, type and select the name of the user that you want to delete.

The user's profile page is displayed.

2 Click *Delete > OK*.

13.4.2 Deleting a User through LDAP

If you add Novell Teaming users by synchronizing with an LDAP directory, as described in "Adding Teaming Users from Your LDAP Directory" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*, Teaming users are automatically deleted when you delete the corresponding User object in the LDAP directory. You can configure LDAP synchronization to automatically delete Teaming users' workspaces and content as well. For more information, see "LDAP Synchronization Options" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*.

Managing Workspaces

<div style="text-align: right">

14

</div>

As a Novell® Teaming administrator, you can perform management functions on all Teaming workspaces. For information on how to perform general workspace management functions, such as creating a workspace, deleting a workspace, moving a workspace, and so forth, see "General Workspace Management" in the *Novell Teaming 2.0 User Guide*.

Managing Workspace and Folder Templates

<div style="text-align: right; font-size: large;">15</div>

Workspace and Folder templates are a powerful and efficient way to manage your Novell® Teaming site. They enable you to customize the default features, default layout, and default access control settings of the workspaces and folders throughout your Teaming site.

For example, the Team Workspaces template is used when any team workspace is created. By default, the access control settings for the Team Workspaces template specify that only team members are able to view the team workspace. However, if you want to run a more relaxed Teaming site and allow all Teaming users to view any team workspace, you can simply modify the access control settings on the Team Workspaces template.

For more information about templates, see Section 3.5.1, "Understanding Templates," on page 31.

- Section 15.1, "Modifying Workspace and Folder Templates," on page 83
- Section 15.2, "Importing Templates," on page 86
- Section 15.3, "Exporting Templates," on page 86
- Section 15.4, "Reverting All Templates to the Factory Default," on page 87

15.1 Modifying Workspace and Folder Templates

Novell Teaming enables you to modify default templates as well as custom templates that you have already created.

For information on how to create custom templates, see Section 3.5.3, "Creating Workspace and Folder Templates," on page 35.

1 In the Workspace or Folder toolbar, click *Manage > Site Administration*, then click *Manage Workspace and Folder Templates*.

2 Click the workspace or folder template that you want to modify.

From this page you can do any of the following:

- Section 15.1.1, "Deleting the Template," on page 84
- Section 15.1.2, "Exporting the Template," on page 84
- Section 15.1.3, "Renaming the Template," on page 84
- Section 15.1.4, "Adding an Existing Workspace Template," on page 84
- Section 15.1.5, "Adding an Existing Folder Template," on page 85
- Section 15.1.6, "Adding Access Controls to the Template," on page 85
- Section 15.1.7, "Changing the Default View for the Template," on page 85
- Section 15.1.8, "Changing the Title, Description, Brand, and Icon for the Template," on page 85
- Section 15.1.9, "Modifying the Accessory Panel for the Template," on page 85

15.1.1 Deleting the Template

Deleting a template deletes the template and all sub-templates.

1 In the Workspace and Folder Templates toolbar, click *Manage This Template*.

2 Click *Delete This Template > OK*.

15.1.2 Exporting the Template

1 In the Workspace and Folder Templates toolbar, click *Manage This Template*.

2 Click *Export This Template*.

3 Click *OK*.

For information on how to export multiple templates simultaneously, see .

15.1.3 Renaming the Template

You can change the information that is displayed on the Add New Workspace page (or Add New Folder page), when users select which type of workspace they want to add.

1 In the Workspace and Folder Templates toolbar, click *Manage This Template*.

2 Click *Modify This Template*.

3 Specify the following information:

Name: This is the internal database name.

Template Title: This name appears in the Add New Workspace page (or Add New Folder page), when users select which type of workspace they want to add.

Description: This description appears in the Add New Workspace page (or Add New Folder page), when users select which type of workspace they want to add.

4 Click *Modify*.

15.1.4 Adding an Existing Workspace Template

You can add a workspace template to the template that you are currently modifying. The workspace template that you add becomes a sub-workspace to the main workspace. All template sub-workspaces and sub-folders that you add are preserved when the template is used in your Teaming site.

1 In the Workspace and Folder Templates toolbar, click *Manage This Template*.

2 Click *Add Workspace Template*.

3 In the Currently Defined Templates section, select the workspace template that you want to add.

4 Click *Add*.

A cloned copy of the workspace template that you add is added as a sub-folder to the main workspace.

15.1.5 Adding an Existing Folder Template

You can add a folder template to the template that you are currently modifying. The folder template that you add becomes a sub-folder to the main workspace or folder. All template sub-workspaces and sub-folders that you add are preserved when the template is used in your Teaming site.

You can add a folder template to the template that you are currently modifying.

1 In the Workspace and Folder Templates toolbar, click *Manage This Template*.

2 Click *Add Folder Template*.

3 In the Currently Defined Templates section, select the folder template that you want to add.

4 Click *Add*.

A cloned copy of the folder template that you add is added as a sub-folder to the main folder or workspace.

15.1.6 Adding Access Controls to the Template

1 In the Workspace and Folder Templates toolbar, click *Manage This Target*.

2 Click *Access Control*.

The Configure Access Control page is displayed.

For information on how to use this page, see Chapter 2, "Planning User Access to Workspaces and Folders," on page 15.

3 After you have made your access control modifications, click *Close*.

15.1.7 Changing the Default View for the Template

1 In the Workspace and Folder Templates toolbar, click *Manage This Target*.

2 Click *Configure*.

The Configure Default Settings page is displayed.

3 In the *Default View* section, select the default view that you want the template to have.

4 Click *Apply > Close*.

15.1.8 Changing the Title, Description, Brand, and Icon for the Template

You can change the attributes of the template that are displayed in the workspace after the workspace is created.

1 In the Workspace and Folder Templates toolbar, click *Manage This Target*.

2 Click *Modify*.

3 Change the title, description, brand, and icon as desired, then click *OK*.

15.1.9 Modifying the Accessory Panel for the Template

Novell Teaming enables you to modify the Accessory Panel in a template.

If the Accessory Panel already contains accessories, you can modify them; or, you can create new accessories. For information on how to modify and create accessories, see "Managing Accessories" in the *Novell Teaming 2.0 User Guide*.

15.2 Importing Templates

You can import a template after you have exported it. For information on how to export a template, see Section 15.3, "Exporting Templates," on page 86.

1 In the Workspace or Folder toolbar, click *Manage > Site Administration*, then click *Manage Workspace and Folder Templates*.
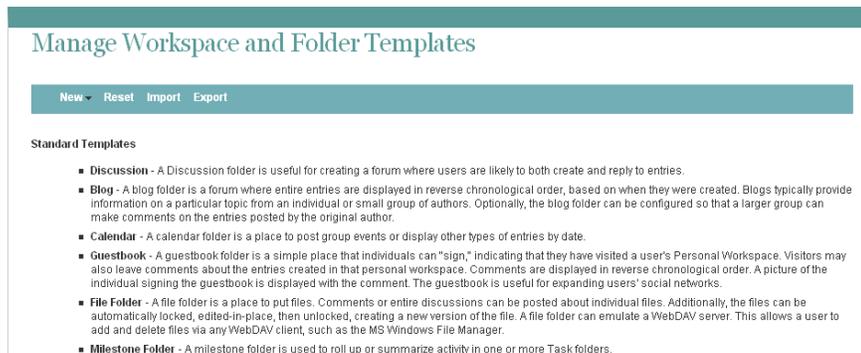
2 Click *Import*.

The *Import Templates* page is displayed.

3 Browse for and select the templates that you want to import, then click *OK*.

The template is displayed in the Manage Workspace and Folder Templates page.

15.3 Exporting Templates

You might want to export templates for the following reasons:

* So you can import the template into another system.
* To save the template.

    This might be useful if you want to make edits to a template, and want to restore the original in case your edits don't go according to plan.

Novell Teaming enables you to export individual templates, or multiple templates simultaneously.

* Section 15.3.1, "Exporting Single Templates," on page 86
* Section 15.3.2, "Exporting Multiple Templates," on page 87

15.3.1 Exporting Single Templates

1 In the Workspace or Folder toolbar, click *Manage > Site Administration*, then click *Manage Workspace and Folder Templates*.

2 Click the workspace or folder template that you want to modify.

3 In the Workspace and Folder Templates toolbar, click *Manage This Template*.

4 Click *Export This Template*.

5 Click *OK*.

15.3.2 Exporting Multiple Templates

1 In the Workspace or Folder toolbar, click *Manage > Site Administration*, then click *Manage Workspace and Folder Templates*.
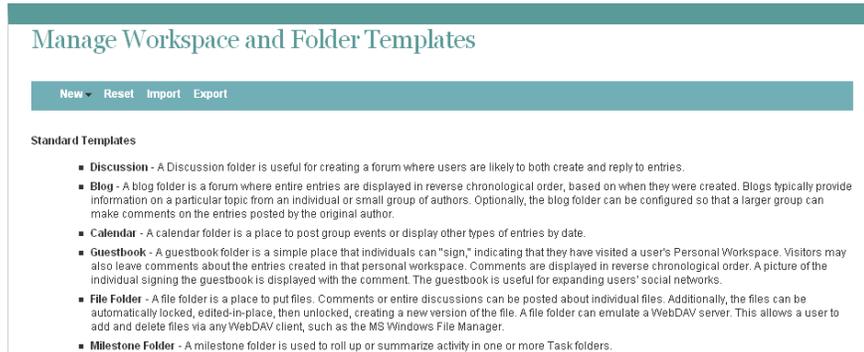
2 Click *Export*.
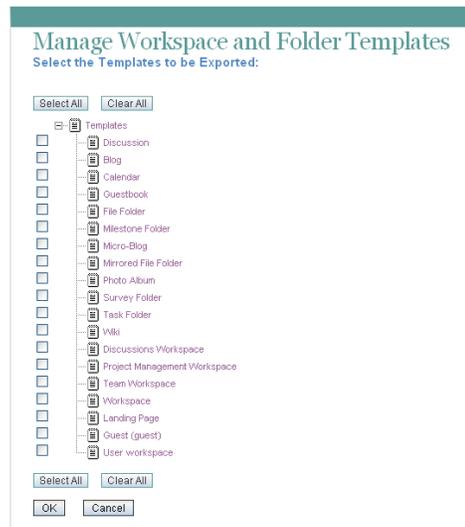
3 In the *Select the Templates to be Exported* section, select the template or templates that you want to export, then click *OK*.

15.4 Reverting All Templates to the Factory Default

When you revert all templates to the factory default, you lose any modifications that you have made to existing templates, as well as any custom templates that you might have created.

1 In the Workspace or Folder toolbar, click *Manage > Site Administration*, then click *Manage Workspace and Folder Templates*.

Manage Workspace and Folder Templates

New ▾   Reset   Import   Export

Standard Templates

- **Discussion** - A Discussion folder is useful for creating a forum where users are likely to both create and reply to entries.
- **Blog** - A blog folder is a forum where entire entries are displayed in reverse chronological order, based on when they were created. Blogs typically provide information on a particular topic from an individual or small group of authors. Optionally, the blog folder can be configured so that a larger group can make comments on the entries posted by the original author.
- **Calendar** - A calendar folder is a place to post group events or display other types of entries by date.
- **Guestbook** - A guestbook folder is a simple place that individuals can "sign," indicating that they have visited a user's Personal Workspace. Visitors may also leave comments about the entries created in that personal workspace. Comments are displayed in reverse chronological order. A picture of the individual signing the guestbook is displayed with the comment. The guestbook is useful for expanding users' social networks.
- **File Folder** - A file folder is a place to put files. Comments or entire discussions can be posted about individual files. Additionally, the files can be automatically locked, edited-in-place, then unlocked, creating a new version of the file. A file folder can emulate a WebDAV server. This allows a user to add and delete files via any WebDAV client, such as the MS Windows File Manager.
- **Milestone Folder** - A milestone folder is used to roll up or summarize activity in one or more Task folders.

2 Click *Reset*, then click *OK*.

Creating and Managing Workflows 16

Workflows can improve efficiency in your organization by automating common business processes.

As a Novell® Teaming administrator, you have the ability to create workflows and make them available to all Teaming users. You can also import existing workflows and then tailor them to your specific organization.

Examples of workflows include: approving documents, ordering supplies, hiring new employees, requesting paid time off, and getting expense reimbursements.

- Section 16.1, "Creating Global Workflows," on page 89
- Section 16.2, "Downloading Existing Custom Forms and Workflows," on page 89

16.1 Creating Global Workflows

You can create workflows that are accessible to all Novell Teaming users.

1 In the Workspace or Folder toolbar, click *Manage > Site Administration*, then click *Form and View Designers*.
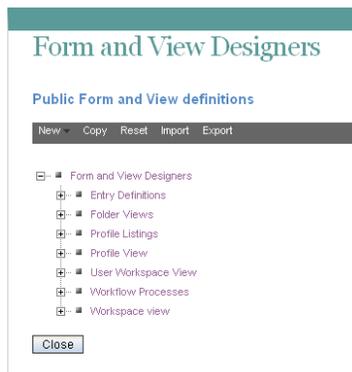
2 Follow the steps for creating and managing a workflow, as described in "Creating and Managing Workflows" in the *Novell Teaming 2.0 Advanced User Guide*.

Remember that when you create workflows at the Site Administration level, the workflows that you create can be leveraged by all users in your Teaming site.

16.2 Downloading Existing Custom Forms and Workflows

The Novell Teaming Library is a project that provides a collection of existing Teaming folder entry forms and workflows that have been designed to solve specific business problems. You can easily download the custom forms and workflows, then import them into your Teaming environment. You can further customize these forms and workflows to suit your individual business needs.

1 Visit the Novell Teaming Library (http://www.novell.com/communities/coolsolutions/teaminglibrary).

2 Select the custom form or workflow that you want to use in your Teaming environment.

3 In the *Attachment* section, click the `zip` file to download it.

4 Import the file into your Teaming environment and deploy it for use.

For information on how to do this, follow the Teaming 2 Deployment Instructions (http://www.novell.com/communities/node/8359/deployment-instructions-teaming-2).

Managing the Lucene Index

17

For background information about the Lucene* index, see "Understanding Indexing in Advanced Installation and Reconfiguration" in the *Novell Teaming 2.0 Installation Guide*.

17.1 Changing Your Lucene Configuration

The default Lucene Index Server configuration is appropriate for a medium-sized Novell® Teaming site. If you have a larger Teaming site, you can change its Lucene Index Server configuration by rerunning the Teaming Installation program, selecting *Reconfigure Settings*, then selecting *Advanced*. For instructions, see "Changing Your Lucene Index Server Configuration" in "Advanced Installation and Reconfiguration" in the *Novell Teaming 2.0 Installation Guide*.

17.2 Rebuilding the Lucene Index

The Lucene index provides access to all data in your Novell Teaming site. If it becomes damaged or out of date for some reason, you can rebuild it. Users might first notice a problem with the Lucene index because they cannot find information that they know should be available on the Teaming site. If you are running multiple Lucene Index servers, follow the instructions in Section 17.3, "Performing Maintenance on a High Availability Lucene Index," on page 92.

1 Log in to the Teaming site as the Teaming administrator

2 On the Workspace toolbar, click *Manage > Site Administration*, then click *Manage the Search Index*.
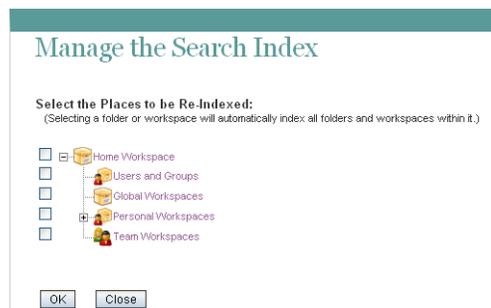
3 To reindex the entire Teaming site, select *Home Workspace*.

Depending on the size of your Teaming site, this can be a very time-consuming process.

or

Select one or more parts of your Teaming site to reindex.

4 Click *OK* to start the indexing.

Users can still access the Teaming site during the indexing process, but search results might not be accurate until the index has been completely rebuilt.

A message notifies you when indexing is complete.

17.3 Performing Maintenance on a High Availability Lucene Index

If you have a high availability Lucene configuration, you can take one Lucene node out of service for maintenance while other Lucene nodes continue to operate. Then you can synchronize the out-of-date Lucene node with the current indexing data.

1 Log in to the Teaming site as the Teaming administrator.

2 Take the Lucene node that needs maintenance out of service.

   2a Click *Manage > Site Administration*.

   2b Expand *Manage the Search Index*, then click *Nodes*.

   2c Locate the node that needs maintenance in the list.

   2d Make sure that *Enable Deferred Update Log* is selected.

   2e In the *User Mode Access* box, change *Read and Write* to *Write Only*.

   2f Click *Apply*, then click *Close*.

      The new setting is put into effect immediately, so that the Lucene node is no longer accessible to Teaming users.

3 Perform the needed maintenance on the Lucene server, then start the Lucene Index Server again.

4 Return the out-of-date Lucene node to full service.

   4a Click *Manage > Site Administration*.

   4b Expand *Manage the Search Index*, then click *Nodes*.

Lucene on Linux (LuceneLinux)
Host: 172.16.5.18
RMI port: 1199

User Mode Access
⦿ Read and Write
○ Write Only
○ No Access

☑ Enable Deferred Update Log

No Deferred Update Log Record Exists

Lucene on Windows (LuceneWindows)
Host: 172.16.5.19
RMI port: 1199

User Mode Access
⦿ Read and Write
○ Write Only
○ No Access

☑ Enable Deferred Update Log

Deferred Update Log Records Exist
○ Apply Deferred Update Log Records to the Index
○ Discard Deferred Update Log Records
⦿ Do Nothing

[Apply] [Close]

The out-of-date Lucene node is flagged with *Deferred Update Log Records Exist*.

The *User Mode Access* option shows *Read and Write* because this is the last selected setting. If you are checking the Tomcat `catalina.out` file, as described in "Observing Lucene Node Activity" in "Multi-Server Configurations and Clustering" in the *Novell Teaming 2.0 Installation Guide*, Teaming is not actually accessing the out-of-date Lucene node because it is out of sync with the Teaming site.

4c Select *Apply Deferred Update Log Records to the Index*, then click *Apply*.

The Deferred Update Log options disappear if the update is successful.

4d Click *Close*.

The Lucene node that was out of service has now been updated with current indexing data.

Backing Up Teaming Data

18

Reliable backups are critical to the stability of your Novell® Teaming site.

- Section 18.1, "Locating Teaming Data to Backup Up," on page 95
- Section 18.2, "Scheduling and Performing Backups," on page 96
- Section 18.3, "Restoring Teaming Data from Backup," on page 96

18.1 Locating Teaming Data to Backup Up

In order to keep adequate backups of your Novell Teaming data, you must back up three types of data.

- Section 18.1.1, "Teaming File Repository," on page 95
- Section 18.1.2, "Teaming Database," on page 95
- Section 18.1.3, "Lucene Index," on page 96

18.1.1 Teaming File Repository

Platform	Default Location
Linux:	`/var/opt/novell/teaming`
Windows:	`c:\Novell\Teaming`

For more information, see "Distributing Different Data Types to Different Locations" in "Advanced Installation and Reconfiguration" in the *Novell Teaming 2.0 Installation Guide*

18.1.2 Teaming Database

Database Server	Default Linux Location	Default Windows Location

MySQL	`/var/lib/mysql`	`c:\Documents and Settings\All Users\`
		`Application Data\MySQL\`
		`MySQL Server version\Data`

Microsoft SQL	N/A	`c:\Program Files\Microsoft SQL Server\` `MSSQL\Data`
Oracle	N/A	N/A

For more information, see "Creating the Teaming Database on a Remote Server" and "Running Multiple Database Servers" in "Multi-Server Configurations and Clustering" in the *Novell Teaming 2.0 Installation Guide*.

18.1.3 Lucene Index

Platform	Default Location
Linux:	`/var/opt/novell/teaming/lucene/`*zone_name*
Windows:	`c:\Program Files\Novell\Teaming\luceneserver\`**zone_name**

For more information, see "Moving the Lucene Index Server to a Remote Server" and "Running Multiple Lucene Index Servers" in "Multi-Server Configurations and Clustering" in the *Novell Teaming 2.0 Installation Guide*.

18.2 Scheduling and Performing Backups

You do not need to bring your Novell Teaming site down in order to perform backups. You might want to back up the Teaming file repository and the Teaming database every night, perhaps doing a full backup once a week and incremental backups on other days. You can back up the Lucene index whenever it is convenient. You can always reindex the Teaming site in order to re-create the Lucene index, but being able to restore one from backup can save time in case of an outage.

18.3 Restoring Teaming Data from Backup

If you need to restore your Novell Teaming site from a backup, restoring the same backup version for both the file repository and the database creates a Teaming site that is consistent within itself but might be missing information that was added after the backups were created. If you lose the file repository but not the database, you can restore the backed-up file repository and keep the more current database, but some entries then have files that are missing from the file repository. If you lose the database but not the file repository, you can run a report to identify entries created since the last database backup, as described in Section 19.1.4, "Content Modification Report," on page 101. You can then notify the affected Teaming users that they need to re-create the entries that are not available in the backup.

Monitoring the Teaming Site

19

You can monitor activity on your Novell® Teaming site by using Teaming reports and log files.

19.1 Generating Reports

Most Novell Teaming reports are created in CSV format, so that you can import them into a spreadsheet and easily manipulate the data to suit your needs. The default CSV filename is `report.csv`. If you create multiple reports without manually renaming them, the default filename increments (`report-n.csv`). The default location to save the report varies by platform:

Linux: `/tmp`

Windows: Your current Windows* default directory

19.1.1 Login Report

The Login report lists what Novell Teaming users have logged in to the Teaming site during a specified period of time. In addition, it can include a dated list of every login by each user.

1 Log into the Teaming site as the Teaming administrator.

2 On the Workspace toolbar, click *Manage > Site Administration*.

3 Expand *Reports*, then click *Login Report*.

Login Report

Generate a Report (Microsoft Excel CSV format) of login information for users.

Report on Activity Between April ▼ 26 ▼ 2009 📅 and May ▼ 26 ▼ 2009 📅

People

⊙ Summarize Login Entries

    Sort Report By: --none-- ▼

○ List All Login Entries

    Sort Report By: Login Date ▼

[OK] [Close]

4 Specify the date range for the Login report.

5 Leave the *People* field blank to list all user logins.

or

6 In the *People* field:

  6a Start typing the first name of a Teaming user.

  6b In the drop-down list of names that match what you have typed, select a user whose logins you want to be reported.

  6c (Optional) Repeat Step 6a and Step 6b to include additional users in the report.

7 Select the type of User Activity report that you want to generate.

Summarize Login Entries: Lists how many times the selected users have logged into the Teaming site. In the *Sort Report By* drop-down list, select *User*, *Last Login*, or *Number of Logins* to organize the data most helpfully.

List All Login Entries: Lists each individual user login and includes the following data about the action:

- ◆ First name
- ◆ Last name
- ◆ Username
- ◆ Date
- ◆ Time

In the *Sort Report By* drop-down list, select *Login Date* or *User* to organize the data most helpfully.

8 Click *OK* to generate the Login report.

9 Select a text editor to view the report in, then click *OK*.

For a short report, you might obtain the information you need by viewing the CSV file.

10 (Optional) Save the CSV file with a meaningful name in a convenient location, then retrieve it into a spreadsheet program for further examination.

19.1.2 User Activity Report

The User Activity report lists how many times specified users have viewed, added, modified, or deleted content on the Novell Teaming site during a specified period of time. In addition, it can include the date and time of each action, along with the specific location of the action.

1 Log into the Teaming site as the Teaming administrator.

2 On the Workspace toolbar, click *Manage > Site Administration*.

3 Expand *Reports*, then click *Activity by User*.

4 Specify the date range for the User Activity report.

5 Leave the *People* field blank to list all user activity.

or

In the *People* field, start typing the first name of a Teaming user.

6 In the drop-down list of names that match what you have typed, select a user whose activity you want to be reported.

7 (Optional) Repeat Step 5 and Step 6 to include additional users.

8 Select the type of User Activity report that you want to generate.

Activity Summary: Lists how many times the selected users have viewed, added, modified, or deleted content on the Teaming site.

Workspace or Folder Activity: Lists each individual user action and includes the following data about the action:

- User
- Activity
- Date
- Time
- Folder
- Entry title
- Entry type

9 Click *OK* to generate the User Activity report.

10 Select a text editor to view the report in, then click *OK*.

For a short report, you might obtain the information you need by viewing the CSV file.

11 (Optional) Save the CSV file with a meaningful name in a convenient location, then retrieve it into a spreadsheet program for further examination.

19.1.3 User Access Report

The User Access report lists the locations on the Novell Teaming site where a specified user has access rights. In addition, you can view, and if necessary, change or remove the access rights for any location. This report is especially useful on Teaming sites where Guest user access has been granted, as described in .

1 Log into the Teaming site as the Teaming administrator.

2 On the Workspace toolbar, click *Manage > Site Administration*.

3 Expand *Reports*, then click *User Access Report*.

4 Start typing the first name of a Teaming user.

5 In the drop-down list of names that match what you have typed, select the user whose site access you want to be reported.

In this example, the Guest user has access to the Guest workspace and also to Janet DeSoto's personal workspace. This could be appropriate if Janet DeSoto's job is maintain a publicly available workspace, but would not be appropriate if the Guest access has been granted in error.

6 (Conditional) If you want to change the current access:

  6a Click the name of a location to display the Configure Access Control page for that location.

In this example, the Guest user has been granted Visitor access to Janet DeSoto's personal workspace.

6b Select or deselect access rights as needed.

6c Click *Save Changes*, then click *Close* to return to the User Access Report page

6d Rerun the report to view the results of your changes.

For example, if you removed the Guest access rights from Janet DeSoto's personal workspace, her workspace is no longer listed in the User Access report for the Guest user.
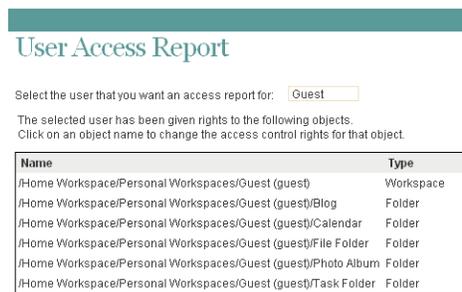
7 (Conditional) If you want to save the user access information, you can block and copy it into a text editor.

8 Click *Close* when you are finished checking user access rights.

19.1.4 Content Modification Report

The Content Modification report lists changes to workspaces, folders, and folder entries, as well as users, groups, access rights, and workflows. By generating a Content Modification report, you can determine who has performed any of the following actions:

- Added, modified, moved, or deleted a workspace
- Added, modified, moved, or deleted a folder
- Added, modified, renamed, or deleted a file or one of its versions
- Added, modified, moved, or deleted an entry

For purposes of this report, users and groups are handled as if they are folder entries.

◆ Started or modified a workflow

◆ Modified or deleted access rights

The Content Modification report can also help you recover data that has been accidentally deleted.

1 Log into the Teaming site as the Teaming administrator.

2 Determine the exact name of the workspace, folder, file entry, and so on where you want to check for content modifications.

3 On the Workspace toolbar, click *Manage > Site Administration*.

4 Expand *Reports*, then click *Content Modification Log*.

5 Fill in the fields to specify where to check for content modifications and the type of modifications to check for:

Find a Folder or Workspace: Start typing the name of a folder or workspace. In the drop-down list of names that match what you have typed, select the folder or workspace where you want to check for content modifications. The internal ID of the folder or workspace is displayed for reference.

Find an Entry: (Optional) To restrict the content modification check to a specific entry in a folder, start typing text in the title of the entry. In the drop-down list of entry titles that match what you have typed, select the entry where you want to check for content modifications. The internal ID of the entry is displayed for reference.

Entity Type: (Optional) To further restrict the content modification check, select one of the following:

◆ Workspace (not the contents of the workspace, but the workspace itself)

◆ Folder (not the contents of the folder, but the folder itself)

◆ Folder entry (the contents of the folder entry)

◆ Profiles (the contents of the Personal Workspaces folder where there is a personal workspace for each user)

◆ User (the contents of a user's personal profile, such as the user's name, e-mail address, locale, and so on)

◆ Group (the contents of the group)

Filter by Operation: Further restrict the content modification check by selecting a specific action performed on the selected workspace, folder, or entry (add, modify, rename, delete, and so on).

6 Click *Apply* to generate the Content Modification report.

The results are displayed as an XML file.

7 (Conditional) If the results are too extensive, restrict the scope of the content modification check until you locate the modification that you are seeking.

8 Click *Close* when you are finished checking for content modifications.

A specialized use of the Content Modification report is to restore accidentally deleted data. For example, you can use the following steps to recover an accidentally deleted folder entry:

1 Run the Content Modification report to list all entry deletions in the folder where the entry was accidentally deleted.

2 Record the entry ID of the deleted entry.

3 Run the Content Modification report on the entry ID, selecting *folder entry* in the *Entity Type* field.

4 Use the modification history of the entry to reconstruct the accidentally deleted entry.

19.1.5 Disk Usage Report

The Disk Usage report lists the amount of disk space for workspaces on the Novell Teaming site by user, by workspace, or by both. In addition, you can restrict the reporting to only those workspaces that exceed a specified number of megabytes.

1 Log into the Teaming site as the Teaming administrator.

2 On the Workspace toolbar, click *Manage > Site Administration*.

3 Expand *Reports*, then click *Disk Usage Report*.
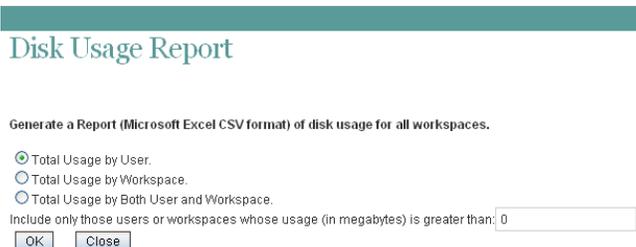
4 Select the type of Disk Usage report that you want to generate.

Total Usage by User: Lists all Teaming users whose disk space usage is above the amount specified in the *Usage Greater Than* field.

Total Usage by Workspace: Lists all workspaces where disk space usage is above the amount specified in the *Usage Greater Than* field. Disk space usage for each folder in each workspace is listed separately. The data is organized by workspace and folder ID.

Total Usage by Both User and Workspace: Combines the user and workspace data into a single report.

Usage Greater Than: Specify the number of megabytes above which you want to list disk space usage. This eliminates smaller disk space usages from the report.

5 Click *OK* to generate the Disk Usage report.

6 Select a text editor to view the report in, then click *OK*.

For a short report, you might obtain the information you need by viewing the CSV file.

7 (Optional) Save the CSV file with a meaningful name in a convenient location, then retrieve it into a spreadsheet program for further examination.

8 Click *Close* when you are finished checking disk space usage.

19.1.6 License Report

The License report lists the amount of disk space for workspaces on the Novell Teaming site by user, by workspace, or by both. In addition, you can restrict the reporting to only those workspaces that exceed a specified number of megabytes.

1 Log into the Teaming site as the Teaming administrator.

2 On the Workspace toolbar, click *Manage > Site Administration*.

3 Expand *Reports*, then click *License Report*.

4 Specify the date range for the Login report, then click *OK*.

The License report lists the following information:

- ◆ Teaming version
- ◆ License key type
- ◆ Date the license key was issued
- ◆ Date range when the license key is valid
- ◆ Maximum number of logged-in users during the date range (high-water mark)
- ◆ Current user count
- ◆ List of dates in the date range with the number of local users and number of users synchronized from LDAP.

The Teaming software does not limit the number of Teaming users that you can create, but sites where Teaming licenses have been purchased and the Teaming software installed are periodically audited against their purchased number of licenses.

The Guest user feature described in Section 4.3, "Allowing Guest Access to Your Teaming Site," on page 41 has its own license. If you originally installed a basic Teaming system, then added the Guest feature, two licenses are listed. If you originally installed with the Guest feature license, only that license is listed. The Guest feature license includes all other standard Teaming functionality. The Guest user counts as one user license, regardless of how many people log in to the Teaming site as Guest.

5 Click *Close* when you are finished reviewing the License report.

For instructions to install a new Teaming license, see "Updating Your Teaming License" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*.

19.2 Using Log Files

19.2.1 Teaming Log File

The Novell Teaming log file (`ssf.log`) is available from the Teaming site.

1 Log in as the Teaming site administrator.

2 Click *Manage > Site Administration*, then expand *Reports*.

3 Click *System Error Logs*.

You are prompted to open or save a file named `logfiles.zip`, which contains the current `ssf.log` file. This file contains any stack traces or warning messages due to unexpected events encountered by the Teaming program.

4 Save the `ssf.log` file to a convenient location on the Teaming server.

This file is helpful when you need assistance resolving a problem with your Teaming site.

The Teaming log file is also available in the following directory of your Teaming installation:

Linux:	`/opt/novell/teaming/apache-tomcat-`*version*`/webapps/ssf/WEB-INF/logs`
Windows:	`c:\Program Files\Novell\Teaming\apache-tomcat-`*version*`\` `webapps\ssf\WEB-INF\logs`

This is helpful if Teaming does not start.

19.2.2 Tomcat Log File

In addition to the Novell Teaming error log file (`ssf.log`), the Tomcat error log file (`catalina.out` on Linux and `stdout_*.log` on Windows when Teaming runs as a service) is also useful. The Tomcat log file contains more information than the Teaming log file, because it includes problems encountered by Tomcat outside of the Teaming application itself. The location of the Tomcat log file varies by platform:

Linux:	`/opt/novell/teaming/apache-tomcat-version/logs`
Windows:	`c:\Program Files\Novell\Teaming\apache-tomcat-version\logs`

> **NOTE:** When Teaming and Tomcat run as a Windows application, rather than as a Windows service, the information displayed in the Command Prompt window where you started Teaming is your only source of information. The data displayed in the Command Prompt window is not logged by Tomcat on Windows.

The Tomcat log file provides the following useful information:

- At the top, the Tomcat log file lists Tomcat startup messages.
- The System Properties section lists information about the supporting software packages that Tomcat relies on (for example, Java) and information about their current location and configuration.
- The System Environment section lists the currently set environment variables (for example, `HOSTNAME`, `PATH`, and `JAVA_HOME`).
- Exception and error data includes sufficient information for you to determine what user was trying to perform what action in what location on the Teaming site, to help you isolate and reproduce the problem.

  > **NOTE:** If your Teaming site was originally installed as a Teaming 2.0 site, the root of your site is referred to as `org.kablink` in the Tomcat error log. If you updated from a Teaming 1.0 site or a Teaming 2.0 beta site, the root of your site is referred to as `com.liferay`.

This file is helpful when you need assistance resolving a problem with your Teaming site.

Adjusting the Log Level for the Tomcat Log File

The log levels for various Tomcat functions are set in the `log4j.properties` file. Each type of information that is logged can have a log level of INFO, WARN, ERROR, FATAL, or DEBUG, depending on the type and quantify of information that you want logged. Some lines in the `log4j.properties` file are commented out with a pound sign (#), so that no information of that type is gathered. You can change the log level for each type of information and comment or uncomment lines to adjust the information gathered in the Tomcat log file to meet your troubleshooting needs.

1 Open the `log4j.properties` file in a text editor.

The location of the `log4j.properties` file varies by platform.

Linux:	`/opt/novell/teaming/apache-tomcat-version/webapps/ssf/WEB-INF`
Windows:	`c:\Program Files\Novell\Teaming\apache-tomcat-version\` `                                        webapps\ssf\WEB-INF`

2 Change log level settings as needed for the type of information you want to gather.

3 Comment or uncomment lines, depending on the type of information you want to gather.

4 Save the `log4j.properties` file, then exit the text editor.

5 Stop Teaming, then start Teaming to put the new logging level into effect.

19.3 Checking the Teaming Site Software Version

To display the version number and software date of Teaming software:

1 Log in to the Teaming site as the Teaming administrator

2 Click *Manage > Site Administration*.

The Teaming software version and date are displayed above the *Administration* menu.

Site Security

III
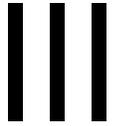
Security Administration

20

-

20.1 Securing LDAP Synchronization

-

20.1.1 Understanding How Teaming Handles Public-Key Certificates

Java uses a keystore file to store public-key certificates. The default keystore that is installed along with Novell® Teaming is:

Linux: `/opt/novell/teaming/apache-tomcat-version/conf/.keystore`

Windows: `c:\Program Files\Novell\Teaming\`
`                                        apache-tomcat-version\conf\.keystore`

The self-signed public-key certificate in the default keystore is sufficient for you to set up secure connections during initial installation. Soon after installation, you should obtain a signed certificate. You can store your signed certificate in the default keystore, or in a location of your own choosing. Teaming reads the location of its keystore from the following file:

Linux: `/opt/novell/teaming/apache-tomcat-version/conf/server.xml`

Windows: `c:\Program Files\Novell\Teaming\`
`                                        apache-tomcat-version\conf\server.xml`

If you do not want to use the default keystore location, you must update the `server.xml` file to match the location you choose for your keystore.

20.1.2 Obtaining a Signed Public-Key Certificate

1 Obtain a signed certificate is through a commercial Certificate Authority (CA).

You can find a CA on the Internet by searching for "Certificate Authority". The process of obtaining a signed certificate varies from company to company. Each company provides instructions to assist you.

or

Generate your own self-signed certificate by using the Keytool utility.

Linux:	`/usr/java/jdk1.5.0_17/bin/keytool`
Windows:	`c:\Program Files\Java\jdk1.5.0_17\bin\keytool.exe`

The Apache Tomcat 6.0 SSL Configuration HOW-TO (http://tomcat.apache.org/tomcat-6.0-doc/ssl-howto.html) provides guidance if you want to use this approach.

2 Place the signed certificate in a convenient location on the Teaming server (for example, in a `certs` directory).

If you obtained the signed certificate from a CA, you also received a CA certificate that validates the public-key certificate.

20.1.3 Importing Certificates

After you have obtained a signed public-key certificate, you must import it into the keystore for your Novell Teaming system. If you also received a CA certificate, you must import it into the Java CA certificate store.

1 To import the public-key certificate, use the following command:

Linux:	`keytool -import -alias ldap_svr_alias -keystore /path/.keystore -file /certs/certname.b64`
Windows:	`c:\Program Files\Java\jdk1.5.0_17\bin\keytool.exe`

For background information, see keytool - Key and Certificate Management Tool (http://java.sun.com/j2se/1.3/docs/tooldocs/win32/keytool.html).

2 Import the certificate into the following directory:

`java_jdk_installation/jre/lib/security/cacerts`.

20.2 Securing E-Mail Transfer

When you install Novell Teaming, you can choose whether or not the Teaming internal mail host uses TLS (Transport Layer Security) when it communicates with other SMTP mail hosts. For more information, see "Inbound E-Mail Security" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*.

If your Teaming site needs to send e-mail messages to an e-mail system that requires secure SMTP (SMTPS), the Teaming site must have the same type of public-key certificate as is required for secure LDAP (LDAPS). If you have not already set up secure LDAP for your Teaming site, you can follow the instructions in Section 20.1, "Securing LDAP Synchronization," on page 111 to set up secure SMTP for communications with your e-mail system.

20.3 Securing HTTP Connections

Using secure HTTP (HTTPS) improves the security of your Novell Teaming site. During installation, you can choose to configure your Teaming site for HTTP or HTTPS. After installation, you can force secure HTTP connections.

- Section 20.3.1, "Implementing Secure HTTP Connections," on page 113
- Section 20.3.2, "Forcing Secure HTTP Connections," on page 113

20.3.1 Implementing Secure HTTP Connections

When you run the Novell Teaming Installation program, you can choose between non-secure and secure HTTP connections, as described in "HTTP/HTTPS Ports" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*.

20.3.2 Forcing Secure HTTP Connections

With additional configuration, you can force users from a non-secure HTTP connection to a secure HTTPS connection.

- "Using Novell Access Manager to Force Secure HTTP Connections" on page 113
- "Configuring Tomcat to Force Secure HTTP Connections" on page 113
- "Adding the Apache Web Server to Force Secure HTTP Connections" on page 115

Using Novell Access Manager to Force Secure HTTP Connections

With Novell Teaming, you can use Novell Access Manager to force secure HTTP connections. For more information, see "Configuring Single Sign-On with Novell Access Manager" in "Advanced Installation and Reconfiguration" in the *Novell Teaming 2.0 Installation Guide*.

Configuring Tomcat to Force Secure HTTP Connections

To reconfigure Tomcat, you must update two configuration files (both named `web.xml`) under two different directories (`ssf` and `ssfs`). The `ssf` directory name refers to SiteScape® Forum, a legacy product name. The `ssf` directory contains the main Teaming Web application that you use when you interact with your browser. The `ssfs` directory name refers to SiteScape File System. The `ssfs` directory contains the Teaming WebDAV application that you use to access files on a remote WebDAV server from the Teaming site.

1 Log into the Teaming server with sufficient rights to edit the `web.xml` files (`root` on Linux, `Administrator` on Windows).

2 Modify the `web.xml` file under the `ssf` directory:

   2a Change to the directory where the `web.xml` file is located.

Linux:	`/opt/novell/teaming/apache-tomcat-version/webapps/ssf/WEB-INF`
Windows:	`c:\Program Files\Novell\Teaming\apache-tomcat-version\webapps\ssf\WEB-INF`

2b Make a backup copy of the `web.xml` file, then open the `web.xml` file in a text editor.

2c Add the following security constraint at the bottom of the file, immediately above the `</web-app>` tag.

```
<security-constraint>
  <web-resource-collection>
    <web-resource-name>Entire Application</web-resource-name>
    <url-pattern>/*</url-pattern>
  </web-resource-collection>
  <user-data-constraint>
    <transport-guarantee>CONFIDENTIAL</transport-guarantee>
  </user-data-constraint>
</security-constraint>
```

2d (Conditional) If users access the Teaming site with Internet Explorer*, replace the following single line provided above:

```
<url-pattern>/*</url-pattern>
```

with the following set of lines:

```
<!-- Patterns from web.xml.tmpl. -->
<url-pattern>/a/*</url-pattern>
<url-pattern>/ws/*</url-pattern>
<url-pattern>/rss/*</url-pattern>
<url-pattern>/atom/*</url-pattern>
<!-- Patterns from subdirectories of webapps/ssf. -->
<url-pattern>/applets/*</url-pattern>
<url-pattern>/css/*</url-pattern>
<url-pattern>/help/*</url-pattern>
<url-pattern>/help_doc/*</url-pattern>
<url-pattern>/i/*</url-pattern>
<url-pattern>/images/*</url-pattern>
<url-pattern>/js/*</url-pattern>
```

For Internet Explorer, this list of URL patterns forces secure HTTP connections for everything except the `/s/*` pattern (document files with extensions such as `.odt` and `.doc`) and the `/ical/*` pattern (calendar `.ics` files).

2e Save the modified `web.xml` file, then exit the text editor.

3 Modify the `web.xml` file under the `ssfs` directory:

3a Change to the directory where the `web.xml` file is located.

Linux:	`/opt/novell/teaming/apache-tomcat-`*version*`/` `webapps/ssfs/WEB-INF`
Windows:	`c:\Program Files\Novell\Teaming\apache-tomcat-`*version*`\` `webapps\ssfs\WEB-INF`

3b Make a backup copy of the `web.xml` file, then open the `web.xml` file in a text editor.

3c Find the security constraint section.

3d Scroll to the bottom of the security constraint section, which is marked with `</security constraint>`.

3e Insert the following lines in the security constraint section after the `</web-resource-collection>` tag and before the `<auth-constraint>` tag:

```
<user-data-constraint>
  <transport-guarantee>CONFIDENTIAL</transport-guarantee>
</user-data-constraint>
```

The result would look like the following example:

```
<security-constraint>
  <web-resource-collection>
    <web-resource-name>DAV resource</web-resource-name>
    <url-pattern>/*</url-pattern>
    <http-method>COPY</http-method>
    .
    .
    .
    <http-method>SUBSCRIBE</http-method>
    <http-method>UNSUBSCRIBE</http-method>
    <http-method>POLL</http-method>
    <http-method>NOTIFY</http-method>
  </web-resource-collection>
  <user-data-constraint>
    <transport-guarantee>CONFIDENTIAL</transport-guarantee>
  </user-data-constraint>
  <auth-constraint>
    <role-name>root</role-name>
  </auth-constraint>
</security-constraint>
```

3f Test the updated configuration:

3f1 Stop Teaming.

3f2 Start Teaming.

3f3 In a Web browser, attempt to access the teaming site using a non-secure URL:

```
http://teaming_hostname
```

The browser should convert it to a secure URL:

```
https://teaming_hostname
```

Adding the Apache Web Server to Force Secure HTTP Connections

You can set up the Apache* Web server to front your Novell Teaming site and use a meta refresh (http://en.wikipedia.org/wiki/Meta_refresh) to redirect users to a secure URL.

1 Install the Apache Web server on one server.

2 Configure Apache to listen on port 80.

3 Create an `index.html` file similar to the following example:

```
<html>
<head>
  <meta http-equiv="refresh" content="0;url=https://teaming_url" />
  <title>Redirected to Secure Teaming</title>
</head>
<body>
  This page is used to redirect to the Secure Teaming server. If your
  browser does not automatically redirect you in a few seconds, click
  <a href="https://teaming_url">here</a> to go to the secure page.
</body>
</html>
```

4 Replace *teaming_url* with the URL to your Teaming site.

5 Place the `index.html` file in the document root directory of the Apache Web server.

Linux: `/srv/www/htdocs`

Windows: `c:\Program Files\Apache Software Foundation\Apache2.2\htdocs`

6 Restart the Apache Web server.

Security Policies

<div style="text-align: right; font-size: 3em; font-weight: bold;">21</div>

- Section 21.1, "Securing the Teaming Data," on page 117
- Section 21.2, "Securing the Teaming Software," on page 118
- Section 21.3, "Securing the Teaming Site," on page 119

21.1 Securing the Teaming Data

- Section 21.1.1, "Limiting Physical Access to Teaming Servers," on page 117
- Section 21.1.2, "Protecting the Teaming File Repository," on page 117
- Section 21.1.3, "Protecting the Teaming Database," on page 117

21.1.1 Limiting Physical Access to Teaming Servers

Servers where Novell® Teaming data resides should be kept physically secure, where unauthorized persons cannot gain access to the server consoles.

21.1.2 Protecting the Teaming File Repository

The Novell Teaming file repository contains unencrypted data. See "Distributing Different Data Types to Different Locations" in "Advanced Installation and Reconfiguration" in the *Novell Teaming 2.0 Installation Guide* for details about how Novell® Teaming uses the local file system for data storage. These directories contain uploaded information in various formats (both native file formats and potentially a number of rendered formats (such as cached HTML versions of files, thumbnails, and RSS feeds) as well as archived data. These files are managed exclusively by the Teaming application software.

For data security, encrypted file systems should be used on servers where Teaming data resides. Only Teaming administrators should have direct access to Teaming data.

21.1.3 Protecting the Teaming Database

During installation, you select the encryption method that you want to use for the Novell Teaming database, as described in "Database Encryption Algorithm" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*. Three levels of encryption strength are available. The encryption algorithm cannot be changed after you have started using the Teaming database, so be sure to select the level of encryption appropriate for your Teaming site during initial installation.

Depending on your local security guidelines, you might want to encrypt the database connections between the Novell Teaming software and the Teaming database. SSL-encrypted data between the Teaming application and the database server imposes a performance penalty because of the increased overhead of encrypting and decrypting the retrieved data.

Support for this is highly dependent on the database client drivers and JDBC* connector support, and on how you are configuring your database client and server certificates. You should check with your database vendor on how to set up SSL connections on both the client and server sides of the

connection. You might need to modify the JDBC URL during installation, as described in "Database Location" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*. For example, for MySQL, you might add `useSSL=true&requireSSL=true` to the `options` part of the JDBC URL.

21.2 Securing the Teaming Software

21.2.1 Protecting the Teaming Configuration Files

The Novell Teaming configuration file (`installer.xml`) for the Teaming software should be protected from tampering. It contains username and password information for Teaming features that interact with other programs.

The initial `installer.xml` is created in the same directory where the Teaming Installation program is run. Backup copies are stored in:

Linux: `/opt/novell/teaming/teaming-config`

Windows: `c:\Program Files\Novell\Teaming\teaming-config`

The Teaming Tomcat configuration file (`ssf.xml`) also contains username and password information. This configuration file is located in the following directory:

Linux: `/opt/novell/teaming/apache-tomcat-version/`
`conf/Catalina/localhost`

Windows: `c:\Program Files\Novell\Teaming\apache-tomcat-version\`
`conf/Catalina/localhost`

21.2.2 Protecting the Teaming Properties File

The Novell Teaming properties file (`ssf.properties`) should be protected from tampering. Like the Teaming configuration file, it contains username and password information, as well as many other details about your Teaming site configuration. The Teaming properties file is located in the following directory:

Linux: `/opt/novell/teaming/apache-tomcat-version/`
`webapps/ssf/WEB-INF/classes/config`

Windows: `c:\Program Files\Novell\Teaming\apache-tomcat-version\`
`webapps\ssf\WEB-INF\classes/config`

21.2.3 Protecting Log Files

The log files for Teaming and Tomcat should be protected against access by unauthorized persons. Log files contain very detailed information about your Novell Teaming system and Teaming users.

The Teaming log file is available in the following directory of your Teaming installation:

Linux: `/opt/novell/teaming/apache-tomcat-version/webapps/ssf/WEB-INF/logs`

Windows: `c:\Program Files\Novell\Teaming\apache-tomcat-version\`
`                                     webapps\ssf\WEB-INF\logs`

The Tomcat log file is available in the following directory of your Teaming installation:

Linux: `/opt/novell/teaming/apache-tomcat-version/logs`

Windows: `c:\Program Files\Novell\Teaming\apache-tomcat-version\logs`

21.2.4 Protecting the Teaming Process on Linux

On Linux, Novell Teaming is installed to run as a user other than the Linux `root` user. See "Linux User ID for Teaming" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*.

21.3 Securing the Teaming Site

21.3.1 Configuring a Proxy Server

Your Novell Teaming system should be located behind your firewall. If Teaming users want to access the Teaming site from outside your firewall, you should set up a proxy server outside your firewall to provide access. You can use Novell Access Manager to protect your Teaming site, as described in "Configuring Single Sign-On with Novell Access Manager" in "Advanced Installation and Reconfiguration" in the *Novell Teaming 2.0 Installation Guide*.

21.3.2 Setting the Teaming Administrator Password

The Novell Teaming site is initially installed to allow administrator access by using the username `admin` and the password `admin`. The Teaming administrator password should be changed immediately after installation, as described in "Accessing Your Basic Teaming Site as the Site Administrator" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*.

21.3.3 Setting Up SSL Connections

All communication with the Novell Teaming site should be configured to use SSL connections, as described in:

- Section 20.2, "Securing E-Mail Transfer," on page 112
- Section 20.1, "Securing LDAP Synchronization," on page 111
- Section 20.3, "Securing HTTP Connections," on page 113

21.3.4 Shortening the Teaming Session Timeout

By default, if a user's Novell Teaming session is idle for four hours (240 minutes), Teaming logs the idle user out. For increased security for your Teaming site, you can make the session timeout shorter, as described in "Changing the Teaming Session Timeout" in "Advanced Installation and Reconfiguration" in the *Novell Teaming 2.0 Installation Guide*.

21.3.5 Using Role-Based Access Control

Novell Teaming controls all access to folders and entries by using role-based access controls. Teaming is intended to be used primarily for the sharing of information, so many default access rights tend toward allowing at least universal read access. For information on setting access controls for your Teaming site, see:

- Chapter 2, "Planning User Access to Workspaces and Folders," on page 15 in this guide
- "Controlling User Access" in the *Novell Teaming 2.0 Advanced User Guide*

21.3.6 Monitoring Inbound E-Mail

You can configure Novell Teaming to receive e-mail and post the messages as entries in a folder, as described in "Enabling Inbound E-Mail" in "Basic Installation" in the *Novell Teaming 2.0 Installation Guide*. Because e-mail is inherently unsecure, there is no way to be sure that the senders are who they claim to be. Entries posted by e-mail include the e-mail address of the sender to alert Teaming users about the origin of the postings.

21.3.7 Preventing Web Services Access

The default Novell Teaming installation allows authenticated access via Web services, as described in "Configuring Web Services" in "Advanced Installation and Reconfiguration" in the *Novell Teaming 2.0 Installation Guide*. If you are not using Web services, you can disable them.

21.3.8 Controlling RSS Feeds

Because RSS readers are outside of the authentication Teaming system, the URL provided by Novell Teaming for an RSS feed embeds some authentication information about the user. This means that the RSS URL must be protected and not shared between users. For this reason, RSS is not recommended for use on highly sensitive data. If necessary, you can disable RSS feeds for your Teaming site, as described in "Managing RSS Feeds" in "Advanced Installation and Reconfiguration" in the *Novell Teaming 2.0 Installation Guide*.

21.3.9 Securing Mirrored Folders

Mirrored folders make files that are stored on a file system available to users on the Novell Teaming site. Two levels of security are provided for mirrored folder access:

- When you create mirrored folder resource drivers, as described in "Configuring Mirrored Folder Resource Drivers" in "Advanced Installation and Reconfiguration" in the *Novell Teaming 2.0 Installation Guide*, you can choose read-only access or read/write access. In addition, you can identify specific Teaming users and groups that are allowed access to the mirrored folder resource drivers.

- When you set up the mirrored folders on the Teaming site, as described in Chapter 7, "Setting Up Mirrored Folders," on page 51 in this guide, you can set access controls on the Mirrored File folder.