

Novell Teaming + Conferencing

1.1

Aug, 2007

INSTALLATION AND
CONFIGURATION GUIDE

www.novell.com



Novell®

Legal Notices

Novell, Inc., makes no representations or warranties with respect to the contents or use of this documentation, and specifically disclaims any express or implied warranties of merchantability or fitness for any particular purpose. Further, Novell, Inc., reserves the right to revise this publication and to make changes to its content, at any time, without obligation to notify any person or entity of such revisions or changes.

Further, Novell, Inc., makes no representations or warranties with respect to any software, and specifically disclaims any express or implied warranties of merchantability or fitness for any particular purpose. Further, Novell, Inc., reserves the right to make changes to any and all parts of Novell software, at any time, without any obligation to notify any person or entity of such changes.

Any products or technical information provided under this Agreement may be subject to U.S. export controls and the trade laws of other countries. You agree to comply with all export control regulations and to obtain any required licenses or classification to export, re-export or import deliverables. You agree not to export or re-export to entities on the current U.S. export exclusion lists or to any embargoed or terrorist countries as specified in the U.S. export laws. You agree to not use deliverables for prohibited nuclear, missile, or chemical biological weaponry end uses. See the [Novell International Trade Services Web page \(http://www.novell.com/info/exports/\)](http://www.novell.com/info/exports/) for more information on exporting Novell software. Novell assumes no responsibility for your failure to obtain any necessary export approvals.

Copyright © 2007 Novell, Inc. All rights reserved. No part of this publication may be reproduced, photocopied, stored on a retrieval system, or transmitted without the express written consent of the publisher.

Novell, Inc., has intellectual property rights relating to technology embodied in the product that is described in this document. In particular, and without limitation, these intellectual property rights may include one or more of the U.S. patents listed on the [Novell Legal Patents Web page \(http://www.novell.com/company/legal/patents/\)](http://www.novell.com/company/legal/patents/) and one or more additional patents or pending patent applications in the U.S. and in other countries.

Novell, Inc.
404 Wyman Street, Suite 500
Waltham, MA 02451
U.S.A.
www.novell.com

Online Documentation: To access the latest online documentation for this and other Novell products, see the [Novell Documentation Web page \(http://www.novell.com/documentation/\)](http://www.novell.com/documentation/).

Novell Trademarks

For Novell trademarks, see [the Novell Trademark and Service Mark list \(http://www.novell.com/company/legal/trademarks/tmlist.html\)](http://www.novell.com/company/legal/trademarks/tmlist.html).

Third-Party Materials

All third-party trademarks are the property of their respective owners.

Contents

About This Guide	v
1 Installing ICEcore	1
1.1 Prerequisites	1
1.2 Steps for Installing ICEcore	2
1.3 Database Planning	3
1.4 File System Planning	4
1.5 Editing the Installer (.xml) File	4
1.6 Installing the Lucene Index Server	5
1.6.1 Install a Standalone Lucene Index Server for a New ICEcore Application	5
1.6.2 Install a Standalone Lucene Index Server for an Existing ICEcore Application	6
1.7 Running the Installer	7
1.8 Starting and Stopping ICEcore	8
1.9 Initial Logon	9
1.10 Adding Users	9
1.10.1 Basic User Management	9
1.10.2 User Management with LDAP/eDirectory	10
1.10.3 The ICEcore LDAP Configuration Form	12
1.10.4 Secure LDAP/eDirectory Setup	14
1.11 Mail Setup	15
1.12 Memory Guidelines	16
1.13 Document Support	17
2 Configuring ICEcore	19
2.1 Log in as Liferay Site Manager	19
2.1.1 To Log In Using the Administrator Account:	19
2.1.2 Using the ICEcore Administration Portlet	20
2.2 Log in as JBoss Site Manager	22
2.3 Adjust Access Control for the Site	22
2.3.1 Default Role Definitions	23
2.3.2 To Change a Default Role Definition:	24
2.3.3 Edit Default Team Workspace Access Rights	25
2.4 Create Your Initial Workspaces	30
2.4.1 Create an Administration Team Workspace	30
2.4.2 Set the Administration Team Access Rights	32
2.4.3 Using the Root Team Workspace	33
2.5 Set Up E-mail for a Workspace	35
2.6 Invite Users to the Site	36
A The sample-installer.xml File	37
ICEcore Glossary	45

About This Guide

This guide covers the installation and initial configuration of ICEcore.

Audience

This guide is intended for ICEcore administrators.

Contents of this Manual

This manual provides information about the following:

- ♦ Installing ICEcore
- ♦ Configuring ICEcore
- ♦ Controlling Access

Conventions

This manual uses the following conventions:

A greater-than symbol (>) is used to separate actions within a step and items in a cross-reference path.

A trademark symbol (® , ™ , etc.) denotes a Novell trademark. An asterisk (*) denotes a third-party trademark.

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.

What you see	What it means
Click the <i>Add toolbar</i> item.	References to toolbar items, links, menu items, and buttons are presented in <i>italic</i> font.
Click the <i>Getting Started</i> link.	
Click the <i>Add Document</i> menu item.	
Click <i>Close</i> .	
Type <code>status</code> , then press Enter.	Text that you must type and file names are presented in <code>Courier</code> font.
Open the <code>ManagerGuide.pdf</code> file.	

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 ICEcore Installation and Configuration Guide and other documentation, visit the [Novell Web site \(http://www.novell.com/documentation/team_plus_conf\)](http://www.novell.com/documentation/team_plus_conf).

Additional Documentation

You may find more information in the ICEcore documentation, which is accessible from links within ICEcore:

- ♦ ICEcore Help system
- ♦ ICEcore Quick Start Guide
- ♦ ICEcore User Guide
- ♦ ICEcore Admin Guide

The ICEcore online documents may be found from within the ICEcore Help system. To access the ICEcore Help system, after logging in (described later in this manual), click the *Help* link.

In the ICEcore Help system, click the *Getting Started Manuals* link to access copies of the online documents listed above.

Installing ICEcore

1

This chapter describes how to initially install and configure ICEcore:

- ♦ [Section 1.1, “Prerequisites,” on page 1](#)
- ♦ [Section 1.2, “Steps for Installing ICEcore,” on page 2](#)
- ♦ [Section 1.3, “Database Planning,” on page 3](#)
- ♦ [Section 1.4, “File System Planning,” on page 4](#)
- ♦ [Section 1.5, “Editing the Installer \(.xml\) File,” on page 4](#)
- ♦ [Section 1.7, “Running the Installer,” on page 7](#)
- ♦ [Section 1.8, “Starting and Stopping ICEcore,” on page 8](#)
- ♦ [Section 1.9, “Initial Logon,” on page 9](#)
- ♦ [Section 1.10, “Adding Users,” on page 9](#)
- ♦ [Section 1.11, “Mail Setup,” on page 15](#)
- ♦ [Section 1.12, “Memory Guidelines,” on page 16](#)
- ♦ [Section 1.13, “Document Support,” on page 17](#)

1.1 Prerequisites

You need a few things before you install ICEcore:

1. Computer:

- ♦ Linux systems need to have a minimum open file limit of 4096.
For SLES, check `/etc/security/limits.conf`:

```
hard nofile 65535
soft nofile 4096
```
- ♦ Minimum 2Ghz processor
- ♦ Multi-CPU systems preferred
- ♦ Minimum 2GB RAM

NOTE: You may potentially run with less RAM for specific development and testing configurations without simultaneous users, lots of database traffic, etc.

See [“Memory Guidelines” on page 16](#) for details.

2. Sun JDK 1.5.0_011 or higher installed.

3. A Database Server:

- ♦ MySQL 5.0.37 (or higher) Server and Client for Linux or MySQL 5.0.26 (or higher) Server and Client for Windows
- ♦ SQL Server for Windows (2000 or 2005)

See [“Database Planning” on page 3](#) for details.

How much disk do you need?

This depends on how much data you plan to put into the system. See sections “[Database Planning](#)” on page 3 and “[File System Planning](#)” on page 4.

The software takes about 250 MB.

1.2 Steps for Installing ICEcore

The following sequence shows the steps you want to follow to install ICEcore:

- 1 Install JDK (Sun JDK 1.5.0_011 or higher).
- 2 Set JAVA_HOME environment variable.
For example:
 - ♦ On Linux: `export JAVA_HOME=/usr/java/jdk_1.5.0_11`
 - ♦ On Windows: `JAVA_HOME=C:\Program Files\Java\jdk1.5.0_11`
- 3 Install and Configure the [Database Server](#).
- 4 Download the appropriate ICEcore kit.
- 5 Edit the `installer.xml` file (see [Editing the Installer \(.xml\) File](#)).

NOTE: If you are doing an upgrade, use your existing `license-key.xml` and `installer.xml` files by placing them in the same directory as the installer program. If you are doing a new installation, copy the `sample-installer.xml` file to `installer.xml` and edit that file. The `license-key.xml` file required to install the product is provided with the software kit (but is not included in kit).

- 6 If you want to run the indexing service in ICEcore on a different machine from ICEcore, you have to [Install the Lucene Index Server](#) on the other machine.
- 7 [Run the installer](#) (on Linux, do a `chmod +x -(liferay|jboss).linux` to make the installer executable).

The installer is named one of the following according to your operating system and portal server:

- ♦ `installer-liferay.exe`
- ♦ `installer-liferay.linux`
- ♦ `installer-jboss.exe`
- ♦ `installer-jboss.linux`

- 8 [Start and Stop ICEcore](#).
- 9 [Login](#).
- 10 [Add Users](#).

1.3 Database Planning

ICEcore and Liferay use separate dedicated databases within your database server.

A set of SQL configuration scripts are used to initialize the databases (creating the necessary tables, etc.).

ICEcore's default database for Linux and Windows is MySQL. It also supports SQL Server on Windows, and Oracle on Linux and Windows.

ICEcore's database requirements are relatively modest. The bulk of the data uploaded to ICEcore is stored in a file repository (see [File System Planning](#) - the database is primarily used for storing metadata and descriptive text.

Because the amount of data stored in the database is highly sensitive to the usage patterns of ICEcore (which are highly variable) there is no reliable formula for determining disk space usage, but the following can be used as a guideline:

- ♦ $\text{numberAttachments} \times \text{averageAttachmentSize} = \text{totalAttachmentSpace}$
- ♦ $\text{totalAttachmentSpace} \times .04 = \text{sqlDataSpace}$
- ♦ $\text{sqlDataSpace} \times 5 = \text{sqlStorageSpace}$

MySQL

- ♦ MySQL 5.0.37 (or higher) Server and Client for Linux or MySQL 5.0.26 (or higher) Server and Client for Windows is required with “innodb support” enabled
- ♦ Specify `root` for the administrator password (or make commensurate changes in the ICEcore `installer.xml` file)
- ♦ Set the default character set to UTF-8 by selecting “*Best support for Multilingualism*” in the Windows Configuration window, or edit the `my.cnf` configuration file to the following:

```
[mysqld]
character_set_server = utf8
[client]
default_character_set = utf8
```

NOTE: This file is located in `/etc/my.cnf` for Linux and in `c:\my.cnf` for Windows.

Microsoft SQL Server

- ♦ You can use SQL Server 2000 or SQL Server 2005
- ♦ Make sure to select SQL Server and Windows for authentication (the default is Windows only)
- ♦ Set the administrator password to “sa” (or make commensurate changes in the ICEcore `installer.xml` file)

1.4 File System Planning

ICEcore software and configuration files are stored in a tree shared with Liferay, Tomcat, etc. There are some temporary files also located here, but mainly locks, etc.

ICEcore data is stored in the database (see “[Database Planning](#)” on page 3) and on the file system. The file system usage is divided up into several functional areas:

- ♦ `filerepository` - This is where all attachment files are located, so it tends to be a large consumer of disk space. The tree is roughly organized by site, binder (folder/workspace), and entry.
- ♦ `archiveStore` - Only activated in the Enterprise version of ICEcore, this is where previous versions of files are stored. The files are stored here to meet compliance and archival goals.
- ♦ `cachefilestore` - This tree holds information derived from the attachments, such as thumbnails, scaled images, text, and HTML renderings. Depending on the nature of the attachments this tree consumes somewhat less space than the file repository (but it can, conceivably, store more).
- ♦ `lucene` - This tree holds the search index for the data. It tends to be a fraction of the space consumed by the file repository, but it is also sensitive to the type of information stored.
- ♦ Other trees - These are other trees that you cannot configure which typically consume a small amount of space (relatively speaking).
 - ♦ `rss` - Caches of RSS feeds for folders
 - ♦ `temp` - Temporary files
 - ♦ `definitions` - Custom definitions are stored here

1.5 Editing the Installer (.xml) File

The `installer.xml` file provides the ICEcore installer with detailed configuration information regarding network, memory, database, file system, e-mail, presence, and other settings. Edit this file with your specific data.

The “`sample-installer.xml`” file is included in the kit and should be used as a template for the `installer.xml` file. If you are doing an upgrade, use your existing `installer.xml` file by placing it in the same directory as the installer program. If you are doing a new installation, copy the `sample-installer.xml` file to `installer.xml` and edit that file.

For a quick installation edit the following sections:

- 1 Change the Host name in the Network section. Change the port number to 80 and the `securePort` to 443 if this is a dedicated server.
- 2 Consider changing the `JavaVirtualMachine` setting in the Memory section if you have a large installation.
- 3 Use the default file system configuration. This stores the files in `/home/icecoredata`
- 4 The default database configuration is MySQL, with the default MySQL passwords.
- 5 Use the default Lucene configuration (unless you are [installing a standalone Lucene Index Server](#)).
- 6 Modify the Email section with your SMTP and POP/IMAP servers.
- 7 If you are using ICEcore Conference, change the settings in the Presence configuration.

To view the `sample-installer.xml` file, see [Appendix A, “The sample-installer.xml File,”](#) on page 37.

1.6 Installing the Lucene Index Server

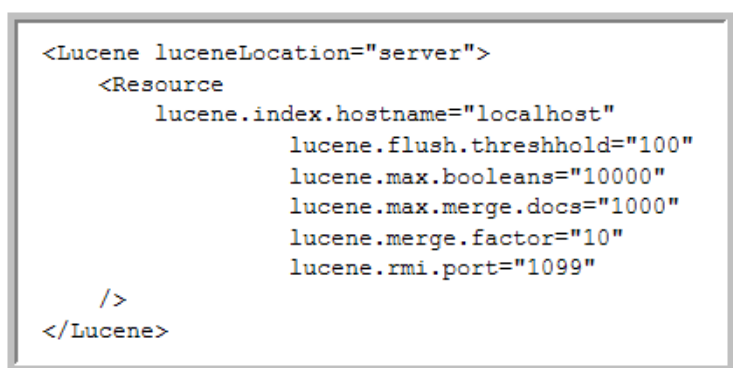
The following procedures shows you how to install the Lucene Index Server on a different machine from ICEcore (the Lucene Index Server is included in a full install of ICEcore on the ICEcore Server):

- ♦ [Section 1.6.1, “Install a Standalone Lucene Index Server for a New ICEcore Application,” on page 5](#)
- ♦ [Section 1.6.2, “Install a Standalone Lucene Index Server for an Existing ICEcore Application,” on page 6](#)

NOTE: You need to install JDK (Sun JDK 1.5.0_011 or higher) before installing the Lucene Index Server.

1.6.1 Install a Standalone Lucene Index Server for a New ICEcore Application

- 1 Edit the Installer.xml file (see [“The sample-installer.xml File” on page 37](#)):



```
<Lucene luceneLocation="server">
  <Resource
    lucene.index.hostname="localhost"
    lucene.flush.threshold="100"
    lucene.max.booleans="10000"
    lucene.max.merge.docs="1000"
    lucene.merge.factor="10"
    lucene.rmi.port="1099"
  />
</Lucene>
```

- 1a In the Lucene section set luceneLocation="server"
 - 1b If necessary, edit the default rmi port: lucene.rmi.port="1099"
- 2 Run the installer on the standalone machine and choose the option for: ICEcore Enterprise Lucene Server (see [Section 1.7, “Running the Installer,” on page 7](#)).
- 3 Start the server at the end of the installation:
 - 3a Change directories to lucene-server-installation-dir
 - 3b Run the rmiregistry-startup script in the bin directory
 - 3c Run the indexserver-startup script in the bin directory
- 4 Run the normal installation of ICEcore (see [Section 1.7, “Running the Installer,” on page 7](#)).

1.6.2 Install a Standalone Lucene Index Server for an Existing ICEcore Application

- 1 Edit the Installer.xml file (see [“The sample-installer.xml File” on page 37](#)):

```
<Lucene luceneLocation="server">
  <Resource
    lucene.index.hostname="localhost"
    lucene.flush.threshold="100"
    lucene.max.booleans="10000"
    lucene.max.merge.docs="1000"
    lucene.merge.factor="10"
    lucene.rmi.port="1099"
  />
</Lucene>
```

- 1a In the Lucene section set luceneLocation="server"
 - 1b If necessary, edit the default rmi port: lucene.rmi.port="1099"
- 2 Shutdown ICEcore (see [Section 1.8, “Starting and Stopping ICEcore,” on page 8](#)).
- 3 Run the installer on the standalone machine and choose the option for: ICEcore Enterprise Lucene Server (see [Section 1.7, “Running the Installer,” on page 7](#)).
- 4 Run the installer on the standalone machine and choose the option for: Apply settings only (see [Section 1.7, “Running the Installer,” on page 7](#)).

NOTE: The *Apply settings only* option can potentially corrupt your existing system (USE WITH CARE).

- 5 Start the server at the end of the installation (if not started already):
 - 5a Change directories to lucene-server-installation-dir
 - 5b Run the rmiregistry-startup script in the bin directory
 - 5c Run the indexserver-startup script in the bin directory
- 6 Run the normal installation of ICEcore (see [Section 1.7, “Running the Installer,” on page 7](#)).
- 7 Restart ICEcore (see [Section 1.8, “Starting and Stopping ICEcore,” on page 8](#)).

1.7 Running the Installer

The following procedure shows you how to run the installer.

- 1 Run the installer (on Linux, do a `chmod +x -(liferay|jboss).linux` to make the installer executable).

The installer is named one of the following according to your operating system and portal server:

- ♦ `installer-liferay.exe`
- ♦ `installer-liferay.linux`
- ♦ `installer-jboss.exe`
- ♦ `installer-jboss.linux`

- 2 Answer Yes to the license agreement:

Have you read and agree with the license? : yes

- 3 Enter the type of install you are performing:

IMPORTANT: A full install erases the existing databases for an existing ICEcore application (use the UPDATE installation for existing ICEcore applications).

```
Enter the type of installation:

 1. ICEcore Enterprise with Liferay/JBoss - FULL INSTALL
 2. ICEcore Enterprise with Liferay/JBoss - UPDATE
NB. SPECIAL NOVELL BETA UPGRADE
 3. ICEcore Enterprise Lucene Server
 4. Apply settings only      (Use with care)
 5. Create Initial Database setup scripts for DBA
 6. Exit (no changes)

Installation type [1]: 1
```

The software is installed in the following dedicated directory: `/opt/icecore`

NOTE: The *Apply settings only* option can potentially corrupt your existing system (USE WITH CARE).

- 4 Review the installation messages and enter `Y` to continue the install or `N` to cancel:

Enter Y to continue, enter N to cancel installation [Y]: Y

- 5 The install process asks you if want to create the ICEcore databases at this time; select `2` to create the databases or `1` to skip this step:

```
About to create the databases for ICEcore:
 1: The databases were created by my DBA, don't create them now.
 2: Create the databases now.
(1/2)  [1]: 2
      Creating jboss database for SQLServer ...
```

1.8 Starting and Stopping ICEcore

Starting ICEcore

On Windows:

```
C:\yourinstall\liferay-portal-tomcat-5.5-jdk5-4.3.0\bin\startup.bat
```

On Linux:

```
/yourinstall/liferay-portal-tomcat-5.5-jdk5-4.3.0/bin/icecore start
```

NOTE: While this is dependent on your system configuration, it can take upwards of 60 seconds before ICEcore/Liferay starts accepting web transactions. Initial transactions also tend to be slower as various caches load into RAM. These delays are amplified somewhat when working with a new installation or updated software as the JSPs are recompiled as they are referenced.

In Windows, startup is complete when the Tomcat window displays:

```
INFO:Server Startup in ##### ms
```

Setting up ICEcore to start on system startup

On Windows:

```
1 C:\yourinstall\liferay-portal-tomcat-5.5-jdk5-4.3.0\bin\service.bat install icecore
```

```
2 Use the Services Control Panel to configure the service to your needs.
```

On Linux, from the root account:

```
1 cp /yourinstall/liferay-portal-tomcat-5.5-jdk5-4.3.0/bin/icecore /etc/init.d
```

```
2 chkconfig --add icecore
```

Log Files/Monitoring

On Windows:

A Tomcat window appears when you issue the `startup.bat` command. Messages (good and bad) appear here.

On Linux:

Unlike Windows, the Tomcat process starts as a background process and no window appears. To monitor the messages in real time:

```
tail -f /yourinstall/liferay-portal-tomcat-5.5-jdk5-4.3.0/logs/catalina.out
```

Stopping ICEcore

On Windows:

```
C:\yourinstall\liferay-portal-tomcat-5.5-jdk5-4.3.0\bin\shutdown.bat
```

On Linux:

```
/yourinstall/liferay-portal-tomcat-5.5-jdk5-4.3.0/bin/icecore stop
```

1.9 Initial Logon

After installing ICEcore/Liferay you need to log in. ICEcore installation creates one system administrator account and a default format for users.

1. Access your installation with a browser via the following URL:
`http://yourhost.name.here:8080`
2. At the login screen enter: `admin`
3. Enter the following Password: `admin`
This brings up the initial Liferay portal window.
4. To add more portlets, click on the “*Add Content*” link in the upper-right-hand corner. This brings up a panel of portlets along the left-hand margin:
 - ♦ Expand the *ICEcore* section to add more ICEcore features, such as the *ICEcore Administration* portlet.
 - ♦ Expand the *Admin* section to add useful Liferay features such as the *Admin* and *Enterprise Admin* portlets.

The portlets are placed in the narrow column on the left side. To move a portlet to the wider right column, mouse down on the title and drag it over the right-hand column and release when you see a blue bar with arrows on each side appear.

1.10 Adding Users

There are two methods of managing users:

1. Basic User Management - create and manage individual accounts manually
2. LDAP/eDirectory - synchronize user account management to a corporate directory

Regardless of which method you choose it is important to realize that because ICEcore is embedded within Liferay, a portion of user management is delegated to the Liferay. For example, Liferay is responsible for all user authentications.

The section includes the following topics:

- ♦ [Section 1.10.1, “Basic User Management,” on page 9](#)
- ♦ [Section 1.10.2, “User Management with LDAP/eDirectory,” on page 10](#)
- ♦ [Section 1.10.3, “The ICEcore LDAP Configuration Form,” on page 12](#)
- ♦ [Section 1.10.4, “Secure LDAP/eDirectory Setup,” on page 14](#)

1.10.1 Basic User Management

This capability comes “out of the box” with the product - no additional setup is required.

- 1 Using the Liferay *Enterprise Admin* portlet, click on the *Users* tab.

Liferay has two portlets, *Enterprise Admin* and *Admin*. Both have *Users* tabs, but they do very different things. Make sure you are using the correct portlet. This brings up a list of current Liferay accounts. You can refer to the [Liferay documentation \(http://www.liferay.com/web/guest/documentation\)](http://www.liferay.com/web/guest/documentation) for more advanced management.

- 2 Click *Add*.

- 3 Fill in the following fields: *First, Last Name*, assign a *User ID*, specify the e-mail address, and then click *Save*.

NOTE: Do not use any forbidden characters (`/*?"<>;|`) in a user's names.

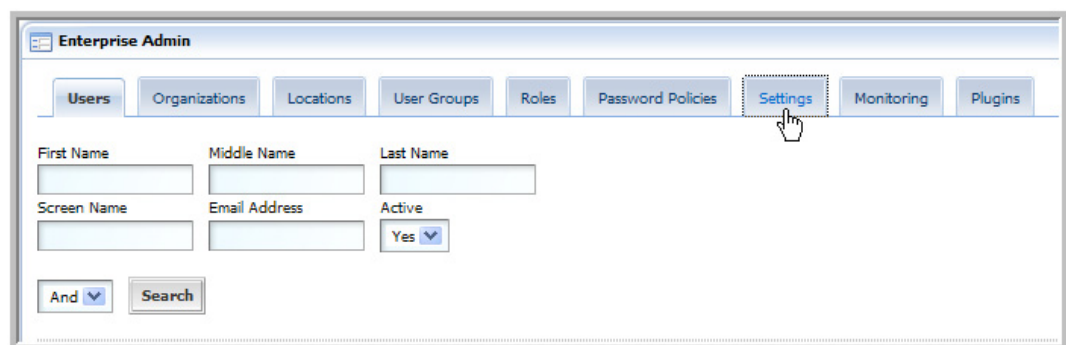
- 4 Liferay shows an extended form.
- 5 Click *Save*.
- 6 Click on the *Password* tab, type in the password, and then click *Save*.
- 7 Repeat these steps to add additional users.

The account is now ready for use, but not fully created. The administrator and other users cannot see the new user until after the user logs in for the first time. Once the new user logs in, ICEcore creates their user workspace, including a blog, calendar, and file area.

1.10.2 User Management with LDAP/eDirectory

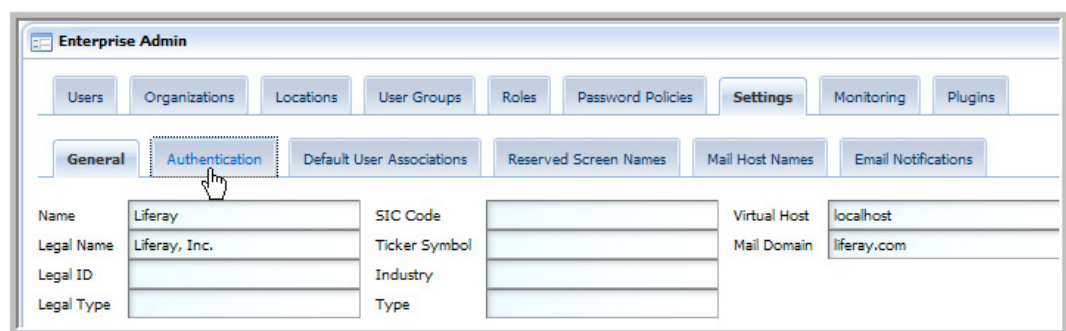
If you want to use a corporate directory as the master reference for user accounts you need to configure both Liferay and ICEcore in a similar manner. ICEcore's LDAP configuration pages are designed to look and work in a similar fashion to Liferay, easing this task significantly. You can refer to the [Liferay documentation \(http://www.liferay.com/web/guest/documentation\)](http://www.liferay.com/web/guest/documentation) for more detailed information.

- 1 Using the Liferay *Enterprise Admin* portlet, click on the *Settings* tab (you may need to click on the *>>* tab to see the *Settings* tab).



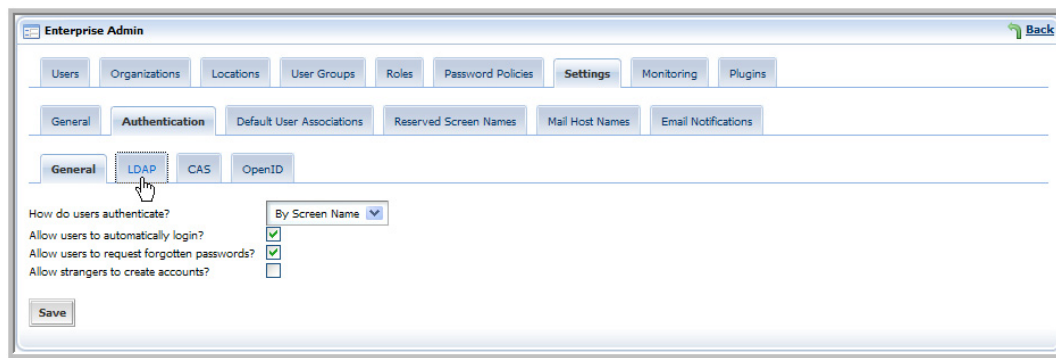
The screenshot shows the 'Enterprise Admin' portlet interface. At the top, there is a navigation bar with tabs: Users, Organizations, Locations, User Groups, Roles, Password Policies, Settings, Monitoring, and Plugins. The 'Settings' tab is selected and highlighted. Below the navigation bar, there are several input fields for user information: First Name, Middle Name, Last Name, Screen Name, Email Address, and Active (a dropdown menu set to 'Yes'). At the bottom left, there is an 'And' dropdown menu and a 'Search' button.

- 2 Click on the *Authentication* tab.



The screenshot shows the 'Enterprise Admin' portlet interface with the 'Settings' tab selected. Below the navigation bar, there are several sub-tabs: General, Authentication, Default User Associations, Reserved Screen Names, Mail Host Names, and Email Notifications. The 'Authentication' sub-tab is selected and highlighted. Below the sub-tabs, there are several input fields for authentication settings: Name (set to 'Liferay'), Legal Name (set to 'Liferay, Inc.'), Legal ID, Legal Type, SIC Code, Ticker Symbol, Industry, Type, Virtual Host (set to 'localhost'), and Mail Domain (set to 'liferay.com').

3 Click on the *LDAP* tab.



4 Fill out the form with the values needed to map to your corporate directory:

- 4a** For the search filter use `uid=@screen_name@` or `cn=@screen_name@`, depending on your site conventions.

Enter the search filter that will be used to test the validity of a user. The tokens `@company_id@`, `@email_address@`, and `@user_id@` are replaced at runtime with the correct values.

`(cn=@screen_name@)`

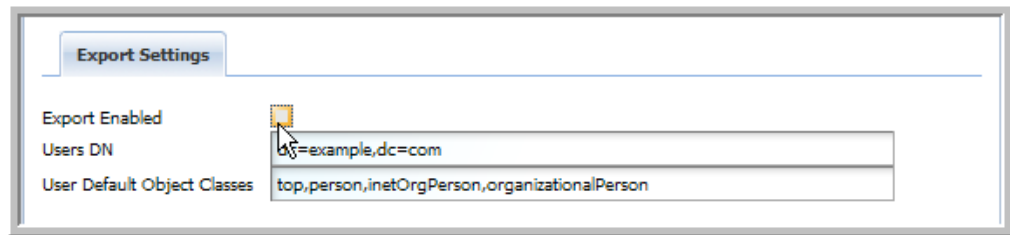
- 4b** Under *If the user...* add: `password=givenName` or `password=sn`.

If the user is valid and the user exists in the LDAP server but not in Liferay, the user will be synchronized from the LDAP server to Liferay. Below is a mapping of Liferay attributes and the pair name used to populate the Liferay field from LDAP.

`screenName=cn`
`password=sn`
`emailAddress=mail`
`firstName=givenName`
`lastName=sn`
`jobTitle=title`
`group=groupMembership`

NOTE: We recommend picking one of these passwords (the Liferay default `password=userPassword` does not always appear to work).

4c Under *Export Settings*, we recommend deselecting the *Export Enabled* option.



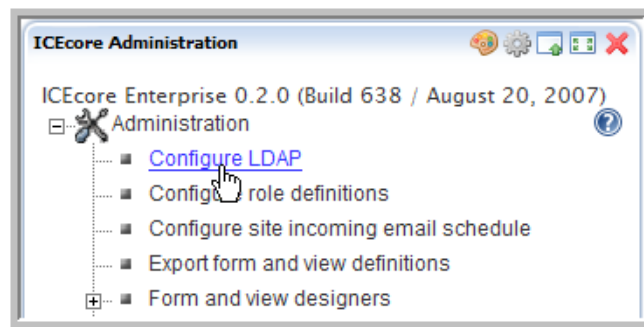
The screenshot shows a web form titled "Export Settings". It has three input fields: "Export Enabled" with a checked checkbox, "Users DN" with the text "dc=example,dc=com", and "User Default Object Classes" with the text "top,person,inetOrgPerson,organizationalPerson".

5 Click *Save*.

1.10.3 The ICEcore LDAP Configuration Form

This form is similar to the Liferay form but includes additional information on scheduling synchronization of all users and, optionally, groups.

1 Using the *ICEcore Administration* portlet, click on “*Configure LDAP*.”



2 Fill out the form using the corresponding values that were used to configure Liferay. (See below for details on this form).

3 Click *Apply*.

NOTE: Users do not show up in the user list until after they have logged in for the first time.

Connection settings:

► Schedule
▼ Connection
The LDAP URL format is `ldap://host:port/searchdn`, where `searchdn` specifies the initial search context for users and is optional. For example: `ldap://localhost:389/ou=Users,o=Example`

URL

Principal

Credentials

- ♦ URL: `ldap://host:port/dc=foo,dc=bar`, for example: `ldap://192.168.3.3:389/dc=sleepy,dc=com`
- ♦ Principal: LDAP principal (user) to authenticate access with, for example: `cn=admin,o=itdepartment`
- ♦ Credentials: Above principal's password or authenticating token

Users settings:

Users

LDAP attribute that identifies the user.

In the box below, map the internal identifiers to the LDAP attribute names of the user record. Use the following syntax: `internalID=ldapAttName`

`emailAddress=mail`
`firstName=gn`
`firstName=givenName`
`lastName=sn`
`lastName=surname`
`phone=telephoneNumber`
`description=description`

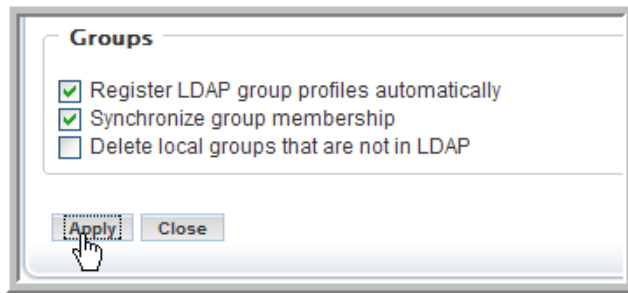
☒ Synchronize user profiles
☒ Register LDAP user profiles automatically
☐ Delete users that are not in LDAP
☐ When deleting users, delete associated user workspaces and content

- ♦ Ldap attribute that identifies the user, for example: `uid` or `cn`

NOTE: For the LDAP attribute that identifies the user, “cn” may be a better choice than “uid” for many sites.

- ♦ Attribute mapping - This is how you map the LDAP attribute names of the user record to the ICEcore internal identifiers. Syntax is: `ICEcoreId=ldapAttName`, for example:
 - ♦ `lastName=sn`
 - ♦ `name=uid`
 - ♦ ICEcoreIds: `lastName`, `firstName`, `name`, `description`, `email`, `Address`, `phone`
- ♦ Select *Synchronize user profiles* (recommended)
- ♦ Select *Register LDAP user profiles automatically* (recommended)
- ♦ Select others as appropriate

Groups settings:



- ♦ Select *Register LDAP group profiles automatically* (recommended)
- ♦ Select *Synchronize group membership* (recommended)

1.10.4 Secure LDAP/eDirectory Setup

To connect to a secure LDAP server, you need to import the server's certificate into ICEcore's keystore. If the LDAP server is `ldap.company.com`, and it's running on the usual ldaps port (636), then you can follow these steps using the command line interface:

NOTE: An administrator who understands the “openssl” tool should perform this procedure.

- 1 Make sure you have `openssl` available.
- 2 Type: `openssl s_client -connect ldap.company.com:636`
- 3 Copy everything from the ‘-----BEGIN CERTIFICATE-----’ to the ‘-----END CERTIFICATE-----’ lines (inclusive) into a file, say `cert.ldap` (the name does not matter).
- 4 Type:

```
keytool -import -alias ldap.company.com -keystore /sitescape-team-0.1.0/liferay-portal-tomcat-5.5-jdk5-4.3.0/conf/.keystore -file cert.ldap
```

NOTE: The path to the keystore depends on your install path.

- 5 Restart Tomcat.

NOTE: This technique only works for real certificates. If the LDAP server is using a self-signed certificate, you also need to get the certificate for the “fake” CA and add it to the `cacerts` file on the ICEcore machine. The code at http://blogs.sun.com/andreas/entry/no_more_unable_to_find to get the other certificate appears to be a good example.

- 6 Make sure you use `ldaps://ldap.company.com:636` as the LDAP URL, rather than the default `ldap://ldap.company.com:389` (note protocol and port number changes).

1.11 Mail Setup

ICEcore e-mail integration is divided into two primary functions:

1. Notification - e-mail messages generated by ICEcore to inform people of events (e.g., new entries, changes) occurring within ICEcore.
2. Posting - the processing of e-mail messages sent to ICEcore with the intent of having the e-mail content added to a particular folder (as a new entry or reply).

System Configuration

As part of installing and configuring ICEcore, the system administrator must supply information related to the address and access to the mail system. E-mail integration is not required and you can configure the level of integration.

The `installer.xml` file contains sections on e-mail configuration for both notification (Outbound) and posting (Inbound).

Outbound configuration requires the basic information for generating SMTP mail messages: server, port, and optional authentication information.

ICEcore posting works by the system accessing a single e-mail account (sometimes referred to as the “posting account”). Using your e-mail system, multiple e-mail addresses (aliases) can be mapped to this account. ICEcore periodically reads e-mail sent to this account and forwards the messages to individual folders (more on this below).

Create the account using your normal e-mail system management tools. You can configure the posting account to use either POP3 or IMAP. ICEcore needs a host, port, e-mail account id, and password for the posting feature to work.

Setting up Incoming Mail schedule

In the *ICEcore > Administration* portlet, click on the *Configure site incoming email schedule* link. This brings up a form that instructs ICEcore when to check the posting e-mail account. You may choose to poll at specific times during the day or at some regular frequency.

The right-hand side of the setup page lists any aliases and the folder that is using that alias. You set up the alias address to folder mapping within the folders themselves (see next section).

Associating an E-mail Address with a Folder

If you enable incoming e-mail the final step that you need to take is to associate a particular e-mail alias address with a folder. When this is done, e-mail sent to that address is “read” by the folder and turned into entries (or replies).

1. Navigate to the folder you want to receive e-mail and click on the *Manage this folder* menu item, then select *Email settings*.
2. Enter the e-mail alias address you want to associate with this folder. Click on the *Apply* button to save the address.

You can optionally set up the notification schedule for this folder at the same time (see next section).

Establishing a Notification Schedule for a Folder

You can configure each folder to send out e-mail messages highlighting activity within the folder.

1. Navigate to the folder you want to send e-mail for and click on the *Manage this folder* menu item, then select *Email settings*.
2. Enable outgoing mail and select the type of schedule you want for notification. You can configure the schedule for specific times of the day or a regular frequency. You also need to specify who is to receive the e-mail. This can be a combination of users, groups, and arbitrary e-mail addresses.
3. Click *Apply* to save the schedule.

1.12 Memory Guidelines

Java virtual machine uses a memory pool that you can configure at startup time. (You can see `catalina.bat/.sh` for all of the Tomcat startup options).

Memory settings are defined in the `installer.xml` file. The default configuration assumes 1GB is available for the Java virtual machine.

Virtual memory configurations in excess of 2GB for large production environments are common, therefore 64-bit server systems are recommended.

Liferay has its own (non-trivial) memory pools that needs to be factored in when determining overall memory demands. These are not accounted for in great detail here.

ICEcore memory usage factors:

1. Number of sessions (users logged in)
2. Number of active/concurrent sessions
3. Hibernate cache (database)
4. Lucene cache

The largest and most important of these are the Hibernate and Lucene caches.

Hibernate Cache

Hibernate is a software framework that manages the mapping between Java objects and relational databases. Consequently, it has a sophisticated cache system that works on top of any database caching mechanisms.

By default ICEcore uses the `ehcache` plug-in, which is a non-clustering cache manager. Fine tuning of the Hibernate cache is done through `ehcache.xml`.

1.13 Document Support

When a file is uploaded into ICEcore it is processed in a number of ways:

1. Textual content is extracted and sent to the search engine. For some file types (e.g., word processing documents) the textual content is obvious. For others, such as graphics files, there may be little or no textual content beyond basic metadata.
2. If possible, a thumbnail (and scaled image - somewhat larger than a thumbnail) of the file is created. The thumbnail of a multi-page document shows the first page.
3. If possible, an browser-only renderable (HTML) version of the file is created. This allows people who do not have the ability to open the file with its native application to get an idea of what is in the file. The rendering is on a “best effort” basis and the level of detail and fidelity of the rendering varies greatly.

The Open and Enterprise versions of ICEcore vary greatly in their ability to perform the above tasks.

The Open version uses OpenOffice to provide access to common Microsoft and OpenOffice document formats, and that is about it.

The Enterprise version uses a licensed technology from the Stellent* company (now part of Oracle*) which provides processing capabilities to a wide spectrum of file types (over 200).

Editing Support

There are two ways of editing files stored in ICEcore:

1. Download the file to your desktop. Edit the file. Upload the file to the entry (as an attachment). A new version of the attachment is created reflecting your changes. It is possible to manually “lock” the entry if you want to prevent other people from modifying any of the attached files.
2. Certain file types provide an [Edit] button which allows for “edit in place”. When available, clicking on the [Edit] button will launch a small Java applet which, in turn, launches the associated edit program for the file. The program accesses the file stored in ICEcore through WebDAV and is subject to the individual file locking protocols that WebDAV provides. Saving the file (or exiting the application) creates a new version of the attachment - no interaction with the browser is needed.

Because the “edit in place” option requires the WebDAV URL support by the application, which is not universally supported by the operating systems, ICEcore must be configured to know which applications are “WebDAV-aware.”

The following table shows the planned default configuration of file/document support in ICEcore.

Ext	Description	HTML View		Thumbnails		Application		Edit via	Search	
		Open	Ext	Open	Ext	Windows	Linux	WebDAV	Open	Ext
doc	MS Word	?	X		X	winword	ooffice	X	X	X
xls	MS Excel	?	X		X	excel	ooffice	X	X	X
ppt	MS Powerpoint	?	X		X	powerpnt	ooffice	X	X	X
ods	OO Calc	X	X		X	soffice	ooffice	X	X	X
odg	OO Draw	X	X		X	soffice	ooffice	X	X	X
odp	OO Impress	X	X		X	soffice	ooffice	X	X	X
odf	OO Math	X	X		X	soffice	ooffice	X	X	X
odt	OO Writer	X	X		X	soffice	ooffice	X	X	X
sww	OO Text	?	X		X	soffice	ooffice	X	X	X
docx	MS Word 2007		X		X	winword	?	W		X
xlsx	MS Excel 2007		X		X	excel	?	W		X
pptx	MS Powerpoint 2007		X		X	powerpnt	?	W		X
123	Lotus 1-2-3		X		X					X
avi	Windows Multimedia		X		X					X
bmp	Bitmap Graphic		X		X					X
cdr	Corel Draw		X		X					X
cgm	Computer Graphics Metafile		X		X					X
dsf	Micrographix Designer		X		X					X
dwg	AutoCAD Drawing Format		X		X					X
dxf	AutoCAD Exchange Format		X		X					X
gif	Graphics			?	X					X
hpgl	HP Graphics Language		X		X					X
htm	HTML		X		X					X
html	HTML		X		X					X
jpg	Graphics			X	X					X
lwp	Lotus WordPro		X		X					X
mdb	MS Access		X		X					X
mov	QuickTime Movie		X		X					X
mp3	Audio		X		X					X
mpeg	Movie		X		X					X
mpg	Movie		X		X					X
mpp	MS Project		X		X					X
pdf	Adobe Portable Document		X		X					X
png	Graphics			?	X					X
pps	MS Powerpoint		X		X	powerpnt		?		X
ps	Postscript		X		X					X
psd	Adobe Photoshop		X		X					X
qt	QuickTime Movie		X		X					X
rm	Real Movie		X		X					X
rtf	Rich Text Format		X		X					X
tif	Graphics		X		X					X
tiff	Graphics		X		X					X
txt	Text		X		X				X	X
vsd	MS Visio		X		X	??		?		X
wav	Windows Wave Audio		X		X					X
wk1	Lotus Worksheet		X		X					X
wk3	Lotus Worksheet		X		X					X
wk4	Lotus Worksheet		X		X					X
wpd	WordPerfect		X		X					X
xbm	X-Windows Bitmap		X		X					X
xml	XML		X		X					X
xpm	X-Windows Pixmap		X		X					X
zip	Compressed files (PKZIP)		X		X					X

Configuring ICEcore

2

Before using ICEcore, you need to perform the initial configuration tasks described in this chapter to set up ICEcore so that all default features are operable:

1. [Section 2.1, “Log in as Liferay Site Manager,” on page 19](#)

After you log in to the management account, you can perform all of the management tasks for ICEcore and the current workspace.

2. [Section 2.2, “Log in as JBoss Site Manager,” on page 22](#)

After you log in to the management account, you can perform all of the management tasks for ICEcore and the current workspace.

3. [Section 2.3, “Adjust Access Control for the Site,” on page 22](#)

One of your first tasks as a site manager is to set the access roles to control how different users can view and participate in the site workspaces according to what access role they are assigned.

4. [Section 2.4, “Create Your Initial Workspaces,” on page 30](#)

As the site manager, you need to create the initial workspaces for the site. Planning the initial content for your site is an important step in regards to how your users learn and use the site.

5. [Section 2.5, “Set Up E-mail for a Workspace,” on page 35](#)

You must set up e-mail for a workspace to use features such as e-mail notifications and postings. Users cannot receive e-mail notification of new or modified entries in a discussion folder until you enable this feature.

6. [Section 2.6, “Invite Users to the Site,” on page 36](#)

Once the site is configured for initial use, you need to invite your users to the site. The users should already be added, see [Section 1.10, “Adding Users,” on page 9](#).

2.1 Log in as Liferay Site Manager

You need to log in using an administrator account in order to set up ICEcore for your users.

2.1.1 To Log In Using the Administrator Account:

- 1 Type the ICEcore URL for your company into the browser window:

`http://<yourCompany.com>/portal/portal/default`

The *Sign In* page appears.

- 2 In the *Login* field, type:

`Admin`

- 3 In the *Password* field, type:

`Admin`

- 4 Click *Login*.

The ICEcore Home Page appears. You are now logged in as administrator.

The Liferay portal management links are in the upper-right corner of the page below the *Welcome Mary Admin!* text. This is the name associated with the default administration account (*administrator*). When the name appears in the upper-right corner, you are logged into the system. (You can change the name “Mary Admin” by modifying the user profile for the *administration* account.)

When you begin managing ICEcore, there are only two management levels: site managers (who manage the server machine) and portal managers.

By default, *administrator* is the only member of the Administrators group for the Liferay portal Administrators group. Members of the Administrators group have the right to perform portal management tasks. If you choose, you can add other members to this group, so that they can help manage the portal.

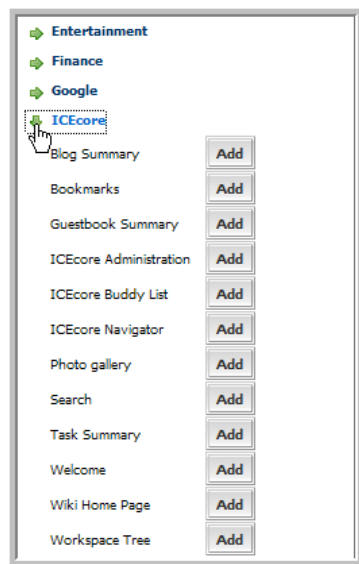
2.1.2 Using the ICEcore Administration Portlet

The ICEcore Administration portlet is designed to provide you with a maximum amount of flexibility when managing resources for your teams.

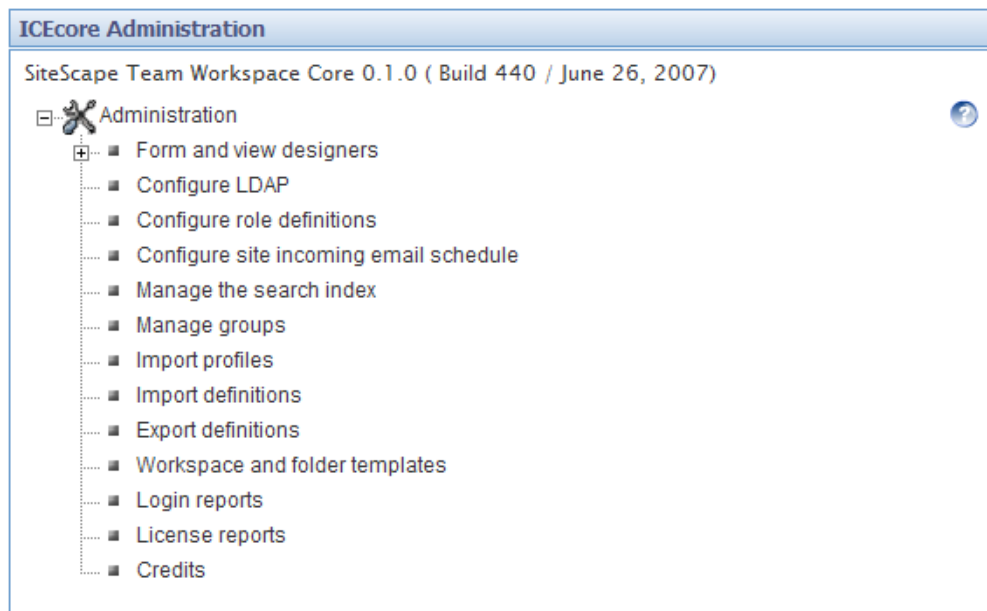
Access the ICEcore management options via the ICEcore *Administration* portlet.

To Add the ICEcore Administration Portlet to Your Home Page:

- 1 Click *Add Content* in the upper-right corner.
- 2 In the portlet access frame that appears in the upper-left corner, click *ICEcore* to view the available ICEcore portlets that you can add.



3 Click the *Add* button next to *ICEcore Administration* to add this portlet to your Home Page.



The *ICEcore Administration* options provides you with access to all the administration tasks controlled by the ICEcore software.

NOTE: Because ICEcore is embedded within Liferay, a portion of user management is delegated to the Liferay. For example, Liferay is responsible for all user authentications using the *Enterprise Admin* portlet.

2.2 Log in as JBoss Site Manager

You need to log in using an administrator account in order to set up ICEcore for your users.

- 1 Type the ICEcore URL for your company into the browser window:
`http://<yourCompany.com>/portal/portal/default`
- 2 Click the *Admin* link in the top bar.
- 3 Click *Portal Definitions*.
- 4 Click *local./ssf.ss_administration*.
- 5 Scroll to the bottom of the screen.
- 6 Type in the *Instance Name* (no spaces): `ICEcoreAdmin`
- 7 Type a window name into the *Window Name* field under *Content Definition* before clicking *Add*.

NOTE: The recommended window naming convention for ICEcore side is <portlet name>-window. So, for instance, to create a window from the `ss_administration-instance` instance, name it `ss_administration-window`, etc.

- 8 Click *Add*. (You are now in the Portlet Instances).
- 9 Click *Dashboard* in the top bar.
- 10 Click *Configure Dashboard*.
- 11 Select *ICEcoreAdmin* and click *Add to Page Layout*.
- 12 Click *Dashboard* in the top bar.

NOTE: You now see *ICEcoreAdmin* on the Dashboard.

2.3 Adjust Access Control for the Site

One of your first tasks as a site manager is to set the access roles to control how different users can view and participate in the site workspaces according to what access role they are assigned. All Access Roles are assigned to users in individual workspaces or folders, except for the Site Administration access role, which grants access to the whole site. There are specific Role Definitions that you can edit to accomplish this. See the default Role Definitions below.

Key Ideas to Keep in Mind:

- ♦ Understand the default access control settings and the philosophy behind them (quick team formation, open communications, etc.)
- ♦ Determine the values and needs of your organization and adjust the access control settings accordingly
- ♦ The best way to delegate administrative tasks is to create groups and use the access-control tools to delegate folder and workspace administration accordingly

2.3.1 Default Role Definitions

The following are the default Role Definitions, which should more than enough to configure your site, though your site administrator can add new Role Definitions if required.

- ♦ *Workspace and Folder Administrator*

Assigns every access right, but *Site Administration*, to users for the specific workspaces and folders that the administer.

- ♦ *Participant*

Assigns the following default access rights to users for any workspaces or folders in which they are participants:

- ♦ Add Comments
- ♦ Create Entries
- ♦ Delete His or Her Own Entries
- ♦ Modify His or Her Own Entries
- ♦ Read Entries

- ♦ *Site Administrator*

Has every access right selected by default. These rights apply to every workspace and folder.

- ♦ *Team Member*

Assigns the following default access rights to users for any workspaces or folders in which they are team members:

- ♦ Add Comments
- ♦ Add Folders
- ♦ Add Workspaces
- ♦ Create Entries
- ♦ Delete Entries
- ♦ Delete His or Her Own Entries
- ♦ Generate Reports
- ♦ Manage Community Tags
- ♦ Modify Entries
- ♦ Modify His or Her Own Entries
- ♦ Read Entries

- ♦ *Visitor*

Assigns the following default access rights to users for workspaces or folders to which they are only assigned as visitors:

- ♦ Add Comments
- ♦ Read Entries

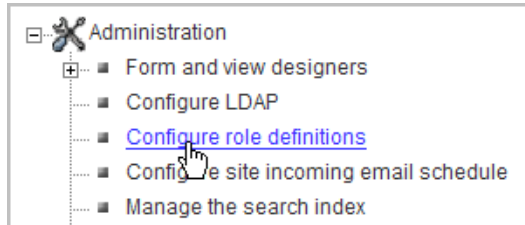
- ♦ *Workspace Creator*

This Role Definition is a special definition assigned to All Users at the Top Team Workspace to give every user the right to create a new Team Workspace. The Site Administrator can edit the Top Team Workspace access rights so that only specific users can add Team Workspaces, see [Section 2.3.3, “Edit Default Team Workspace Access Rights,” on page 25](#).

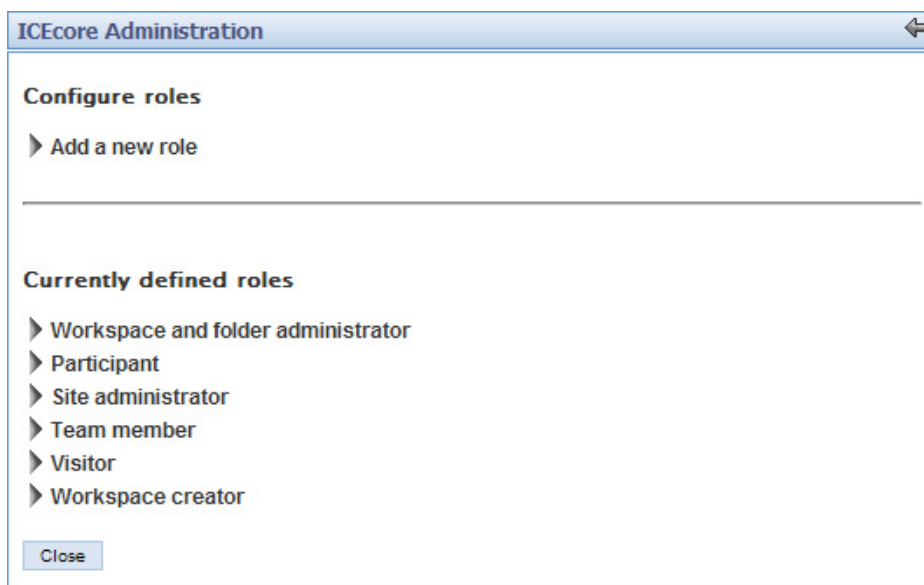
2.3.2 To Change a Default Role Definition:

For example, you may choose to prevent visitors from adding comments in the site.

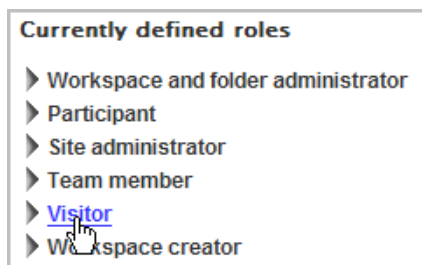
- 1 In the *ICEcore Administration* portlet, click *Configure Role Definitions*.



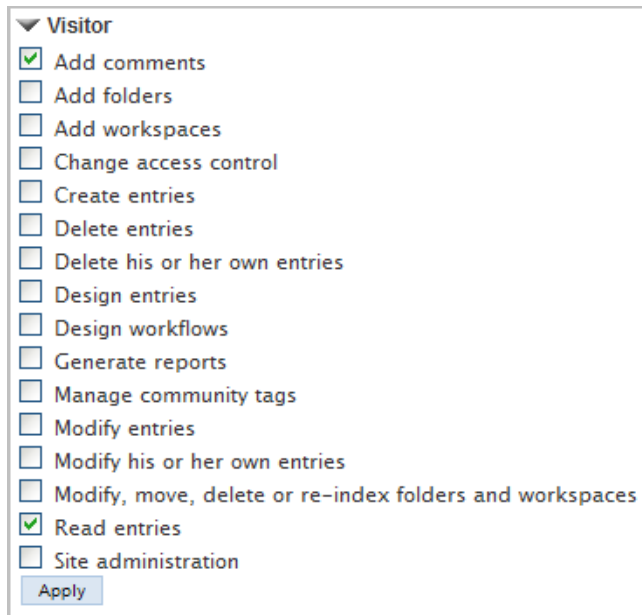
The *Configure Roles* page appears.



- 2 Click *Visitor*.



3 Under *Visitor*, deselect the *Add Comments* option, and then click *Apply*.



▼ Visitor

- ☒ Add comments
- ☐ Add folders
- ☐ Add workspaces
- ☐ Change access control
- ☐ Create entries
- ☐ Delete entries
- ☐ Delete his or her own entries
- ☐ Design entries
- ☐ Design workflows
- ☐ Generate reports
- ☐ Manage community tags
- ☐ Modify entries
- ☐ Modify his or her own entries
- ☐ Modify, move, delete or re-index folders and workspaces
- ☒ Read entries
- ☐ Site administration

Apply

4 Click *Close* to return to your Home Page.

Visitors to your site can now view entries, but can no longer add comments.

2.3.3 Edit Default Team Workspace Access Rights

Every workspace and folder has their own access rights. Access rights are the assignment of the Role Definitions to groups and individuals for a workspace or folder. When you create a new workspace, it starts off with the default access rights according to the type of workspace you created: Global, Personal, or Team.

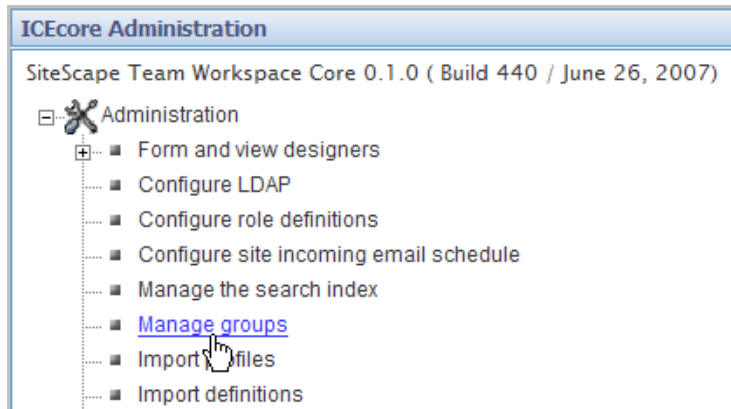
NOTE: A personal workspace is created when a user signs into ICEcore for the first time.

The Site Administrator can edit these default settings, for example, you might want to edit the Top Team Workspace access rights so that only specific users or groups can add Team Workspaces.

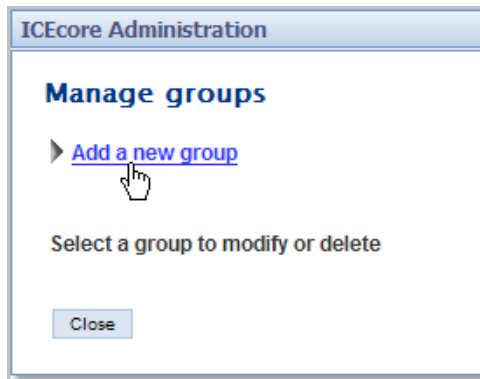
First you want to create a *Team Creator* group to be in charge of Team Workspace creation, and then you want to remove the *Workspace Creator* Role Definition from *All Users* and assign it to the *Team Creator* group in the Top Team Workspace access rights. The site administrator can add new users to the *Team Creator* group at any time.

Create the Team Creator Group:

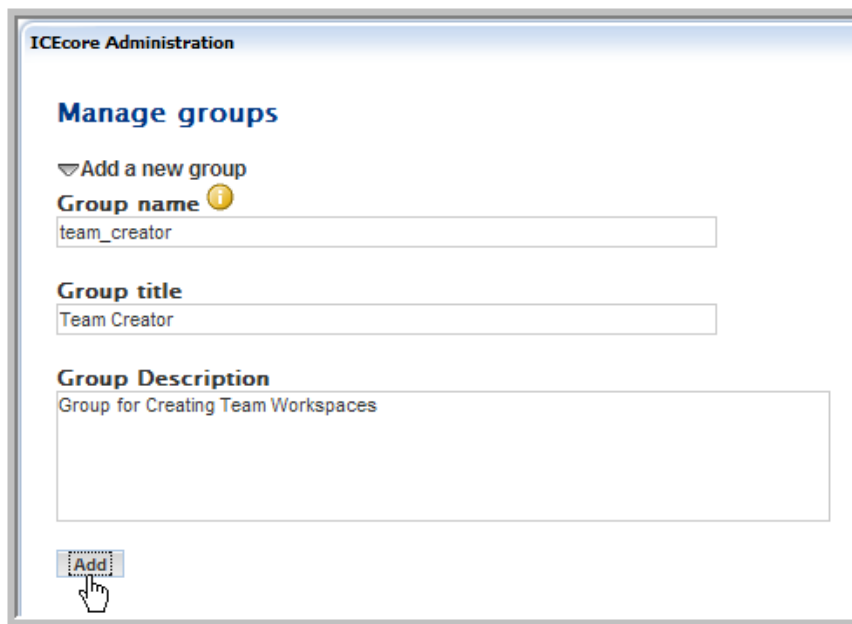
- 1 In the *ICEcore Administration* portlet, click *Manage Groups*.



- 2 In the *Manage Groups* window, click *Add a New Group*.



- 3 Enter the new group's name, title, description, and then click *Add*.



ICEcore Administration

Manage groups

▼ Add a new group

Group name ⓘ
team_creator

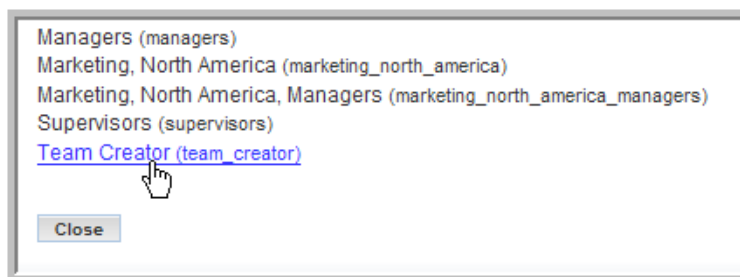
Group title
Team Creator

Group Description
Group for Creating Team Workspaces

Add

The new group appears on the page.

- 4 Under *Select a Group to Modify or Delete*, click the *Team Creator (Team Creator)* group.



Managers (managers)
Marketing, North America (marketing_north_america)
Marketing, North America, Managers (marketing_north_america_managers)
Supervisors (supervisors)
Team Creator (team_creator)

Close

- 5 Add users to the group and click *Apply*.

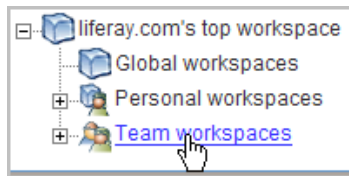


- 6 Click *Close*.

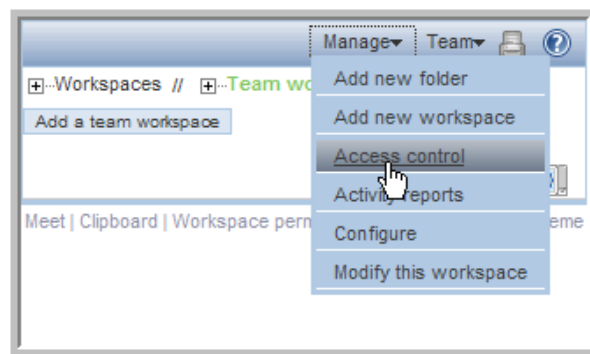
NOTE: See the Online Help or ICEcore User Guide for details on adding users to groups.

Grant the Team Creator Group Sole Team Workspace Creation Rights:

- 1 Click *Team Workspace*.



- 2 Select the *Manage > Access Control* menu item.



The *Configure Access Control* page appears. This page allows you to assign the Role Definitions to specific groups and users from the workspaces and folders. The current page controls the access rights for the Top Team Workspace area.

- Click *Add a Group* in the *Access Rights* table.

Add user names from clipboard

		Add a role ▾					
		Workspace and folder administrator	Participant	Workspace creator	Site administrator	Visitor	
	Owner of workspace or folder	<div><div>✓</div><div><input checked="" type="checkbox"/></div></div>	<div><div></div><div><input type="checkbox"/></div></div>	<div><div></div><div><input type="checkbox"/></div></div>	<div><div></div><div><input type="checkbox"/></div></div>	<div><div></div><div><input type="checkbox"/></div></div>	
	Team members	<div><div></div><div><input type="checkbox"/></div></div>	<div><div>✓</div><div><input type="checkbox"/></div></div>	<div><div></div><div><input type="checkbox"/></div></div>	<div><div></div><div><input type="checkbox"/></div></div>	<div><div></div><div><input type="checkbox"/></div></div>	
Add a group ▾	Group title	Group name	Workspace and folder administrator	Participant	Workspace creator	Site administrator	Visitor
	All users	allUsers	<div><div></div><div><input type="checkbox"/></div></div>	<div><div>✓</div><div><input checked="" type="checkbox"/></div></div>	<div><div></div><div><input checked="" type="checkbox"/></div></div>	<div><div></div><div><input type="checkbox"/></div></div>	<div><div>✓</div><div><input type="checkbox"/></div></div>
Add a user ▾	User title	User name	Workspace and folder administrator	Participant	Workspace creator	Site administrator	Visitor
	administrator	administrator	<div><div></div><div><input type="checkbox"/></div></div>	<div><div></div><div><input type="checkbox"/></div></div>	<div><div></div><div><input type="checkbox"/></div></div>	<div><div>✓</div><div><input type="checkbox"/></div></div>	<div><div></div><div><input type="checkbox"/></div></div>

Save changes

- Start typing *Team Creator* in the *Add a Group* dialog that appears and select *Team Creator* from the drop-down list that appears.

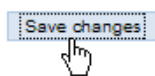


The *Team Creator* groups appears in the *Access Rights* table.

- Deselect the *Workspace Creator* option for the *All Users* group and select the same right for the *Team Creator* group.

Add a group ▾	Group title	Group name	Workspace and folder administrator	Participant	Site administrator	Visitor	Workspace creator
	All users	allUsers	<input type="checkbox"/>	✓ <input checked="" type="checkbox"/>	<input type="checkbox"/>	✓ <input type="checkbox"/>	<input type="checkbox"/>
	Team Creator	Team Creator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Add a user ▾	User title	User name	Workspace and folder administrator	Participant	Site administrator	Visitor	Workspace creator

- Click *Save Changes*.



- Click *Close*.

You have now created a specific group to control the creation of Team Workspaces. This is an example of how you use Role Definitions and access rights to configure your site. You want to map out the access issues for your site so you can edit the default Role Definitions and default access rights for your workspaces prior to granting all your users access to the site.

2.4 Create Your Initial Workspaces

There are three types of workspaces in ICEcore: Global Workspaces (company wide), Personal Workspaces (individual), and Team Workspaces (smaller teams). Once a new workspace is created, every sub-workspace and sub-folder inherits its access rights from the parent workspace by default. The workspace or folder administrator can de-select this option for any individual sub-workspace and sub-folder (on the *Access Control* page for the individual workspace or folder).

Planning the initial content for your site is an important step in regards to how your users learn and use the site. Without some content, users are lost. However, too much content (especially empty containers and a complex structure) might cause users to have trouble mapping to the real work they have to do. So, before letting end users into the installation, the Global Workspace should have enough content to engage them, but not so much as to overwhelm them. Also, we have seen time and again that a workspace hierarchy and set of dedicated applications are best developed in parallel with users using the product and providing feedback about what best serves their needs.

The best approach is to plan out a tight minimal set of content in the Global Workspace to provide the end users with a functional site that they can quickly navigate and start using.

Creating Teams

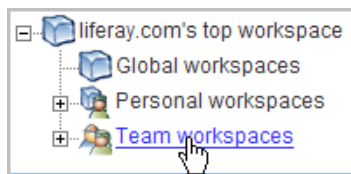
The team creation process can be simplified with some up front planning:

- ♦ Although, by default, anyone can create a team (unless you edit the default access rights, see [Section 2.3.3, “Edit Default Team Workspace Access Rights,” on page 25](#)) the process is a lot easier if a site administrator creates group names for teams before team creation occurs.
- ♦ Thinking through how you want to architect group names is a useful up front task.
- ♦ Access control is greatly simplified and enhanced by utilizing well-planned group names for your site.

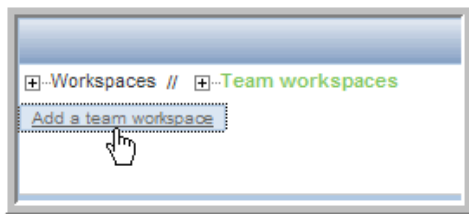
2.4.1 Create an Administration Team Workspace

NOTE: You should create an *Administration* group first to simplify the process for editing your administration access rights. You can then add this group to the administration team and set the access rights to this group. In the future, you can add or delete users from this administration group and not worry about editing the administration team’s access rights for individual members since they are assigned correctly to the group. Assume the `admin` group now exists.

- 1 From your Home Page, click *Team Workspace*.



- 2 Click *Add a Team Workspace*.



- 3 Type in a *Workspace Title* for the new workspace.

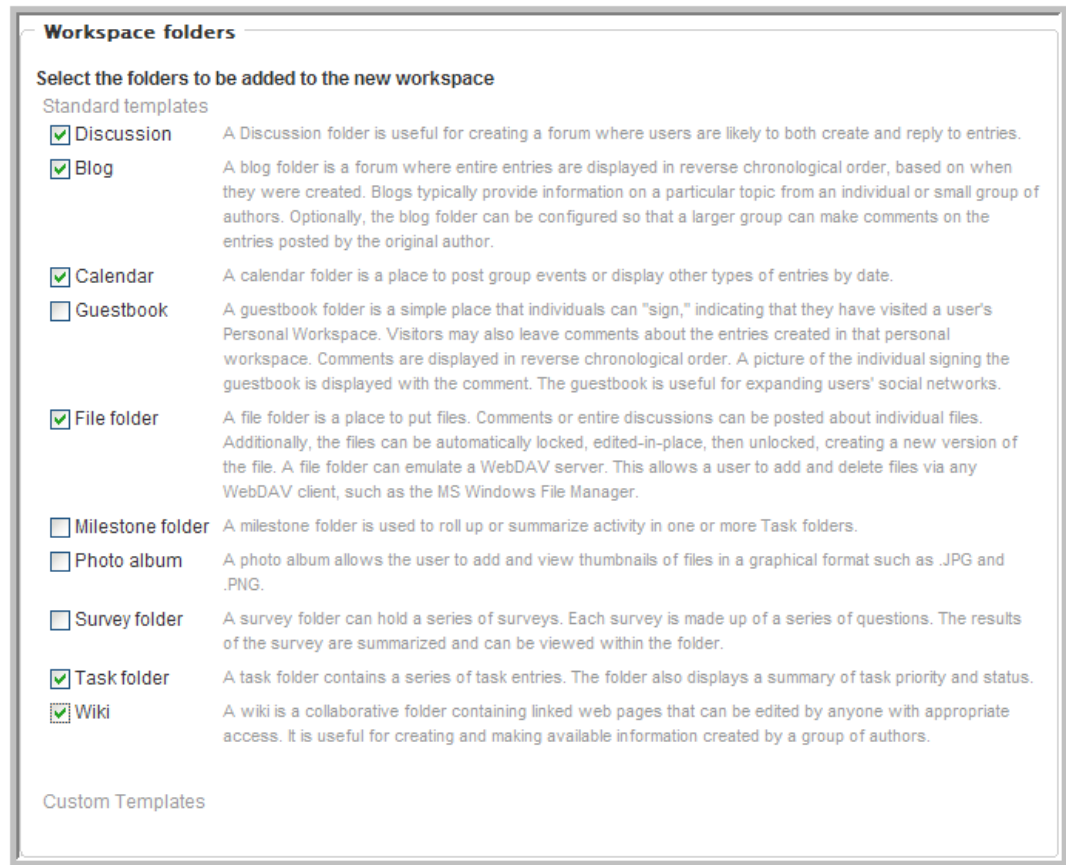
A screenshot of the 'Title' dialog box in the ICEcore interface. The dialog has a title bar that says 'Title'. Inside, there is a section titled 'Workspace title' with a text input field containing 'ICEcore Administration Team'. Below this, there is a section titled 'Team Workspace' with a paragraph of text explaining that a Team Workspace is a workspace where you pick Team members as you create the workspace. It also mentions that access is initially limited to Team members and that an Accessory with Team member names is automatically placed on the workspace page. The text continues: 'The Team workspace name will be displayed in each Team member's individual list of the teams on which he or she is a member. Select the types of folders you wish to have in the workspace.'

- 4 Select the team members (add the `admin` group, which we will also use for setting access rights so that you only have to control membership to this group to control administrative access rights and administration workspace membership).

A screenshot of the 'Team members' dialog box in the ICEcore interface. The dialog has a title bar that says 'Team members'. Inside, there are two sections: 'Users' and 'Groups'. The 'Users' section has a text input field and a 'Find people' button. The 'Groups' section has a text input field containing 'a' and a 'Find groups' button. Below these sections, there are two expandable sections: 'Clipboard user names' and 'Team members'. The 'Groups' section is currently expanded, showing a list of groups. The 'admin' group is selected and highlighted in blue. There is a small 'x' icon next to the 'admin' group name.

NOTE: See the Online Help or the ICEcore User Guide for details on selecting users.

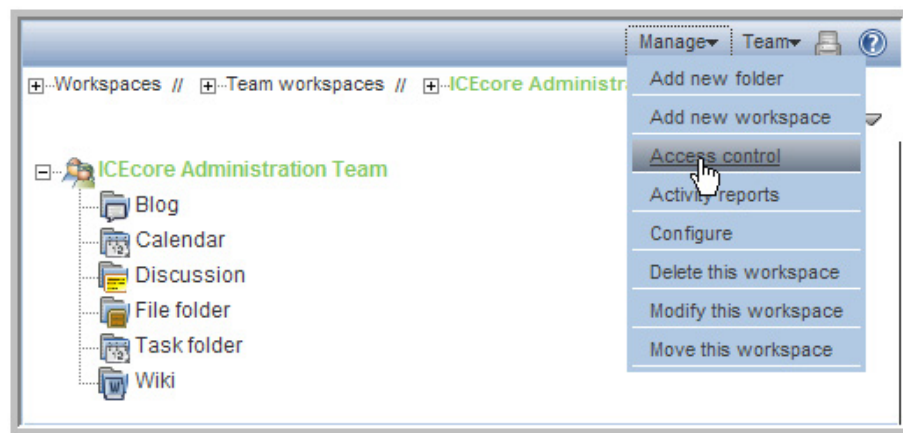
- 5 Select all the initial *Workspace Folders* you want to create in this workspace.




- 6 Click *OK*.

2.4.2 Set the Administration Team Access Rights

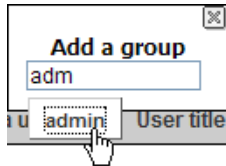
- 1 From the *ICEcore Administration Team* workspace, select the *Manage > Access Control* menu item.



- 2 In the Access Rights table, click *Add a Group*.

Add a group ▾	Group title	Group name	Workspace and folder administrator
	All users	allUsers	<input type="checkbox"/>

- 3 Start typing in *admin*, and select *admin* from the drop-down list that appears.



- 4 For the *admin* group, select the *Workspace and Folder Administrator*, *Participant*, and *Team Member* roles.

Add a group ▾	Group title	Group name	Workspace and folder administrator	Participant	Team member	Workspace creator
	admin	ICEcore Administration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- 5 Click *Save Changes*.

- 6 Click *Close*.

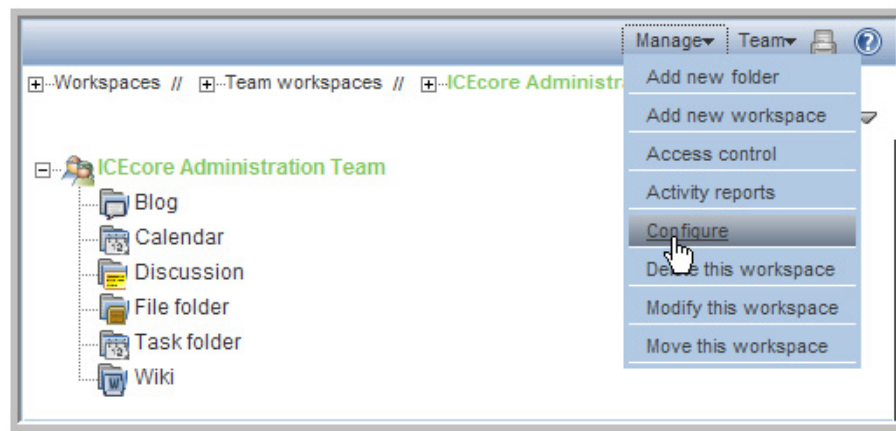
2.4.3 Using the Root Team Workspace

You can set any workspace to be a “root” team workspace, which allows anyone with the correct access rights to add workspaces under the “root” workspace. A “root” team workspace has the *Add a team workspace* button available to anyone with the appropriate access rights.

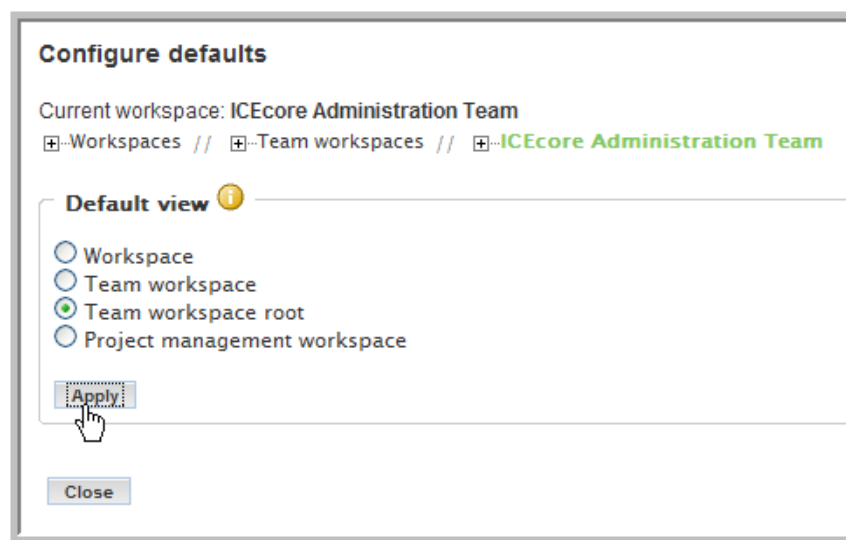
An administrator can set a workspace to be a “root” team workspace temporarily, while the sub-workspaces your company needs to set up are added, or permanently so that users can create additional workspaces under the “root” team workspace on a continuous bases. How you configure a specific area depends on what the workspaces are used for how much control you want the users to have over the layout of the site.

Configuring a Workspace to be a Root Team Workspace:

- 1 From the *ICEcore Administration Team* workspace, select the *Manage > Access Control* menu item.



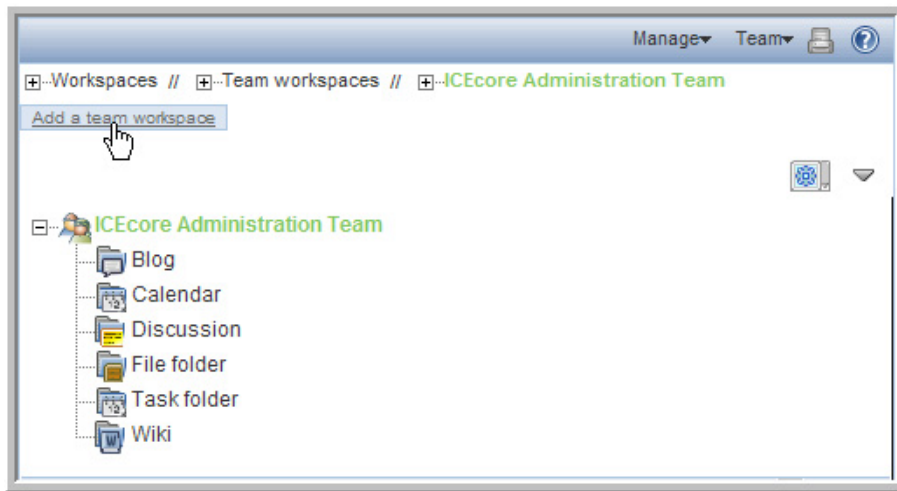
- 2 Select the *Team workspace root* option and click *Apply*.



NOTE: When choosing for a workspace, you can select the default “Workspace” definition. If you want to track project tasks and milestones based on task completion, you can select the “Project management workspace” definition. Finally, when choosing for a team workspace, select “Team workspace root” for workspaces that you want to display the *Add a team workspace* button. If your team workspace is organizational in nature and not intended to have team workspaces as its subworkspaces, select the “Team workspace” definition (which omits the button for team creation).

- 3 Click *Close*.

The Add a team workspace button is now available in the *ICEcore Administration Team* workspace.

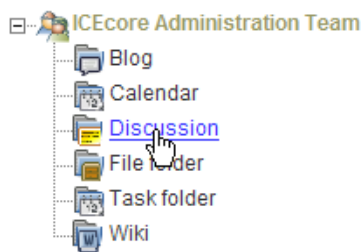


NOTE: Since only members (administrators) of the `admin` group have access to this workspace, you can make it a permanent Team workspace root, so any administrator can create sub-workspaces under this one.

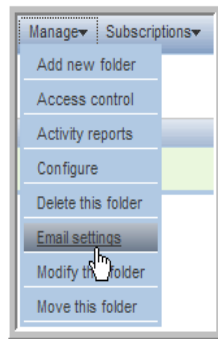
2.5 Set Up E-mail for a Workspace

To set up notifications in a workspace, enable them on one of the top level folders in your workspace first. Once this is done, e-mail notifications are enabled on all sub-folders. For postings, you need to configure the workspace with a valid e-mail alias. See your e-mail administrator to get a valid e-mail alias address for your workspace.

- 1 From your workspace, select the top level folder for which you want to enable e-mail.



- 2 Select the *Manage > Email Settings* menu item.



- 3 Type in the e-mail alias you received from your e-mail administrator in the *Receiving Email From* field.

This enables the folder to receive e-mail posts.

- 4 Configure the e-mail *Notification Schedule* and add the users, groups, and any individual e-mail addresses you want to receive e-mail notifications, and then click *Apply*.

A screenshot of the 'ICEcore Navigator' application window, specifically the 'Email Settings' configuration page for a folder named 'Discussion'. The page has a breadcrumb trail: 'liferay.com's top workspace // Team workspaces // ICEcore Administration Team // Discussion'. The 'Receiving email from' field is set to 'emailalias@sitescape.com'. Below this, there are two main sections: 'Notification schedule' and 'Users/groups receiving notifications'. The 'Notification schedule' section includes a checkbox for 'Enable outgoing email', radio buttons for 'Every day' (selected), 'Weekly (on the days selected below)', and 'Repeat every' (with options for hours, minutes, and seconds). The 'Users/groups receiving notifications' section includes a text field for 'Add email addresses (separate multiple addresses with commas)', a checkbox for 'Team members', and lists of 'Users' (Richard Goodman, Jane Doe, John Smith) and 'Groups' (admin). At the bottom, there are 'Apply' and 'Close' buttons.

NOTE: See the Online Help and the ICEcore User Guide for more details.

2.6 Invite Users to the Site

Most end users require some minimal guidance before entering the site. They need to be invited (there is no automatic way to do this, unless you invite them during team creation (ICEcore is designed to be team-centric). The invitation should contain the URL to the site. Also, you may want to include the ICEcore Quik Start Guide and ICEcore User Guide in the e-mail invitation.

Your organization may want to run some training sessions before having people enter the site. As another option, the administrators may want to customize the getting-started information available on the static web page off the *Welcome* portlet.

The sample-installer.xml File

A

The `sample-installer.xml` file is shown below:

```
<!--                                     -->
<!--             ICEcore Installation Configuration File             -->
<!--                                     -->

<ICEcoreConfig version="3">

    <!--                                     -->
    <!--             Network Settings                                     -->
    <!--                                     -->
    <!-- The host name or IP address of the server must be             -->
    <!-- specified here. The default, localhost, is only             -->
    <!-- appropriate for test configurations with no remote         -->
    <!-- access.                                                     -->
    <!--                                     -->
    <!-- If you have a dedicated server, setting the port           -->
    <!-- to "80" and/or securePort to "443" will avoid having       -->
    <!-- to specify a port number in browser URLs.                 -->
    <!--                                     -->

    <Network>
        <Host name="localhost" port="8080" securePort="8443" />
        <WebServices endpoint="http://localhost:8080" />
    </Network>

    <!--                                     -->
    <!--             Memory (RAM) Settings                               -->
    <!--                                     -->
    <!-- ICEcore requires a minimum of 512m to operate.             -->
    <!-- 1g is recommended for basic production.                   -->
    <!-- More is better.                                             -->
    <!--                                     -->

    <Memory>
        <JavaVirtualMachine mx="1g" />
    </Memory>

    <!--                                     -->
    <!--             File System Configuration                           -->
    <!--                                     -->
    <!-- Modify the configName to your desired configuration         -->
    <!-- in the FileSystem element below. You must set the           -->
    <!-- configName to the exact configuration in the file:         -->
    <!--     basic          - Simple one-directory setup             -->
    <!--     advanced       - Advanced multiple-directory setup      -->
    <!--                                     -->
    <!-- NOTE: Only basic is supported for beta test.               -->
    <!--                                     -->
```

```

<FileSystem configName="basic">

    <!-- The basic configuration only requires that you -->
    <!-- specify a root directory for the data and -->
    <!-- we'll take care of the rest. -->

    <Config id="basic">
        <RootDirectory path="/home/icecoredata" />
    </Config>

    <!-- The advanced configuration requires that you -->
    <!-- specify individual directory locations. -->

    <Config id="advanced">
        <RootDirectory path="/home/icecoredata" />
        <FileRepositories />
        <ArchiveStore />
        <CacheStore />
        <LuceneIndex />
        <WebServiceTemp />
        <Other />
    </Config>

</FileSystem>

<!-- -->
<!-- Database Configuration -->
<!-- -->
<!-- Modify the configName to your desired configuration -->
<!-- in the Datatabase element below. You must set the -->
<!-- configName to the exact configuration in the file: -->
<!-- MySQL_Default - For MySQL -->
<!-- SQLServer_Default - For Microsoft SQL Server -->
<!-- -->
<!-- Change the Resources for the configuration you chose -->
<!-- (the defaults are pretty good for a simple configuration -->
<!-- with the database running locally, but you'll probably -->
<!-- have different passwords!). -->

<Database configName="MySQL_Default">

    <!-- -->
    <!-- MySQL_Default -->
    <!-- -->

    <Config id="MySQL_Default" type="MySql">
        <Resource for="liferay"
            driverClassName="com.mysql.jdbc.Driver"
            url="jdbc:mysql://localhost:3306/
lportal?useUnicode=true&characterEncoding=UTF-8"
            username="root"
            password="root"
        />

```

```

        <Resource for="jboss"
            driverClassName="com.mysql.jdbc.Driver"
            url="jdbc:mysql://localhost:3306/
jbossportal?useUnicode=true&characterEncoding=UTF-8"
            username="root"
            password="root"
        />
        <Resource for="icecore"
            driverClassName="com.mysql.jdbc.Driver"
            url="jdbc:mysql://localhost:3306/
sitescape?useUnicode=true&characterEncoding=UTF-8"
            username="root"
            password="root"
        />
    </Config>

    <!-- -->
    <!--          SQLServer_Default -->
    <!-- -->

    <Config id="SQLServer_Default" type="SQLServer">
        <Resource for="liferay"
            driverClassName="net.sourceforge.jtds.jdbc.Driver"
            url="jdbc:jtds:sqlserver://localhost/
lportal;SelectMethod=cursor"
            username="sa"
            password="sa"
        />
        <Resource for="jboss"
            driverClassName="net.sourceforge.jtds.jdbc.Driver"
            url="jdbc:jtds:sqlserver://localhost/
jbossportal;SelectMethod=cursor"
            username="sa"
            password="sa"
        />
        <Resource for="icecore"
            driverClassName="net.sourceforge.jtds.jdbc.Driver"
            url="jdbc:jtds:sqlserver://localhost/
sitescape;SelectMethod=cursor"
            username="sa"
            password="sa"
        />
    </Config>

    <!-- -->

    <!--          Oracle_Default -->
    <!-- -->

    <Config id="Oracle_Default" type="Oracle">
        <Resource for="liferay"
            driverClassName="oracle.jdbc.driver.OracleDriver"
            url="jdbc:oracle:thin:@//localhost:1521/orcl"
            username="lportal"
            password="pw"
        />

```

```

        <Resource for="icecore"
            driverClassName="oracle.jdbc.driver.OracleDriver"
            url="jdbc:oracle:thin:@//localhost:1521/orcl"
            username="sitescape"
            password="pw"
        />
    </Config>

</Database>

<!--                                     -->
<!--             Lucene Configuration Settings             -->
<!--                                     -->
<!--                                     -->
<!--     The Lucene index can be run "local" (within       -->
<!--     the context of this application) or "server"      -->
<!--     (run as it's own server).  Additionally it       -->
<!--     can be run as it's own server on this system     -->
<!--     or on a remote system.                           -->
<!--                                     -->
<!--     Note: The rmi port need only be set if running   -->
<!--     in server mode. (And then, only if the default   -->
<!--     port cannot be used.                             -->

<Lucene luceneLocation="local">
    <Resource
        lucene.index.hostname="localhost"
        lucene.flush.threshold="100"
        lucene.max.booleans="10000"
        lucene.max.merge.docs="1000"
        lucene.merge.factor="10"
        lucene.rmi.port="1099"
    />
</Lucene>

<!--                                     -->
<!--             Email Configuration Settings             -->
<!--                                     -->
<!--     Edit the Outbound and Inbound settings as required. -->
<!--                                     -->
<!--                                     -->
<!--     For inbound mail (postings) you need to specify either -->
<!--     pop3 or imap, and fill out the settings for which one -->
<!--     you choose.  These settings are not used until you -->
<!--     enable incoming email within the product.  If you do -->
<!--     not plan on using inbound email, you can ignore these -->
<!--     settings.                                         -->
<!--                                     -->

```

```

<EmailSettings>

  <Outbound>
    <Resource
      mail.smtp.host="mailhost.yourcompany.com"
      mail.smtp.user="icecore@yourcompany.com"
      mail.smtp.password=""
      mail.smtp.auth="false"
      mail.smtp.port="25"
    />
  </Outbound>

  <Inbound>
    <Resource
      mail.store.protocol="pop3"

      mail.pop3.host="localhost"
      mail.pop3.auth="true"
      mail.pop3.user="popEmailUserId"
      mail.pop3.password="passwordHere"
      mail.pop3.port="110"

      mail.pop3s.host="localhost"
      mail.pop3s.auth="true"
      mail.pop3s.user="popEmailUserId"
      mail.pop3s.password="passwordHere"
      mail.pop3s.port="995"

      mail.imap.host="localhost"
      mail.imap.auth="true"
      mail.imap.user="imapEmailUserId"
      mail.imap.password="passwordHere"
      mail.imap.port="143"

      mail.imaps.host="localhost"
      mail.imaps.auth="true"
      mail.imaps.user="imapEmailUserId"
      mail.imaps.password="passwordHere"
      mail.imaps.port="993"

      mail.transport.protocol="smtp"

      mail.smtp.user="icecore@sitescape.com"
      mail.smtp.host="localhost"
      mail.smtp.port="25"

      mail.smtps.user="icecore@sitescape.com"
      mail.smtps.host="localhost"
      mail.smtps.port="465"
    />
  </Inbound>
</EmailSettings>

```

```

<!--                                     -->
<!--             Presence Configuration Settings             -->
<!--                                     -->
<!--                                     -->
<!-- Use these settings to link your Teaming and Zon         -->
<!-- servers together. Leave the presence.service.enable    -->
<!-- setting at false if you do not use the conferencing    -->
<!-- realtime (Zon) software.                                -->
<!--                                     -->
<!-- The values to fill in this section are obtained when   -->
<!-- Zon has been installed and configured. If you don't     -->
<!-- know them now, you can update this configuration later   -->
<!-- and apply the settings.                                  -->
<!--                                     -->
<!-- The jabber.server is IP or host of the Zon XML Router   -->
<!--                                     -->
<!-- The default Zon admin.id is admin, and default password -->
<!-- is also admin. Change the admin.passwd to match the     -->
<!-- Zon administrator password you have set.                -->
<!--                                     -->
<!-- The jabber.domain is the host name of the XML router     -->
<!--                                     -->
<!-- The community.id is the name of the community you       -->
<!-- created with the Zon console.                             -->
<!--                                     -->
<!-- Change the hostname part of the zon.url to the ip or     -->
<!-- host of the Zon Web Portal (don't change the port or    -->
<!-- the rest the URL).                                       -->
<!--                                     -->

<Presence>
  <Resource
    presence.service.enable="false"
    presence.service.jabber.server="zon-server.yourcompany.com"
    presence.broker.admin.id="admin"
    presence.broker.admin.passwd="admin"
    presence.broker.jabber.domain="newzon"
    presence.broker.default.community.id="yourcommunity"
    presence.broker.zon.url="http://zon-server.yourcompany.com:8000/
imidio_api/"
  />
</Presence>

```



```

<!--                                     -->
<!--           Mirrored Folders Configuration Settings           -->
<!--                                     -->
<!-- Mirrored folders are local/shared directories that         -->
<!-- are exposed within ICEcore. The directories must be        -->
<!-- configured here first before they are available to         -->
<!-- the folder configuration interface within ICEcore (see     -->
<!-- Modify a Folder).                                          -->
<!--                                     -->
<!-- For security reasons the set of people who can map         -->
<!-- ICEcore folders to these shared directories is limited     -->
<!-- Specify the specific ICEcore users or groups that are      -->
<!-- allowed to map each folder.                                -->
<!--                                     -->
<!-- Each mirrored folder configuration must have a unique      -->
<!-- id (use a-z,0-9), and a title to be used in the user      -->
<!-- interface. Set enabled to true to make the mirrored       -->
<!-- folder configuration active. The examples below show       -->
<!-- how to set up both file system and Sharepoint mirrors.    -->
<!--                                     -->
<!-- By default the mirrored folder is set to readonly.        -->
<!-- This means that ICEcore users can access the files, but    -->
<!-- cannot modify them. Set the readonly attribute to false   -->
<!-- to allow read/write access to the folder (based on both   -->
<!-- this server's access to the directory and the ICEcore     -->
<!-- user's access).                                           -->
<!--                                     -->

<MirroredFolders>

    <MirroredFolder enabled="false" type="file"
        id="fs1" title="Shared Files 1"
        rootPath="k:/somedir" readonly="true">
        <AllowedUsers idList="administrator,u1,u2,u3" />
        <AllowedGroups idList="g1,g2,g3" />
    </MirroredFolder>

    <MirroredFolder enabled="false" type="file"
        id="fs2" title="Shared Files 2"
        rootPath="/sharedFiles/someDirectory"
readonly="true">
        <AllowedUsers idList="administrator,u1,u2,u3" />
        <AllowedGroups idList="g1,g2,g3" />
    </MirroredFolder>

    <MirroredFolder enabled="false" type="sharepoint"
        id="sp1" title="Sharepoint 1"
        rootPath="/Shared Documents/cool-dir"
readonly="true">
        <WebDAVContext hostUrl="http://hostname" user="accessId"
password="pass" />
        <AllowedUsers idList="administrator,u1,u2,u3" />
        <AllowedGroups idList="g1,g2,g3" />
    </MirroredFolder>

</MirroredFolders>

```

```

<!--                                     -->
<!--             iChain Single Sign-On Support             -->
<!--                                     -->
<!-- To use iChain SSO, set the enable attribute to true. -->
<!-- Set the Logoff URL to the address used to trigger an -->
<!-- iChain logoff. Also set the ip address of the iChain -->
<!-- proxy server. Only transactions from that address and -->
<!-- localhost will be allowed.                             -->
<!--                                     -->

<SSO>
    <iChain type="1" enable="false">
        <Logoff url="http://something" />
        <Proxy ipaddr="ipaddr" />
    </iChain>
</SSO>

<!--                                     -->
<!--             Custom Configuration Settings             -->
<!--                                     -->
<!-- Custom properties set here will be placed in the     -->
<!-- ssf-ext.properties file.                             -->
<!--                                     -->

<CustomProperties>
    <Resource
    />
</CustomProperties>

</ICEcoreConfig>

```

ICEcore Glossary

Items that include an “(a)” are more relevant for ICEcore site administrators.

access control

The tool that determines who has the right to perform which tasks in which places. See also [role-based access control](#).

accessibility mode

An optimized user interface that facilitates use by assistive devices, such as readers.

accessory

A section located at the top of a workspace or folder page that provides a summary view, most likely of the information contained within the item. For example, an accessory can show all of the entries within a folder authored by someone designated as a subject-matter expert.

advanced search

Extra search tools that allow you to specify more specific criteria (such as the author of an item or restricting the search to a portion of the workspace tree).

alias

See [e-mail alias](#).

attachment

A file attached to an [entry](#).

author

The person who created an entry.

blog

A folder contain a chronological listing of journal entries.

blog archive

A feature of blog folders that allow you to see entries authored in a specific month.

buddy list

A list of people whose presence you want to check and whom you contact frequently.

calendar

A folder containing entries for scheduled appointments.

clipboard

A tool that gathers people's names. Later, when using a tool that requires names, you can take them from your clipboard.

comment

A reply to an [entry](#).

community tag

A keyword **tag** applied to an item by the owner of a workspace or folder. Other users of the workspace or folder can perform searches based on community tags.

configuration (a)

A set of tools that alter the way item content is presented. There are many types of configuration, ranging from setting allowable **views** for an item, selecting a color scheme, creating custom entries, and creating workflow processes.

default view

The **configuration** of the information you see when you first view a workspace or folder. Some items may be configured to allow alternate **views**, which you can select.

definition (a)

A set of elements for both the **form** and **view** of a workspace, folder, or entry.

designer (a)

A tool used to create **definitions** or **workflow processes**.

discussion

A folder whose entries are discussion topics and comments about those topics.

e-mail alias

An alternative e-mail address for an e-mail account. To enable e-mail posting into a folder, you must provide an e-mail alias for the one account used to post into all folders in your ICEcore installation. Consult with your ICEcore site administrator for further assistance; site administrators, consult with the IT person responsible for creating e-mail accounts to create new aliases.

e-mail notification

An e-mail message that ICEcore sends indicating new or changed entries in a folder (and subfolders).

entry

An item in a folder.

favorites panel

A tool used to save links to workspaces and folders most important to you, providing a method of accessing these places quickly.

file folder

A folder whose entries are configured to highlight an attached file and to facilitate file management.

filter

A setting that limits a **folder** listing to only the entries that match the filter's search criteria. For example, you can create a filter that shows only the contents of a folder authored by you or that were created past a certain date.

folder

A container for **entries** and other folders. Each folder has a type, such as **blog**, **wiki**, or **calendar**, that determines its appearance and features.

form (a)

An HTML form used to create a workspace, folder, or entry.

global workspace

workspace that, by default, allows everyone to participate.

guestbook

A **folder** or **accessory** whose entries indicate who has visited the place.

help mode

A dimmed page and information icons (“i”). When you click on an information icon, ICEcore presents a panel of information about that section of the page.

inherit (a)

A process by which a workspace or folder automatically uses **configuration** settings from its **parent**.

instant message (IM)

A quick communication between teammates using the Zon messaging software.

Liferay (a)

The **portal** software within which ICEcore runs by default.

meeting

An online communication by teammates using the Zon messaging software. Zon provides tools that assist with online meetings, such as people designated as running the meeting, a way for participants to “raise their hands,” and a whiteboard.

milestone

A **folder** that, by default, summarizes the status of tasks in a task folder as they relate to meeting **project** milestones.

navigator

A set of tools that you can use to go anywhere within ICEcore you want to go. The tools include “**My workspace**,” “**Favorites**,” viewing your **teams**, search, **Help**, and a **workspace tree**.

owner

The person who created the workspace, folder, or entry.

parallel workflow process (a)

A set of **state** transitions that happen at the same time as other state transitions. A state in the main thread initiates the parallel process, and a state later in the main thread can wait for the completion of the parallel thread.

parent (a)

A workspace or folder that contains another workspace or folder. The item contained within the parent is sometimes called its child.

participant

An **access role** that, generally, by default, allows people to author entries in a folder.

permalink

A web address (URL) for an ICEcore workspace, folder, or entry that you can copy, paste, and send to a teammate so that they may access a page directly by specifying the address to their web browser.

personal tag

A keyword **tag** that you apply to an item, and that only you can see and use.

personal workspace

A workspace that serves as a person's homepage in ICEcore, including contact information, pictures, a personal **blog**, and more.

photo gallery

A **folder** whose entries are pictures.

portal page

A web page that can run various application in sections of its page. For example, Google and Yahoo use portal pages. Sections within a portal page may display the local time, the local weather, your favorite stock quotes, and more.

portlet

A section on a portal page. ICEcore runs in portlets.

presence

The state of being connected to a communications service and available for communication. Presence information is indicated by status icons (Online, Away,

project-management workspace

A **workspace** configured to facilitate the tracking of tasks and completion of complex project work.

role-based access control

A mechanism that controls access by assigning people and groups to roles, and the roles determine the rights assigned to those people. See the online Help for a list of ICEcore default role definitions.

site administrator

The person or people who have the right to perform any task anywhere in the ICEcore installation.

state

See **workflow state**.

subscription

A way to track new or changed items in ICEcore.

tag

A keyword that anyone can apply to a workspace, folder, or entry to make it easier to find. See also **personal tag** and **community tag**.

task

A **folder** that, by default, contains entries that track progress with completing an assignment.

team

An **access role** that, by default, allows people to **participate** in a workspace or folder, to do some minor administrative tasks, and to communicate easily with each other.

team workspace

A **workspace** that restricts participation to only teammates.

template (a)

A set of default configuration settings used to create a new workspace or folder. A template includes at least one **definition**, **access control**, a possible hierarchy of defined items, and possibly more.

view

A presentation of an item's content. For example, you can view a discussion folder in either a list or table format. By default, most folders use one view (calendar folders use a calendar view, blog folders use a blog view, and so on.)

visitor

An **access role** that, by default, allows people to read entries and make **comments** on them (but not create new entries).

WebDAV

The Web Distributed Authoring and Versioning protocol. If your system provides a tool that uses this protocol, it allows you to manage ICEcore file-folder entries using the WebDAV window.

wiki

A **folder** whose entries are authored by all **participants**.

workflow

An online representation of a business process (for example, document review, paid time-off requests, document sign off, and so on). An **entry** can have an associated workflow process, which places the entry into various workflow states.

workflow state

A status label for an **entry** in a workflow process. A state determines who has the right to work with an entry (including who may see it), who needs to be notified, who needs to perform the next task, and which subsequent states are possible.

workspace

A container for folders and other workspaces.

workspace tree

A tool that allows you to navigate the hierarchy of workspaces, subworkspaces, **folders**, and subfolders within ICEcore.