Novell
Teaming + Conferencing

1.1

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INSTALLATION AND
CONFIGURATION GUIDE

Novell®

Contents

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 ($^®$, ^{TM}, 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 *Add toolbar* item.	References to toolbar items, links, menu items, and buttons are presented in *italic* font.
Click the *Getting Started* link.	
Click the *Add Document* menu item.	
Click *Close*.	
Type `status`, then press Enter.	Text that you must type and file names are presented in `Courier` font.
Open the `ManagerGuide.pdf` 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, visit the Novell Web site (http://www.novell.com/documentation/).

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 Installation and Configuration 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:

1.1 Prerequisites

You need a few things before you install ICEcore:

1. Computer:
   - 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 23 for details.
2. JDK 1.5.x installed (do not use 1.6).
3. A Database Server:
   - MySQL 5.0.37 for Linux or MySQL 5.0.36 Windows
   - SQL Server for Windows (2000 or 2005)

   See "Database Planning" on page 8 for details.

How much disk do you need?

This depends on how much data you plan to put into the system.

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 and Set Path

2 Install and Configure the Database Server

3 Download the appropriate ICEcore kit

4 Edit the installer.xml file (see Editing the Installer (.xml) File)

5 Run the installer (on Linux, do a `chmod +x installer.linux` to make the installer executable)

6 Start and Stop ICEcore

7 Login

8 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 is MySQL. It also supports SQL Server on 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:

- numberAttachments x averageAttachmentSize = totalAttachmentSpace
- totalAttachmentSpace * .04 = sqlDataSpace
- sqlDataSpace x 5 = sqlStorageSapce

MySQL

- MySQL 5 is required
- 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*"

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 8) 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 zone, 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.

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.

6 Modify the Email section with your SMTP and POP/IMAP servers.

7 This initial beta release does not come with the Novell Conferencing software, so use the default Presence configuration.

An example `installer.xml` file is shown below:

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

<ICEcoreConfig>

    <!--                                                         -->
    <!--                   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 broswer 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 alpha 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>
```

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

        <Config id="advanced">
          <RootDirectory path="/home/icecoredata"  />
          <FileRepositories />
          <ArchiveStore    />
          <CacheStore      />
          <LuceneIndex     />
          <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&amp;characterEncoding=UTF-8"
                username="root"
                password="root"
            />
            <Resource for="icecore"
                driverClassName="com.mysql.jdbc.Driver"
                url="jdbc:mysql://localhost:3306/
sitescape?useUnicode=true&amp;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="icecore"
        driverClassName="net.sourceforge.jtds.jdbc.Driver"
        url="jdbc:jtds:sqlserver://localhost/
sitescape;SelectMethod=cursor"
        username="sa"
        password="sa"
     />
</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.                          -->
<!--                                                   -->

<Lucene luceneLocation="local">
    <Resource
        lucene.index.hostname="localhost"
        lucene.flush.threshhold="100"
        lucene.max.booleans="10000"
        lucene.max.merge.docs="1000"
        lucene.merge.factor="10"
    />
</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.imap.host="localhost"
            mail.imap.auth="true"
            mail.imap.user="imapEmailUserId"
            mail.imap.password="passwordHere"
            mail.imap.port="143"

            mail.smtp.user="icecore@sitescape.com"
            mail.transport.protocol="smtp"
            mail.smtp.host="localhost"
            mail.smtp.port="25"
        />
    </Inbound>
</EmailSettings>

<!--                                                     -->
<!--             Presence Configuration Settings         -->
<!--                                                     -->

<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          -->
<!--                                                           -->

<MirroredFolders>

    <MirroredFolder enabled="false" type="file"
                    id="fs1" title="Shared Files 1"
                    rootPath="k:/somedir">
        <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">
        <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">
        <WebDAVContext hostUrl="http://hostname" user="accessId"
password="pass" />
        <AllowedUsers idList="administrator,u1,u2,u3" />
        <AllowedGroups idList="g1,g2,g3" />
    </MirroredFolder>

</MirroredFolders>

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

<CustomProperties>
    <Resource
    />
</CustomProperties>
</ICEcoreConfig>
```

1.6 Run the Installer: Sample Installer Sequence

```
LED-SLES10:~ # ./installer.linux

Novell Teaming and Conferencing Enterprise Installer 0.1.2

Checking license key...

License Summary

  Product:   Novell Teaming and Conferencing Enterprise
  Version:   1.0
  UID:       1
  Effective: 2007-04-01
  Expires:   2007-04-01
  Users:     1000


Installing this software requires agreement to the
terms and conditions set forth in the:
  Novell EULA and Export Compliance Notice

You can review this agreement again at the download site or
type "REVIEW" below.

Note: You must answer "YES" to install the software.

Have you read and agree with the license? : yes

Starting installation...

JAVA_HOME is set to: /usr/java/jdk1.5.0_11
   Loading installer.xml...
Creating installer working directory: /root/temp-installer

Enter the type of installation:

  1. Novell Teaming and Conferencing Enterprise with Liferay/Tomcat - FULL
INSTALL
  2. Novell Teaming and Conferencing Enterprise with Liferay/Tomcat - UPDATE
  3. Novell Teaming and Conferencing Enterprise Lucene Server    (Not
Available)
  4. Apply settings only    (Use with care)

Installation type [1]:

We have to install the software into a dedicated directory
Install directory: [/usr/local/icecore-team-0.1.0]:
   Directory /usr/local/icecore-team-0.1.0 does not exist.  Creating...
   Checking database settings...
   Database type is: MySql
   Checking MySql version and access for LifeRay
     mysql --user=root --password=root --port=3306
--------------
mysql  Ver 14.12 Distrib 5.0.37, for pc-linux-gnu (i686) using readline 5.0

Connection id:          1
Current database:
Current user:           root@localhost
```

```
SSL:                    Not in use
Current pager:          stdout
Using outfile:          ''
Using delimiter:        ;
Server version:         5.0.37-community MySQL Community Edition (GPL)
Protocol version:       10
Connection:             Localhost via UNIX socket
Server characterset:    latin1
Db      characterset:   latin1
Client characterset:    latin1
Conn.  characterset:    latin1
UNIX socket:            /var/lib/mysql/mysql.sock
Uptime:                 12 min 16 sec

Threads: 1  Questions: 4  Slow queries: 0  Opens: 12  Flush tables: 1  Open
tables: 6  Queries per second avg: 0.005
--------------

   Checking MySql version and access for Novell Teaming and Conferencing
Enterprise
      mysql --user=root --password=root --port=3306
--------------
mysql  Ver 14.12 Distrib 5.0.37, for pc-linux-gnu (i686) using readline 5.0

Connection id:          2
Current database:
Current user:           root@localhost
SSL:                    Not in use
Current pager:          stdout
Using outfile:          ''
Using delimiter:        ;
Server version:         5.0.37-community MySQL Community Edition (GPL)
Protocol version:       10
Connection:             Localhost via UNIX socket
Server characterset:    latin1
Db      characterset:   latin1
Client characterset:    latin1
Conn.  characterset:    latin1
UNIX socket:            /var/lib/mysql/mysql.sock
Uptime:                 12 min 16 sec

Threads: 1  Questions: 8  Slow queries: 0  Opens: 12  Flush tables: 1  Open
tables: 6  Queries per second avg: 0.011
--------------

  NOTE: Minimum database requirement is 5.0.37
  We see Server version: 5.0.37

Please review above notes.

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


Copying deployment kits to work directory...
   (this takes about a minute)
   ... done

Ready to apply kits to the installation directory
Enter Y to install, enter N to cancel installation [Y]:
```

```
Installing Novell Teaming and Conferencing Enterprise (LifeRay/Tomcat)
    ... this will take a minute or so ...
Installing Novell Teaming and Conferencing Enterprise converters ...
    ... done

Applying installation settings...

    Loading current configuration files...
    Database settings...
       using database configuration: MySQL_Default
       Database type is: MySql
    File system settings...
       using configuration: basic
    File system root path: /home/aspendata
    Email settings...
    Network settings...
    Lucene...
    Custom settings...
    Startup files...
    Writing all settings...
    Settings applied.

New installation selected.  Getting database creation scripts....

    Creating Liferay database for MySql ...
mysql --user=root --password=root --port=3306 < /root/temp-installer/liferay/
create/create-mysql.sql
    Creating Novell Teaming and Conferencing Enterprise database for MySql ...
mysql --user=root --password=root --port=3306  < /root/temp-installer/aspen/
create/create-database-mysql.sql

    Databases created.

    Customizing Liferay database for MySql ...
mysql --user=root --password=root --port=3306 --database=lportal < /root/temp-
installer/changeAdministrator-lportal.sql
    Customizing Novell Teaming and Conferencing Enterprise database for MySql
...
mysql --user=root --password=root --port=3306 --database=sitescape  < /root/
temp-installer/changeAdministrator-sitescape.sql

    Databases have been customized for this product installation.


Installation completed.

You can start Novell Teaming and Conferencing Enterprise/Liferay by running
the startup script
in: /usr/local/icecore-team-0.1.0/liferay-portal-tomcat-jdk5-4.1.2/bin
```

1.7 Starting and Stopping ICEcore

Starting ICEcore

On Windows:

```
C:\yourinstall\liferay-portal-tomcat-jdk5-4.1.2\bin\startup.bat
```

On Linux:

```
/yourinstall/liferay-portal-tomcat-jdk5-4.1.2/bin/startup.sh
```

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-jdk5-4.1.2\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 `cd /etc/init.d`

2 `ln -s  /yourinstall/liferay-portal-tomcat-jdk5-4.1.2/bin/ icecore`

3 `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-jdk5-4.1.2/logs/
catalina.out
```

Stopping ICEcore

On Windows:
```
C:\yourinstall\liferay-portal-tomcat-jdk5-4.1.2\bin\shutdown.bat
```

On Linux:
```
/yourinstall/liferay-portal-tomcat-jdk5-4.1.2/bin/shutdown.sh
```

1.8 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: `administrator`

3. Enter the following Password: `test`

   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 *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.

1.9 Adding Users

As this is a teaming product, you probably want to add some people besides yourself.

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.

Basic User Management

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

Using the Liferay "*Enterprise Admin*" portlet, click on the *Users* tab. (Note: 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 for more advanced management, but the basic steps needed are:

1. Click *Add*.

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

3. Liferay shows an extended form.

4. In the second section set the timezone and portal window size. While ICEcore can operate in an 800x600 pixel window, we recommend the 1024x768 or Full Screen option.

5. Click *Save*.

6. Click on the *Password* tab, type in the password, and then click *Save*.

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.

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 for more detailed information, but the basic steps needed are:

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

   > **NOTE:** The Liferay "*Enterprise Admin*" and "*Admin*" portlets both have "*Users*" tabs, but they do very different things. Make sure you are using the correct portlet.

2. Click on the *Authentication* tab.

3. Click on the *LDAP* tab.

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

5. Click *Save*.

6. Using the ICEcore *Administration* portlet, click on "*Configure LDAP*."

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

8. Click *Apply*.

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.

Connection settings:

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

Users settings:

- Ldap attribute that identifies the user
  - e.g, `uid`
- Attribute mapping - This is how you map the LDAP attribute names of the user record to the ICEcore internal identifiers. Syntax is: `aspenId=ldapAttName`
  - e.g, `lastName=sn`
  - e.g., `name=uid`
  - AspenIds: `lastName, firstName, name, description, email, Address, phone`
- Select "*Synchronize user profiles*" (recommended)
- Select "*Register LDAP user profiles automaticially*" (recommended)
- Select others as appropriate

Groups settings:

- Register LDAP group profiles automatically (recommended)
- Synchronize group membership (recommended)

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:

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-jdk5-4.1.2/conf/.keystore -file
cert.ldap
```
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).

1.10 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 the *Apply* button to save the schedule.

1.11 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 Tomcat's 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`.

Lucene Cache

Lucene has a number of tuning parameters. At this time, we have not done any work with them.

1.12 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
sxw	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

<div style="text-align: right; font-size: 3em;">2</div>

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.

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

2.

   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.

3.

   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.

4.

   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.

5.

   Once the site is configured for initial use, you need to invite your users to the site. The users should already be added, see .

2.1 Log in as Site Manager
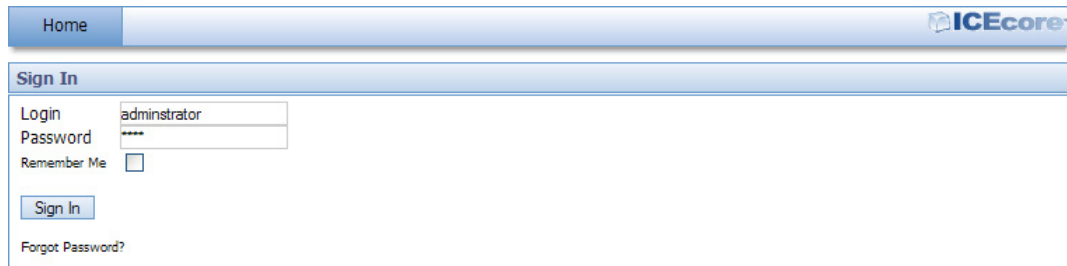
You need to log in using an administrator account in order to set up ICEcore for your users.

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/ICEcore-site>`

The *Sign In* page appears.

2 In the *Login* field, type:

`administrator`

3 In the *Password* field, type:

`test`

4 Click the Login button.

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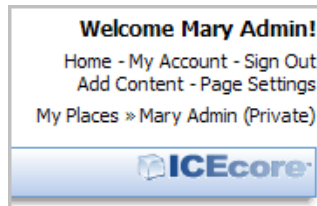
When you begin managing ICEcore, there are only two management levels: site managers (who manage the server machine) and portal managers.

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 Adminstration Portlet to Your Home Page:

1 Click *Add Content* in the upper-right corner.
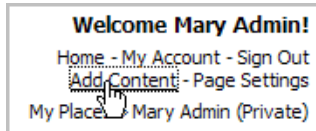
2 In the portlet access frame that appears in the upper-left corner, click ICEcore to view the available ICEcore portlets that you can add.
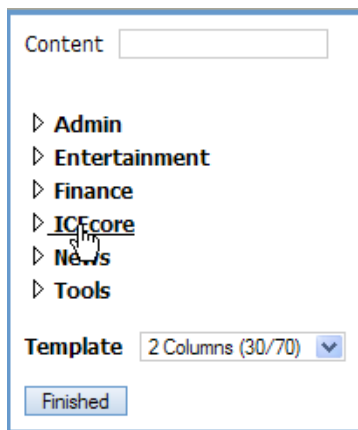
3 Click the *Add* button next to ICEcore *Administration* to add this portlet to your Home Page.

NOTE: The portlet access frame closes automatically and the ICEcore *Administration* portlet appears on your home page. When you add LifeRay portlets (any portlet not under ICEcore) the portlet access frame does not automatically close as it does when you add ICEcore portlets.

ICEcore Administration

SiteScape Team Workspace Core 0.1.0 (Build 440 / June 26, 2007)

- Administration
  - Form and view designers
  - Configure LDAP
  - Configure role definitions
  - Configure site incoming email schedule
  - Manage the search index
  - Manage groups
  - Import profiles
  - Import definitions
  - Export definitions
  - Workspace and folder templates
  - Login reports
  - License reports
  - Credits

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

2.2.1 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 Enties
  - 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 2.2.3, "Edit Default Team Workspace Access Rights," on page 34.

2.2.2 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*.
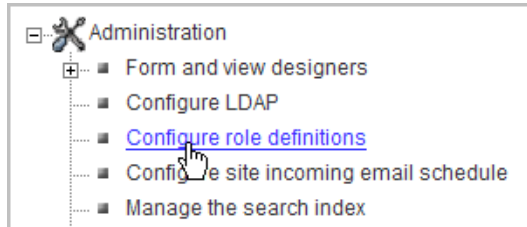
The Configure Roles page appears.

2 Click *Visitor*.

Currently defined roles
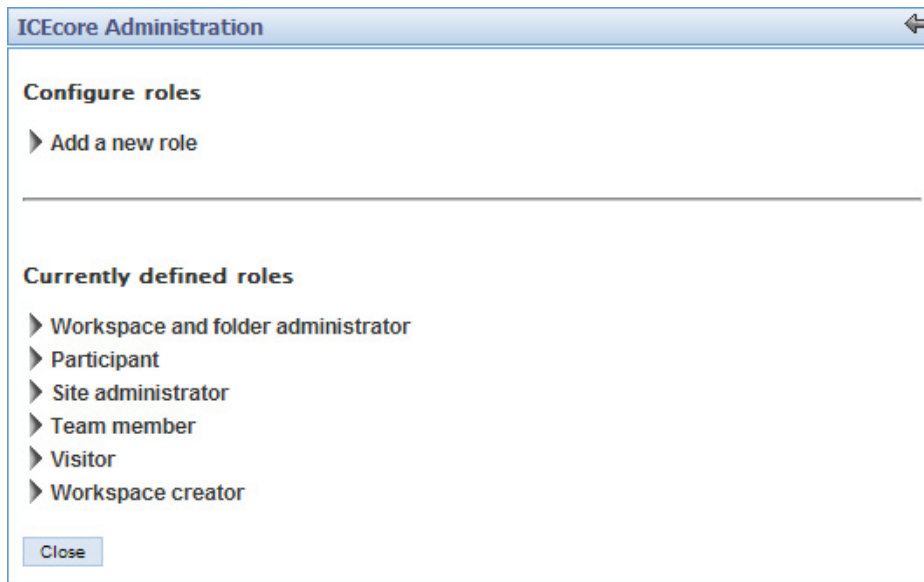
▸ Workspace and folder administrator
▸ Participant
▸ Site administrator
▸ Team member
▸ Visitor
▸ Workspace creator
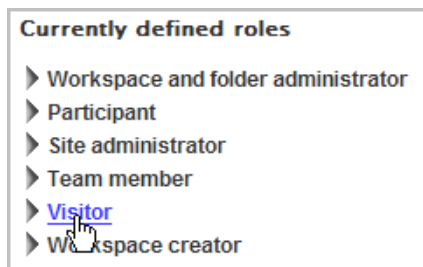
3 Under *Visitor*, deselect the *Add Comments* option, and then click *Apply*.

▾ 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]
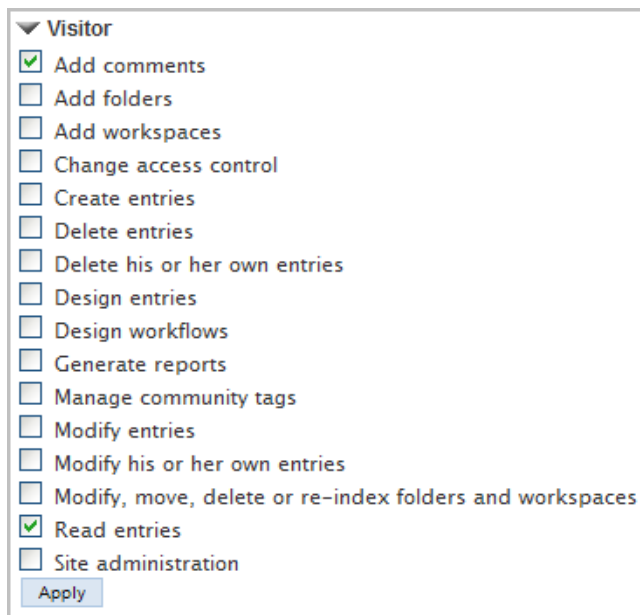
4 Click Close to return to your Home Page.

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

2.2.3 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 Adminitrator 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:
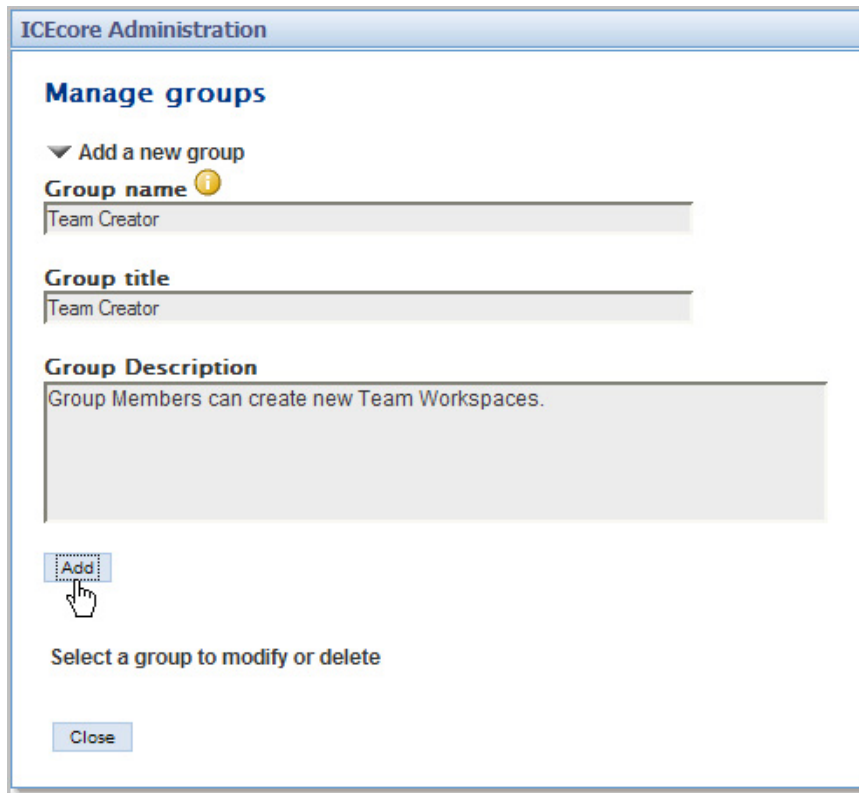
1 In the ICEcore *Administration* portlet, click *Manage Groups*.
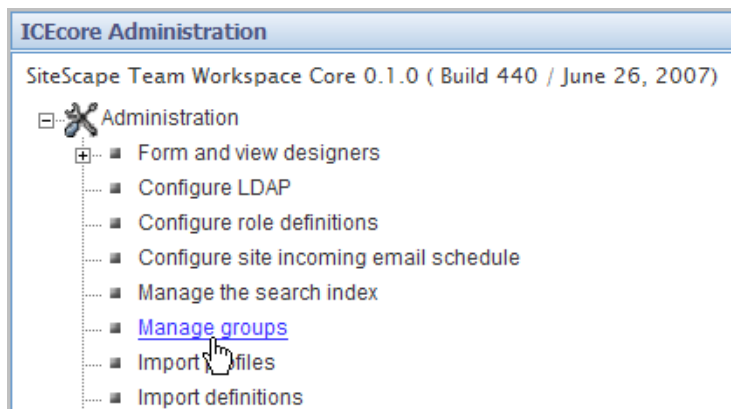
2 In the *Manage Groups* window, click *Add a New Group*.
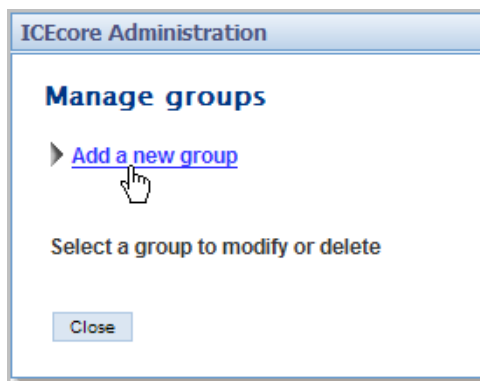
3 Enter the new group's name, title, description, and then click *Add*.

The new group appears on the page.
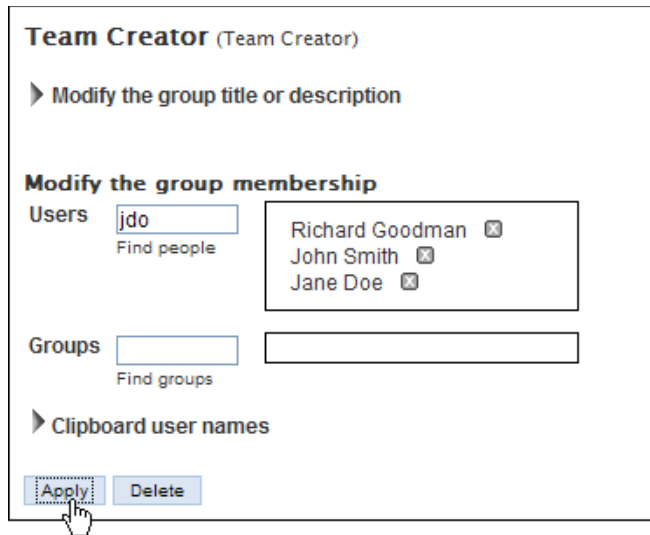
4 Under *Select a Group to Modify or Delete*, click the *Team Creator (Team Creator)* group.

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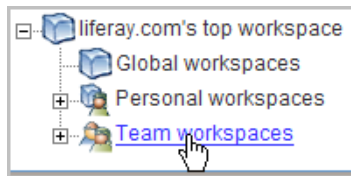
2 Click *Access Control*.
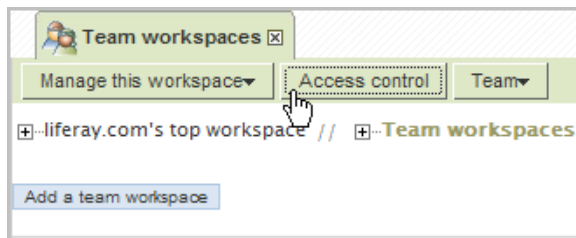
The *Configure Access Control* page appears. This page allows you to assign the Role Definitions to specific groups and users fro the workspaces and folders. The current page controls the access rights for the Top Team Workspace area.

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

4 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.

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

6 Click *Save Changes*.

7 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.

2.3 Create Your Initial Workspaces

There are three types of workspaces in ICEcore: Global Workspaces, Personal Workspaces, and Team Workspaces. 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 upfront planning:

- Although, by default, anyone can create a team (unless you edit the default access rights, see Section 2.2.3, "Edit Default Team Workspace Access Rights," on page 34) 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 upfront task.
- Access control is greatly simplified and enhanced by utilizing well-planned group names for your site.

2.3.1 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.

1 From your Home Page, click *Team Workspace*.
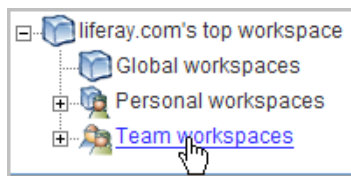
2 Click *Add a Team Workspace*.
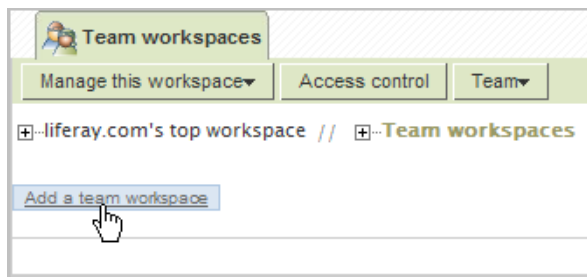
3 Type in a tile for the new workspace.

4 Select the team members.

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*.
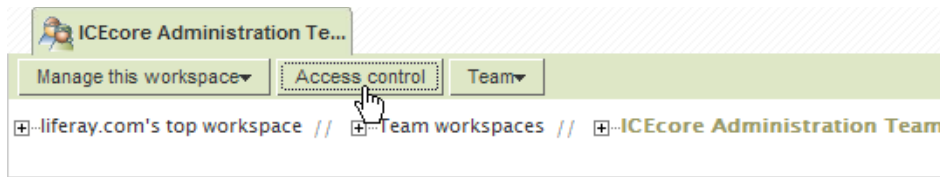
2.3.2 Set the Administration Team Access Rights

1 From the ICEcore Administration Team workspace, click *Access Control*.

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

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	☑	☑	☑	☐

**5** Click *Save Changes*.

6 Click *Close*.

2.4 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.

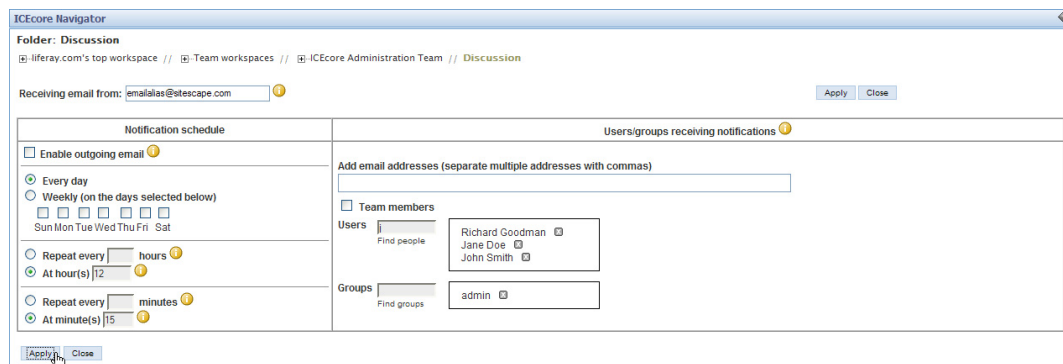**1** From your workspace, select the top level folder for which you want to enable e-mail.
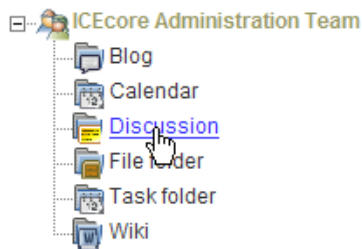
2 Click *Manage This Folder* and select the *Email Settings* menu item.
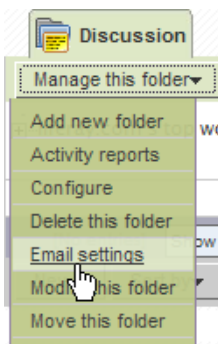
3 Type in the e-mail alias you recieved from your e-mail administrator in the *Reiceiving Email From* field.

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*.

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

2.5 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 Getting Started Guide and 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.

ICEcore Glossary

buddy list
A list of people that you contact frequently.

entry
An item, such as a wiki topic, file, or photo, that is contained in a folder.

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.

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

tag
A keyword that anyone can add to a place to make it easier to find that and related places. Community tags are shared. Personal tags are private.

tag cloud
A weighted list of tags in which frequently used tags are displayed in larger type.

workspace
A container for folders and other workspaces.