Elixir Domain Configuration and Administration

Release 3.0.0

Elixir Technology Pte Ltd

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Chapter 1
Introduction

Elixir Ambience combines Business Intelligence with Cloud Computing to provide scalable utility computing power for demanding Business Analytics applications. With its underlying multi-process architecture, it scales effortlessly across commodity hardware, with full control of the individual system processes.

Ambience supports multi-tenant deployment by enabling each customer group to have its own domain, securely separated from other customer groups. A domain consists of a separate tree structure which represents customized configurations. Different members in a customer group may have different user names and passwords, but these members all log into the same domain to access files stored in the tree structure.

Logging In

Navigate to `http://<host>:8080/elx/` to view the Elixir Ambience Web Console.

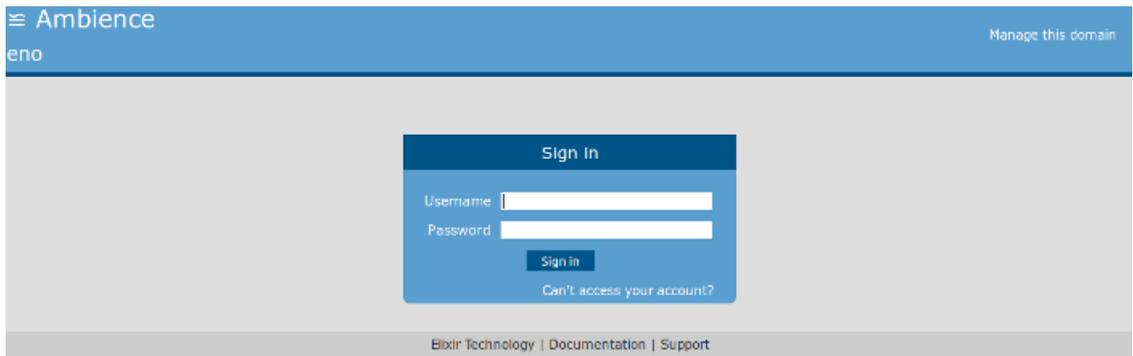**Figure 1.1. Elixir Ambience Main Page**
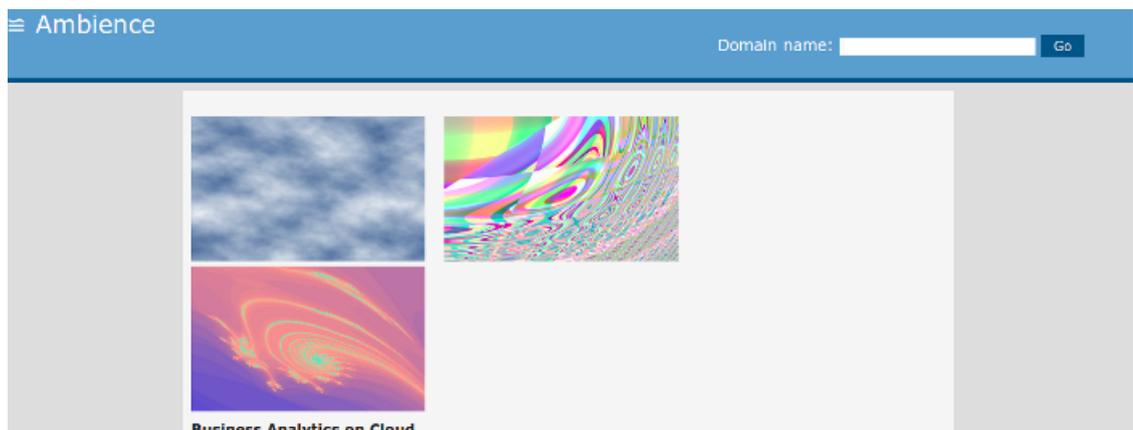
Enter the domain to login and click **Go**. The default domain is **eno**.

The Domain Manager Link screen is displayed.

Click `Manage this domain` on the top right corner of the page.

Figure 1.2. Domain Manager Login Link

After clicking the manage link, the Domain Manager Login screen is displayed.

Figure 1.3. Domain Manager Login Screen
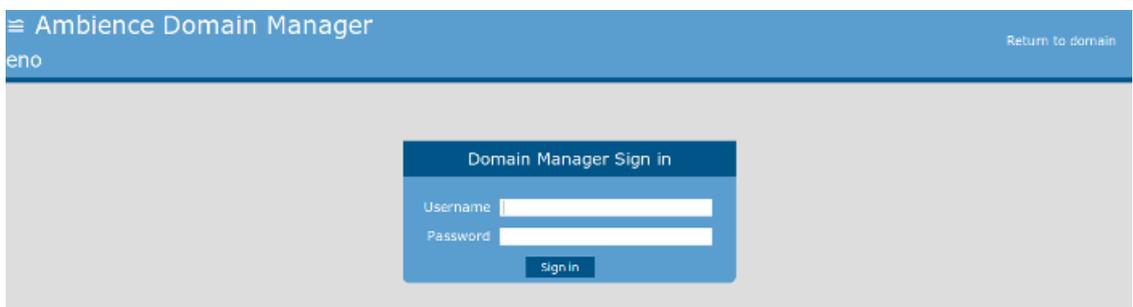
Type the user name and password to sign in.

The default domain manager user name is **domadmin**. The default domain manager password is **da**.

> **Note**
>
> To return to the regular Ambience login page, click the `Return to domain` link on the top right corner of the page
.

Overview Page

The Overview Page displays the number of hosts running and the CPU and Memory resources consumed by them.

Ambience starts two job engines by default. The main system (represented in blue) runs on port 2552 and the two job engines use other available ports, so those values will vary.

Figure 1.4. Overview Page
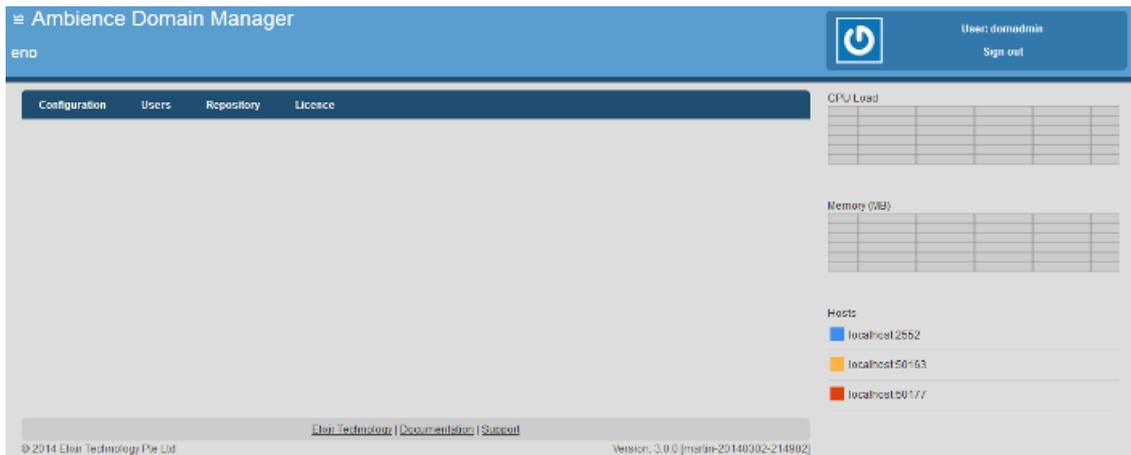
Users

The Users page displays the administration users of the current domain and their email addresses.

Figure 1.5. Users Page
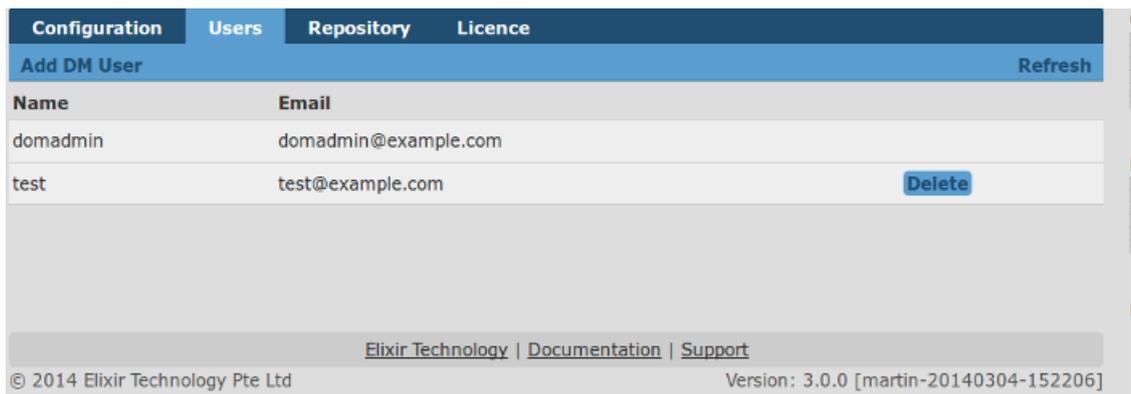
Adding a Domain Manager User

To add a user, click the `Add DM User` link.

Enter the user name, email and password of the user to be added.

Figure 1.6. Add Users

Click **OK** to create the user.

Editing a Domain Manager User

To edit a user, click the name of the user.

Modify the email address and password as appropriate.

Click **OK** to save the details.

Deleting a Domain Manager User

To delete a user, from the Users page, click **Delete** that is at the right hand side of the user's details.

Users CANNOT delete their own login. This ensures that at least one user always remains in the system and is able to login.

Chapter 2
Configuration

## Introduction

Note

This is the lowest level configuration. In almost all cases, higher level configuration tools exist within Ambience to set all these items. You should use the higher level tools which enforce consistency and the correct type of content. For example some values must contain JSON, others must contain XML, others must contain just plain text. The higher level tools enforce this. The low level editors trust that you know what you are doing. If you make a mistake, you can easily render the system unusable. Therefore use this low-level editing ability with extreme caution.

The `Configuration` tab allows you to configure the domain. The configuration items are displayed as a tree. Click each item and enter its configuration in the pane on the right.

Figure 2.1. Domain Configuration Page
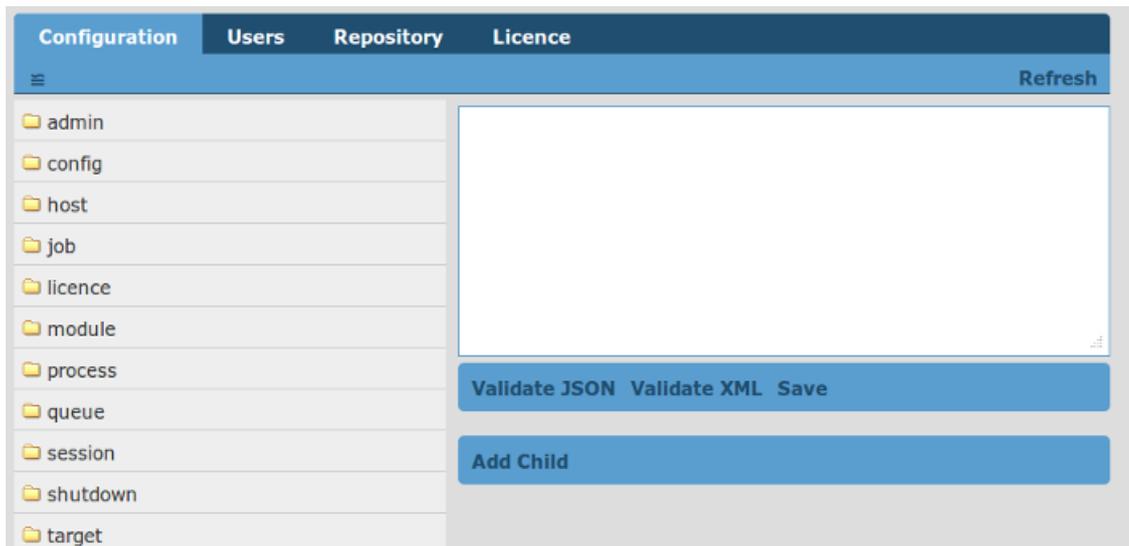
To add a child item, click the `Add Child` link and enter the name of the child item. For example, within the admin item on the tree, you can have mail and output formats as the child items, with each item having its own configuration.

Any number of child items can be added to any of the main items, as per your requirements.

To rename an item, click `Rename`.

To delete an item, click `Delete`.

The configuration tree is as follows:

Note

Configuration options are often altered with each releases as new features are exposed. Therefore, the configuration tree you see may not match exactly those seen in the screen shots.

Table 2.1. Configuration Tree

Tree Node	Description
admin/user	This holds the credentials of the domain administrator. Use the Domain > admin option from the left panel to add or alter these values. Only the domain administrators are defined here. Regular users are defined in the authentication module.
admin/mail/from	Indicates the mail address from which emails are sent.
config/	This holds common configurations that will apply across all Ambience modules. For example, you can set the uniform formats for date, datepicker, time, timepicker and timestamp. When a date is displayed by Java, it will use the `/config/format/date/` settings. When JavaScript is used, it will use the `/config/format/datepicker` settings by default, unless there is a local override. Web-based modules will reflect the changes immediately, while other modules may show the changes after they are restarted. Preferably, you can configure these settings in **Repertoire > Administration Tools > System > Configuration**.
host/	This lists the hosts that have connected to the Ambience system.
job/constraints	Lists the constraints for jobs. Constraints include the time to wait for the job to start and the number of retries, for instance.
licence/	This is where the licence information for the domain is stored. To install a licence, use the **Domain > Licence** option, which will populate the license.
module/	This is where the additional modules store their configuration data.
module/domain-man	This holds Domain Manager configuration.
module/eikon	Elixir Ambience AdHoc Dashboard configuration is stored here.
module/filetype	The filetype child tree records known file types, and identifies the mime type strings, the icons to use and the actions that can be invoked, for each file type.
module/identity	Contains the domain realm.
module/jdbc	Holds the JDBC driver configuration for connection to various databases.
module/logging	Contains the path where the log files are stored.
module/metro	Provides metrics gathering. Used when Elixir Ambience is hosted as a SAAS application.
module/queue-map	Stores the configuration of the various queues such as the email queue, the print queue and the job queue.
module/repository	Contains the repository paths and file system configuration. Adding a file to the repository causes its properties to be automatically added to the configuration.
module/rml	Contains the configuration of the report module. Configuration items include callback and font specifications for PDF output.
module/scheduler	Stores the triggers for the scheduled jobs. Creating a scheduled job causes its configuration to be stored here.
module/store	Contains the stores that hold the file systems mentioned in the Repository. These stores can either be local file systems, Samba shares, NFS shares, or Amazon S3 stores.
module/support	Contains the email of Elixir Support to which logs are to be sent for analysis and resolution.
module/universe	Contains the access rights for universes.
module/usergroupdb	Stores the configuration of users. Configuration items include password policy and access rights.

Tree Node	Description
module/web	Contains the configuration of the web interface. CSS and JS file paths, and the paths for the various theme files are stored here. Adding a CSS, JS or theme file causes the file configuration to be automatically stored under this entry in the tree.
process/job-engine	The parameters of the various job engines are stored here.
queue	Contains the settings for the queues defined in the queue-map.
session	The details of all active sessions within the domain are stored here.
shutdown/control	This is used to coordinate shutdown of the entire domain and should not be modified except by the shutdown process.
target	Contains the configuration for the output targets such as printers, browsers and email. Configuration items include SMTP servers, mime types and printer names.
version	The version tree is where modules record their installation status - which versions of which modules are installed. This enables easy migration as new modules are released.

Configuration Samples

This section lists a few configuration samples with screen shots, to demonstrate how easy it is to configure the domain. Every item in the configuration tree follows the same process of configuration.

Some fields need to be entered in XML, some are in JSON and some are just plain text. Be careful not to make a mistake, as you can render the system unusable. If you enter the configuration as JSON or XML, make sure to validate using the JSON or XML validation links in the configuration screen. This helps catch errors in the configuration and ensures that the configuration is not broken.

Click Save to save each configured item.

admin/mail/from

Indicates the mail address from which emails are sent.

**Figure 2.2. Admin Mail From Address Configuration**
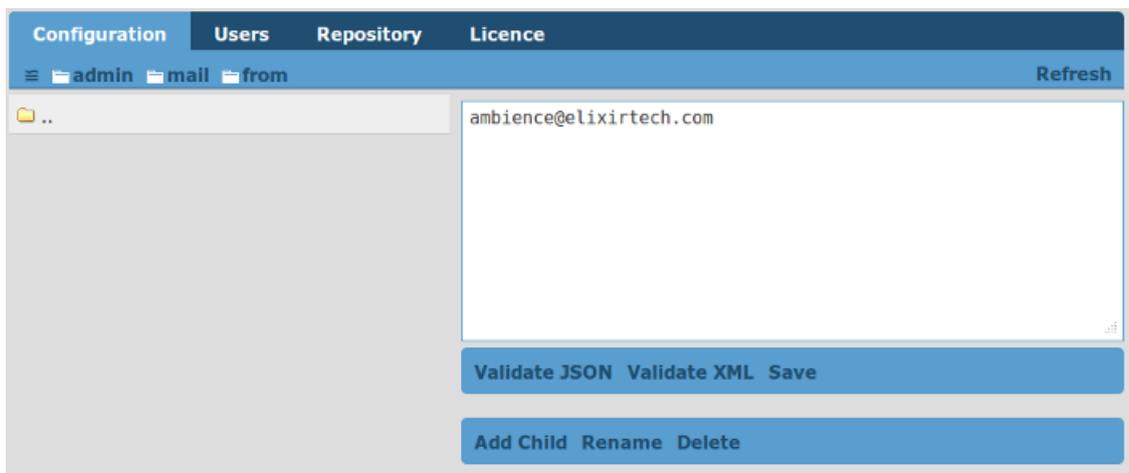
Here, the mail address is set as ambience@elixirtech.com

admin/user

Contains the name, email and encrypted password for each user. Adding a user from the Users page causes the details to be stored here.

The following figure shows the configuration for the default `domadmin` user.

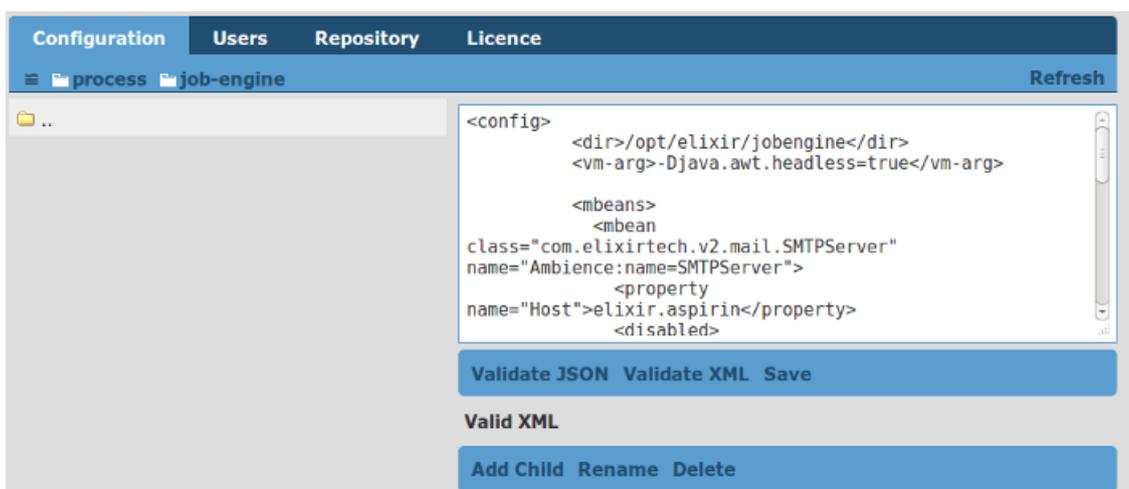**Figure 2.3. Domadmin User Configuration**
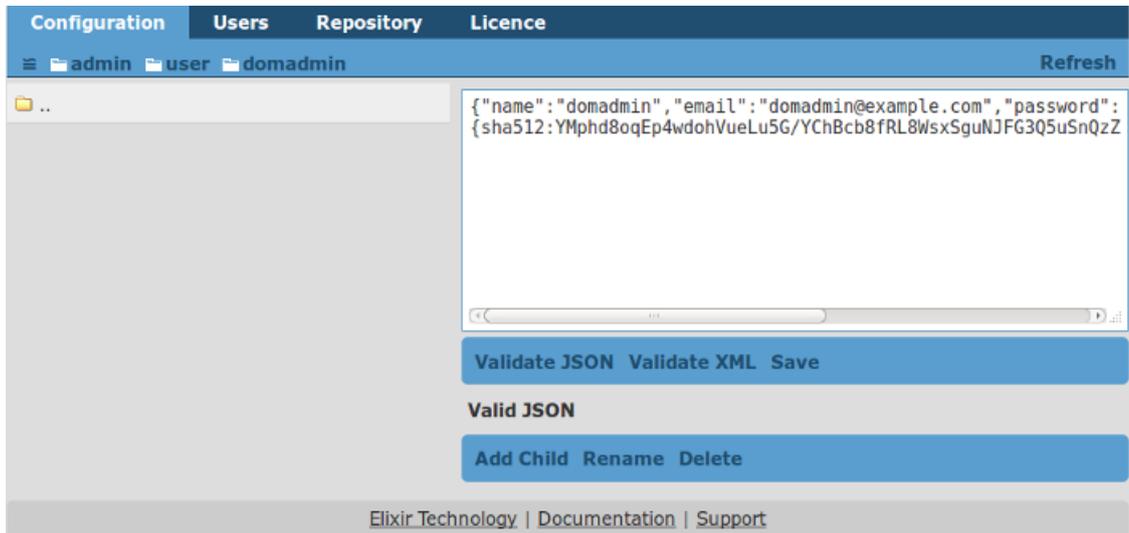
The configuration is written as a JSON statement.

process/job-engine

Contains the job engine configuration to run each job queue.

The following figure shows an example:
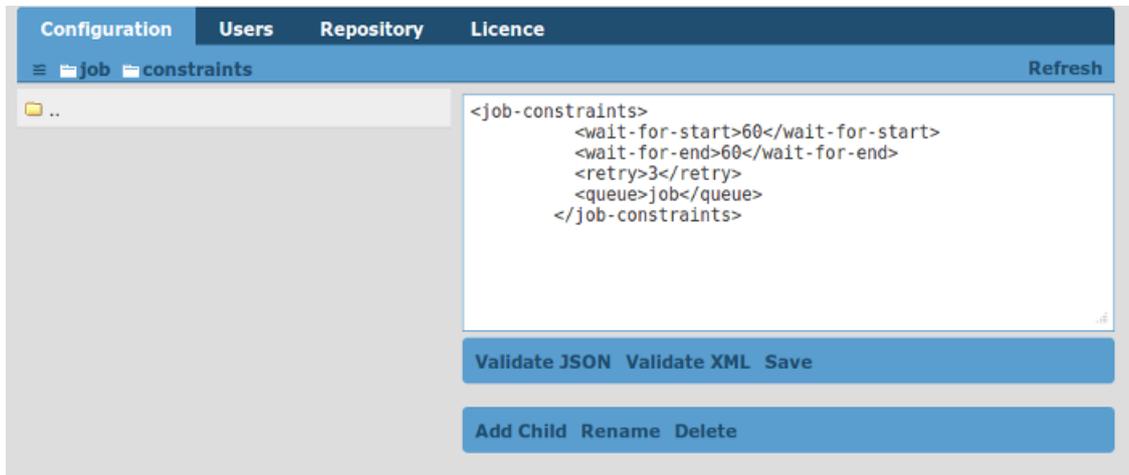
Figure 2.4. Job Engine Configuration

Here, the configuration is written as XML statements.

job/constraints

Contains the constraints for jobs. Constraints include time to wait for the job to start, number of times to retry in case of an error and the job queue name.

The following figure shows an example:

Figure 2.5. Job Constraints

Here, the configuration is written as XML statements.

Configuration Examples

Setting the Password Policy

Passwords are required to follow the password policy. A default policy is installed in Domain Manager. As shown in the following code, the password policy can be configured in **module > usergroupdb > password-policy**. You can control the minimum or maximum length of passwords, specify whether certain combinations of characters, digits and symbols are required by passwords, indicate whether password can match user name, and whether the password can be the same as one previously used. Setting the password policy helps comply with the enterprise's security policy.

```
<password-policy>
  differentPasswordCount="0"
  maxPasswordExpiresDays="0"
  notSameAsLogon="false"
  maxLength="0"
  minLength="1"

<symbols>
mustNotHaveSymbolSet=""
mustHaveSymbolSet=""
mustHaveLowerCase="false"
mustHaveUpperCase="false"
mustHaveDigit="false"
</symbols>
<retry
retryAttemptDelayMultiplier="1"
retryAttemptDelaySecs="0"
retryAttemptLockoutCount="0"
```

```
</retry>
</password-policy>
```

Setting up a Print Engine

In a clustered or cloud-based environment, it is likely that not all machines have access to a printer. When considering your architecture, you may wish to dedicate one or more hosts with printer access to facilitate printing. By default, all job engines run on a single queue and are assumed to be able to print. However, you can easily split the engines into two queues - one for rendering reports and one for printing reports, whereby only the hosts that run the printing report job engines need a connection to a printer. Any other job engine which needs to print, will now forward the rendered report to the specialised queue for printing.

Complete the following steps to set up a print engine:

1. Create a new node, `/queue/print`.

2. Copy the contents of `/process/job-engine` into a new node, `/process/print-engine`. Alter `<arg>/queue/job</arg>` to `<arg>/queue/print</arg>`.

3. Change the contents of `/module/queue-map/print` to `/queue/print`. The print-engine process is successfully created.

4. Open Repertoire. Click the **Admin Tools...** button. In the **System** tab, add a new job engine and select the print-engine process. Click **OK**. After refreshing, the print engine will be functional.

Chapter 3
Repository

Introduction

Ambience needs to ensure that all files are available to all job engines, regardless of which machine the job engine is running on. Any assumption that the files are on the local hard disk is going to break as the system scales up to handle larger loads by adding more engines.

Therefore, all Ambience files (reports, dashboards, data sources and other resources) are kept in a shared Repository. The Repository is divided into a number of file systems. The default four are `/ElixirSamples`, `/Public`, `/Temp` and `/User`. These are what the end-user sees. However, behind the scenes the files still need to be physically located somewhere - this is the role of the Store.

The Repository page enables you to add new stores, where all documents related to the domain are stored.

Stores can either be local - within your network, or can be on Amazon S3.

Figure 3.1. Repository Page

This page lists the stores and the filesystems present in the repository.

The repository page allows you to create a store and a filesystem easily. You do not have to login twice - once to create a store (as a domain administrator) and once to create a filesystem (as an administrator).

Adding a File Store

Click the `Add File Store` link.

Figure 3.2. Add File Store

Enter a name for the store, the description of the store and the path where the files are to be kept. The path can be a local folder, an external drive, a NFS share or a Samba share.

Click **OK** to add the store.

Adding a S3 Store

Click the `Add S3 Store` link.

Figure 3.3. Add S3 Store

Enter a name for the store, the description of the store and the details of the S3 bucket.

Click **OK** to add the store.

Editing a Store

From the repository page, click the name of the store that you want to edit.

Modify the description and the path of the store and click **OK**.

Compacting a Store

Compacting a store removes files not referenced by any attached filesystem.

To compact a store, from the repository page, click **Compact** that is to the right of the store that you want to compact.

Deleting a Store

From the repository page, click **Delete** that is to the right of the store you want to delete.
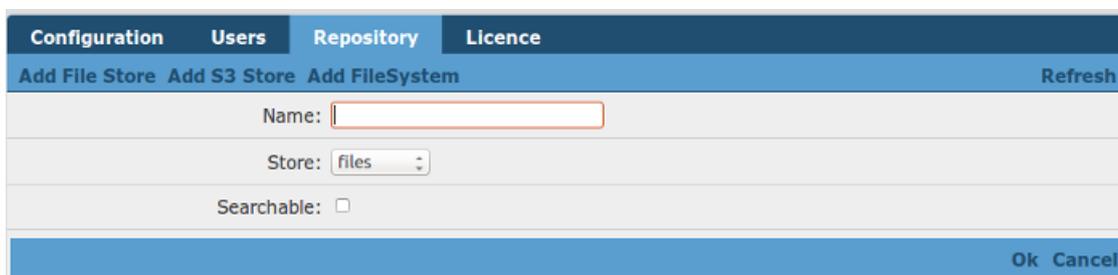
Note

Deleting the store in the configuration, does not delete the corresponding folders and files on disk. Once you have deleted the store from the configuration, you may choose to delete the folder, but such a process is not reversible unless you have made a backup.

Adding a FileSystem

Click the `Add FileSystem` link.

Figure 3.4. Add FileSystem

Enter a name for the filesystem, the type of content that you want to store in the file system (one of files, samples or temporary files) and choose to make it searchable if you want.

Click **OK** to add the filesystem.

Making a FileSystem Searchable

From the repository page, toggle the `Searchable` option to make the filesystem searchable or not.

Deleting a FileSystem

From the repository page, click **Delete** that is to the right of the filesystem you want to delete.

Note

Deleting a filesystem, deletes it irrevocably.Ensure that you have a backup, before deletion.

Backing up data

To backup data, simply backup the data folder inside the ElixirAmbience folder.

Restoring data

To restore data, copy the data that you backed up, inside the ElixirAmbience folder.

If a particular module detects an older version of the configuration (as seen in /version), then it will apply the update to the configuration and modify the /version node accordingly.

Note

The restore process is only backwards compatible - you can upgrade from a lower version to a higher version and NOT vice versa.

Chapter 4
Licence

Adding the Elixir Ambience Licence

The Licence key gives you the legal right to use the software, based on the the features and resources for which you have paid.

A new licence key will be provided when any entry in the licence changes - for example the expiry of the licence in the case that it is a trial or when additional users or functionality are allowed. The licence key includes a clear text description of the licence parameters, along with a digital signature which ensures that the values have not been modified.

Figure 4.1. Filing in the Elixir Ambience Licence

Copy and paste the licence. To validate the licence, click the `Validate Licence` link. Click the `Save` link to save the licence.

Note

In case the licence is invalid, double check to see that you have entered it correctly. If you have checked and it is still invalid, contact customer support to help you resolve the issue.