Elixir Ambience

Release 2.5.0

Elixir Technology Pte Ltd

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Elixir Technology Pte Ltd

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About Elixir Ambience

Sign in

Elixir Ambience is a Cloud-Scale Business Analytics/Intelligence Platform, with a complete set of services that collaborate behind the scenes to ensure each request is fulfilled:

ZooKeeper: This service is a centralized service for maintaining configuration information, naming, providing distributed synchronization, and providing group services.

DaCapo: This multi-tenant repository provides file services for the rest of the Ambience architecture.

Identity: This service contains the default Elixir authentication module, which never stores passwords. Therefore even domain administrators cannot access passwords, which ensures password security and prevent hackers.

Scheduler: This service enables the user to define tasks, which will run based on triggers and calendars.

Universe: The Universe is the interface to data in Ambience. There are two categories of Universe – JDBC Universe and Repository Universe.

Eikon: This service is for Ad-hoc Dashboard and is a Web application that enables the building and navigation of BI dashboards. The data for the dashboard is provided by Universe, and Eikon is a Universe consumer. DASHBOARD is the file extension of an Ad-hod Dashboard.

ProcMan: The Process Manager is the controller of dynamic processes, such as Job and ETL engines. It monitors ZooKeeper configuration, as well as starts and stops engines on demand.

PML Engine: This service assembles a set of views, contents and actions together into a dashboard. PML is the file extension of a dashboard, which stands for "Perspective Markup Language".

Web Jetty: This service provides an HTTP server, HTTP client and javax.servlet container. Visit http://<machine-name>:8080/elx/ to view the Web console of Elixir Ambience. Enter the domain name, user name and password to sign in.

Audit: Auditing records domain-level events, such as creating a transaction, performing an action and more, which may be legally obligated to record in certain types of application, i.e. banking.

Visit http://<host>:8080/elx/ to view the Elixir Ambience Web Console. Type the domain name (for example, "eno", "foxx", etc), user name and password to sign in.

Anonymous mode

If you skip the sign in and directly go to http://<host>:8080/elx/do/<domain>/po/index.html, the anonymous page will display. The anonymous page provides limited features only, which enables the anonymous user to access files that the administrator has allowed to display. For more details on showing files in anonymous mode, refer to Elixir Administration Tools User Manual.

Desktop redirect

Instead of visiting the default Ambience Web Interface, you have the option to redirect the Ambience desktop page to a customized HTML page.

Before you can successfully redirect the Ambience desktop page, complete the following steps:

1. Open the Repository GUI. Create a new folder /Public/desktop/. Place Desktop.html and Desktop.js inside this folder. Please note that you can use other file names or locations, which should be consistent with those written in the desktop-redirect.txt file.

2. Copy the desktop-redirect.txt file into the /User/test/ folder. Please note that the file name and location are important. In this example, the desktop redirect functionality is available when you login as **test**.

3. Log into the Ambience Web Interface as **test**. The new desktop page will display. To disable the desktop redirect functionality, delete or rename the desktop-redirect.txt file.

When you visit http://<host>:8080/elx/do/<domain>/po/index.html, Ambience will check for a file named desktop-redirect.txt in the user home directory and redirect to the contents of that file. Inside desktop-redirect.txt, there is information about the Repository path (dc/content) to the Desktop.html file:

```
/dc/content/Public/desktop/Desktop.html
```

The desktop redirect functionality enables many users to share the same Desktop.html with all the CSS, PNG and JS files, without requiring the administrator to copy Desktop.html into each user's home directory. To share desktop with many users, only the desktop-redirect.txt file is needed. Different users can also have different desktops by using a different redirect.

Here is a sample of Desktop.html, which works without Cascading Style Sheets. You have the option to append your own CSS.

```html
<html>
<head>
<script src="/elx/lib/jquery-1.8.3.min.js" type="text/javascript">
</script>
<script src="Desktop.js" type="text/javascript"></script>
</head>
<body>
This is the new desktop
<hr>
<div id="info"></div>
<hr>
<div id="rml"></div>
<hr>
<a href="/elx/do/eno/po/portal.html">Back to Portal</a>
<hr>
<form method="POST" action="/elx/go/eno">
<input type="submit" value="Sign Out"></input>
</form>
</body>
</html>
```

Chapter 2
Using Elixir Ambience

Overview

Ambience

Watched Files

This enables you to view the watched files such as Daily Performance Report and Sales Report, as well as the files' last modification time. For more details on how to start watching a file, refer to the section called "Watch".

System

This enables you to view the summary of system statistics, including how many users are currently online, how many jobs are running, how many job engines are online, and the quantity of your scheduled tasks.

News

From here you can obtain the latest news of Elixir products, including recent releases, future product forecast and more.

Settings

You can view the user name, domain name and associated email account here. To change password, click the **Change password...** button, enter the current password, set the new password, and repeat the new password. To change email, click the **Change email...** button, enter the current password, and enter the new email address.

Create

Create an Ad-hoc Dashboard

For more details, refer to *Elixir Ad-hoc Dashboard User Manual*.

Create an Ad-hoc Report

For more details, refer to *Elixir Ad-hoc Report User Manual*.

Repository

File information: Size, Last Modified,Access, Tags

Actions for a folder

When a folder is selected, the following actions are available for your option:

Add Folder

This enables you to add a sub-folder under the current folder.

Copy

This enables you to copy the current folder and its contents into another folder.

Rename

This enables you to rename the current folder.

Upload

This enables you to choose a file from the designated location and upload it to the current folder.

Alternatively, you can upload any type of file using the **curl** command following the syntax below:

```
curl --user <username>:<password> --upload-file <source-file-path>
<target-file-path>
```

The following shows an example of uploading a JDBC driver JAR file to /Public/lib:

```
curl --user admin:sa --upload-file ~/JDBC/mysql-connector-java-
5.1.21-bin.jar http://knockshinnie:8080/elx/do/eno/dc/content/
Public/lib/mysql-connector-java-5.1.21-bin.jar
```

Drop files here

If you are using an HTML5 browser, **Drop files here** will appear in a text field. Drag and drop a file into the text field to upload.

Delete

This enables you to delete the current folder and its contents.

Actions for a file

When a file is selected, the following actions are available for your option:

Open

This action opens the current file in a new tab. The supported file types include datasources, image files, PDF and more.

Parameters in datasources are supported, including two new types, #timestamp and #time. You can also sort parameters using the dependency notation, eg ${A<B,C>#password#sa}, which indicates A should come lower than B and C in the parameter list.

Watch

Watch provides a quick way to keep track of files that are frequently used, which saves you from the trouble of repeatedly navigating to these files or searching for them.

After selecting a file, enable **Watch** by clicking the star in the top right hand corner of the File Information panel. Upon clicking, the file will be watched, and a tag **<user>#watch** will be added. Open the **Overview** panel and click the **Refresh** icon next to the watched files, and the file list will be updated.

Generate a datasource

After opening a datasource in the Ambience Web Console, you can generate it by clicking the **Generate** button. Data fields will be shown in the browser.

Render a report

After opening a report in the Ambience Web Console, you can render the report by selecting from the **Target** dropdown list and the **Render Type** dropdown list. Target options include browser, mail, printer and userhome, which can be configured in Repertoire GUI > Administration Tools. Render type options include HTML and Simple HTML.

Besides using the Ambience Web Console, you can also use HTTP requests to render a report, which supports all output types provided in Render Wizard. You can send an HTTP request with a parameter list with **?mode=render** and other options, or send an HTTP request with an XML body describing the options. In all cases, it is assumed that authentication has been completed as a cookie is required to be sent with each request. All requests must use POST not GET. For a complete list of parameters used in HTTP requests, refer to Table 2.1, "Parameters".

You can specify the parameters as part of the URL, such as "?elx.start.timeout=30&elx.end.timeout=120", which works for all jobs. One example is in the following:

```
curl -X POST -u admin:sa --data "mime-type=application/x-glint
&elx.target=output1&elx.start.timeout=30&elx.end.timetout=120
&elx.job.retry=5"
http://MachineName:8080/elx/do/eno/re/ElixirSamples/Feature/Report/
Form.rml?mode=render
```

The order of parameters is unimportant. Report parameters are distinguished from target parameters by not having the **elx.target.** prefix.

The response from the parameter string version is the same as the XML version, with the same headers.

Note
Different browsers and web servers impose different limits on the length of URL strings, so a very long request URL, perhaps 1024 characters or greater, should be sent using the XML approach, where there is no such limit.

Table 2.1. Parameters

Parameter	Description	Value Options	Necessary
mode=render	This parameter means the report will be rendered.	render	Yes
mime-type={mime-type}	This parameter defines the report output type.	Refer to Table 2.2, "Mime Types"	Yes
{name}={value}	This is a user-defined report parameter.	Add any value.	Optional
elx.target={target}	This defines the report output target.	Add any target.	Yes
elx.target.{name}={value}	This defines the report output target name.	Add any value by prefixing the parameter name with **elx.target.**	Optional
elx.start.timeout	This is a timeout parameter for job engines, which specifies the time spent in the job queue. If the job stands in the queue longer than this value, and no job engine starts processing it, then the job will quit.	The default value is 60 (seconds).	Optional
elx.end.timeout	This is a timeout parameter for job engines, which specifies the time spent running the job. If a job takes longer than this value, then the system aborts the job, and assumes it was stuck in an endless loop or is thrashing. This ensures the job engine will be able to run other jobs.	The default value is 60 (seconds).	Optional
elx.job.retry	This is a timeout parameter for job engines, which specifies the number of retries before a job gives up. This only applies for the elx.end.timeout. If the job doesn't complete in 60 seconds, it will be put back on the queue to get picked up. Therefore, if a machine fails while running a job, the job will still have another chance at running.	In most cases, the default value is 3.	Optional

Table 2.2. Mime Types

Name	Extension	Mime Type
Windows Bitmap	bmp	image/bmp
Zipped Windows Bitmap File	bmp.zip	application/x-bmp-zip
Cascading Stylesheets	css	text/css
Comma Separated Values	csv	text/csv
Elixir Ad-hoc Cube	cube	text/x-adhoc-cube
Elixir Ad-hoc Dashboard	dashboard	text/x-adhoc-dashboard
Elixir Database Filesystem	dbf	application/x-dbf
Microsoft Office Open XML Format Document	docx	application/vnd.openxmlformats-officedocument.wordpro-cessingml.document
Elixir DataSource	ds	text/x-datasource
Graphical Interchange Format File	gif	image/gif
Elixir Glint File	glint	application/x-glint
HyperText Markup Language File	html	text/html
Zipped HyperText Markup Language File	html.zip	application/x-html-zip
Elixir Interactive Markup Language File	iml	application/x-rml-interactive
Elixir Job File	job	text/x-job
Joint Photographic Experts Group File	jpg	image/jpeg
Zipped Joint Photographic Experts Group File	jpg.zip	application/x-jpeg-zip
JavaScript File	js	application/javascript
JavaScript Object Notation File	json	application/json
Elixir Line Print Text File	lpt	text/x-lpt
Elixir Map File	map	text/x-map
OpenDocument Presentation File	odp	application/vnd.oasis.opendoc-ument.presentation
OpenDocument Spreadsheet File	ods	application/vnd.oasis.opendoc-ument.spreadsheet
OpenDocument Text Document	odt	application/vnd.oasis.opendoc-ument.text
Printer Command Language Document	pcl	application/vnd.hp-pcl
Portable Document Format File	pdf	application/pdf
Elixir Perspective Markup Language File	pml	text/x-perspective
Portable Network Graphic File	png	image/png
Zipped Portable Network Graphic File	png.zip	application/x-png-zip
Elixir Connection Pool	pool	text/x-connection-pool
Elixir Connection Pool	pool	text/x-connection-pool
Microsoft PowerPoint Presentation	ppt	application/vnd.ms-powerpoint
Microsoft PowerPoint Open XML Present-ation	pptx	application/vnd.openxmlformats-officedocument.presentationml.present-ation

Name	Extension	Mime Type
Elixir Print	Print the file on the specified printer.	application/x-print
Adobe PostScript File	ps	application/postscript
Elixir Ad-hoc Report	report	text/x-adhoc-report
Elixir Report Markup Language File	rml	text/x-report-template
Rich Text Format File	rtf	application/rtf
Elixir Safe File	safe	application/x-safe
Elixir Shape File	shp	application/x-esri-shapefile
Scalable Vector Graphics File	svg	image/svg+xml
Zipped Scalable Vector Graphic File	svg.zip	application/x-svg-zip
Elixir Shockwave Flash File	swf	application/x-shockwave-flash
Tagged Image File Format	tiff	image/tiff
Zipped Tagged Image File Format File	tiff.zip	application/x-tiff-zip
Plain Text File	txt	text/plain
Wireless Bitmap File	wbmp	image/vnd.wap.wbmp
Zipped Wireless Bitmap File	wbmp.zip	application/x-wbmp-zip
Extensible Hypertext Markup Language File	xhtml	application/xhtml+xml
Zipped Extensible Hypertext Markup Language File	xhtml.zip	application/x-xhtml-zip
Extensible Markup Language File	xml	text/xml
Microsoft Excel Spreadsheet File	xls	application/vnd.ms-excel
Microsoft Excel Open XML Spreadsheet File	xlsx	application/vnd.openxmlformats-officedocument.spreadsheetml.sheet
Zipped File	zip	application/zip

Print a PDF, Glint or PCL file

You can print a PDF file by navigating to the file in the Repository and clicking the **Open** button. The PDF file will open in browser. Choosing **Print** from the browser will print the file to the client default printer.

If you want to print a Glint file, navigate to the file in the Repository and click the **Print** button directly. The Glint file will be printed to the server default printer. Similarly, you can print a PDF file to the server default printer in this way.

You also have the option to print a PCL file. Note that it is subject to printer capabilities to get a PDF or PCL file printed.

You can also explicitly name your printer in **Administration Tools > System > Targets > printer**. This is necessary for Windows 7, but optional for other operating systems. The printer name must be a constant value, and substitutions such as "${Value}" will not work but get replaced by empty strings "". A "" printer name means using the default OS printer as mentioned above.

Run a job

You can run a job by navigating to the job file in the Repository and click the **Run** button. A new tab will open and display a message "Request Submitted". It will prompt for parameters (if any), run the job and show the job log when finished.

View a log

Some events may open the log viewer. For example, when you are rendering a report to mail, printer, userhome or any other target except the browser, there will be a log file link which appears in the status box at the end of the rendering. Click the log file to view the details. Alternatively, Logs are available in the /User/{User_Name}/logs/ directory in Repository. Logs are stored in JSON files, which are excluded from the indexing and hence unsearchable. Select a JSON file and click the **Open** button.

The log viewer will show actions on the right hand side for follow-up purpose. The actions include **Open**, **View** and **Follow**, allowing you to look at job results, view more details of exceptions or follow handovers to other jobs. For example, the **Follow** action helps you navigate through a potential tree of logs produced by multiple engines working together to solve a problem. The parent log will show the status and elapsed time of each child processing log, saving you from the trouble of following irrelevant logs.

Edit Tags

This enables you to edit the tag keywords for the current file.

Copy

This enables you to copy the current file into another folder.

Rename

This enables you to rename the current file.

Download

This enables you to download the current file into the default folder on the machine.

Delete

This enables you to delete the current file. After deletion, the file will be temporarily placed in /User/admin/deleted/ folder.

Search

The Search page allows you to search for files by name, content or tags. Click the **Name**, **Tags** or **Advanced** button, type the keyword, and click the **Search** button. Results will display, which can be sorted by name, path, file type and last modification time.

The **Dashboards**, **Datasources**, **Documents**, **Images** and **Reports** items are shortcuts for commonly-used file extensions. For example, select the **Images** item and start a search. GIF, PNG and JPEG files matching the keywords will display.

Search by name

This enables you to type keywords and search for file names and paths. There are two shortcuts for file name search, "ext:xxx" and "fs:xxx". The ext:xxx shortcut enables you to specify the file extension,

while the fs:xxx enables you to restrict the search to a specific filesystem. For example, "order fs:ElixirSamples" will search for all file names and paths containing the keyword "order" within the ElixirSamples filesystem.

By default, if the fs:xxx shortcut is not used, all filesystems except the Temp filesystem will be scanned. To involve the Temp filesystem in the search, add "fs:Temp" behind the keywords.

The "ext:xxx" and "fs:xxx" shortcuts can be used in conjunction for multiple times in one search. For example, add "fs:Temp fs:ElixirSamples ext:pml" behind your keywords, and the search will match all PML files in both the Temp and ElixirSamples filesystems.

The "ext:xxx" and "fs:xxx" must be used with some keywords instead of being used alone, because it means searching for all files in that type or filesystem, and there might be a huge number of files to process.

Another filter is "mode:xxx". There are two modes available, "glob" and "regexp". The default mode is "glob", in which wildcard characters are supported. An asterisk (*) represents zero or more characters, and a question mark (?) represents a single character. Please note that wildcard characters cannot be used to represent file extensions. For example, "sales.*" should be avoided; to specify a certain file extension, use "ext:xxx" instead.

You can also explicitly select the "regexp" mode, in which regular expressions are used. The dot (.) means any character, which can be escaped by a backslash (\). For example, "\." means the dot will be interpreted literally. For more details about the regular expression syntax, visit the following link:

http://www.regular-expressions.info/reference.html

Search by tags

For detailed information on searching by tags, refer to *Elixir Repository User Manual > Tags*.

Advanced Search

The Advanced Search follows Lucene syntax. The following are keyword and search result examples.

Table 2.3. Keywords and Results

Keywords	Description
Sales	This will exactly match all files containing "Sales" in the path.
Sales Resources	This will match all files containing "Sales" or "Resources" in the path, in which OR is the default operator.
Sales ext:ds	This will match files either with "Sales" in the path, or files with the extension ".ds".
Sales AND ext:ds	This will match only those files with "Sales" in the path and the extension ".ds".

For more details on Lucene syntax, visit the following link:

http://lucene.apache.org/java/3_5_0/queryparsersyntax.html

In Advanced Search, you can use the following filters alone or with keywords in front:

Table 2.4. Advanced Search Filters

Filter	Description
fs:XXX	This restricts the search within a specified filesystem.
name:XXX	This restricts the search within files with a specified name.
path:XXX	This restricts the search within files located in paths containing a specified keyword.
modified:XXX	This restricts the search within files with a certain modification date.
ext:XXX	This restricts the search within files with a specified extension.
mimetype:XXX	This restricts the search within files with a specified MIME type.
tags:XXX	This restricts the search within files with a specified tag.
contents:XXX	This restricts the search within files containing a specified keyword in the contents.

Save a search

Upon clicking Save, you can archive the search keyword. Saved searches will display on the right pane.

Schedule

Overview

Resided in the Ambience Web interface, the Scheduler provides control over triggers and calendars. Through the Scheduler Web interface, triggers may be created, tested and modified, while calendars can be specified to exclude some dates such as public holidays from firing the job. Time zone can also be selected to ensure every trigger will be fired at a proper time, no matter where you are around the globe or which season you are in. These will help you schedule jobs and fire triggers with ease.

After the installation of Ambience, you will be able to use the Scheduler by logging into the Ambience Web interface:

http://<host>:8080/elx/

For information about another Scheduler resided in **Ambience > Administration Tools**, refer to the Elixir Scheduler User Manual.

Running

This tab page shows the jobs that are currently running in the Ambience system. It provides information including trigger name, job file path, previous running time, next running time and the calendar to base upon.

Hourly

The Hourly trigger starts at every hour sharp, and invokes a command task to clean inactive sessions.

Daily

The Daily trigger starts at 00:15 every day, and invokes a command task to clean the unused temporary files and log files.

Weekly

The Weekly trigger starts at 03:15 am on every Sunday.

Note

The Hourly, Daily and Weekly triggers start at different time to avoid conflict.

Disabled

This tab page shows the triggers that are currently disabled in the Ambience system. It provides information including trigger name, job file path and the calendar to base upon.

Create

This page allows you to create a trigger to schedule a job. A trigger is a mechanism for deciding when to invoke a job. Most commonly, triggers are time-based - for example invoke the job every Tuesday at 6am. All triggers have a name, an enabled/disabled flag and some specialized fields for identifying when to run.

All triggers have a Start and Stop time and can only fire between those times. It is possible to set the Stop to be Never, so that the trigger is always operational.

Alternatively, you can perform the following operations in **Ambience > Administration Tools > Scheduler > Triggers**.

Basic

This page defines the trigger name, the job location, the calendar and the time zone.

Basic Information Panel

On this page, you need to enter the name of the trigger and the location of the job, select the exclusion calendar, and select the time zone where you are currently located.

With the correct time zone selected, job firing will be accurate, which follows the rules below:

- The time should always follow the changes of daylight saving time. Therefore 01:00 is the same whether Summer or Winter.

- When a time doesn't exist (a gap due to the clocks moving forwards), job firing will choose the first valid time after the gap.

- When the time exists twice, job firing will choose the first item and ignore the second.

Job

This page allows you to configure the schedule of the trigger, as well as the start and stop time of the trigger.

Job Schedule

On the Job Schedule page, you can schedule a job to run once only, daily, weekly, monthly, at regular intervals or controlled by a CRON expression.

For weekly events, you need to choose the day(s) of the week when the job should run.

For monthly events, you need to choose the day(s) and month(s) to run the job. You can also choose specific day(s) within each month.

For jobs that run daily, weekly or monthly, the job will fire at the same time on the scheduled days.

Active Period

This page of the wizard lets you configure the absolute time range in which a trigger can fire. The actual firing time itself is governed by the values entered on the previous page - this page only indicates the earliest and latest times that it could possibly fire.

> **Note**
>
> By default, a trigger becomes active upon completion of the wizard and never stops. Also, when the trigger has completed the job run, it will be set to disabled automatically. If you would like to run the job again, the trigger will need to be enabled and make adjustment in the Active Period page.

Misfire

This page allows you to override the default job timeouts by setting start/end timeout intervals, and choose the action to be taken when a trigger fails to work the way it was supposed to.

Misfire Configuration

- **Timeout for Start:** Set the start timeout value for the job. If the job does not get started within the start timeout value, the trigger will be considered misfired.

- **Timeout after Start:** Set the end timeout value for the job. If the job does not complete within the end timeout value, the trigger will be considered misfired.

Should the trigger be fired immediately when misfire is detected?

- **Fire the trigger immediately upon detection:** This option enables the trigger to fire soon after the misfire is discovered.

- **Do not fire. Wait until the next scheduled time:** This option enables the trigger to fire in the next round.

Parameter

This page allows you to add, edit and delete trigger parameters, as well as view existing parameter information.

Trigger Parameters

If the job requires parameters, you should enter them here. Parameters can be used by all the tasks within the job and it is useful to have a single point of maintenance. Parameters can either be hard-coded, for example User = Bill, or can be dynamic, for example, User = ${User Name##Bill}. This indicates that the triggering code should supply a value for User, which may be by prompting for "User Name", and that the default value is Bill. Refer to the Elixir Repertoire User Manual for details of how dynamic parameters can be used throughout the Elixir Repertoire suite.

Adding a trigger parameter

Complete the following steps to add a trigger parameter:

- On the Schedule > Create > Parameter page, click **Add**. The Edit Entry panel displays.

- Fill in the parameter name and value. Select the **Enabled** checkbox upon your needs.

- Click **OK**. The trigger parameter is successfully added.

Editing a trigger parameter

Complete the following steps to edit a trigger parameter:

- On the **Schedule > Create > Parameter** page, select an existing trigger. The line of the trigger information becomes gray.

- Click **Edit**. The Edit Entry Panel displays.

- Change the parameter name or value. Select or deselect the **Enabled** checkbox upon your needs.

- Click **OK**. The trigger parameter is successfully edited.

Deleting a trigger parameter

Complete the following steps to delete a trigger parameter:

- On the **Schedule > Create > Parameter** page, select an existing trigger. The line of the trigger information becomes gray.

- Click **Delete**. The parameter is successfully removed.

Logs

On the Ambience home page, you can view log details. Select an appropriate time interval from **Today**, **Yesterday**, **This Week** and **All**. Click a log that was generated during that time interval. A log viewer will open in browser, allowing you to inspect the event details.

Saved Searches

Here you can view the archived search titles. Upon clicking a saved search title, a search will start, with the saved keyword automatically filled in.

Recent Files

Here you can view the recently accessed files. Click a file and it will open in a new tab of your browser.