
JRI Publisher

Release 0.4.3

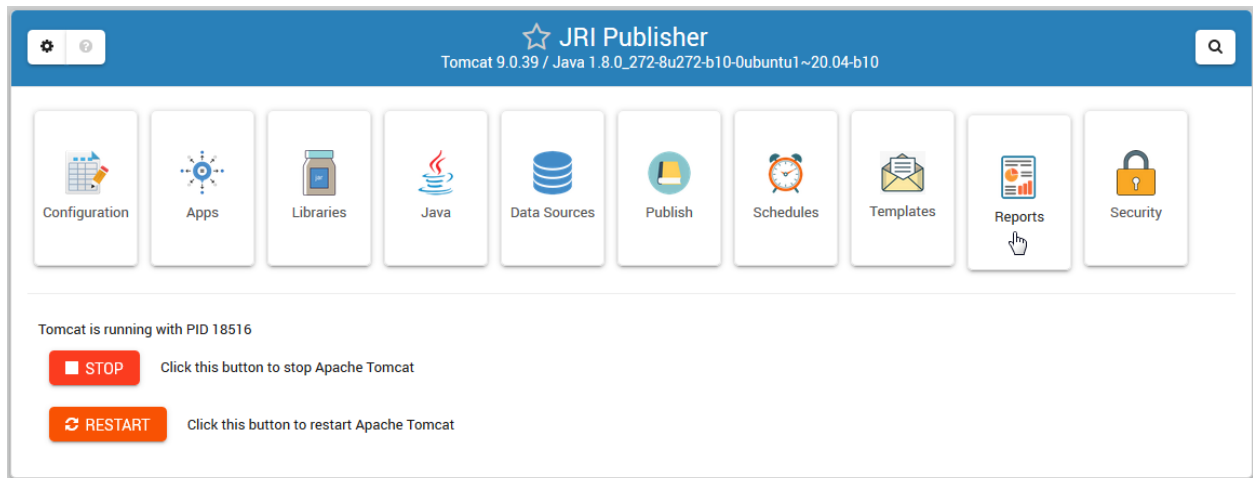
acugis

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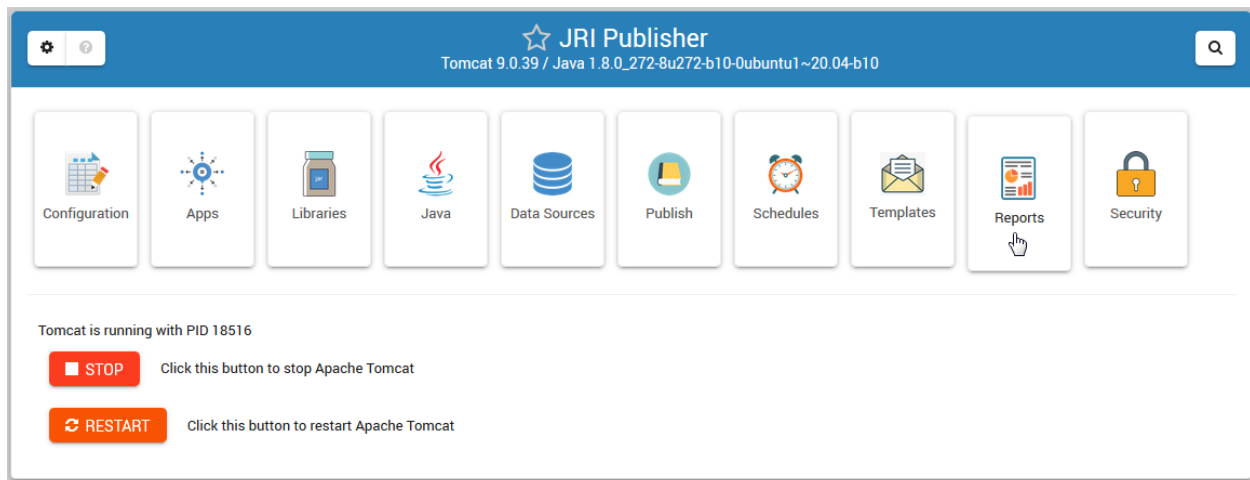


1.1 Overview

JRI Publisher is a Webmin module that installs, configures, and manages Tomcat, Java, and [JasperReportsIntegration](#). It also provides Publishing, Scheduling, Email Formatting, and Report Management.

It can be used with or without Oracle APEX.

In addition to Oracle, JRI Publisher includes one-click JNDI support for PostgreSQL, MySQL, and SQL Server.



1.2 Use Cases

- Those looking to get up and running quickly and easily with [JasperReportsIntegration](#)
- Those looking for the advanced functionality JRI Publisher adds to [JasperReportsIntegration](#) (UI, Scheduling, Email Templates, and Dashboard)

- **Non-APEX** Oracle, PostgreSQL, MySQL, and MSSQL users who want a Jasper reporting solution. While [JasperReportsIntegration](#) was designed for Oracle APEX (and can be used with Oracle APEX), JRI Publisher does **not** require APEX or installing the JRI SQL objects.

1.3 System Requirements

- CentOS 8 or
- Ubuntu 18 or 20
- Postfix
- 1 GB Ram
- 10 GB SSD

1.4 Authors

- David Ghedini
- Kaloyan Petrov

1.5 Components

[JasperReportsIntegration](#)

[Jasper Reports Library](#)

[Apache Tomcat](#)

[OpenJDK](#)

[PostgreSQL JDBC](#)

[MySQL JDBC](#)

[Microsoft SQL Server JDBC](#)

[Responsive HTML Email Templates](#)

1.6 Open Source

JRI Publisher is Free, Open Source Software.

GNU GENERAL PUBLIC LICENSE v3

CHAPTER 2

Installation

Installation can be done using the pre-installer.sh script or via GIT.

2.1 Using the Pre-Installer

On a fresh CentOS 8 or Ubuntu 18 or 20 installation, the fastest method is to use the pre-installer script:

```
1  wget https://raw.githubusercontent.com/DavidGhedini/jri-publisher/master/scripts/pre-
   ↪install.sh
2
3  chmod +x pre-install.sh
4
5  ./pre-install.sh
```

The above will install Webmin, Apache HTTPD Server, JRI Publisher module, as well as our (optional) Certbot Module for SSL.

When the script completes, you will see the message below:

```
1  /opt ~
2  Installed CertBot in /usr/share/webmin/certbot (336 kb)
3  ~
4  JRI Publisher is now installed. Go to Servers > JRI Publisher to complete_
   ↪installation
```

Note: Following above, you will need to log in to Webmin to complete installation using the install *Wizard*.

2.2 Via Git or Download

You can use Git to build module for an existing Webmin installation:

```
1 git clone https://github.com/DavidGhedini/jri-publisher
2 mv jri-publisher-master jri_publisher
3 tar -cvzf jri_publisher.wbm.gz jri_publisher/
```

Note: Following above, you will need to log in to Webmin to complete installation using the install [Wizard](#).

2.3 Postfix

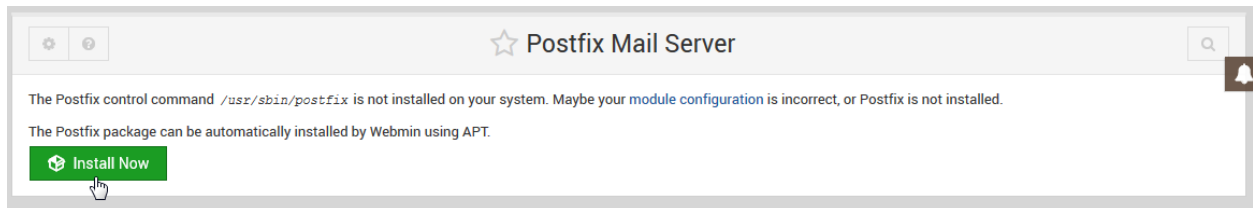
In order to use the email functionality for Report Scheduling, a working MTA is required.

If one is not already installed, the simplest to install is Postfix.

Postfix can be installed on Webmin.

Navigate to Servers > Unused Modules > Postfix Mail Server

Accept the defaults and click “Install Now” as shown below.

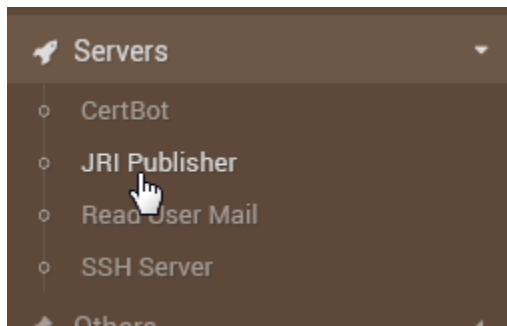


CHAPTER 3

Wizard

Once the module is installed, the Wizard is used to configure the components.

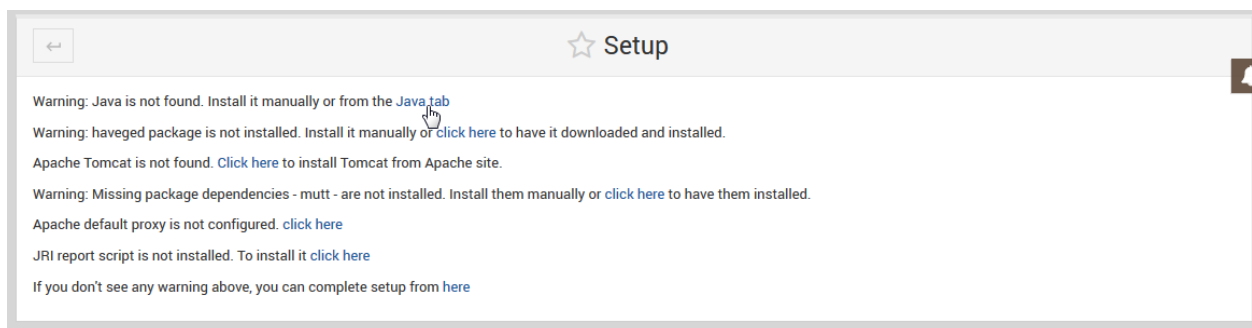
Go to Servers > JRI Publisher:



The main Wizard screen will have a link for completing each step.

While most steps are self-explanatory, we will cover Tomcat, JDK, and JRI selection below:

3.1 Install Java/JDK:



Select the JDK you wish to use. We have tested with JDK 8

The screenshot shows the 'Java' installation wizard. At the top, there's a star icon and the word 'Java'. Below it are tabs for 'Install', 'Uninstall', and 'Default'. The main heading is 'Install Java Development Kit(JDK) from distribution repository or from Oracle .tar.gz archive'. Under 'Install Options', there are two columns. The left column is 'JDK source' with options: 'OpenJDK' (selected), 'Oracle JDK', 'Local file', 'Uploaded file', and 'FTP or HTTP URL'. The right column shows '8' in a dropdown, 'Headless package' checked, and '8u241-b07' in a dropdown. At the bottom, 'Set as system default Java' is checked with the note '(using alternatives)'. An 'Install' button is at the bottom left.

JRI Publisher has been tested with OpenJDK 8 and Oracle JDK 8.

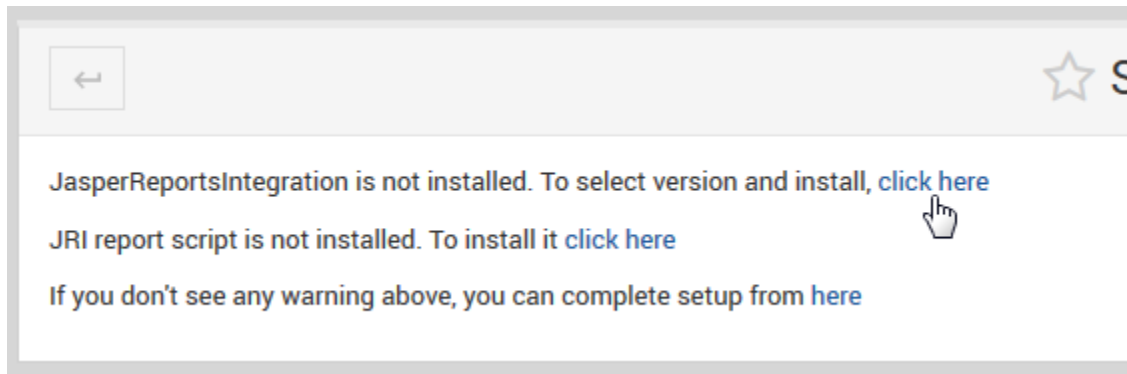
3.2 Apache Tomcat

The screenshot shows the 'Setup' wizard. At the top, there's a star icon and the word 'Setup'. Below it are instructions: 'Apache Tomcat is not found. Click here to install Tomcat from Apache site.', 'Warning: Missing package dependencies - mutt - are not installed. Install them manually or click here to have them installed.', 'Apache default proxy is not configured. click here', 'JRI report script is not installed. To install it click here', and 'If you don't see any warning above, you can complete setup from here'.

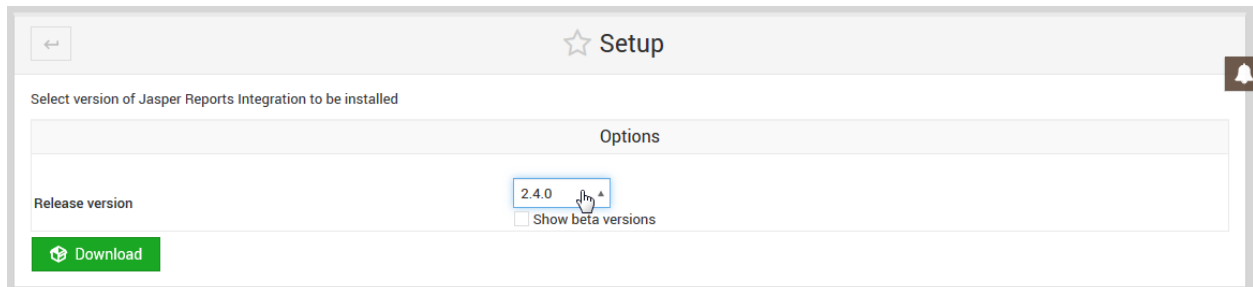
JRI Publisher has been tested with Apache Tomcat 8.x and 9.x:

The screenshot shows the 'Setup' wizard with the 'Options' section. At the top, there's a star icon and the word 'Setup'. Below it is the instruction 'Download an archive of Apache Tomcat Server from Apache website and install it'. The 'Options' section has a 'Tomcat Major Version' dropdown set to '9'. Under 'Install source', 'Apache Archive' is selected, and '9.0.31' is shown in a dropdown. Other options are 'Local file', 'Uploaded file', and 'FTP or HTTP URL'. A 'Download' button is at the bottom left.

3.3 JasperReportsIntegration



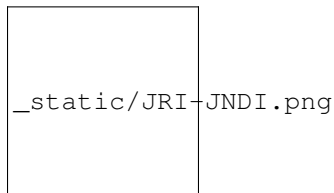
JRI Publisher has been tested with JasperReportsIntegration 2.5.1 and 2.6.2:



Note: If you wish to use a Beta version of JasperReporsIntegration, tick the “Show Beta Versions” select box

3.4 JNDI Entries

JRI Publisher allows you to add JNDI templates, and associated JARS for PostgreSQL, MySQL, and MSSQL as shown below:



The JNDI entries are optional.

Note: JNDI entries are created at `/home/tomcat/tomcat-version/conf/context.xml`

The JNDI elements added are shown below. These defaults and must be edited with your own host, username, etc. . .

```

1 <Resource name="jdbc/postgres" auth="Container" type="javax.sql.DataSource"
2   driverClassName="org.postgresql.Driver"
3   maxTotal="20" initialSize="0" minIdle="0" maxIdle="8"

```

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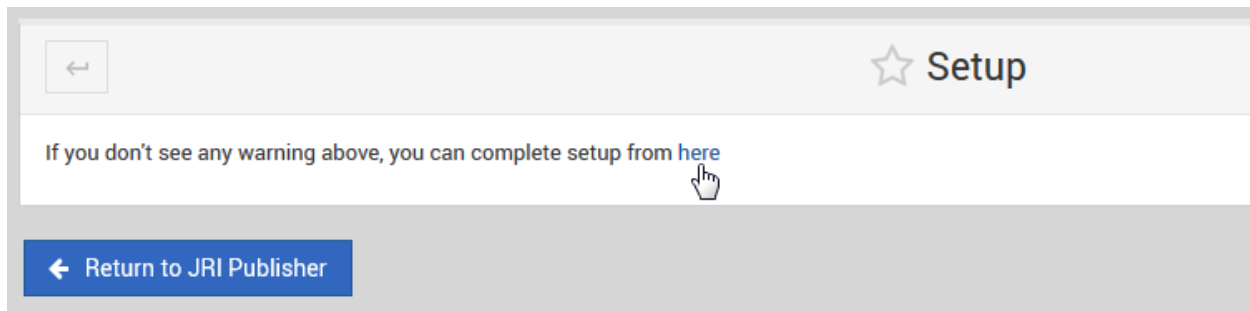
```

4  maxWaitMillis="10000" timeBetweenEvictionRunsMillis="30000"
5  minEvictableIdleTimeMillis="60000" testWhileIdle="true"
6  validationQuery="select user" maxAge="600000"
7  rollbackOnReturn="true"
8  url="jdbc:postgresql://localhost:5432/xxx"
9  username="xxx"
10 password="xxx"
11 />
12
13 <Resource name="jdbc/MySQL" auth="Container" type="javax.sql.DataSource"
14 maxTotal="100" maxIdle="30" maxWaitMillis="10000"
15 driverClassName="com.mysql.jdbc.Driver"
16 username="xxx" password="xxx" url="jdbc:mysql://localhost:3306/xxx"/>
17
18 <Resource name="jdbc/MSSQL" auth="Container" type="javax.sql.DataSource"
19 maxTotal="100" maxIdle="30" maxWaitMillis="10000"
20 driverClassName="com.microsoft.sqlserver.jdbc.SQLServerDriver"
21 username="xxx" password="xxx" url="jdbc:sqlserver://localhost:1433;databaseName=xxx
  ↪"/>

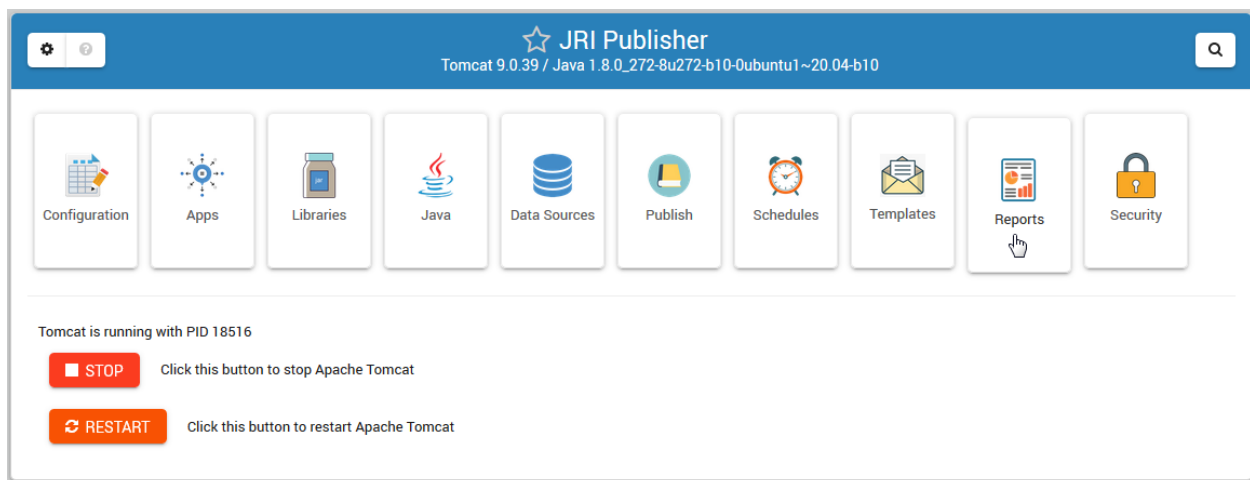
```

3.5 Completing Installation

Once each step of the Wizard is completed, the Wizard can be removed:



With the Wizard completed, your module should appear as below:



Note: The JRI application is deployed at this point. You can proceed to create data sources, publish reports, etc..

3.6 About Haveged

Haveged is an entropy generator that will provide markedly faster JVM startup times. The caveat is that it will use much higher CPU load (although for shorter duration due to decreased JVM start up time). Bear this in mind if deploying on VM with limited CPU or other critical applications.

CHAPTER 4

Webmin

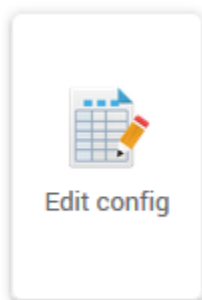
Webmin can be accessed via:

```
https://yourdomain.com:10000
```


Table of Contents

- *General*
 - *Edit Config*
 - *Apps*
 - *Libraries*
 - *Java*
 - *Proxy*

5.1 Edit Config



The Config tab is used to edit the following files:

```
application.properties  
server.xml
```

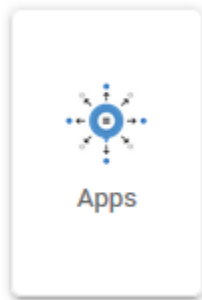
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```
web.xml  
context.xml  
tomcat-users.xml  
setenv.sh
```

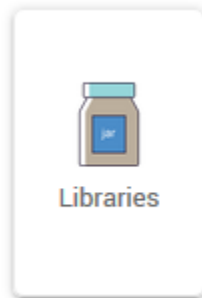
These files can, of course, be edited via the file system or VI as well.

5.2 Apps



The Apps manager allows you to deploy, undeploy, and redeploy WAR files in Apache Tomcat

5.3 Libraries



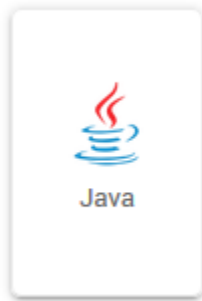
The Libraries tab is for managing Jar files under:

```
/home/tomcat/<tomcat-version>/libs
```

These files can, of course, via the file system.

Note: The advantage of the Libraries tab is that it tracks Jar files installed, This allows you to easily roll back changes.

5.4 Java



The Java tab is used during installation as well as for updating of JDK.

It can also be used to un-install the selected JDK and replace it with a new version.

Note: When installing or removing, there is an option to set as System default.

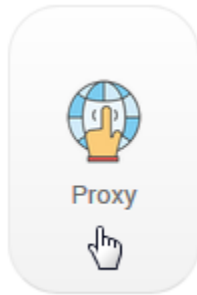
5.5 Proxy

By default, JRI Publisher enables a Proxy for Apache and maps port 8080 to 80.

This enables you to reach reports via <http://yourdomain.com/JasperReportsIntegration> without need to add the 8080 port.

Warning: While the proxy is convenient for development or intranet use, in production you should remove the proxy. To remove the Proxy, follow the steps below:

To edit, remove, or update Proxies, click on the Proxy tab as shown below.



Select the default Proxy of / as shown below, and click Remove.

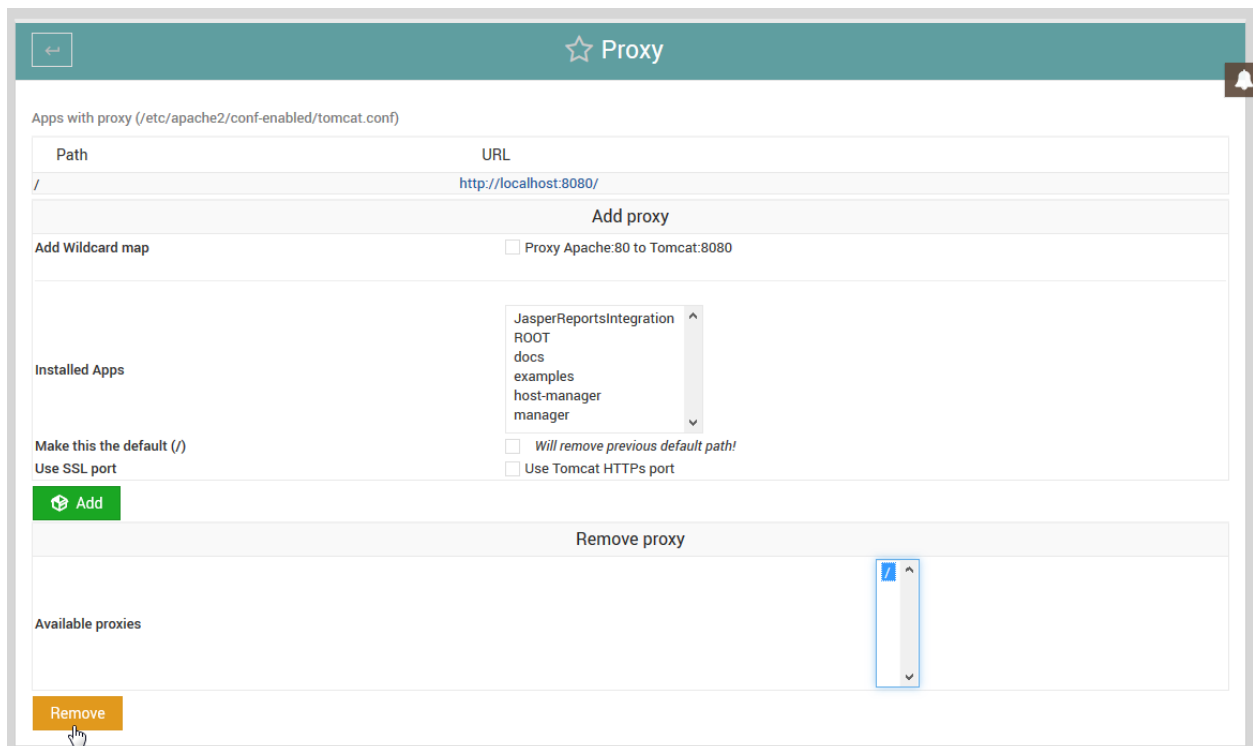


Table of Contents

- *Apache Tomcat*
 - *Layout*
 - *JRI File Locations*
 - *Starting and Stopping*
 - *Init Script*
 - *Version*

6.1 Layout

For installations done using the Wizard, the Apache Tomcat (CATALINA) home directory is:

```
/home/tomcat/apache-tomcat-v/
```

Where apache-tomcat-v is the version you chose to install.

The CATALINA_HOME variable is set both in the Tomcat init script as well as setenv.sh files.

6.2 JRI File Locations

For JasperReportsIntegration layout and customization options, please see the Jasper section below.

6.3 Starting and Stopping

There are two ways to start/stop/restart Tomcat.

1. Via Module, using the Stop/Start/Restart buttons as shown below:
2. Via SSH, using the following commands

```
/etc/init.d/tomcat { start | stop | restart | status }
```

6.4 Init Script

The Tomcat init script is located in /etc/init.d and has the following content.

```
#!/bin/bash
### BEGIN INIT INFO
# Provides:          tomcat
# Required-Start:    $network
# Required-Stop:     $network
# Default-Start:     2 3 4 5
# Default-Stop:      0 1 6
# Short-Description: Start/Stop Tomcat server
### END INIT INFO

# Source function library.
. /etc/environment;      #Catalina variables
. $CATALINA_HOME/bin/setenv.sh

RETVAL=$?

function start() {
echo "Starting Tomcat"
/bin/su - tomcat $CATALINA_HOME/bin/startup.sh
RETVAL=$?
}

function stop() {
echo "Stopping Tomcat"
/bin/su - tomcat -c "$CATALINA_HOME/bin/shutdown.sh 60 -force"
RETVAL=$?
}

case "$1" in
start)
    start;
;;
stop)
    stop;
;;
restart)
    echo "Restarting Tomcat"
    stop;
    start;
;;
```

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```
41     status)
42
43     if [ -f "${CATALINA_PID}" ]; then
44         TOMCAT_PID=$(cat "${CATALINA_PID}")
45         echo "Tomcat is running with PID ${TOMCAT_PID}";
46         RETVAL=1
47     else
48         echo "Tomcat is not running";
49         RETVAL=0
50     fi
51     ;;
52 *)
53     echo $"Usage: $0 {start|stop|restart|status}"
54     exit 1
55 ;;
56 esac
57 exit $RETVAL
```

6.5 Version

JRI Publisher has been tested with Tomcat 9.x

Table of Contents

- *Data Sources*
 - *Data Source Types*
 - *Working with Data Sources*

7.1 Data Source Types

Data Sources are used to connect your Oracle database.

JRI Publisher supports both JDBC and JNDI Data Source types included with JRI.

JDBC Data Sources are stored in a flat file at:

```
${CATALINA_HOME}/jasper_reports/conf/
```

JDBC Data Sources have the following form:

```
#=====
# JDBC datasource configuration
# http://www.orafaq.com/wiki/JDBC#Thin_driver
# additional jdbc configurations, please uncomment
#=====
[datasource:test]
name=test
url=jdbc:oracle:thin:@127.0.0.1:1521:XE
username=my_oracle_user
password=my_oracle_user_pwd
```

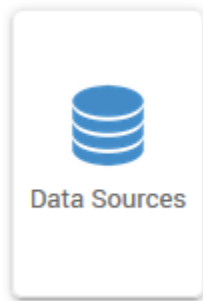
JNDI Data Sources are stored in a database and referenced in the application server rather than stored in a flat file as with JDBC Data Sources.

JNDI Data Sources have the following form:

```
#####
# Native JNDI datasource, to be configured in the application server
# name: jndi_test
#####
[datasource:jndi_test]
type=jndi
name=jndi_test
```

7.2 Working with Data Sources

Data Sources can be added, edited and removed from the JRI Publisher Module via the Data Source tab, as shown below



The default view on clicking the tab is the List view, as shown below.

Data Sources					
<div> Add Remove List </div>					
List datasource entries from conf/application.properties					
Datasource	Type	Name	URL	Username	Password
default	jdbc	default	jdbc:oracle:thin:@127.0.0.1:1521:xe	my_oracle_user	my_oracle_user_pwd

To add a Data Source, click on the Add tab at top.

Select the desired Data Source type and enter the required information as shown below. Then click the Add button:

← Data Sources

Add Remove List

Add entries in conf/application.properties

Add options

Type

Name

URL

Username

Password

ADD

On the main Data Source tab we can confirm the Data Source has been added:


← Data Sources

Add Remove List

List datasource entries from conf/application.properties

Datasource	Type	Name	URL	Username	Password
Demo DS	jdbc	Demo DS	jdbc:oracle:thin:@domain.com:1521:orc	Scott	Tiger
default	jdbc	default	jdbc:oracle:thin:@127.0.0.1:1521:xe	my_oracle_user	my_oracle_user_pwd

To remove a Data Source, click on the Remove tab and select the Data Source you wish to remove using the drop-down selector as shown below:

 ☆ Data Sources

Add Remove List

Remove entries from conf/application.properties

Datasource

REMOVE

Remove options

Demo DS ▲

Demo DS

default

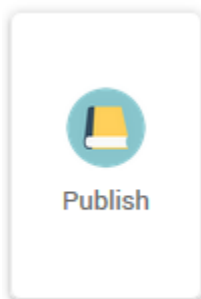
Publish

Table of Contents

- *Publish*
 - *Publishing Reports*
 - *Creating Directories*
 - *Options*

8.1 Publishing Reports

To publish a report, click the Publish tab as shown below:



This will open the screen below.

← Publish

Upload

Upload a file to \$CATALINA_HOME/jasper_reports/reports/. To create a new directory, select the parent dir, and append name manually in 'Destination directory'

Publish options

Destination directory /

Source file

☒ Local file
☐ Uploaded file
☐ FTP or HTTP URL

☐ Extract if upload is archive (.zip)
☐ Overwrite existing files

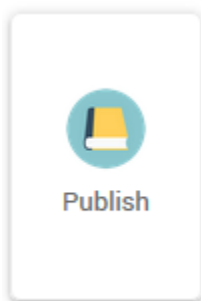
PUBLISH

Note: The file browser location is set to /home/tomcat/apache-tomcat-v/jasper_reports/reports

Select the directory you wish to publish to and then select Upload to upload both your .jspx and .jasper files. You would also include any support files, such as image files.

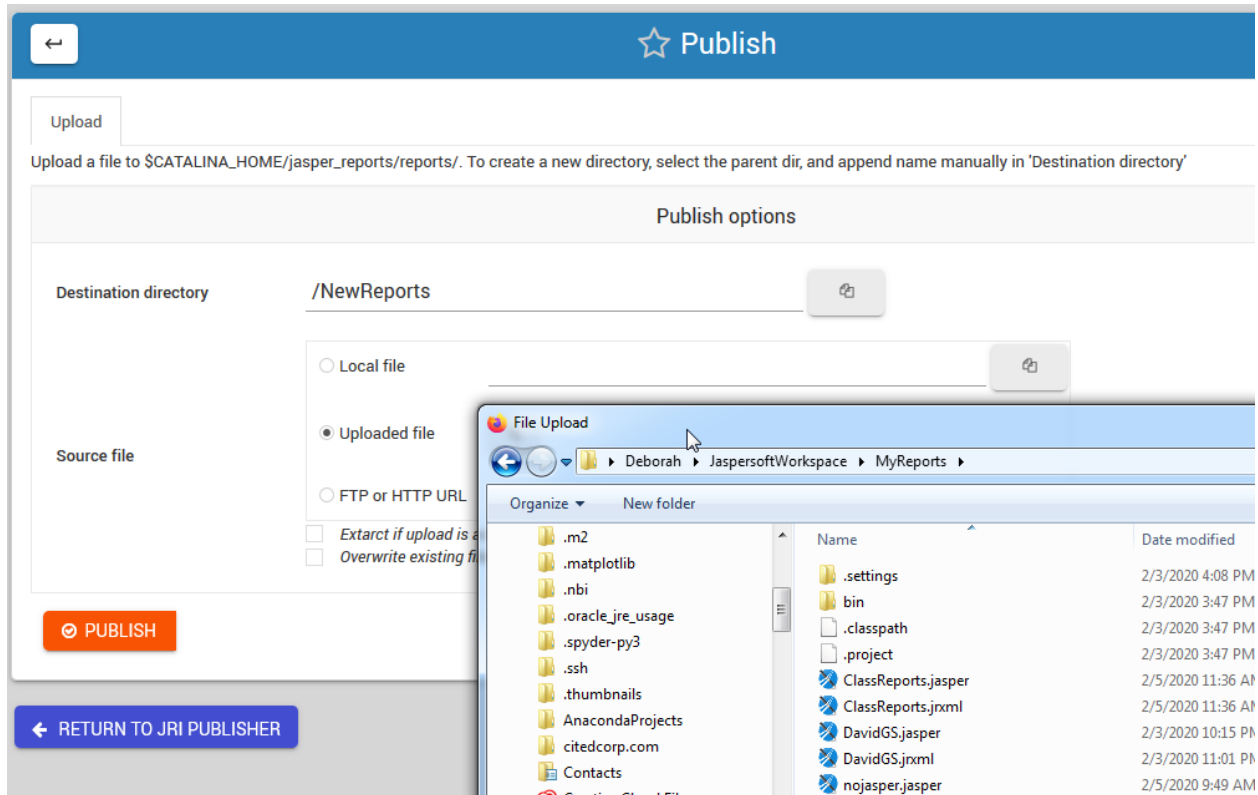
8.2 Creating Directories

To publish a report, click the Publish tab as shown below.

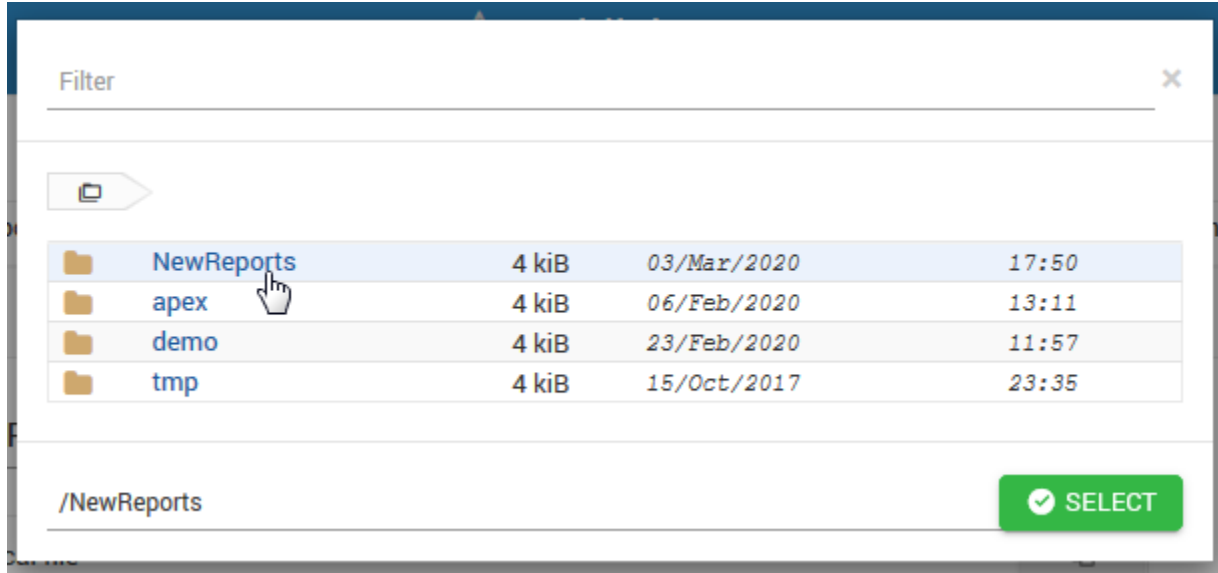


Enter the name of the directory you wish to create as show below. This will create a new directory, NewReports, under the main reports directory.

Once text is entered, upload any files you wish to.



Note that once a Directory has been created, it will be added to the available directories for subsequent publications:



8.3 Options

There are four options for uploading files.

1. Local File - this is a file already on the device.
2. Uploaded File - upload from your local machine.

3. HTTP or FTP URL - obtain files via HTTP or FTP

Additionally, select the options to upload zip archives as well as to over-write any existing files (for when you publish updates to your reports).

☐ FTP or HTTP URL

☐ *Extarct if upload is archive (.zip)*

☐ *Overwrite existing files*

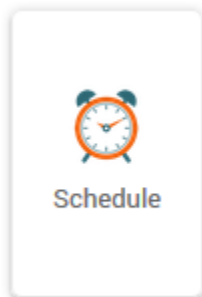


Table of Contents

- *Schedule*
 - *Scheduling Reports*
 - *Scheduling Options*
 - *Optional Params*
 - *Email Templates*
 - *URL Parameters*
 - *Additional Examples*

9.1 Scheduling Reports

Reports can be scheduled with a variety of options via the Schedule tab as shown below:



On the main Schedule page, click the Add tab to open the Create Schedule page as shown below.

←

☆ Schedule

Add

View

Fill in parameters for the new JRI Schedule

Parameters

CRON string

daily ▾

* /30 * * * *

Cron helper

Name

NewReports/StateInfo ▾

Format

pdf ▾

Datasource

Demo DS ▾

Filename

State-Info.pdf

Email

user@company.com

☐ Don't send email

Optional Parameters

ADD

9.2 Scheduling Options

The Schedule module offers the following options.

Execute:

```
Options:
now
custom
hourly
weekly
monthly
```

now: This will run the report immediately, with no subsequent runs.

custom: This option allows you to enter a custom cron for running the report

hourly, weekly, and monthly are as stated.

Name:

Options:
Drop-down **list** of **all** available reports

The Name field will display a list of all available reports. Above, we have select the NewReports/ClassReports we created earlier.

Format:

Options:
csv
docx
html
html2
jxl
pdf
ptx
rtf
xls
xlsx

Select the desired output format for the report.

Data Source:

Options:
Displays a drop-down **list** of Data Sources you have created.

Select the desired Data Source for the report.

File Name:

Options:
Enter the desired file name WITH Extension.
Example: ClassReports.pdf

Enter the desired Data Source for the report.

Email:

Options:
Enter email address **or** comma separated **list** of addresses **for** delivery.

Enter the desired Data Source for the report.

Note: If you do not wish to email the report, tick the “Don’t send email” box. This will run the report and save it to disk on the server. The report can be retrived via disk or downloaded via Reports tab.

9.3 Optional Params

The Optional Params tab allows you to:

1. Set email subject
2. Set email message

3. Use Email HTML Template
4. Add report parameters

9.4 Email Templates

You can use HTML Email Templates you created by selecting the desired template from the drop-down list as shown below.

Optional Parameters

Email Subject

State Report

Email Body

Email Template

MyTemplate.html

☒ Use template

Additional URL variables

=

SAVE

CLEAR

Note: Be sure to check the “Use template” box when using an HTML Template.

9.5 URL Parameters

To add a Report Parameter to the report URL, enter the variable in the left box and the value in the right box as shown below:

StateID

= 47

SAVE

CLEAR

Click the Save button.

Optional Parameters

Custom parameters

StateID=47

Email Subject

State Report

Email Body

Please find the daily State Report attached.

SAVE CLEAR

ADD


You can add as many parameters as you wish to.

Finally, click the Creat button to schedule the report.

9.6 Additional Examples

Below are some additional examples.

Send report every Tuesday at 1500 (3 PM)

 Schedule

AddView

Fill in parameters for the new JRI Schedule

Parameters

CRON string

custom ▼ 0 * * * TUE [Cron helper](#)

Name

NewReports/StateInfo ▼

Format

docx ▼

Datasource

Demo DS ▼


Filename

State-Info.docx


Email

user@company.com ☐ Don't send email

► Optional Parameters

 ADD

Send report every hour without email delivery

 Schedule

AddView

Fill in parameters for the new JRI Schedule

Parameters

CRON string

custom

*/30 * * * *

[Cron helper](#)

Name

NewReports/StateInfo

Format

CSV

Datasource

Demo DS


Filename

State-Info.csv

Email

☐ Don't send email


Optional Parameters

 ADD

Send report weekly with StudentID = 51

9.6. Additional Examples

37

 Schedule

AddView

Fill in parameters for the new JRI Schedule

Parameters

CRON string

weekly*/30 * * * *Cron helper

Name

NewReports/StateInfo

Format

pptx

Datasource

Demo DS

Filename

State-Info.pptx

Email

user@company.com

☐ Don't send email

Optional Parameters

Custom parameters

StateID=51

=


SAVECLEAR


Email Subject

Weekly State Report

Email Body

Please find the weekly State PPTX Report attached.

 ADD



CHAPTER 10

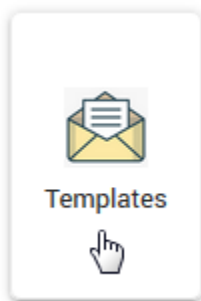
Email Templates

Table of Contents

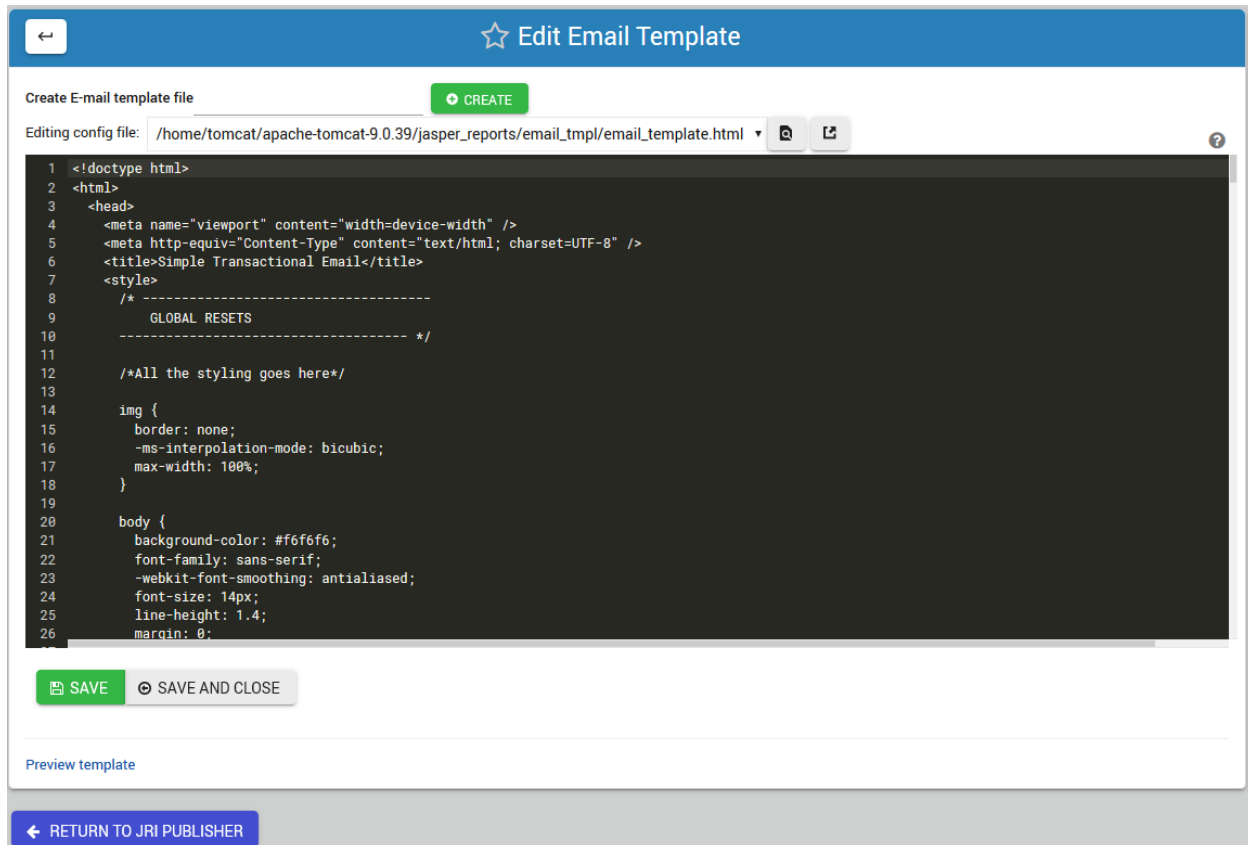
- *Email Templates*
 - *Overview*
 - *Template Layout*
 - *Create a Template*
 - *Using Templates*

10.1 Overview

Click the Templates tab to open the Email Templates.



This will open the screen below.



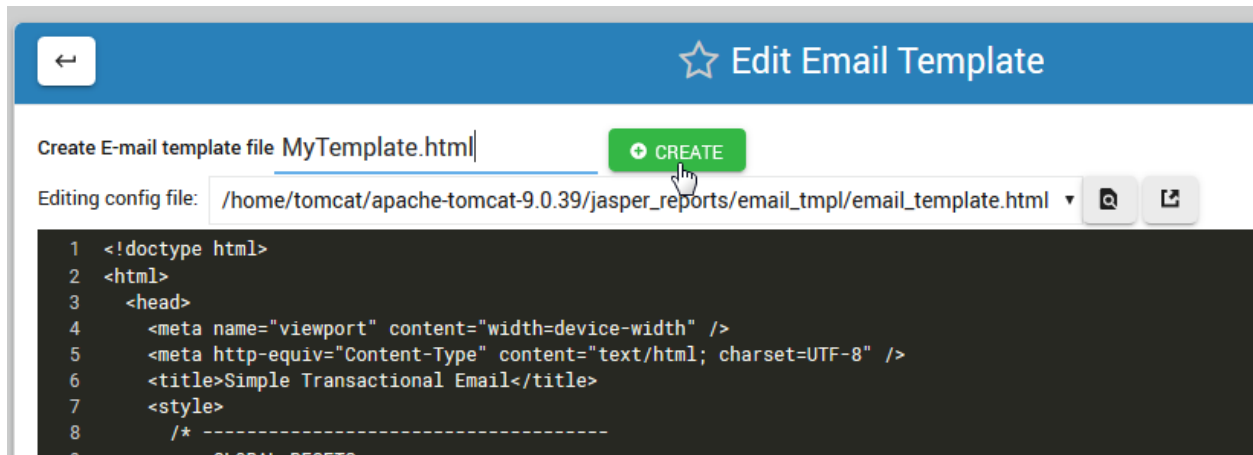
10.2 Template Layout

The default template is Lee Munroe's Responsive Email Template:

<https://github.com/leemunroe/responsive-html-email-template>

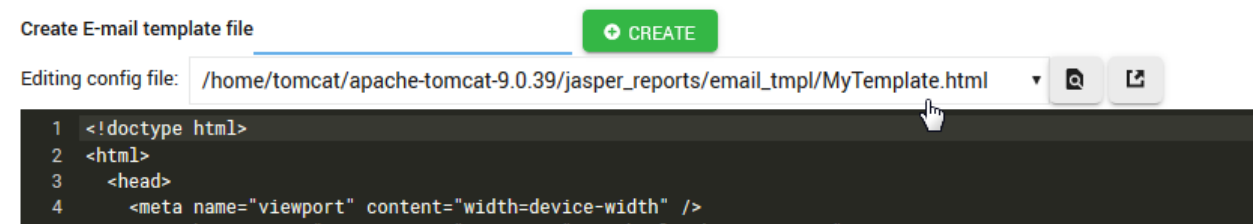
10.3 Create a Template

To create a new Template, enter the name of the new template and clicking Create as shown below:

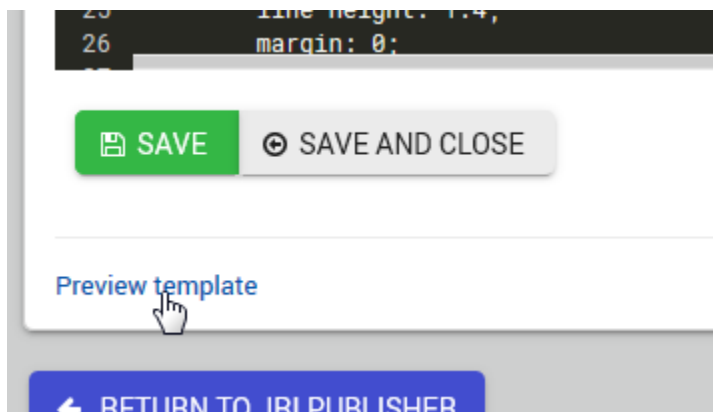


Note: You must include the .html file extension in the name of the template you create.

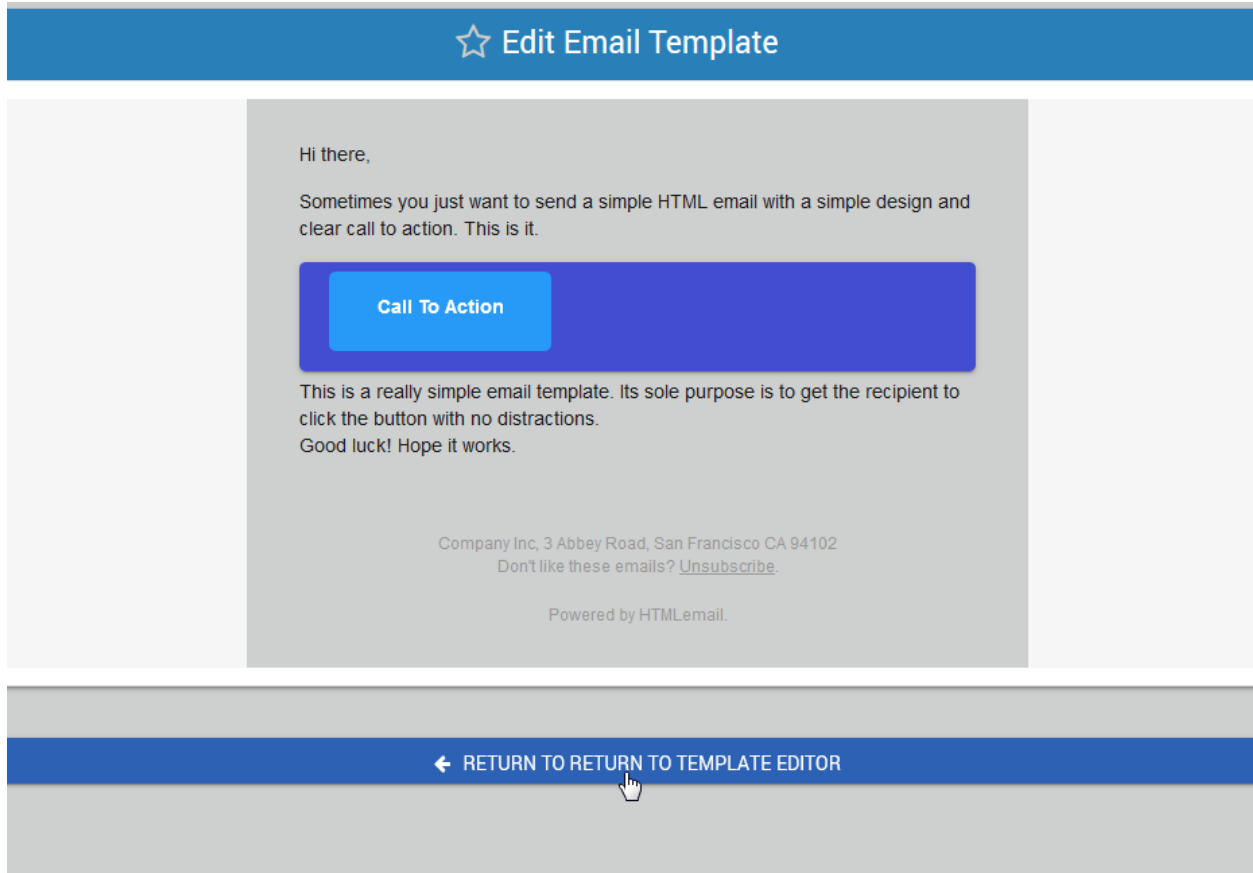
The new template you created will now will be loaded into the editor as shown below:



Perform your edits and click the Preview Template link as shown below:



To return to the Editor, click the return link as shown below:



Note: The Preview Template function is basic and it is best to run your HTML code to confirm and check your work.

Once you are happy with the template, click the Save button.

Link to edit the Schedule for the report

10.4 Using Templates

Templates are assigned by you during schedule creation.

You can use a single template on multiple schedules.

CHAPTER 11

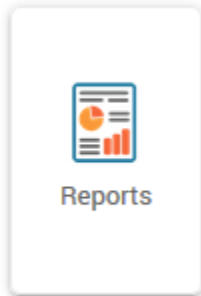
Report Dashboard

Table of Contents

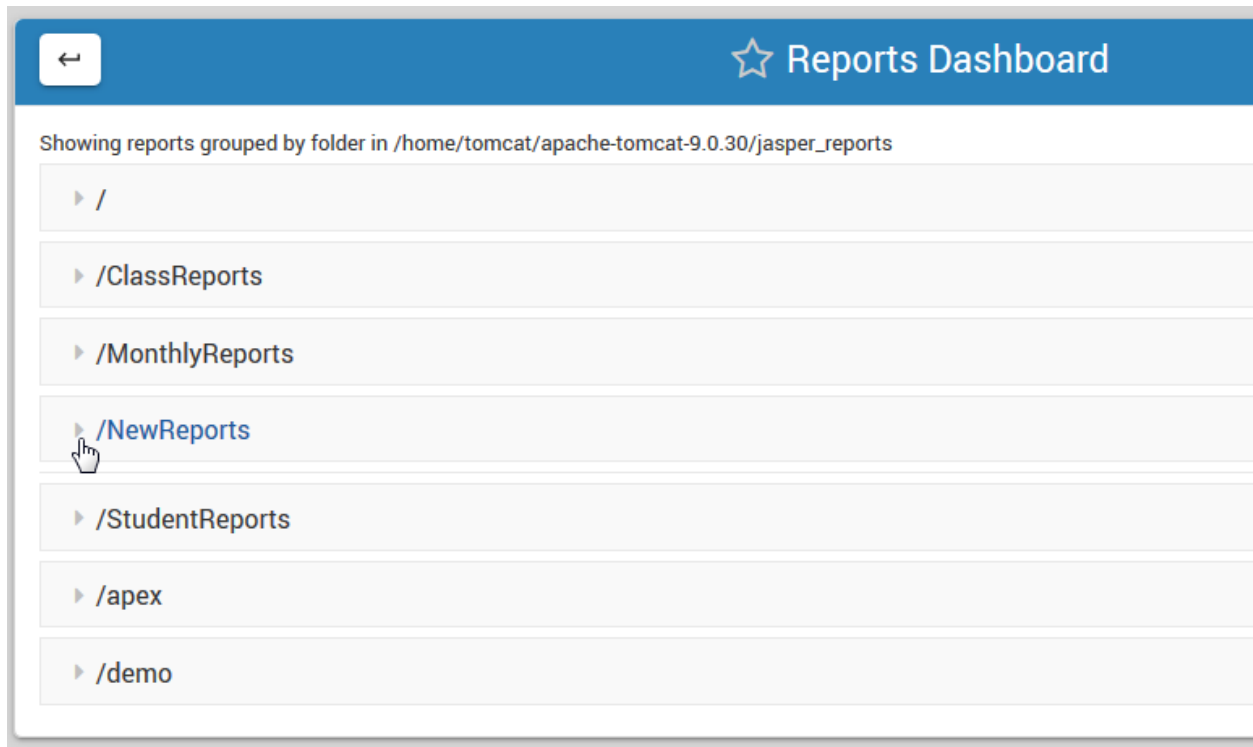
- *Report Dashboard*
 - *Overview*
 - *Dashboard Layout*
 - *Dashboard Functions*
 - *No Schedule*

11.1 Overview

Click the Reports tab to open the Reports Dashboard.



This will open the screen below.



As we can see above, the creation of our NewReports Directory has been added to the directory structure. This is true for all directories and sub directories added.

11.2 Dashboard Layout

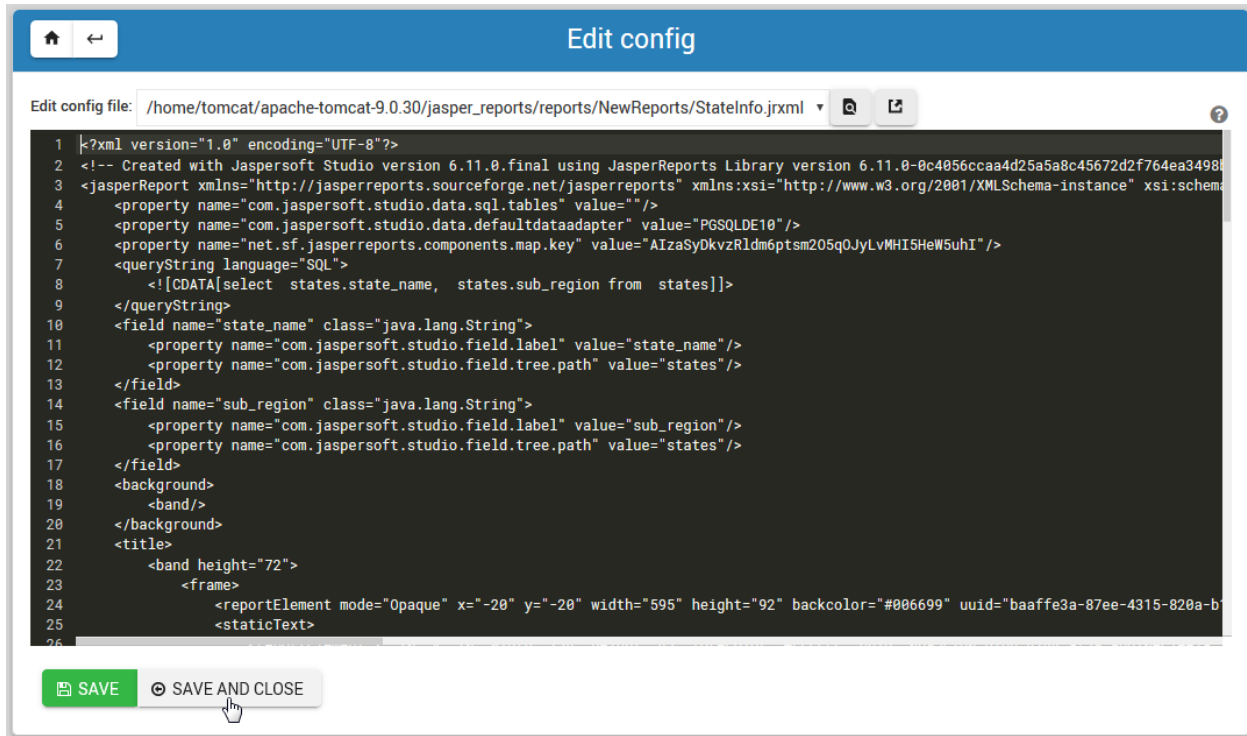
Expanding the NewReports directory, we see below:

▼ /NewReports									
Name	Actions	SchID	Cron	Format	Datasource	Output	Email	Optional Params	
StateInfo		12	@daily	pdf	Demo DS	Browse	user@company.com	StateID=51	

11.3 Dashboard Functions

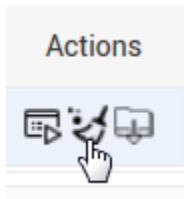
Name:

Clicking on the report name will open the .jrxml file for editing, as shown below:

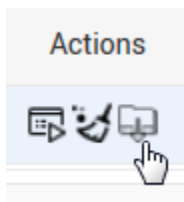
**Actions:**

Run: Runs the report on demand.

Clean: Opens a new window to delete any reports you may wish to delete



Download: Opens a new window to download selected report(s) in .zip or .bgz format.

**SchID:**

Link to edit the Schedule for the report

Cron:

Displays the cron in use for the Schedule

Format:

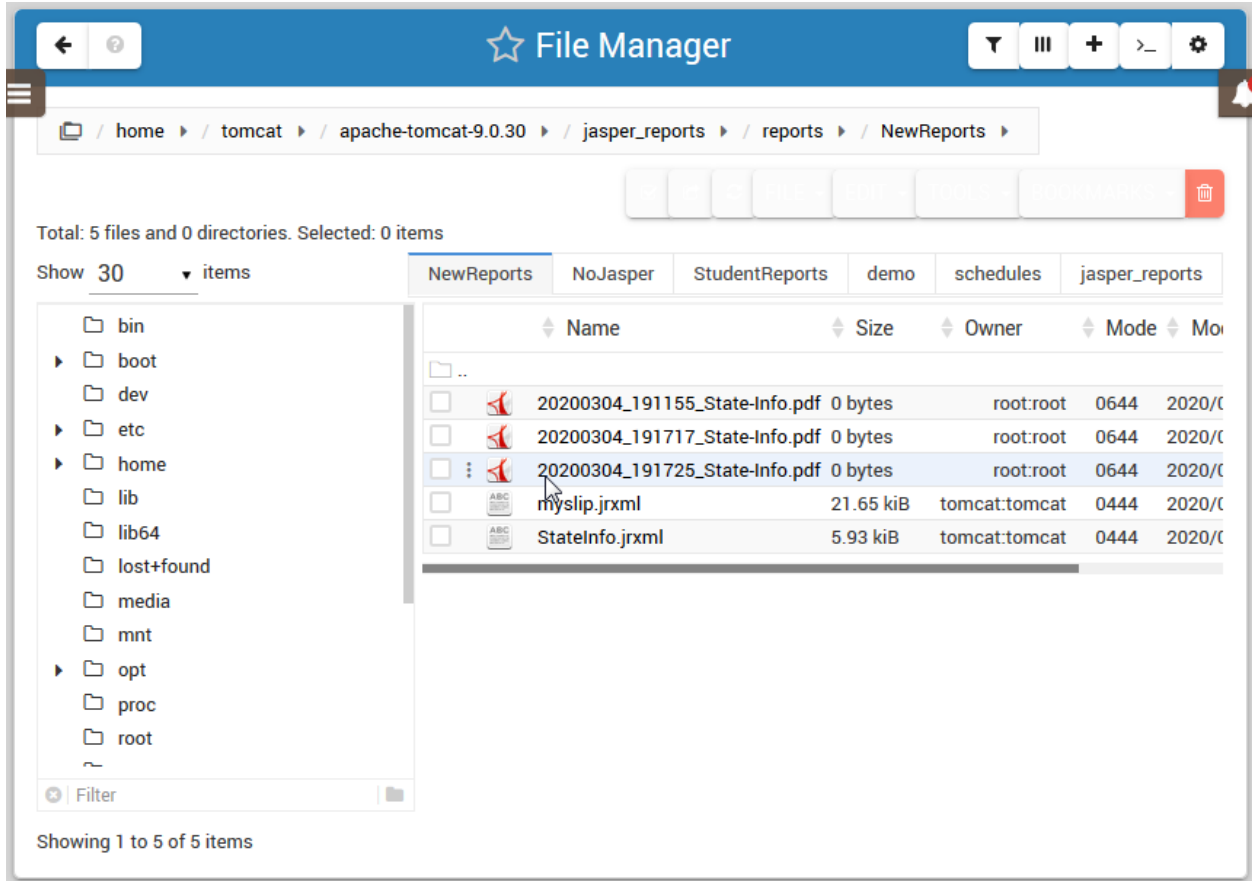
Displays the report format (e.g. pdf, csv, etc. ...)

Data Source:

Displays report Data Source

Output:

Clicking the Browse button will open the report directory in the File Manager as shown below:

**Email:**

Displays report email recipient(s).


Optional Params:

Displays any URL Parameters the report is using.

11.4 No Schedule

Note: Any report that does not have a schedule will show the Scheduler icon in the Actions menu. To add a Schedule, click the icon as shown below.

▼ /NewReports

Name	Actions	SchlD	Cron	Format	Datasource	Out
StateInfo						

CHAPTER 12

Security Monitor

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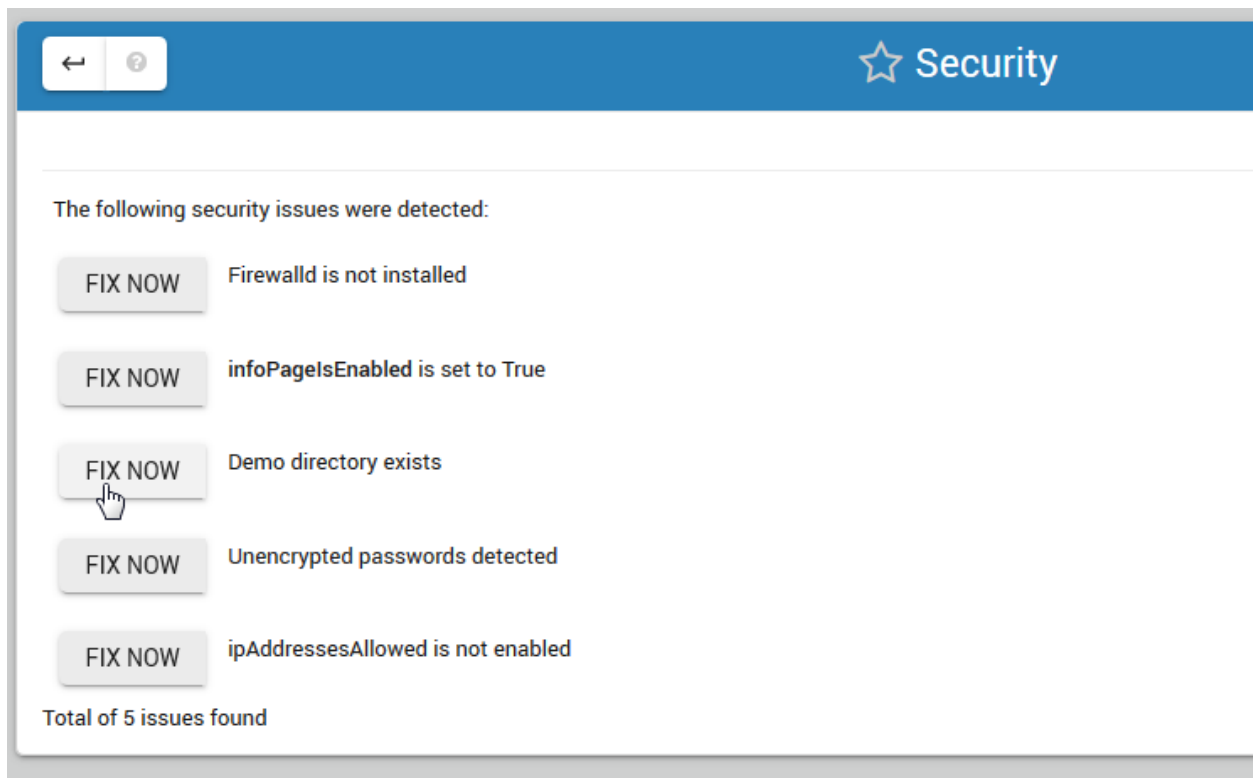
- *Security Monitor*
 - *Overview*
 - *Checks*
 - *Fixing Security Issues*
 - *Firewalld*
 - *InfoPage*
 - *Demo Directory*
 - *Password Encryption*
 - *ipAddressesAllowed*

12.1 Overview

Click the Security tab to open the Security Checks page.



This will open the screen below.



12.2 Checks

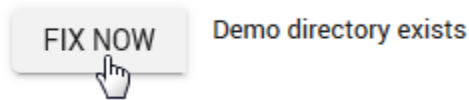
The security page evaluates five checks and provides fixes if check fails.

- Firewalld status
- InfoPage status
- Demo directory status
- Password encryption status
- ipAddressesAllowed status

12.3 Fixing Security Issues

Whether or not you elect to fix an issue is up to you.

To fix a security issue, simply click the “Fix Now” button as shown.



12.4 Firewall

It's important to limit the IPs that have access to your JRI instance to the database(s) being served.

12.5 InfoPage

The info page shows important information and should be disabled.

Clicking the Fix Now button will disable the page in your application.properties file.

12.6 Demo Directory

The demo directory should be deleted in production environments.

12.7 Password Encryption

Clicking the button will encrypt all un-encrypted passwords in your application.properties file.

Whenever a new password is added via a Data Source, you can encrypt via this location.

Note: You may see an error displayed: ERROR StatusLogger No log4j2 configuration file found. Using default configuration... The error is due to configuration and does not effect encryption.

12.8 ipAddressesAllowed

Restrict access to JRI based on IP address

Note: Each time a Data Source password is added via the Data Source tab, you will see the status for password encryption change.

Please see <https://github.com/daust/JasperReportsIntegration#security> for additional information.

Table of Contents

- *Jasper*
 - *JasperReportsIntegration*
 - *File Locations*
 - *Gen Script*
 - *JRI Module Files*
 - *Version*
 - *Schedule Files*
 - *MUTT Parameters*

13.1 JasperReportsIntegration

The information below pertains to the deployment of JasperReportsIntegration in JRI Publisher. For full documentation of JasperReportsIntegration, please see http://www.opal-consulting.de/downloads/free_tools/JasperReportsIntegration/

13.2 File Locations

On installation, the JRI files are saved to:

```
/home/tomcat/apache-tomcat-v/jasper_reports
```

Here, you will find the following:

```

/home/tomcat/apache-tomcat-v/jasper_reports/conf
/home/tomcat/apache-tomcat-v/jasper_reports/schedules
/home/tomcat/apache-tomcat-v/jasper_reports/reports
/home/tomcat/apache-tomcat-v/jasper_reports/logs

```

**** reports **** contains your Jasper report files.

**** conf **** contains the application.properties file

**** schedules **** contains the .sh files for the Scheduler

13.3 Gen Script

The Report Scheduler script is located under /etc/init.d/gen_jri_report.sh and can be customized to suit and extend your requirements.

```

1  #!/bin/bash -e
2
3  source /etc/environment
4
5  JRI_HOME="${CATALINA_HOME}/jasper_reports/"
6
7  #source the report environment
8  source "${JRI_HOME}/schedules/${1}_env.sh"
9
10 DONT_MAIL="${2}"
11
12 #set who is sending the mail
13 export EMAIL='root@localhost'
14 REPORT_FOLDER=$(dirname ${REP_ID})
15
16 #encode the / in report id
17 REP_ID=$(echo "${REP_ID}" | sed 's/\//%2F/g')
18
19 if [ "${OPT_PARAMS}" ]; then
20   OPT_PARAMS="${OPT_PARAMS}"
21 fi
22
23 URL="http://localhost:8080/JasperReportsIntegration/report?_repName=${REP_ID}&_
↪repFormat=${REP_FORMAT}&_dataSource=${REP_DATASOURCE}&_outFilename=${REP_FILE}$
↪{OPT_PARAMS}"
24
25 TSTAMP=$(date '+%Y%m%d_%H%M%S')
26 REP_FILEPATH="${JRI_HOME}/reports/${REPORT_FOLDER}/${TSTAMP}_${REP_FILE}"
27
28 wget -O "${REP_FILEPATH}" "${URL}"
29 if [ $? -ne 0 ]; then
30   rm -f "${REP_FILEPATH}"
31 fi

```

13.4 JRI Module Files

On installation, the JRI Module files are saved to:

```
/usr/libexec/webmin/jri_publisher (CentOS)
/usr/share/webmin/jri_publisher (Ubuntu)
```

The JRI Module configuration files are located at /etc/webmin/jri_publisher:

```
/etc/webmin/jri_publisher/config
/etc/webmin/jri_publisher/openjdk_version_cache
/etc/webmin/jri_publisher/oracle_version_cache
```

reports contains your Jasper report files.

conf contains the application.properties file

schedules contains the .sh files for the Scheduler

13.5 Version

The JasperReportsIntegration version is the one selected while using the install Wizard.

13.6 Schedule Files

Each schedule creates a numeric file under:

```
/home/tomcat/apache-tomcat-version/jasper_reports/schedules
```

The file has the following structure:

```
1 REP_FORMAT=pdf
2 REP_ID=NewReports/StateInfo
3 OPT_PARAMS="StateID=51"
4 REP_DATASOURCE="Demo DS"
5 EMAIL_SUBJ="State Report"
6 REP_FILE=State-Info.pdf
7 EMAIL_BODY="Please find the State Reports attached."
8 SCH_ID=12
9 RECP_EMAIL=user@company.com
```

The above parameters are passed to the Jasper url as well as to MUTT for email delivery.

13.7 MUTT Parameters

JRI Publisher uses MUTT in conjunction with Postfix to deliver reports via email.

The final input has the form:

```
./etc/init.d/gen_jri_report.sh schedules.{1}
```

Where schedules.{1} is passed to gen_jri_report.sh

CHAPTER 14

CSS

The screenshots in the documentation use a Material Design CSS Extension we created.

The Material Design CSS, as well as a logo, are added during installation.

To remove these, simply delete below from `/etc/webmin/authentic-theme/` directory

`style.css`

`logo_welcome.png`

In addition to making the screens a bit more vivid, it also increases the size of objects on the page as well as padding, making it easier to work with

CHAPTER 15

Security

You can use the [Security Monitor](#) on your installation to address common security issues.

The above is only meant to address a subset of JRI security areas.

It does not address basic server security such as changing ports, disabling root access, etc. . .

Note: All Tomcat and JRI services are owned and run by user tomcat with minimal privileges.

CHAPTER 16

Calling Reports

Table of Contents

- *Calling Reports*
 - *Calling Reports*
 - *Cautions*
 - *Example*
 - *Blocking Port*

16.1 Calling Reports

The information below is a quick start guide to calling reports from non-APEX environments.

16.2 Cautions

It is important that the following be observed:

Access to the JRI installation via 8080 must be limited to the web server.

Do **not** display the report URL **in any** way

16.3 Example

Below is a basic example of calling Jasper reports via a drop-down using PHP.

The drop-down contains the `_reportName` parameter, which is passed to the PHP code.

The code then parses the `_reportName` parameter to create the url.

```

1      <?php
2
3
4      if (isset($_GET['report_name'])) {
5
6          $data = array(
7              "_repName"=> $_GET['report_name'],
8              "_repFormat"=>"pdf",
9              "_dataSource"=>"datasource",
10             "_outFilename"=>"report.pdf"
11         );
12
13         $file = 'http://123.4.5.6:8080/JasperReportsIntegration/report?' . http_build_
↪query($data);
14
15         header("Pragma: public");
16         header("Expires: 0");
17         header("Content-Type: application/octet-stream");
18         header("Cache-Control: must-revalidate, post-check=0, pre-check=0");
19         header("Cache-Control: public");
20         header("Content-Description: File Transfer");
21         header('Content-Disposition: attachment; filename="'. $data['_outFilename'] . '"
↪');
22         header("Content-Transfer-Encoding: binary\n");
23
24         readfile($file);
25         exit();
26     }
27     ?>
28
29     <!DOCTYPE html>
30     <html>
31         <body>
32             Report Form
33             <br>
34             <form action="" method="get">
35                 <select name="report_name">
36                     <option value="student">Student Reports</option>
37                     <option value="teacher">Teacher Reports</option>
38                     <option value="class">Class Reports</option>
39                     <option value="grade">Grade Reports</option>
40                 </select>
41                 <button type="submit">Submit</button>
42             </form>
43
44
45         </body>
46     </html>

```

16.4 Blocking Port

Be certain that access to port 8080/8443 is open only to the web server.

17.1 Contributing

We welcome all contributors.

While any code contributions are welcome, areas that could use improvement are:

- Providing feedback
- Email Formatting
- iReport Library Updates

17.2 Issues

If you've found a bug, let us know.

17.3 Pull Requests

Create a fork of our repo.

To submit a pull request for a **new feature**:

1. Run the tests. Every pull request for a new feature should have an accompanying unit test and docs changes.
2. Create a new branch off of the *master* branch for your feature.
3. Add a test (or multiple tests) for your feature.
4. Add your new feature.
5. Push to your fork and submit the pull request.

To submit a **bug fix**:

1. Create a new branch off of the *master* branch.
2. Add a test that demonstrates the bug.
3. Make the test pass.
4. Push to your fork and submit the pull request!

To submit a **documentation fix**:

1. Create a new branch off of the *master* branch.
2. Add your documentation fixes (no tests required).
3. Push to your fork and submit the pull request!

CHAPTER 18

Commercial Support

Commercial Support is available via [Cited, Inc.](#)

In addition to JRI Publisher, Cited, Inc. also offers a multi-user edition written in PHP.

CHAPTER 19

License

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c) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.

d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

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