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# JRI Publisher

*Release 0.4.3*

**acugis**

**Jul 18, 2023**

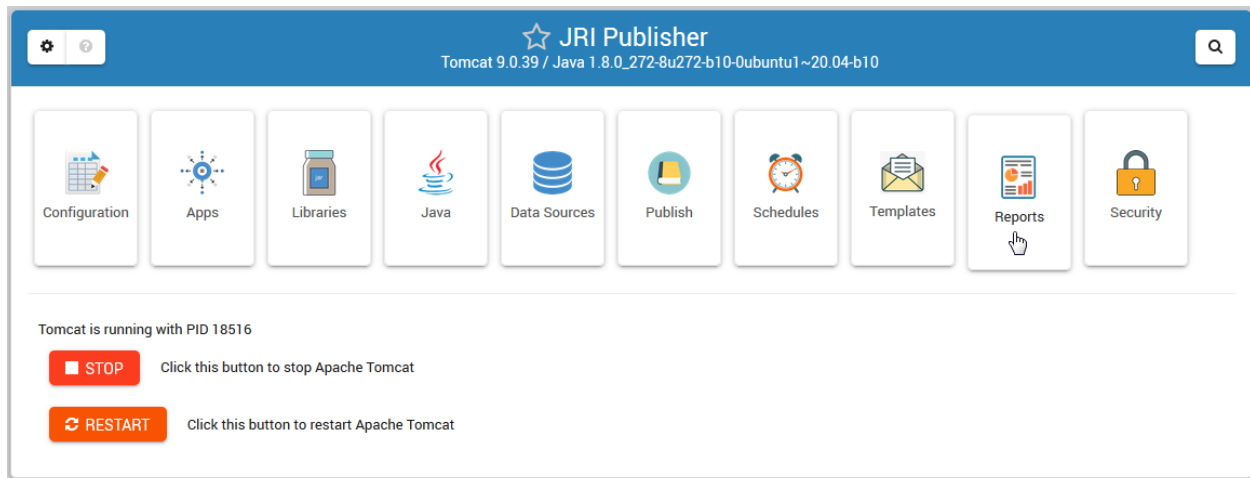


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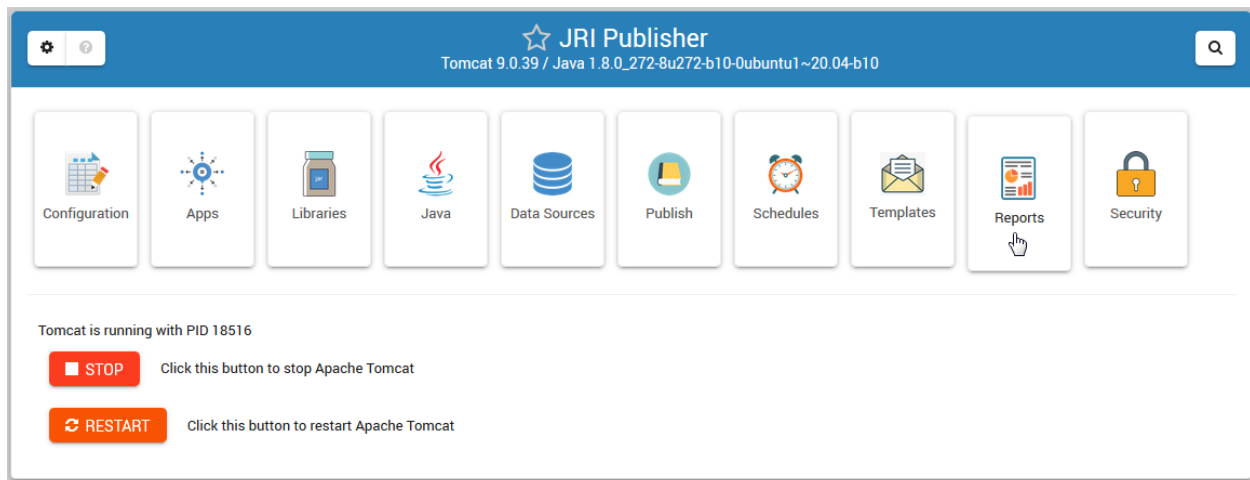


### 1.1 Overview

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

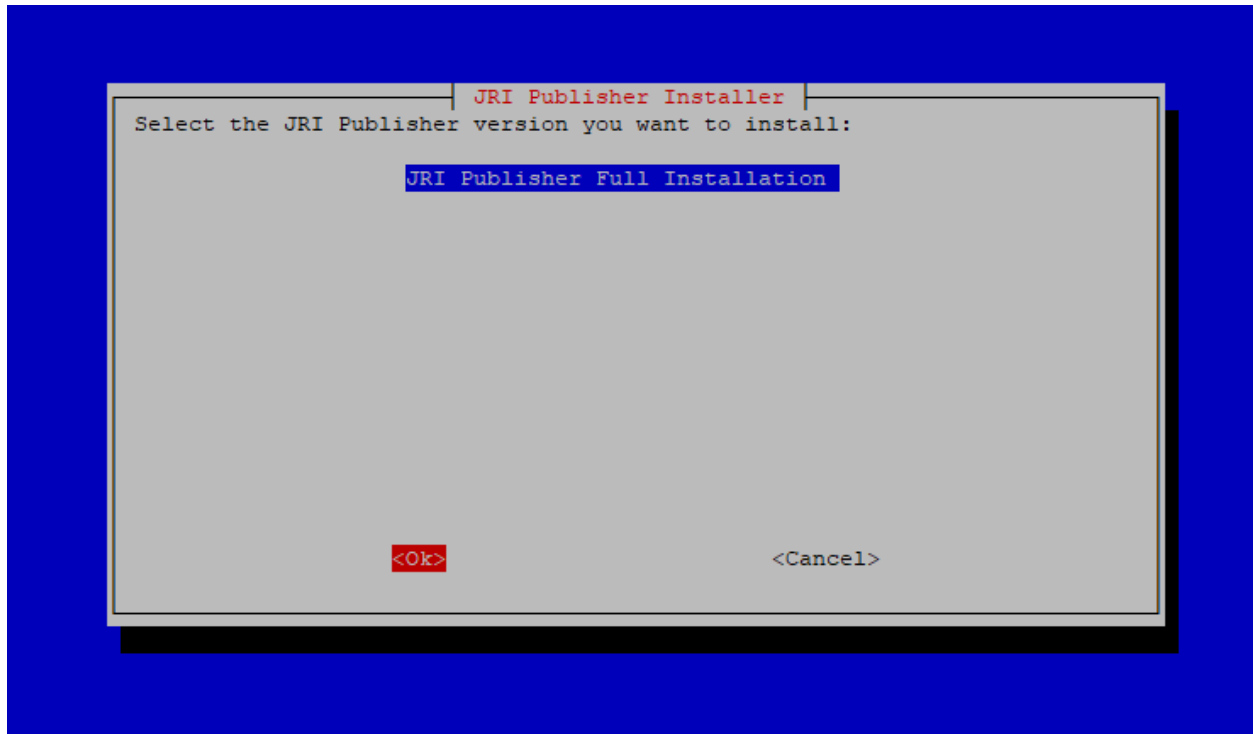
Installation is done via the GUI Installer

### 2.1 Using the Installer

1. Issue below to launch the Installer

```
wget https://raw.githubusercontent.com/cited/jri-publisher/master/scripts/jri_
↪publisher-installer.sh && chmod +x jri_publisher-installer.sh && ./jri_publisher-
↪installer.sh
```

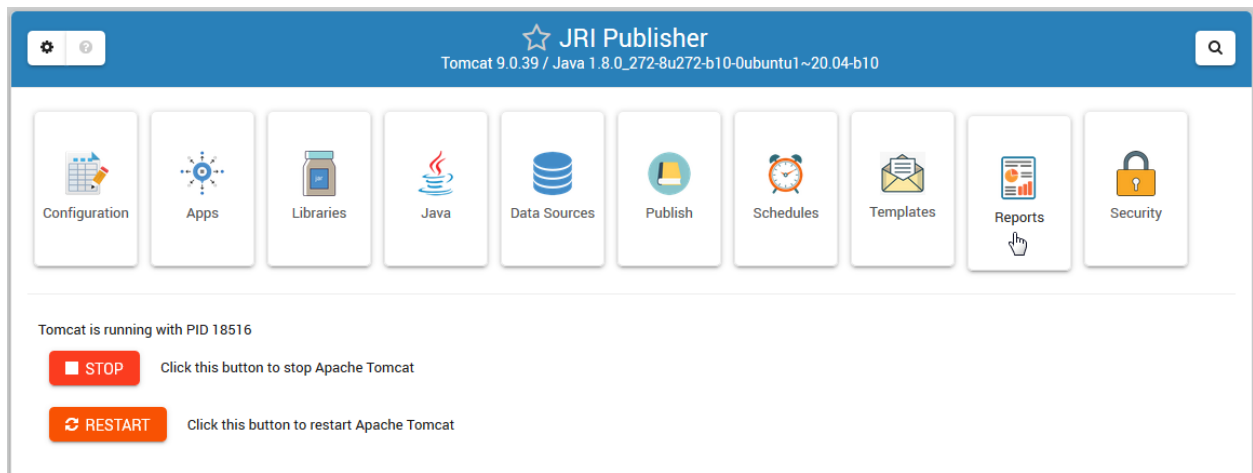
2. Follow the prompts to install



3. Upon completion, below will be displayed

```
Version: JRI Publisher Full Installation
Control Panel Modules: jri_publisher certbot
Tomcat Version: 9
Java Version: OpenJDK
Installation is now completed.
SSL Provisioning Success.
```

4. Click the Login link on the home page to log in.



## 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

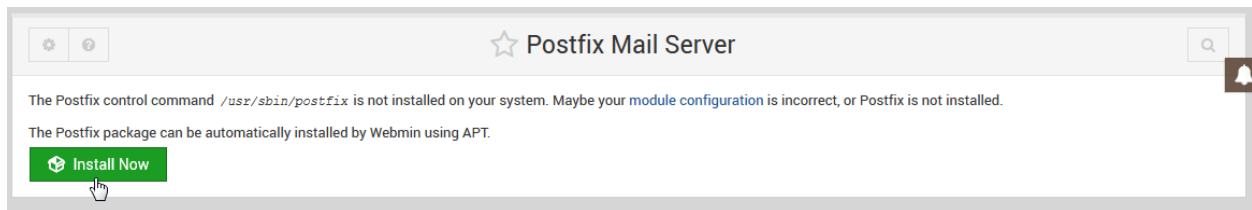
In order to use the email functionality for Report Scheduling, a working MTA is required.

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.



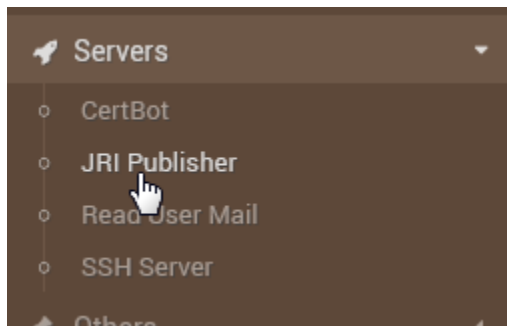


## CHAPTER 3

### Wizard

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

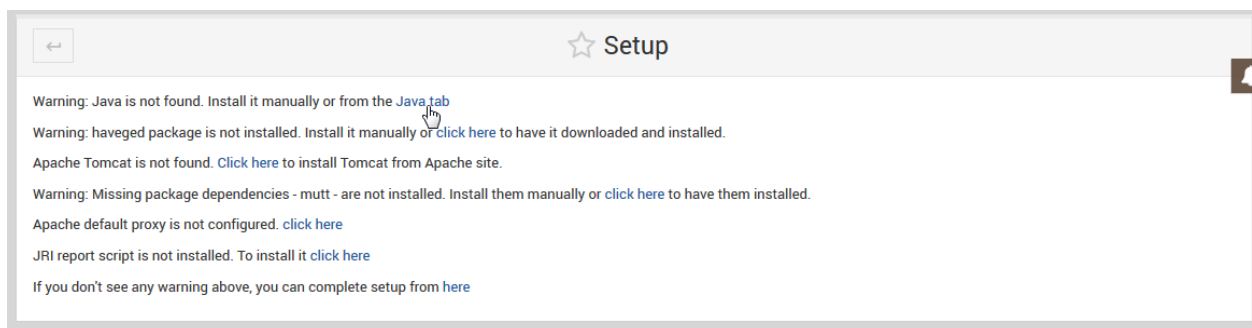
Go to Servers > JRI Publisher:



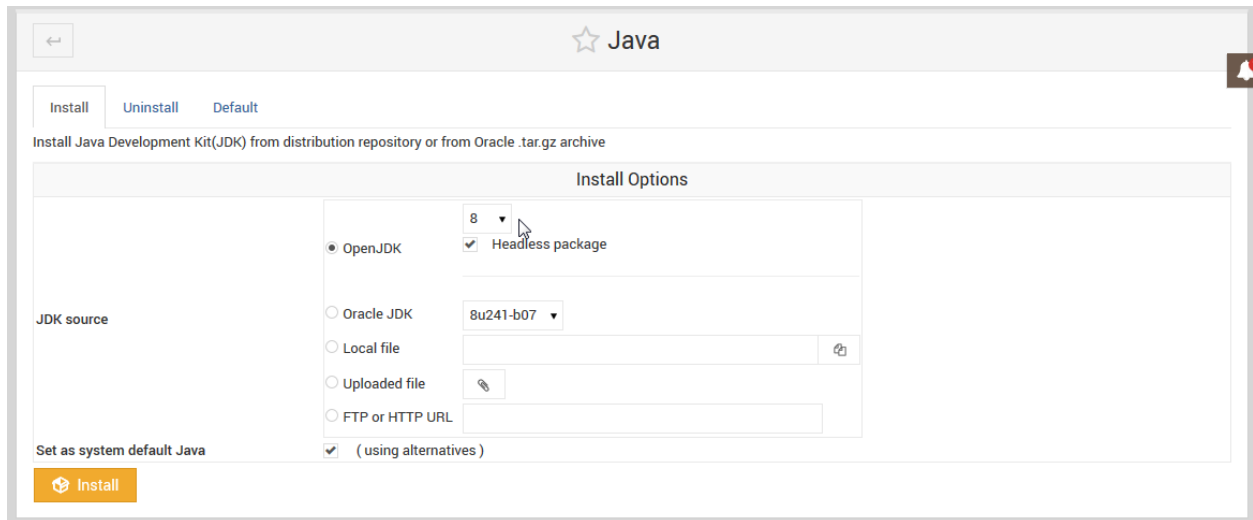
The main Wizard screen will a link for completing each step.

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

### 3.1 Install Java/JDK:



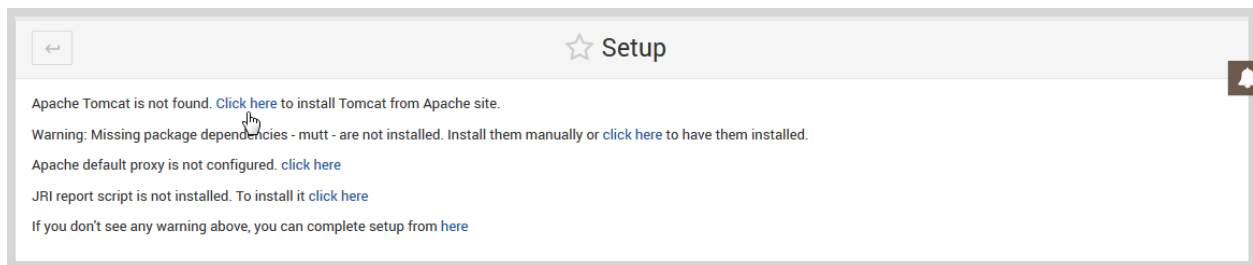
Select the JDK you wish to use. We have tested with JDK 8



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 has a dropdown for '8', a checked box for 'Headless package', a dropdown for '8u241-b07', and input fields for 'Local file', 'Uploaded file', and 'FTP or HTTP URL'. At the bottom, there's a checkbox 'Set as system default Java' which is checked, and a note '( using alternatives )'. An orange 'Install' button is at the bottom left.

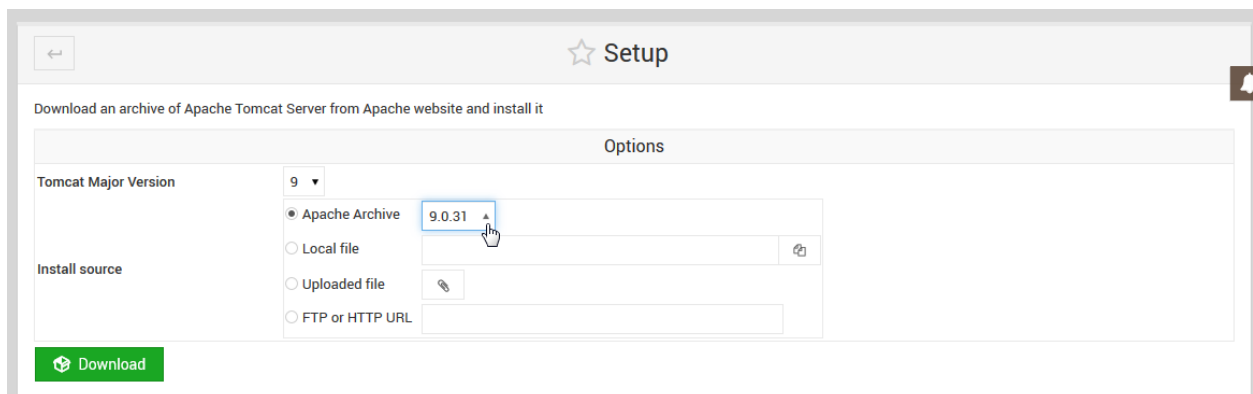
JRI Publisher has been tested with OpenJDK 8 and Oracle JDK 8.

## 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](#)'.

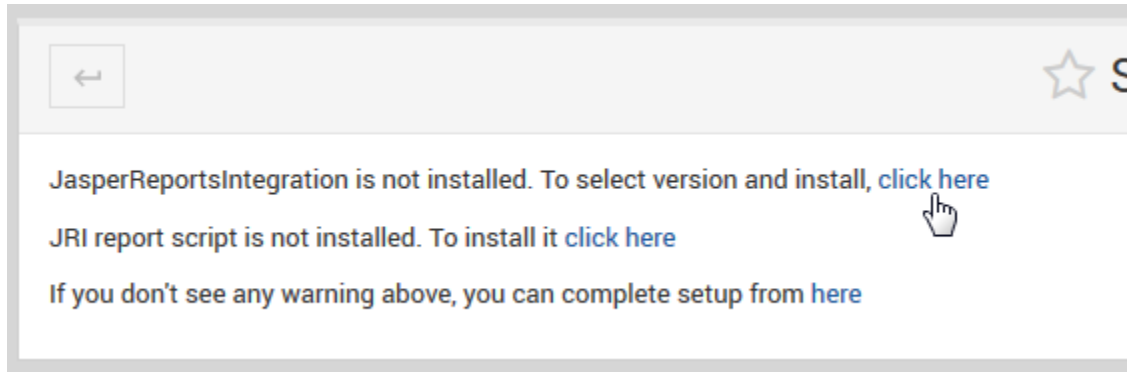
JRI Publisher has been tested with Apache Tomcat 8.x and 9.x:



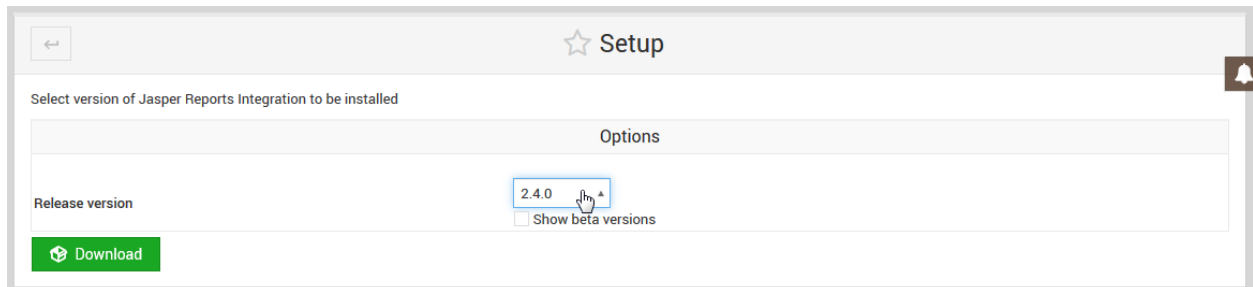
The screenshot shows the 'Setup' wizard, specifically the 'Options' section. At the top, there's a star icon and the word 'Setup'. Below it is the instruction 'Download an archive of Apache Tomcat Server from Apache website and install it'. The 'Options' section has a dropdown for 'Tomcat Major Version' set to '9'. Below it are radio buttons for 'Apache Archive' (selected), 'Local file', 'Uploaded file', and 'FTP or HTTP URL'. The 'Apache Archive' option has a dropdown for '9.0.31'. There are input fields for 'Local file', 'Uploaded file', and 'FTP or HTTP URL'. A green 'Download' button is at the bottom left.



### 3.3 JasperReportsIntegration



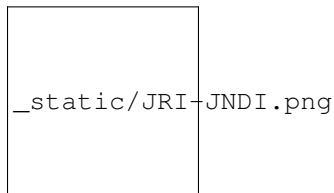
JRI Publisher has been tested with JasperReportsIntegration 2.5.1 and 2.6.2:



**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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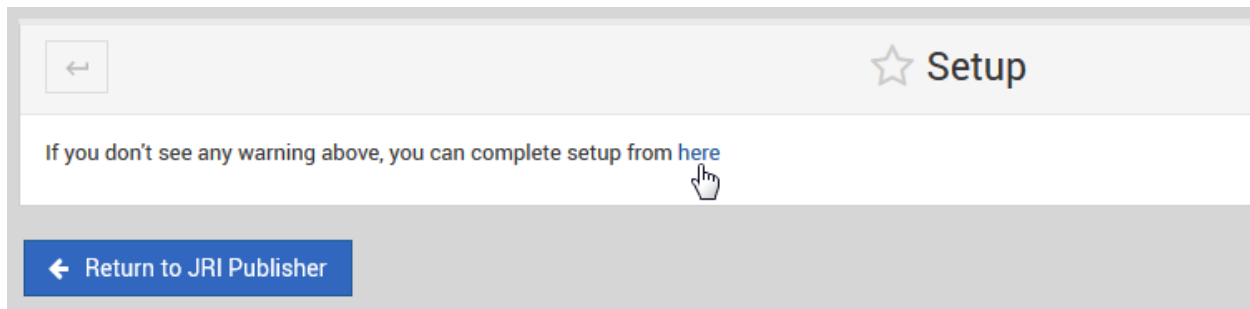
```

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
  ↪"/>

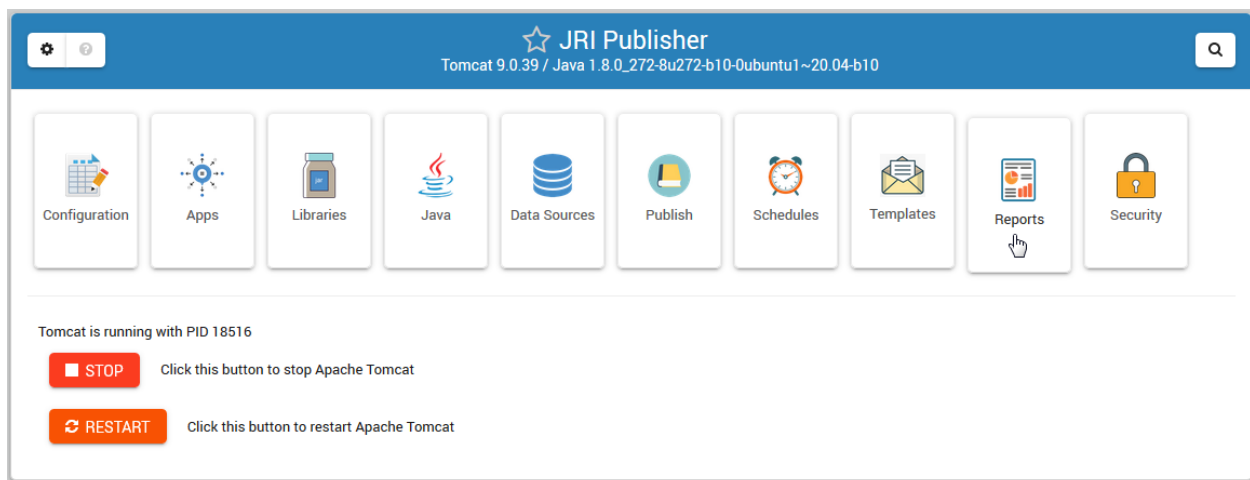
```

## 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

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### Webmin

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Webmin can be accessed via:

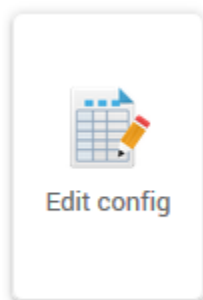
```
https://yourdomain.com:10000
```



### 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
```

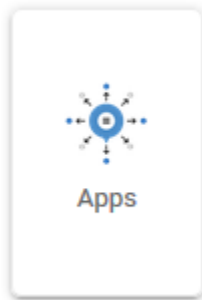
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```
web.xml
context.xml
tomcat-users.xml
setenv.sh
```

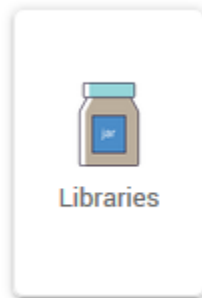
These files can, of course, be edited via the file system or VI as well.

## 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.

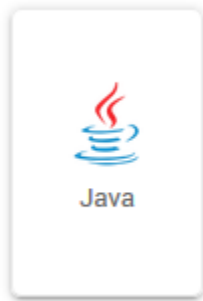
---

**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.

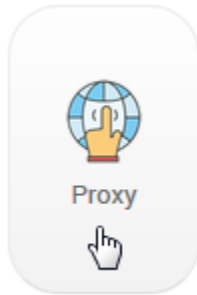
## 5.5 Proxy

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

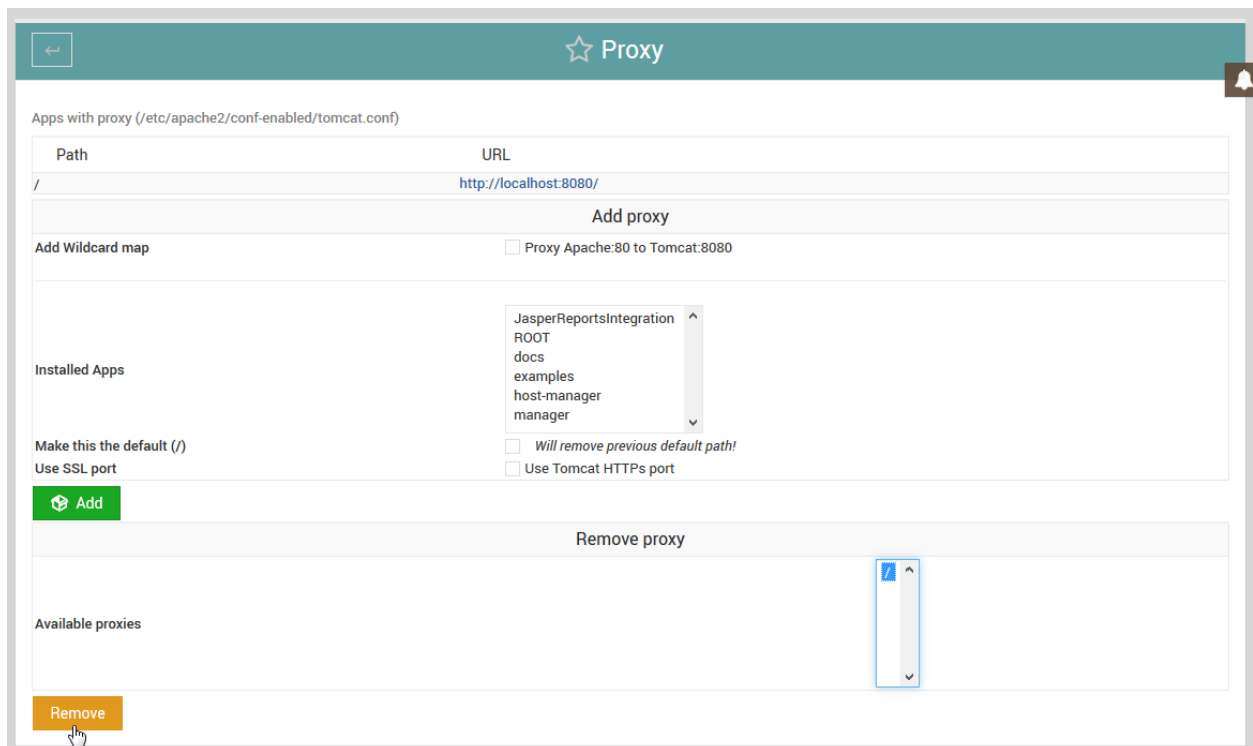
This enables you to reach reports via <http://yourdomain.com/JasperReportsIntegration> without need to add the 8080 port.

**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

```
systemctl { start | stop | restart | status } tomcat
```

## 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
```

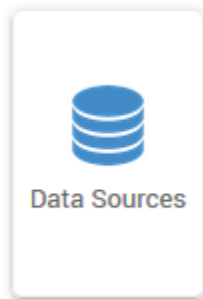
JNDI Data Sources are stored in a database and referenced in the application server rather than stored in a flat file as with JDBC Data Sources.

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> <span>Add</span> <span>Remove</span> <span>List</span> </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

## CHAPTER 8

---

Publish

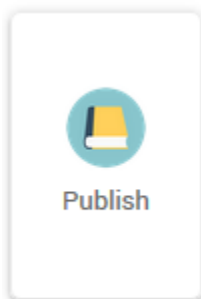
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### Table of Contents

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

## 8.1 Publishing Reports

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



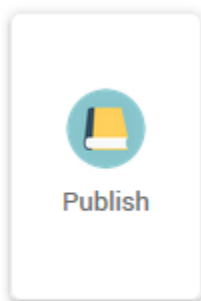
This will open the screen below.

**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.

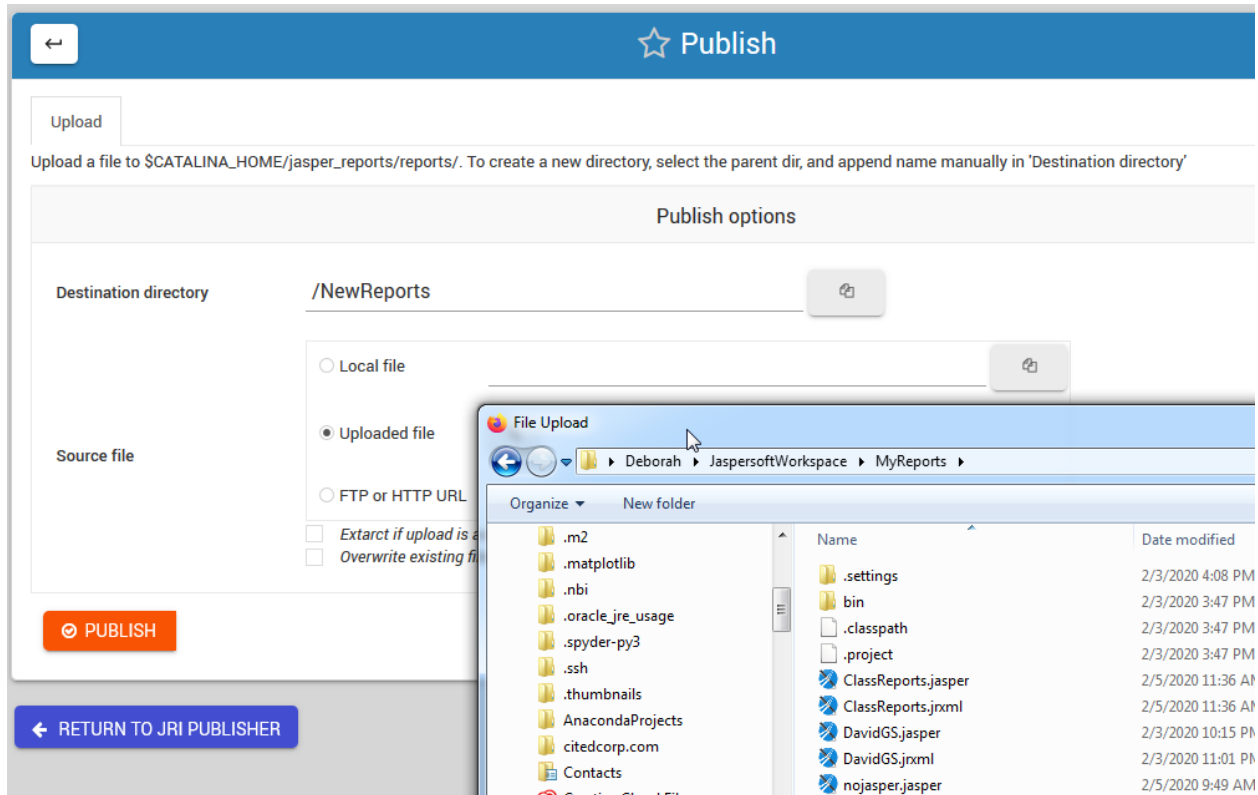
## 8.2 Creating Directories

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

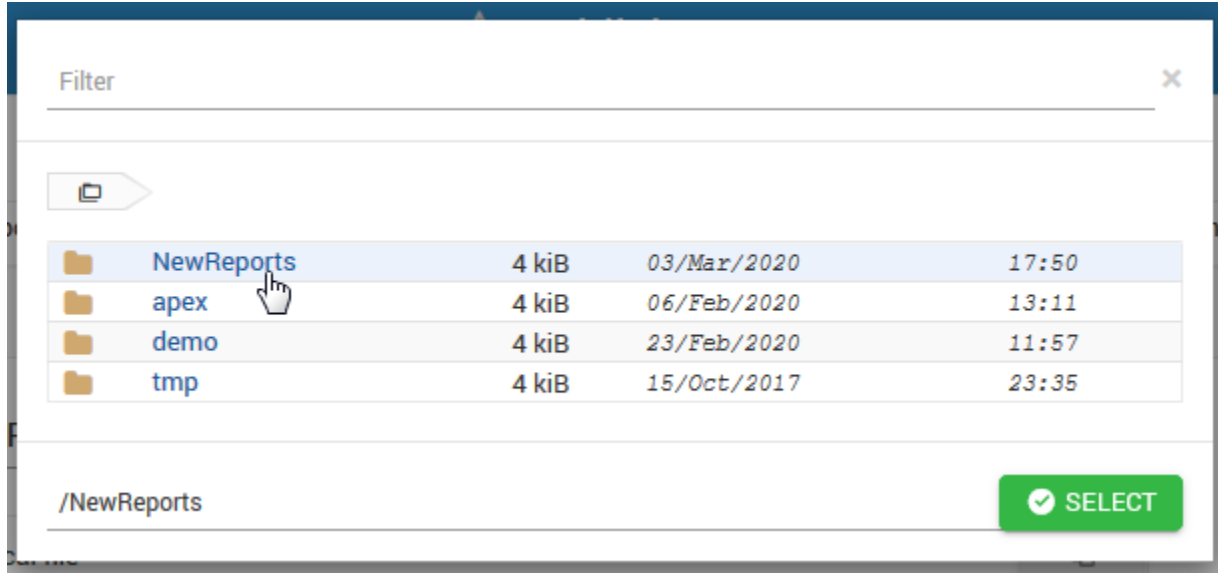


Enter the name of the directory you wish to create as show below. This will create a new directory, NewReports, under the main reports directory.

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*

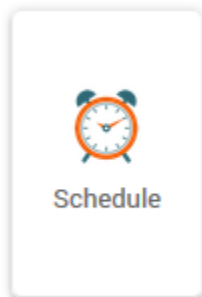


#### Table of Contents

- *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.

## 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

38

Chapter 9. Schedule

 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

 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

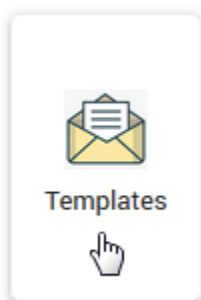
---

#### Table of Contents

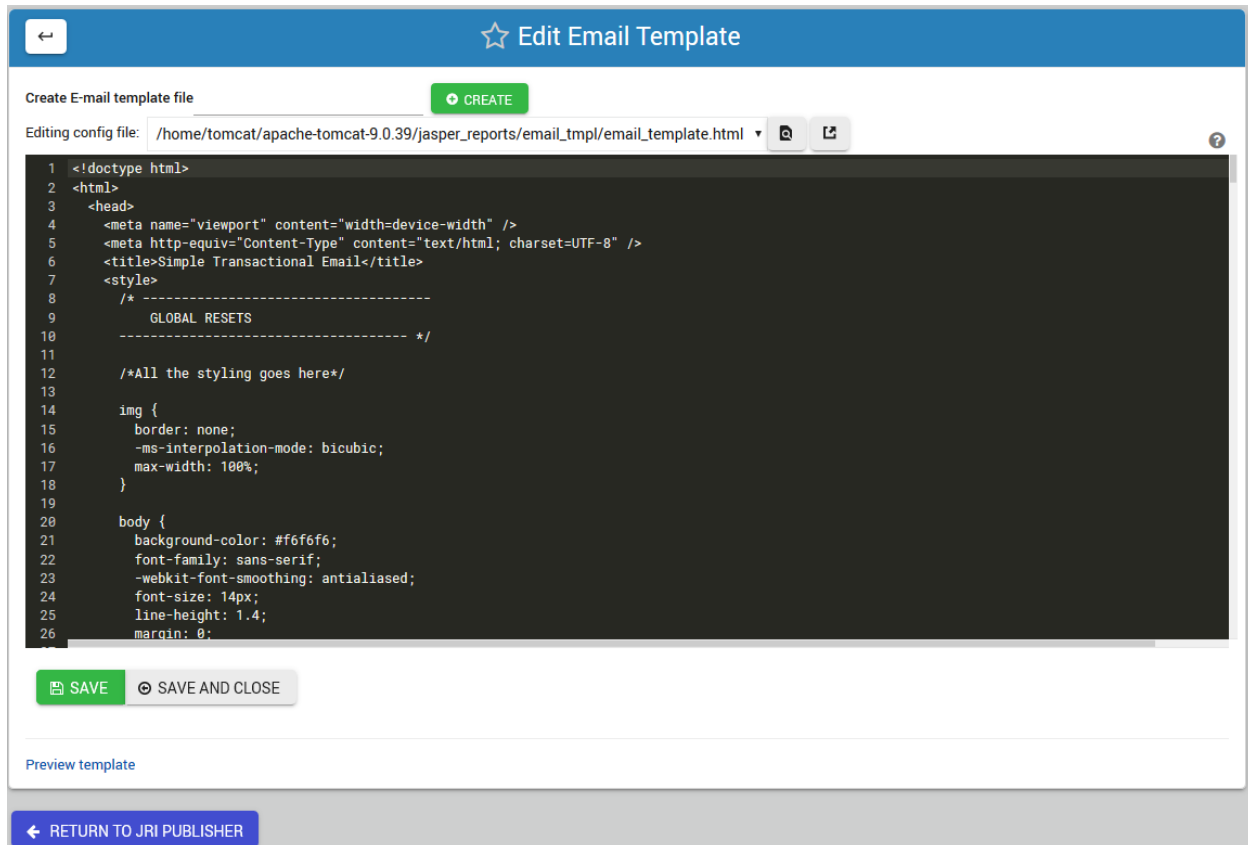
- *Email Templates*
  - *Overview*
  - *Template Layout*
  - *Create a Template*
  - *Using Templates*

### 10.1 Overview

Click the Templates tab to open the Email Templates.



This will open the screen below.



## 10.2 Template Layout

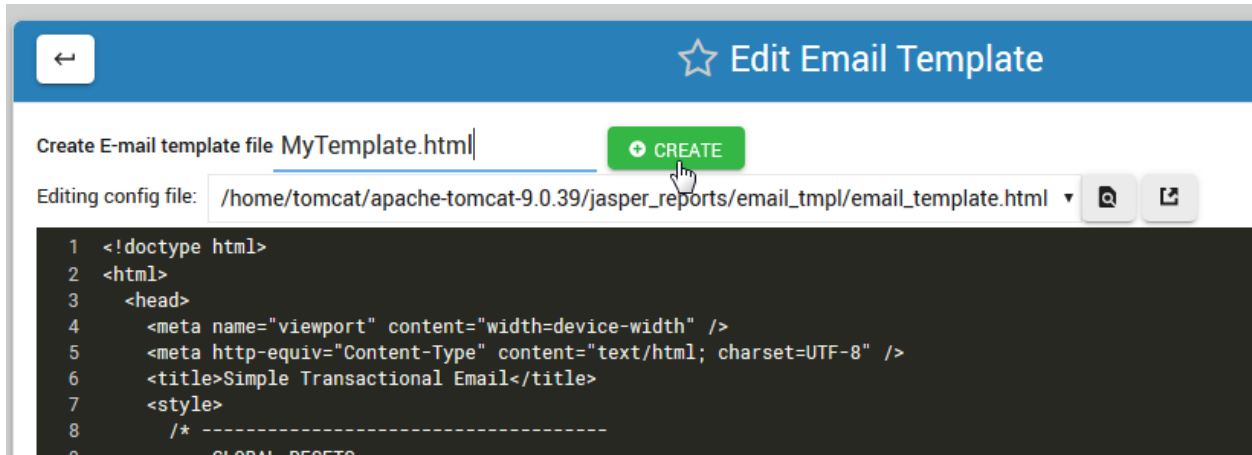
The default template is Lee Munroe's Responsive Email Template:

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

## 10.3 Create a Template

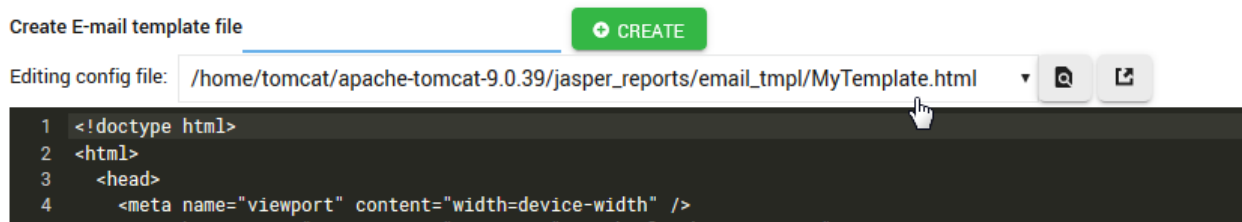
To create a new Template, enter the name of the new template and clicking Create as shown below:



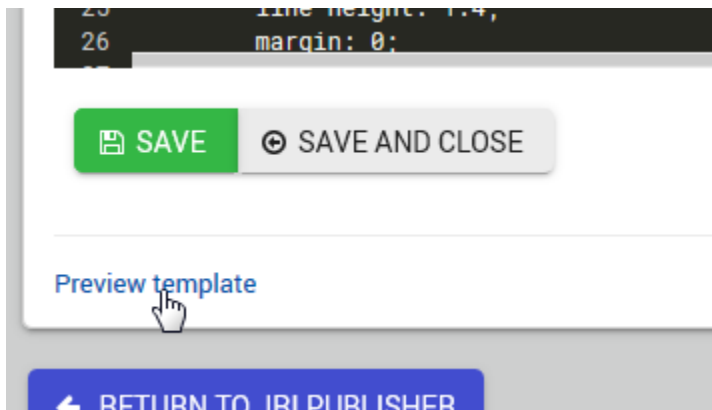


**Note:** You must include the .html file extension in the name of the template you create.

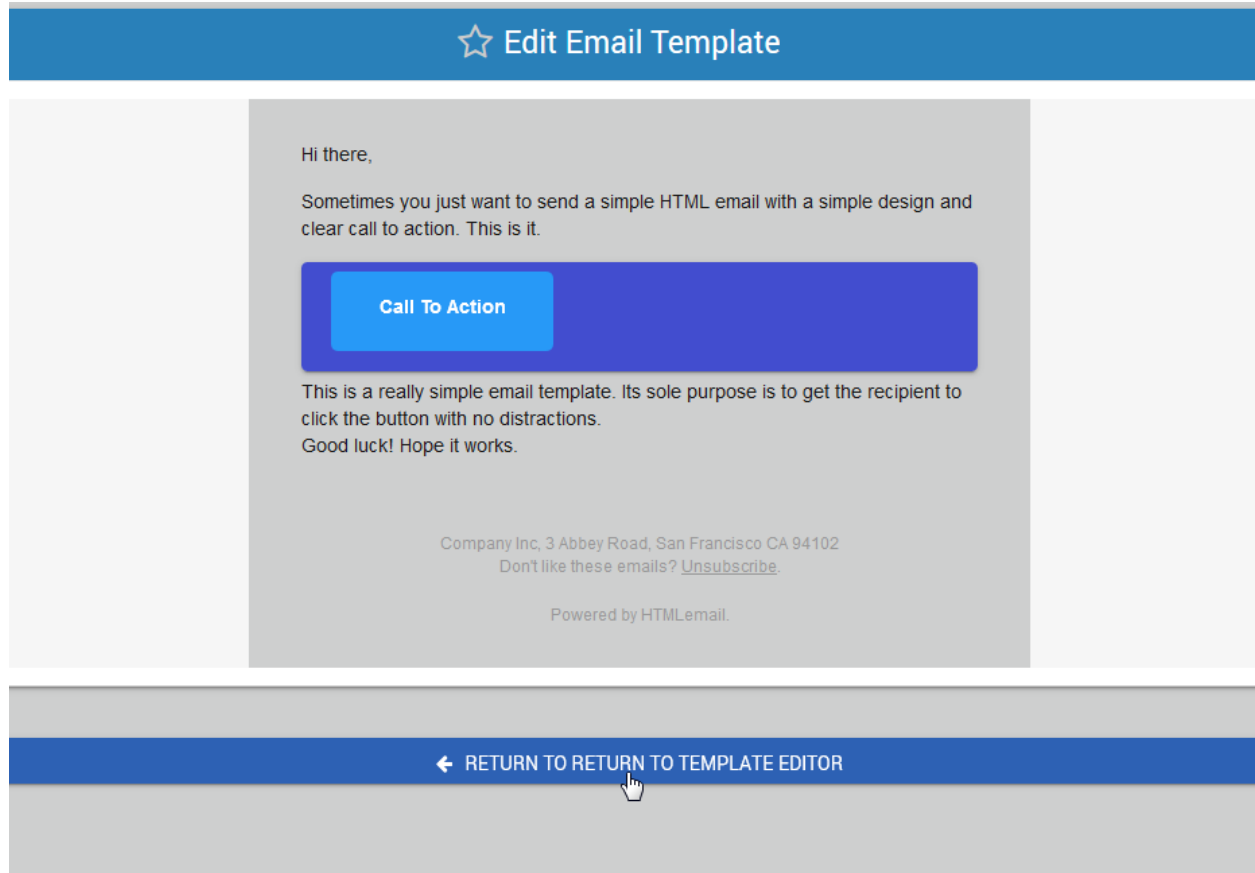
The new template you created will now will be loaded into the editor as shown below:



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

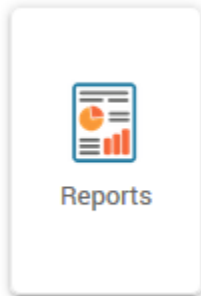
## Report Dashboard

### Table of Contents

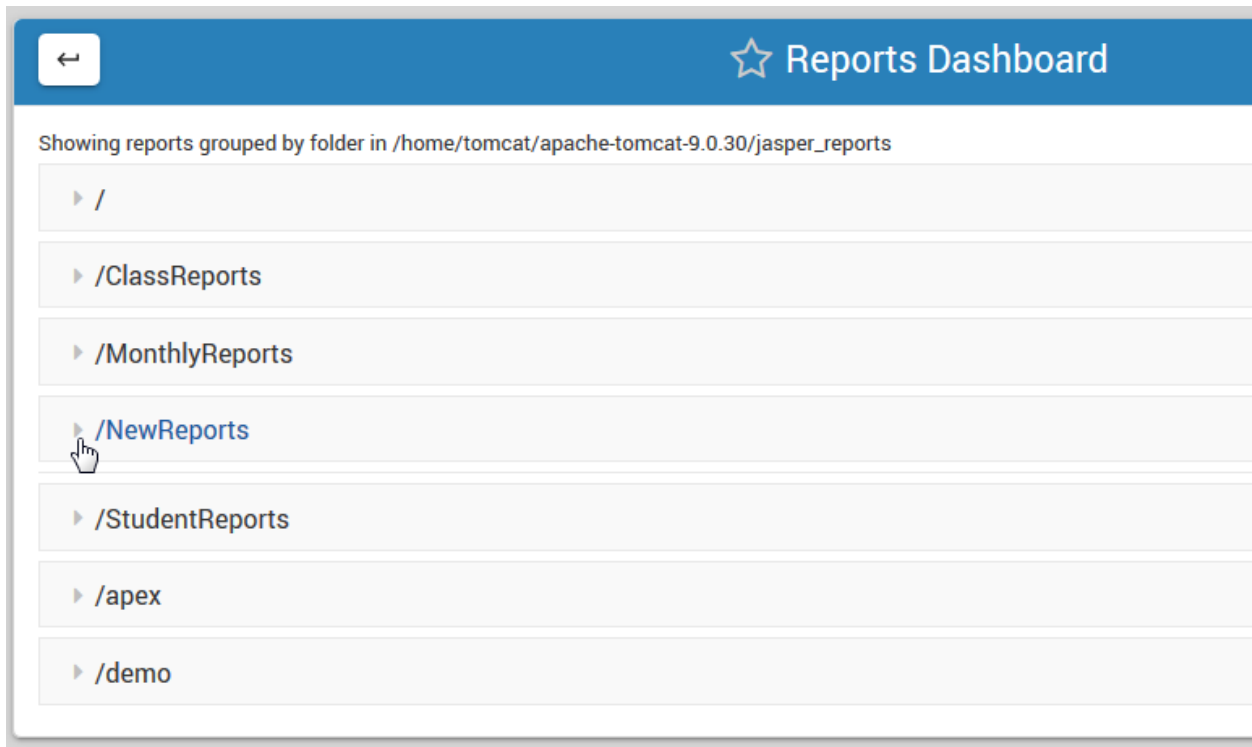
- *Report Dashboard*
  - *Overview*
  - *Dashboard Layout*
  - *Dashboard Functions*
  - *No Schedule*

## 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

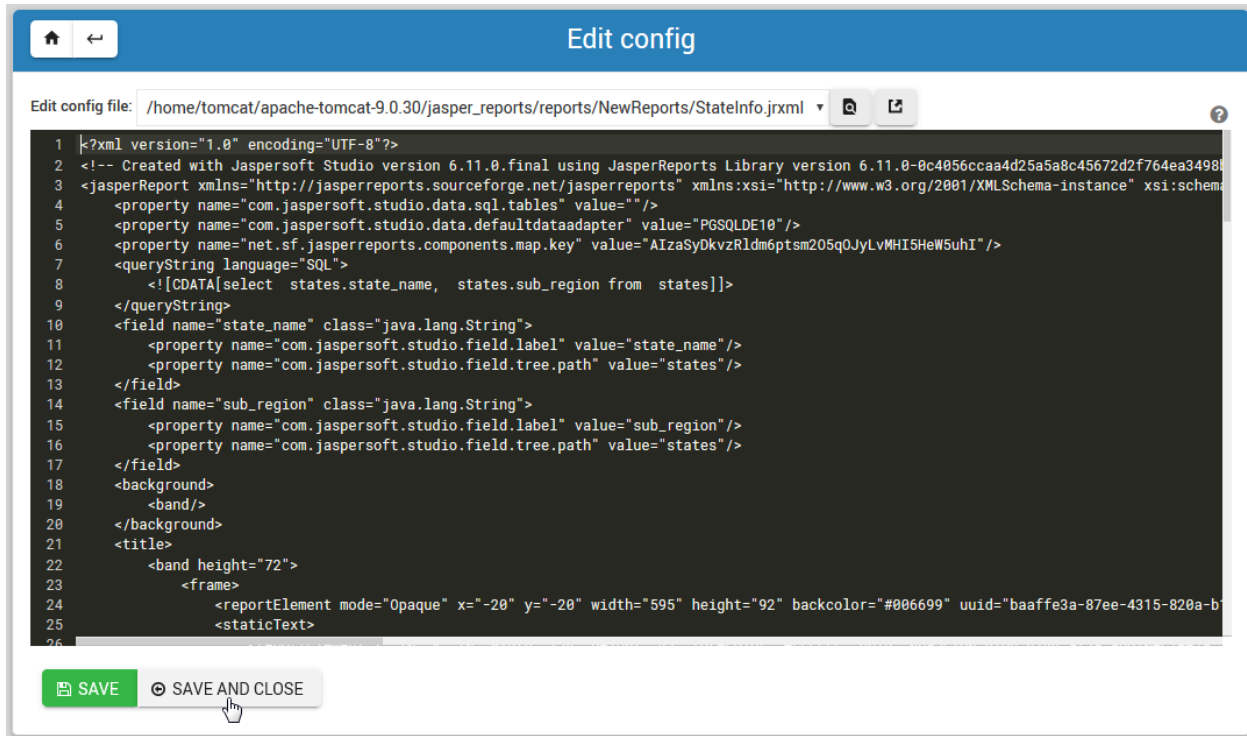
Expanding the NewReports directory, we see below:

▼ /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

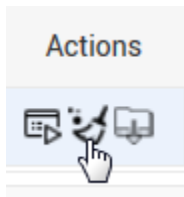
**Name:**

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

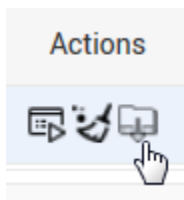
**Actions:**

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:**

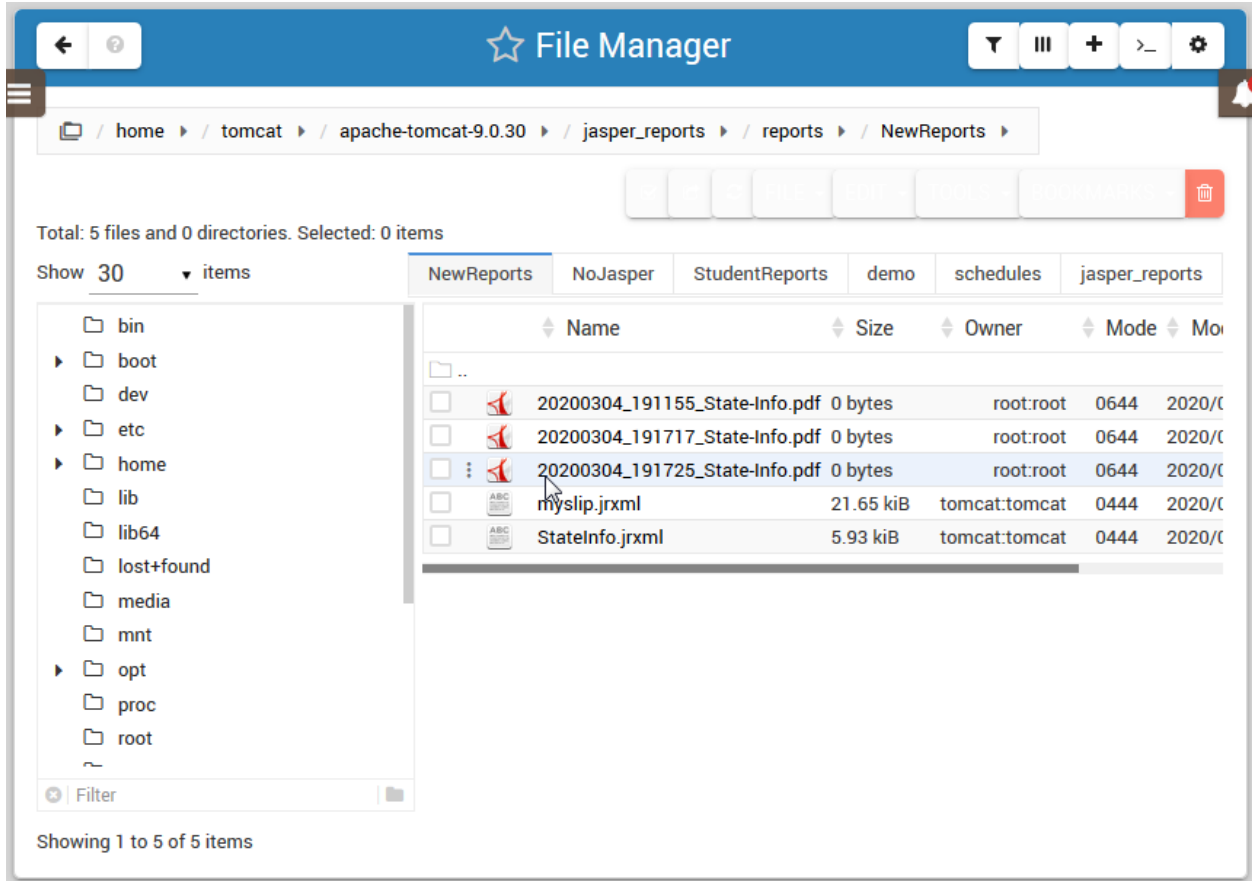
Displays the report format (e.g. pdf, csv, etc. ...)

**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

### Table of Contents

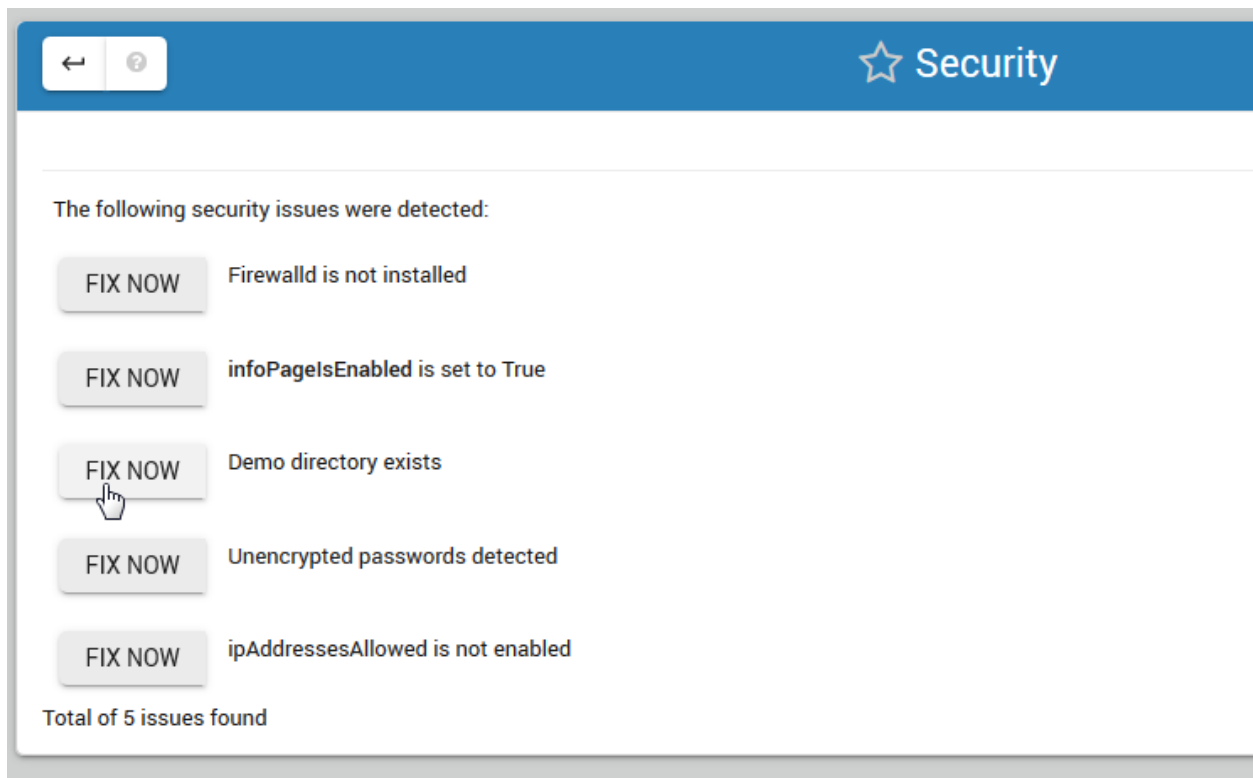
- *Security Monitor*
  - *Overview*
  - *Checks*
  - *Fixing Security Issues*
  - *Firewalld*
  - *InfoPage*
  - *Demo Directory*
  - *Password Encryption*
  - *ipAddressesAllowed*

## 12.1 Overview

Click the Security tab to open the Security Checks page.



This will open the screen below.



## 12.2 Checks

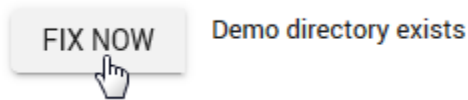
The security page evaluates five checks and provides fixes if check fails.

- 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 ipAddressAllowed

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/](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 increaes 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         );
11
12         $file = 'http://123.4.5.6:8080/JasperReportsIntegration/report?' . http_build_
↪ query($data);
13
14         header("Pragma: public");
15         header("Expires: 0");
16         header("Content-Type: application/octet-stream");
17         header("Cache-Control: must-revalidate, post-check=0, pre-check=0");
18         header("Cache-Control: public");
19         header("Content-Description: File Transfer");
20         header('Content-Disposition: attachment; filename="'. $data['_repName']. ".pdf" .
↪ '');
21         header("Content-Transfer-Encoding: binary\n");
22
23         readfile($file);
24         exit();
25     }
26     ?>
27
28     <!DOCTYPE html>
29     <html>
30         <head>
31             <link href="https://cdn.jsdelivrivr.net/npm/bootstrap@5.0.2/dist/css/
↪ bootstrap.min.css" rel="stylesheet" integrity="sha384-EVSTQN3/
↪ azprGlAnm3QDgpJLIm9Nao0Yz1ztcQTWfSpd3yD65VohhpUuCOmLASjC" crossorigin="anonymous">
32         </head>
33         <body style="padding:50px">
34             <body>
35                 Report Form
36                 <br>
37                 <form action="" method="get">
38                     <select name="report_name">
39                         <option value="student">Student Reports</option>
40                         <option value="teacher">Teacher Reports</option>
41                         <option value="class">Class Reports</option>
42                         <option value="grade">Grade Reports</option>
43                     </select>
44                     <button type="submit">Submit</button>
45                 </form>
46
47
48             </body>
49             </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

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## License

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modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

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States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

## TERMS AND CONDITIONS

### 0. Definitions.

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"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees" and "recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

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### 1. Source Code.

The "source code" for a work means the preferred form of the work

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