



# JASPERREPORTS® SERVER COMMUNITY

## RELEASE NOTES

RELEASE 7.1

<http://www.jaspersoft.com>

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## CHAPTER 1 INTRODUCTION

JasperReports® Server Community Project is a high-performance standalone or embeddable Business Intelligence (BI) platform that provides rich reporting and integrated in-memory analysis capabilities. In addition, Jaspersoft® OLAP provides data analysis running on the same shared BI platform.

These release notes describe the installation and available functionality at a high level; for details, see the documentation, which is available at:

- <http://community.jaspersoft.com/documentation>
- <https://docs.tibco.com>
- <js-install-ce>/docs (after installation)

In particular, see the *JasperReports Server Installation Guide* for instructions about running the installer, creating and updating the database, and deploying the WAR file; see the *JasperReports Server Upgrade Guide* for instructions on upgrading from previous versions.



JasperReports Server is governed by a License Agreement, the text of which is found at <js-install>/Jaspersoft-Subscription-Services-Agreement.txt. Please read it before you login to JasperReports Server for the first time. If you installed the server using an installer binary (rather than deploying a WAR file), you have already agreed to this license.

These release notes include the following:

- **What's New**
- **Installation and Basic Usage**
- **Upgrade Notes**
- **Known Issues**
- **Release Distributions**
- End of Support Notices



## CHAPTER 2 WHAT'S NEW

This section describes new features introduced in the Jaspersoft BI Suite Version 7 release. For information regarding features added to Version 6 releases, see the latest 6.4.x release notes.

### 2.1 Version 7.1.0

JasperReports Server 7.1.0 includes these improvements:

- **Visualize.js Ad Hoc View Support.** Visualize.js provides new building blocks to embed Ad Hoc views, helping application developers build modern, immersive experiences. This release includes:
  - A frozen heading pane and infinite scrolling for table and crosstab components; this can greatly improve performance when viewing large result sets.
  - CSS inheritance can define crosstab and table styling.
  - The ability to capture attributes about table, crosstab, and chart components for use in hyperlinks.
  - Object properties that help developers build their own user interfaces for selecting visualization types.
  - Parameter and parameter value calls that enable dynamic view updates and custom filter controls in the surrounding application.



OLAP Data Sources are not supported by Ad Hoc views in Visualize.js.

- **Ad Hoc Views.** Ad Hoc views and reports now offer:
  - **Ad Hoc View Referential Integrity** - When items from a Domain are used in a dependent Ad Hoc view, removing the items from the Domain now returns an error message when editing the Ad Hoc view. You're given the option to remove the missing items from the Ad Hoc view to continue using it. The removed items no longer appear in the Data Source Selection panel.
  - **Time Balance Calculations.** The ability to define basic Time Balance properties on measures, providing greater control of time series aggregate data.  
By default, all data are aggregated by summing time series values. New options let the user calculate aggregate time values by taking the first or last values of a time series. This benefits cases where opening and ending balance values (such as Inventory and Cash Balances) are measured. These options can change the totals to the sum of the numeric data for a period of time, as well as an average of the numeric values, the first numeric value entered for the period, and the last numeric value entered for the period.
  - **Grouping by Day of the Week.** There is a new option for grouping time series data into Day of Week.

- **Jaspersoft Studio.** Several new features are available in our report designer:
  - Spotfire (Version 7.5+) Infolink support. The data adapter for connecting to a Spotfire instance uses the latest public Spotfire API. Report developer create content from Spotfire data.
  - Support for properties in datasets and query executors. Better support for fields and parameters in the Dataset and Query dialog, including support for field properties on the **Fields** tab and show and hide built-in parameters and display, create, and edit parameter properties on the Parameters tab. This lets you configure your fields and parameters directly in the Dataset and Query dialog.
  - Data adapters that connect to a web service. You can now create data adapters that connect to a web service. You configure these data adapters in the data adapter dialog. When you use this type of data adapter in a report, you can access them in the Dataset and Query dialog: you can auto-discover fields from a node you enter in the query dialog and view and manage HTTP parameters on the Data Adapter tab.
  - Enhanced Properties UI. The advanced properties dialog now displays a searchable list of available properties. You can create expressions, toggle the view to the old Properties dialog, and add properties for your custom classes. Most elements now support expressions in properties.
  - Support for Data Snapshots. Jaspersoft Studio now lets you create a JasperReports data snapshot, which contains a sample dataset that contains all the data necessary to run the report. Storing the data for a report makes it easier to develop reports while offline or to share a functional report with other developers working on the report design.
- **New Platforms.** Components included in the installer have been updated to:
  - PostgreSQL 9.3.20
  - Tomcat 8.5.30
  - Oracle JDK 8 version 1.8.0\_151 (8u151)
  - Spring Framework 3.2.18
- **New Third-party Software Support.** This release adds support for Oracle 12c as a host for the JasperReports Server repository and WebLogic 12.2.1 as the application server. You can still create reports and connect to the latest JasperReports Server with previous versions of Jaspersoft Studio.
- **Security Improvement.** JasperReports Server implements a new mechanism to protect against clickjacking attacks. To enable this mechanism, edit a configuration file.
  1. Using a text editor, open the applicationContext-security-web.xml file (found in <js-install>\apache-tomcat\webapps\jasperserver-pro\WEB-INF).
  2. Locate the `antiClickJackingEnabled` property in the `webAppSecurityFilter` bean, and set it to true. Setting this property to true instructs JasperReports Server to include an X-Frame-Options header in every response.
  3. You can also set the `antiClickJackingOption` property to control the header value. Valid values are:
    - DENY - JasperReports Server doesn't load into any iframe.
    - SAMEORIGIN - JasperReports Server only loads into an iframe on a page in the same domain as JasperReports Server.
    - ALLOW-FROM - JasperReports Server only loads in a frame on a page specified in `antiClickJackingUri` property.
  4. If you set the `antiClickJackingOption` property to ALLOW-FROM, also set the `antiClickJackingUri` property to a valid URI.
  5. Save the file and restart the server.





If you use iframes to embed JasperReports Server (including use of Visualize.js), set the `antiClickJackingOption` to either `SAMEORIGIN` (if the embedding host is on the same domain as JasperReports Server) or `ALLOW-FROM` (if the embedding host is on a different domain than JasperReports Server). If you use `ALLOW-FROM`, also set the `antiClickJackingUri` property.

Clickjack protection doesn't support cases in which multiple domains embed JasperReports Server.

- Directory Access Control.** A new option can deny access to directories in the file system of the JasperReports Server host using the `ResourceForwardingServlet` servlet. The servlet forwards requests from, for example, `/runtime/<hex-code>/<my-resource>` to the `/<my-resource>` URL to handle browser caching.  
 Access to the `WEB-INF` and `META-INF` directories is always denied. In some circumstances, you may want to deny access to other directories. For example, if you restrict access to certain directories using the `security-constraint` tag in `web.xml`, also restrict access to those directories using the `forwardForbiddenDirectories` parameter of the `ResourceForwardingServlet` servlet. To do so, edit a configuration file.
  - Using a text editor, open the `web.xml` file (found in `<js-install>\apache-tomcat\webapps\jasperserver-ce\WEB-INF`).
  - Locate the `init-param` section of the `ResourceForwardingServlet` servlet.
  - In the `param-value` section of the `forwardForbiddenDirectories` parameter, enter a comma-separated list of directories that JasperReports Server users shouldn't be able to access. This parameter can only list directories under the `jasperserver-ce` web application.

For example:

```
<servlet>
  <servlet-name>ResourceForwardingServlet</servlet-name>
  <servlet-class>com.jaspersoft.jasperserver.war.ResourceForwardingServlet</servlet-class>
  <init-param>
    <param-name>forwardForbiddenDirectories</param-name>
    <param-value>jpivot,fusion,wcf</param-value>
    <!-- Comma separated list of any additional directories
         (besides WEB-INF, META-INF) that the access is forbidden to-->
  </init-param>
```

- Save the file and restart the server.



## CHAPTER 3     INSTALLATION AND BASIC USAGE

This section includes:

- **Installation**
- **Login**
- **Starting and Stopping**

### 3.1     Installation

You can install JasperReports Server either by running an executable installer or deploying a WAR file. For evaluations, we recommend you use the installer; for most production instances, we recommend you use the WAR file. Both the executable and the WAR file are available from [the Jaspersoft community site](http://community.jaspersoft.com) (<http://community.jaspersoft.com>); download:

- `TIB_js-jrs-cp_7.1.0_<osType>-<arch>.<ext>`
- `TIB_js-jrs-cp_7.1.0_bin.zip`

For more information, see the installation guide, which is found at `<js-install-ce>/docs/JasperReports-Server-CP-Install-Guide.pdf`.

#### 3.1.1     Binary Installer

To install JasperReports Server, you can use the binary installer, which is available for Windows, Linux, and Mac: `TIB_js-jrs-cp_7.1.0_installer-<osType>-<arch>.<ext>`

Double-click the installer and accept the default installation type to create a standard installation. Select the custom installation type to configure your instance to specify the application server and RDBMS to use, among other options. The installer can also be run from the command line.

#### 3.1.2     War File Distribution ZIP js-install Script Installation

You can use the `js-install` command-line shell scripts if you are installing to the third-party products listed in **6.2, “WAR File Binary Distributions,” on page 22**. The scripts are found in this WAR file Distribution ZIP file: `TIB_js-jrs-cp_7.1.0_bin.zip`.

**To install:**

1. Go to the `builddomatic` folder, create and edit a `default_master.properties` file, and run `js-install-ce.sh/bat`:

```
cd <js-install>/buildomatic
cp sample_conf/<dbType>_master.properties default_master.properties
```

- Using a text editor, edit default\_master.properties to add your application server and database server properties.

```
./js-install.sh (or js-install.bat)
```

- Then change the JAVA\_OPT memory options for your application server following instructions from the installation guide. For example, under Linux with Tomcat running on JDK 1.8, add the following to the top of the <tomcat>/bin/setclasspath.sh file:

```
export JAVA_OPTS="$JAVA_OPTS -Xms1024m -Xmx2048m"
export JAVA_OPTS="$JAVA_OPTS -Xss2m -XX:+UseConcMarkSweepGC -XX:+CMSClassUnloadingEnabled"
```

- Next, copy your jasperserver.license to your application server user's home folder:

```
cp <js-install>/jasperserver.license <path-to-home-folder>
```

## 3.2 Login

To login after installation, use the following URL:

<http://<hostname>:8080/jasperserver>

These users are created during installation:

Default User	Password
<b>Always created</b>	
jasperadmin	jasperadmin

If you install the sample data, these users are also created:

Sample User	Password
joeuser	joeuser



For security reasons, always change the default passwords immediately after installing JasperReports Server.

## 3.3 Starting and Stopping

This section describes how to start and stop the server if you installed using the binary installer. If you used another installation method, see the *JasperReports Server Installation Guide*.

### 3.3.1 Windows

You can start and stop from the Windows menu: click **Programs > JasperReports Server 7.1.0 CP > Start and Stop > Start Service or Stop Service**.

### 3.3.2 Linux

You can start and stop from the command line:

```
./<js-install>/ctlscript.sh (start|stop)
```

### 3.3.3 Mac OS X

From Finder, double-click the start, stop, or login apps:

```
/Applications/jasperreports-server-cp-7.1.0/jasperServerStart.app
```

```
/Applications/jasperreports-server-cp-7.1.0/jasperServerStop.app
```

```
/Applications/jasperreports-server-cp-7.1.0/jasperServerLogin.app
```

Alternatively, you can start/stop from the OS X command line:

```
./<js-install>/ctlscript.sh (start|stop)
```



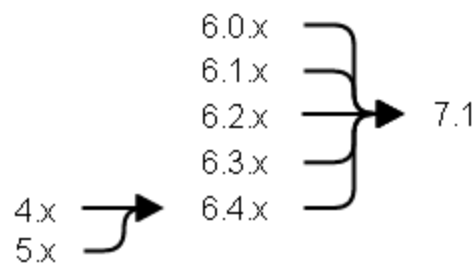
# CHAPTER 4    UPGRADE NOTES

This section includes:

- **Introduction**
- **Database Changes**
- **Upgrade from 6.4.x to 7.1.0**
- **Upgrade from Older Versions**
- **Important Upgrade Information**

## 4.1    Introduction

Your current version determines your upgrade path:



**Figure 4-1    Paths for Upgrading to Version 7**

You can upgrade directly to 7.1.0 if your instance is one of the following:

6.0.x	6.1.x	6.2.x	6.3.x	6.4.x
-------	-------	-------	-------	-------

If your instance is one of the older versions listed below, you must first upgrade to the latest version of 6.4.x before upgrading to 7.1.0:

<b>Version 5</b>	5.0	5.1	5.2	5.5	5.6.x
<b>Version 4</b>	4.0	4.1	4.2.x	4.5.x	4.7.x

For information about upgrading to 6.4.x, please see its release notes.

To upgrade, start with the WAR File Distribution ZIP: `TIB_js-jrs-cp_7.1.0_bin.zip`

Downloaded it from [the Jaspersoft community site](http://community.jaspersoft.com) (<http://community.jaspersoft.com>).

The recommended upgrade procedures are fully described in the *JasperReports Server Upgrade Guide*.



If you are upgrading from certain versions of JasperReports Server, such as 6.0.1, 6.1, or 6.2.0, the upgrade involves substantial changes that may require you to plan and prepare beforehand. See the *JasperReports Server Upgrade Guide* for advice regarding these important considerations. Also, see [4.5, “Important Upgrade Information,” on page 17](#).

## 4.2 Database Changes

Between certain versions of the server, we have changed the repository database in order to add new functionality. There are changes between 6.4.x and 7.1.

For information on database changes in previous releases, please see the latest 6.4.x release notes.

## 4.3 Upgrade from 6.4.x to 7.1.0

The recommended procedure for upgrading from 6.4.x is described in Chapter 3 of the *JasperReports Server Upgrade Guide*. Run this procedure from the command line. In summary:

1. Copy the properties file:

```
cd <unpacked-dir>/buildomatic
cp sample_conf/<dbType>_master.properties default_master.properties
```

2. Using a text editor, edit `default_master.properties` to add your application server and database server properties.
3. Run the install `.sh` or `.bat` file:

```
./js-upgrade-samedb-ce.sh
```

## 4.4 Upgrade from Older Versions

This upgrade procedure lets you upgrade from JasperReports Server versions 6.0.x through 6.3.x. The recommended procedure is described in Chapter 4 of the *JasperReports Server Upgrade Guide*. This procedure is run from the command line. In summary:



1. Export your existing JasperReports Server repository data, either using the `buildomatic/js-export.sh/bat` command (for example, `./js-export-ce.sh --everything --output-zip my-export.zip`), or by exporting directly from the web UI).
2. Change directories to the `buildomatic` directory (for example, `cd <unpacked-dir>/buildomatic`).
3. Copy the master properties file (for example, `cp sample_conf/<dbType>_master.properties default_master.properties`).
4. Edit the `default_master.properties` file to add your application server and database properties (for example, `./js-upgrade-newdb-ce.sh <path>/my-export.zip`, or `./js-upgrade-newdb-ce.bat <path>/my-export.zip`).

## 4.5 Important Upgrade Information

This section describes special upgrade considerations for moving to this release.

For additional information on planning for your upgrade, see the *JasperReports Server Upgrade Guide*.

- **Changes in the 7.1 Release.** The layout of the login page changed in JasperReports Server 7.1. There were no changes to the CSS classes, but some default values were changed. If you have customized the login page, test your customizations to ensure they have the desired effect in 7.1, and make any necessary changes.  
If you haven't customized the login page, this change doesn't affect you.
- **Changes in the Version 6 Releases.** JasperReports Server Version 6 releases included many changes that may impact the upgrade steps in unexpected ways. We made such changes in 6.0.x, 6.1.x, 6.2.x, and 6.4.x. For example, changes in 6.2.1 replaced the drivers used by Impala and Simba data sources. If you used the older drivers, you must take these additional steps; if you didn't use those drivers, you don't.  
For more information about considerations when upgrading to version 7, please refer to the latest 6.4.x release notes. For details, see the upgrade guide for the release that impacts your upgrade path.



## CHAPTER 5 KNOWN ISSUES

This section describes issues you may need to be aware of, including:

- **Current Known Issues**
- **Known Issues Addressed in this Release**

For information regarding known issues found or addressed in Version 5 releases, see the 5.6.1 release notes.

### 5.1 Current Known Issues

We're aware of these issues in this release of JasperReports Server:

- **JA-926** (was 35986): If you use Jaspersoft OLAP's XML/A functionality to connect to a remote JasperReports Server's XML/A sources, you must take additional steps to complete your upgrade if your previous version was 5.2 or earlier. You must redefine your XML/A connections to specify the connection string in a new way. For example, in previous versions, the Foodmart XML/A connection specified:

```
Provider=Mondrian;DataSource=Foodmart
```

In more recent versions, the DataSource portion of the connection string is always JRS when the remote provider is JasperReports Server. For example:

```
Provider=Mondrian;DataSource=JRS
```

Note that the final steps in this section, those regarding `java.io.FilePermission`, can be ignored.

- **JRS-15525**: In the course of testing Wildfly 8.1 with this version of JasperReports Server, we discovered issues that prevented the server from starting. Because the issues aren't present in Wildfly 8.2, which we already support, we have ended support for Wildfly 8.1.
- **JRS-15530**: The UI Samples page for administrators, available in previous releases, has been removed. When testing themes and other cosmetic changes or customizations to the web UI, please navigate to a web page with the UI component you're changing rather than viewing the samples page. We may address this issue in a subsequent release.
- **JS-20916** (was 32168): Though we don't strictly support the practice, in previous versions of JasperReports Server, it was possible to create a clone install in JBoss by copying an existing JasperReports Server WAR file and deploying it to a new JBoss instance. Though Jaspersoft supports JBoss EAP6, we uncovered issues with clone installs. For more information, see this [article on our Community website](#).

- **JS-30583** (was 43387): We are aware of significant performance issues when the server is run in certain versions of Tomcat. We recommend 8.5.30 or later.

## 5.2 Known Issues Addressed in this Release

These defects, which were listed in the release notes of previous versions, were resolved in this release:

- **JRL-30**: When JasperReports Server is hosted under certain combinations of Windows and application servers (such as WildFly 9 on Windows 8.1 or Tomcat 8 on Windows 10), the server becomes unresponsive when a user exports a report; the server responds again once the export completes. We added instructions for working around this problem to the *JasperReports Server Administrator Guide*.
- **JRS-11883**: Some application servers, such as Tomcat, are ending their support of the pipe character (`|`), which delimits a user's name and organization when they are passed as a URL to the server; the application server returns an illegal character error. Our examples and documentation now use `%7C` instead of pipe. For example, instead of:

```
homeFlow&j_username=jasperadmin|organization_1
```

we now use:

```
homeFlow&j_username=jasperadmin%7Corganization_1
```

- **JRS-15389**: This Tomcat configuration, which was documented as optional, is required:

```
grant codeBase "file:/groovy/script" {  
    permission java.io.FilePermission  
        "${catalina.home}${file.separator}webapps${file.separator}jasperserver-pro${file.separator}WEB-INF${file.separator}classes${file.separator}-", "read";  
    permission java.io.FilePermission  
        "${catalina.home}${file.separator}webapps${file.separator}jasperserver-pro${file.separator}WEB-INF${file.separator}lib${file.separator}*", "read";  
    permission java.util.PropertyPermission "groovy.use.classvalue", "read";  
};
```

Note that the related JasperReports Server documentation has been corrected and moved from the *JasperReports Server Security Guide* to the *JasperReports Server Installation Guide*.

## CHAPTER 6 RELEASE DISTRIBUTIONS

This section describes:

- **Installation Executables**
- **WAR File Binary Distributions**

For more information, see the *Jaspersoft Platform Support* document, which is available from [the Jaspersoft community site](http://community.jaspersoft.com) (<http://community.jaspersoft.com>).

### 6.1 Installation Executables

The provided executables support various operating systems and install the required components.

#### 6.1.1 Operating Systems

The installers are available for 64-bit versions of these operating systems:

Linux Installer	Windows Installer	Mac OS X Installer	Other
<ul style="list-style-type: none"><li>• Red Hat Enterprise Linux 6.1, 6.4, 6.6, and 7.1</li><li>• Novell SUSE Linux Enterprise 12.1</li><li>• Ubuntu 14.04 LTS and 17.04</li><li>• Debian 8 and 9</li><li>• Fedora 22</li><li>• CentOS 6.4 and 7</li></ul>	<ul style="list-style-type: none"><li>• Windows Vista (SP2)</li><li>• Windows 2008 R1 and R2</li><li>• Windows 7 (SP1)</li><li>• Windows 8 and 8.1</li><li>• Windows 10</li><li>• Windows Server 2012 and 2016</li></ul>	<ul style="list-style-type: none"><li>• Mountain Lion (10.8)</li><li>• Maverick (10.9)</li><li>• Yosemite (10.10.1)</li><li>• El Capitan (10.11)</li><li>• Sierra (10.12)</li></ul>	<ul style="list-style-type: none"><li>• Solaris SPARC 10 and 11</li><li>• HP-UX 11.23 and 11.31</li><li>• FreeBSD 8.1 and 10.2</li><li>• IBM AIX 7.2</li></ul>

#### 6.1.2 Components in the Installer

The executable installers contain all the components needed to run the JasperReports Server web application, including:

- Apache Tomcat 8.5.30
- PostgreSQL 9.3.20

- Oracle JDK 8 version 1.8.0\_151 (8u151)
- JasperReports Server Web Application (WAR) file
- PhantomJS 2.1.1



During installation, you can choose whether to use an existing instance of Tomcat or create a new one to host JasperReports Server. Similarly, you can choose whether to use an existing instance of PostgreSQL or create a new one. These choices are entirely independent; you can use either an existing instance or create a new instance of either.

## 6.2 WAR File Binary Distributions

The WAR File Binary Distribution contains sample configurations and repository database setup scripts for the following applications.

### 6.2.1 Java Virtual Machines

- Oracle JDK 1.8
- OpenJDK 1.8
- IBM JDK 1.8



Only 64-bit JDKs are supported.

### 6.2.2 Application Servers

- Apache Tomcat 8.0.48 through 8.5.30 (we recommend 8.5.30)
- GlassFish 4.1.2
- JBoss EAP 6.4 and 7.0

### 6.2.3 Database Servers

- PostgreSQL 9.3, 9.4, 9.5, and 9.6
- MySQL 5.5, 5.6, and 5.7