JasperReports® Web Studio

User Guide

Version 2.0.0
May 2023

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Overview

JasperReports Web Studio - Professional Edition is the visual designer for creating and editing report templates for the JasperReports Library reporting engine and the whole Jaspersoft family of products that use this open source library to produce dynamic content and rich data visualizations. It comes as a web-based alternative to Jaspersoft Studio, the desktop application, which is the most complete and powerful designer for JasperReports templates.

JasperReports Web Studio - Professional Edition supports a few different deployment scenarios, including a standalone web application that can be run on its own or added to the existing JasperReports Server instances as a pluggable report editing feature.

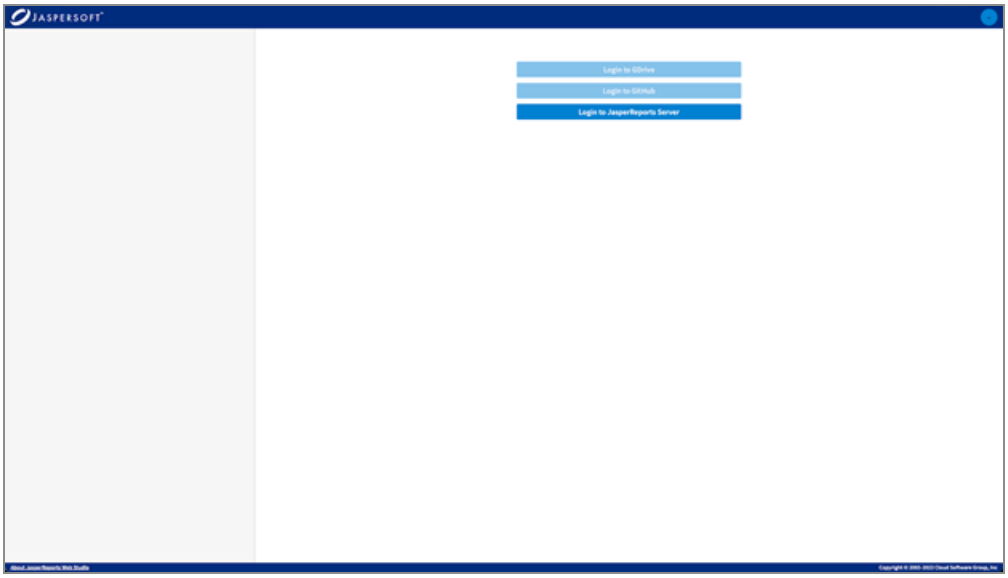
Getting Started

The standalone web application distribution of JasperReports Web Studio is called the Professional Edition and comes in the form of a ZIP package that contains everything you need to start the application on a Linux, Windows, or macOS machine.

After downloading the package from the Jaspersoft JasperReports Web Studio website, you can extract its contents to a folder of your choice on your target machine and then navigate to that folder using a terminal window and launch the start.sh or start.bat script.

By default, the application starts on *http://localhost:8088*, but the port and other configuration parameters can be changed in the start script if needed.

The web application opens up with a login screen where you have the option to connect to various types of repositories where reporting resources are stored, including JasperReports® Server instances, Google Drive accounts, or GitHub projects.



Only the button to connect to an existing instance of JasperReports® Server is enabled by default, the other two login options for Google Drive and GitHub are disabled as they require additional configuration in the start script for the OAuth2 based authentication into these cloud platforms.

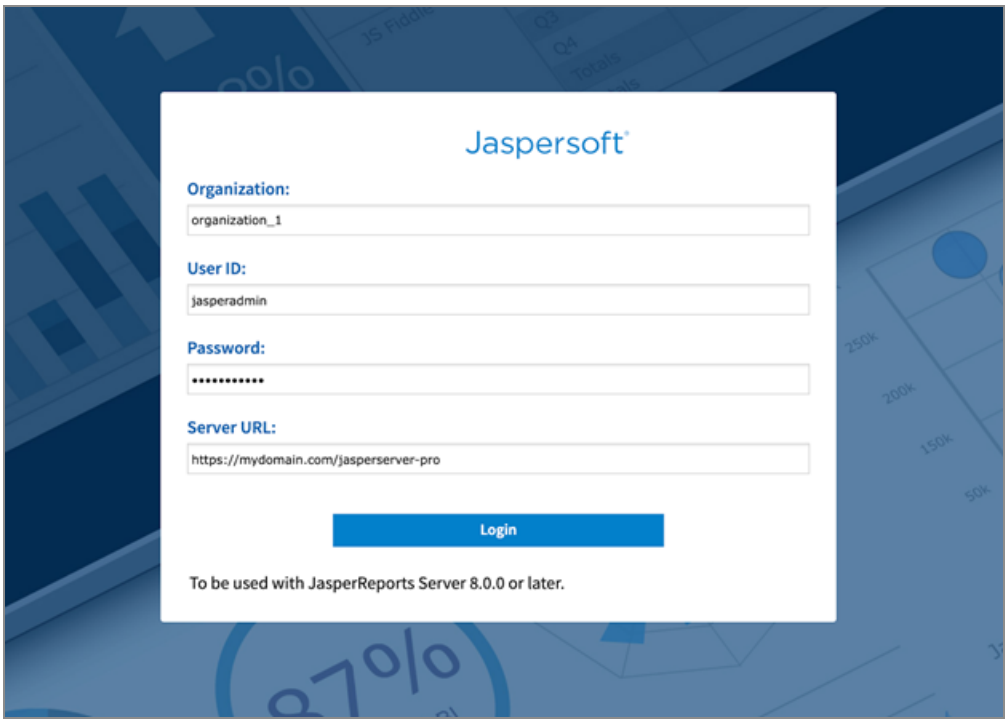
Report Repositories

A report could be as simple as a file or could be composed of multiple files, images, styles, or resource bundles. These files should be stored somewhere and should have a location, eventually relative to the report or root. They are usually stored in a kind of repository. The most simple and popular repository is a simple file system folder. File folders are very good for classic desktop development but are not enough in the modern way to work on multiple computers with multiple users involved, in clouds. JasperReports Web Studio will work with different repository types: Google Drive, GitHub, folder, JasperReports® Server. Each repository could have its own particularities, for example, there is no way to save on GitHub, instead it will do commits.

Using JasperReports Server

One of the available buttons on the JasperReports Web Studio - Professional Edition welcome screen allows you to connect to a JasperReports® Server instance and manage the reporting resources available in its repository using specialized visual editors.

In addition to the usual JasperReports® Server login credentials such as the organization/tenant ID, the user name, and the password, you need to specify the URL of the JasperReports Server instance to connect to, as seen in the following screenshot:



Note: If JasperReports® Server is located on a different server from JasperReports Web Studio - Professional Edition, then due to the web CORS and CSP rules both (JasperReports® Serverr and JasperReports Web Studio - Professional Edition) should be accessed using HTTPS protocol. In case they are located on the same server and share the same hostname, it can be either HTTP or HTTPS.

Using Google Drive

The login screen of JasperReports Web Studio - Professional Edition shows a button that allows you to log in to a Google Drive account and edit reporting resources stored there. But it requires specifying Google OAuth2 application registration information in the start script of the application using system configuration properties.

The installer does not come with such Google Drive authorization information preset in the application start script and this is why the respective login button is disabled.

In order to enable the Google Drive login button, you need to register your instance of the JasperReports Web Studio - Professional Edition with Google Drive by following the steps detailed on this page:

https://developers.google.com/drive/api/v3/about-auth

Once you have obtained the client ID and the secret key for your application at Google, you can set them in the start script of the JasperReports Web Application using the following system properties added with a *-D* flag to the command that launches the Java Virtual Machine as follows:

```
-Djsw.google.client.id=[YOUR_CLIENT_ID]
```

```
-Djsw.google.secret.key=[YOUR_SECRET_KEY]
```

Using GitHub

The login screen of JasperReports Web Studio - Professional Edition also features a login button for connecting to GitHub to create and modify report template files stored in the GitHub project associated with the respective account.

The GitHub login button is also disabled by default as it requires OAuth2 application registration information to be specified in the application start script using system configuration properties. This startup provides authorization information that allows the application to access remote GitHub repositories and can be obtained by registering your local instance of JasperReports Web Studio - Professional Edition with GitHub by following the steps detailed on this page:

https://docs.github.com/en/rest/guides/basics-of-authentication

The client ID and the secret key provided by Github for your registered application can be set in the start script of the JasperReports Web Studio - Professional Edition using *-D* arguments in the command that launches the Java Virtual Machine:

```
-Djsw.github.client.id=[YOUR_CLIENT_ID]
```

```
-Djsw.github.secret.key=[YOUR_SECRET_KEY]
```

Using a Folder as a Repository

It is possible to use a folder from the PC as a report repository. In case JasperReports Web Studio is installed and used by a single report developer, the developer could work

with reports from a laptop. In order to do that, a property should be configured in the startup script jrws.repository.file.[name], for example:

For Linux:

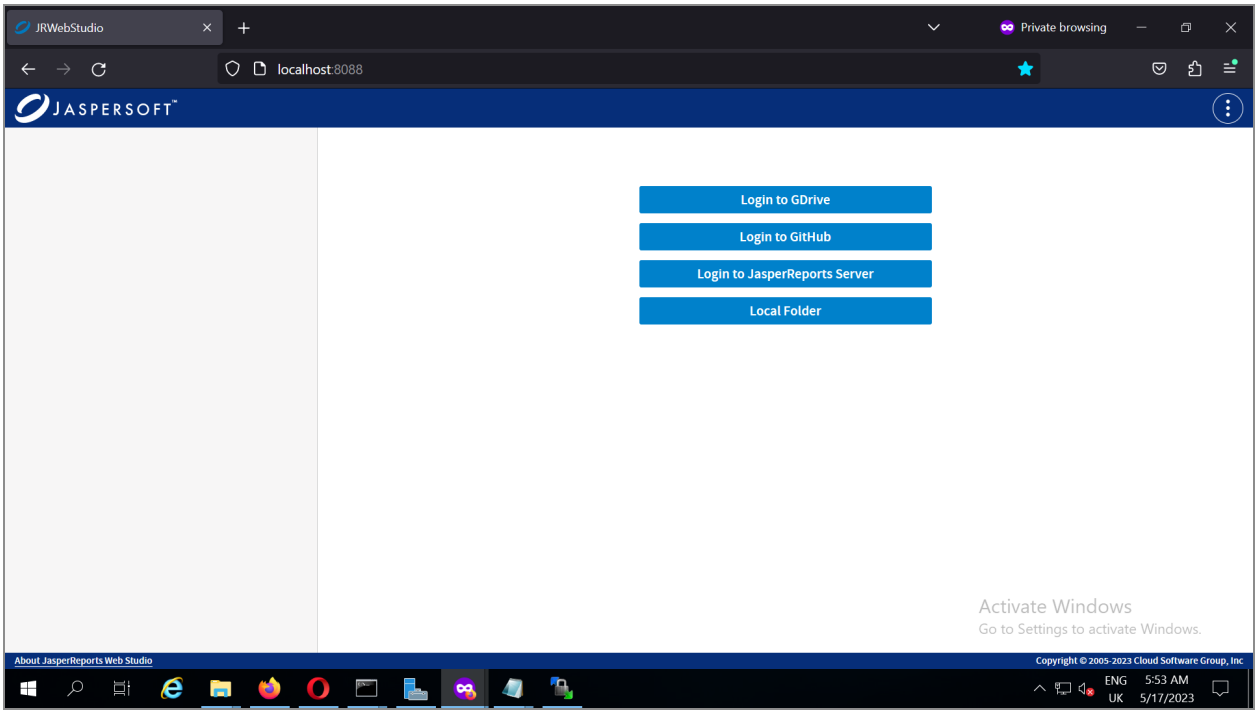
```
JRWS_ARGS="${JRWS_ARGS} -Djrws.repository.file.samples=/path/to/the/samples"
```

For Windows:

```
set "JRWS_ARGS=%JRWS_ARGS% -
Djrws.repository.file.samples=C:/path/to/the/samples"
```

It is also possible to configure multiple folders.

Warning! Because JasperReports Web Studio is listening by default on the localhost:8088 , this folder will be seen by other network users. To avoid this, it is the responsibility of the users to protect this port with a firewall (not allowing connections from outside) or configure the Jetty server to allow connections only from the localhost.



Repository Manager

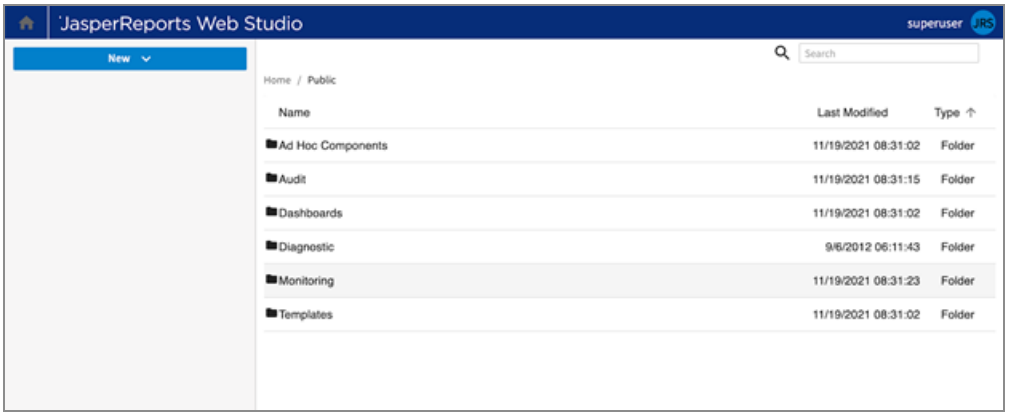
After logging into the remote storage platform, you arepresented with the contents of the target repository and are able to navigate the folder structure or search for resources that need to be edited using the specialized editors that JasperReports Web Studio - Professional Edition offers.

Folders and files can be created, edited, or removed, just like in any file system like a repository. To upload a file or folder, click on the **New** button and select "**Upload File**" or "**Upload Folder**". The menu also contains the following options:

- New Report
- New Data Adapter
- New Folder

The following actions are available from the context menu, when you right-click on the name of a file or folder:

- **Delete** deletes the resource permanently.
- **Download** is self-describing.
- **Resource Information** shows detailed information about the resource: name, description, mime, ID, type, path, size, Created Date, Last Modified Date and permissions; in case permissions or the repository allows, it changes the name or description, for example.



To open a file, just click on the file name.

Editors

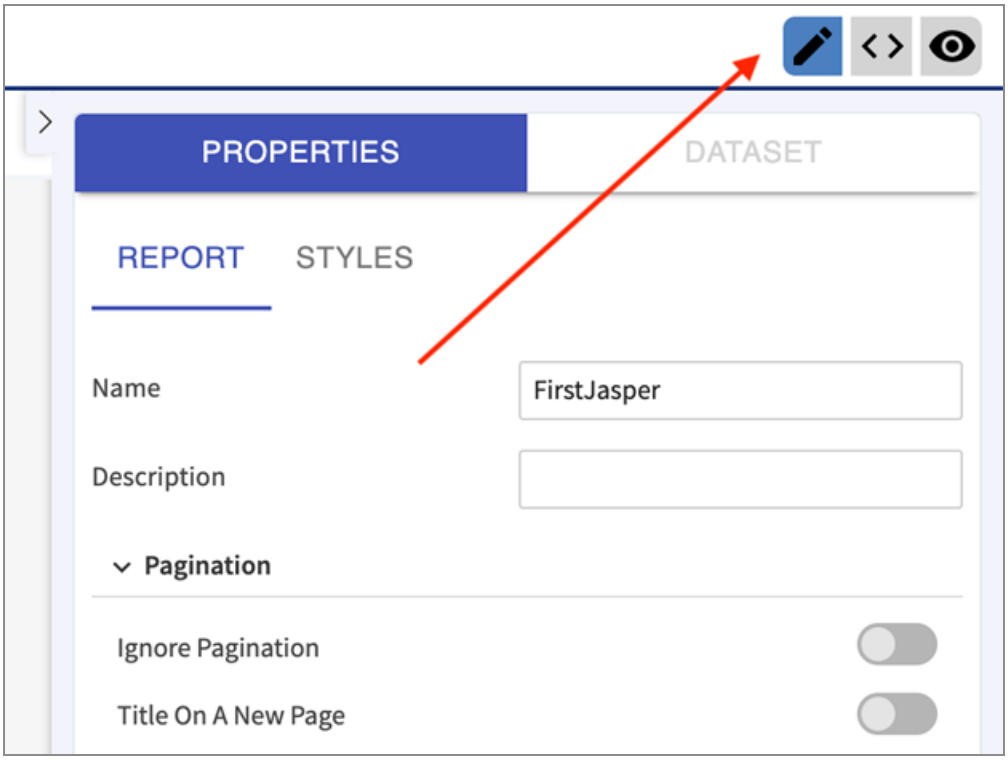
JasperReports Web Studio is a collection of tools that helps to develop reports. It will open and edit the file types usually used in report development, report templates, data adapters, JasperReports styles templates, images, all kinds of text, XML, JSON files. If it is not working with a particular type of file available in the repository, use another tool.

Report Designer

JasperReports Web Studio - Professional Edition main feature is the editor for JRXML report templates. Like Jaspersoft Studio, the editor has three tabs: visual designer, jrxml source editor, and report preview. You can switch between these tabs using buttons at the upper-right corner of the application window.

Layout Designer

The visual report designer consists of a design view, outline, palette, and properties view.



Palette contains all the elements from which the report is built. Drag an element from the palette into the designer.

Outline will show the structure of the layout part of the report. From here you can see, add, and delete the bands. See the order of the elements inside a container.

Designer area will show the large layout composed of the bands and elements. Drag the elements to arrange them in the desired layout. Keep in mind that this is very close to

the report rendered in the HTML format. Reports rendered in PDF or other formats could look a bit different.

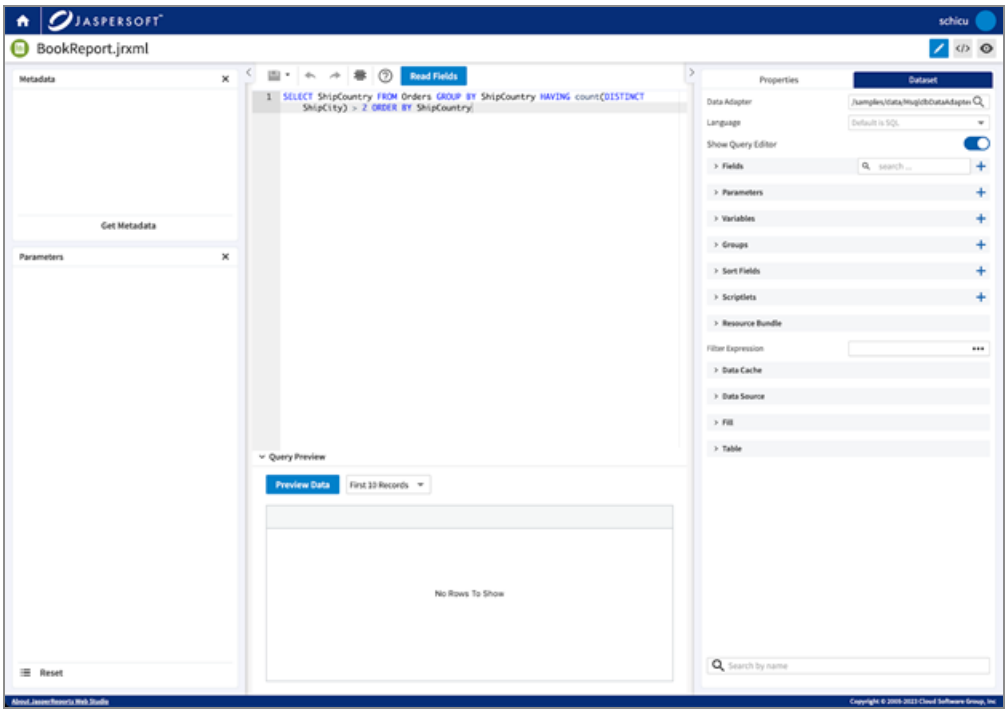
Selecting an element in the Outline or Design area will automatically show its properties in the Properties view. Elements could have hundreds of properties that are organized in categories. It is possible to filter properties by name using the search box at the bottom of the view. In the same place, there is an icon to set more filters, to show or not deprecated properties, or all JasperReports custom properties.

A special category of properties is styles. If an element uses a style, properties will inherit the value of the parent style. These values are shown in the light gray color. In general, if the property shows the value in the light gray color, this is the default or calculated from the properties value, black color is used for the actual value.

Dataset

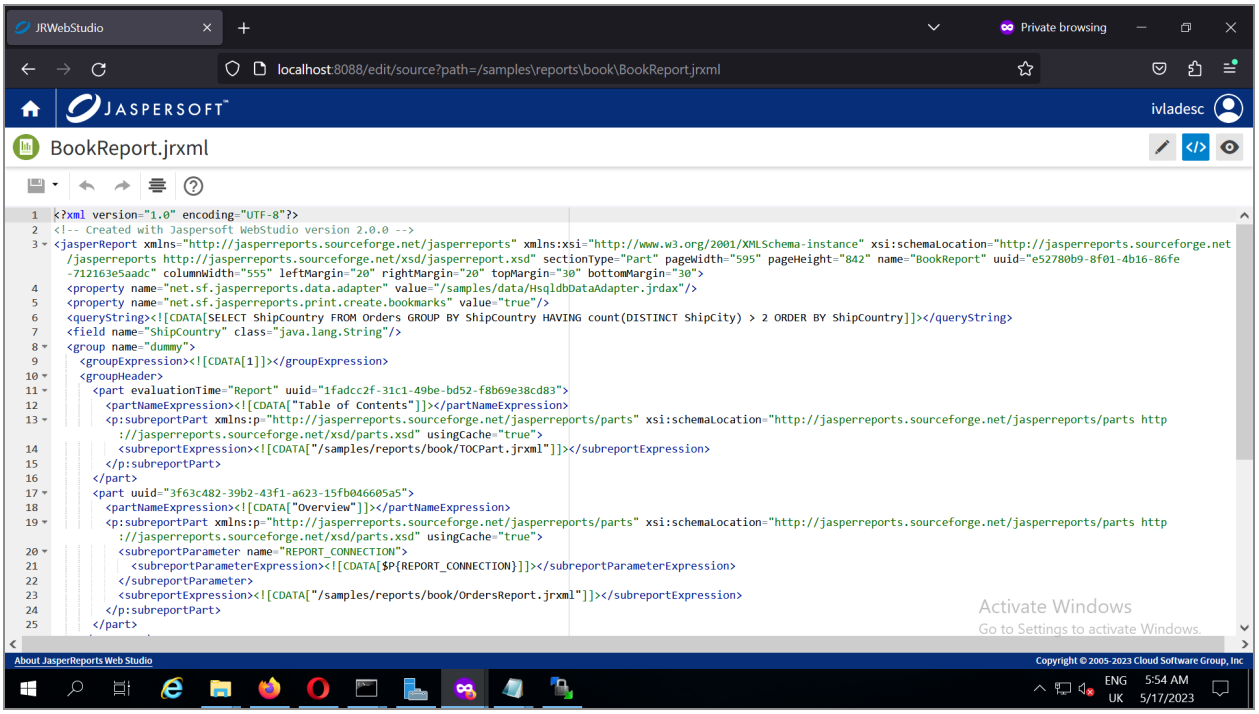
The dataset view helps to configure the report datasets. It shows the list of datasets, for each dataset in the properties view has Fields, Parameters, Variables, Groups, and a large list of other properties. Use "**Show Query Editor**" to show the Query Editor and all related tools.

In the Query Editor area, depending on the language, a text editor with syntax highlighting will help edit the query. Parameters view is for setting the values for the parameters. Metadata view will help visualize the structure of most of the JDBC databases or csv, xls, xml, and json files. Query Preview is useful to run the query and see what data it will return.



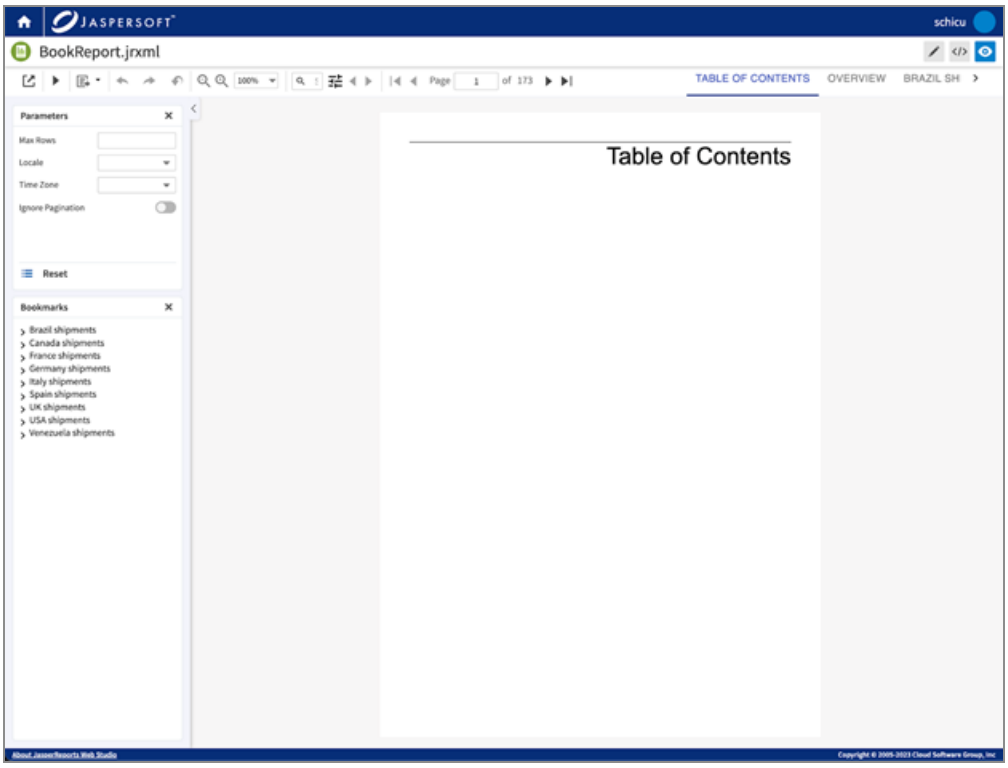
Source Editor

Report templates for JasperReports Web Studio are text files with .jrxml extension. You can use the **Source Editor** to manually modify a template by editing the XML code.



Preview

This is the place to consume and test reports. This view provides user interfaces to give values to parameters, select the format to generate, and navigate the report. Report navigation could be done in different ways. On the top toolbar, there are controls to select the desired page, search through the report, or use bookmarks to jump inside the report.



Data Adapter Editors

An important aspect of reporting is acquiring the data for the reports. This data usually comes from relational databases, files, or other specialized data storage systems.

The way to acquire report data in JasperReports Web Studio - Professional Edition is by using data adapters, which are specialized files containing information about how to get the data.

Data adapters could be of the following types: Random, Empty, QueryExecutor, relational database connections (JDBC), MongoDB, Mondrian, locally stored or remotely retrieved data files of CSV, XML, JSON, Excel type, etc.

JasperReports Web Studio - Professional Edition features a specialized editor that allows creating and editing these data adapter types.

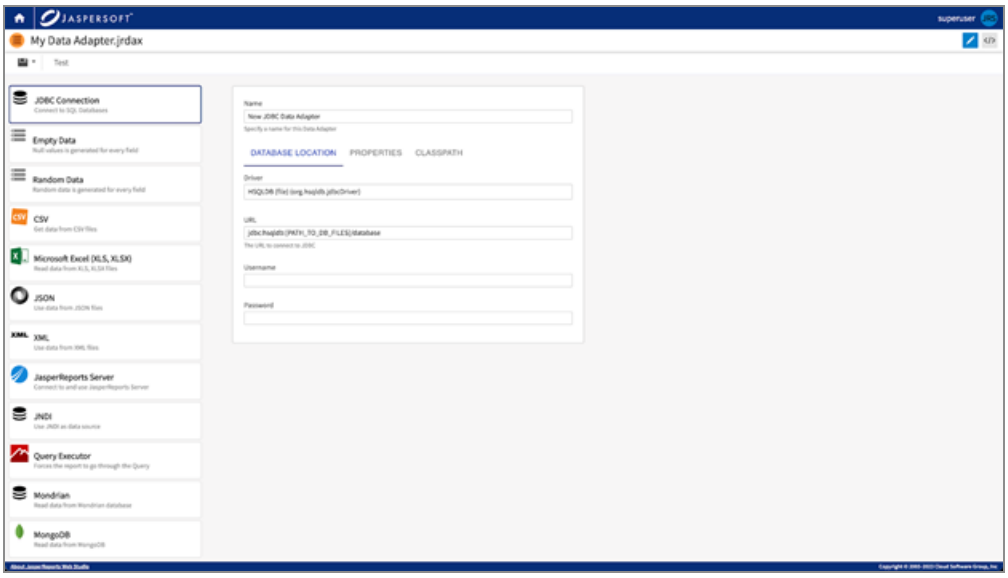
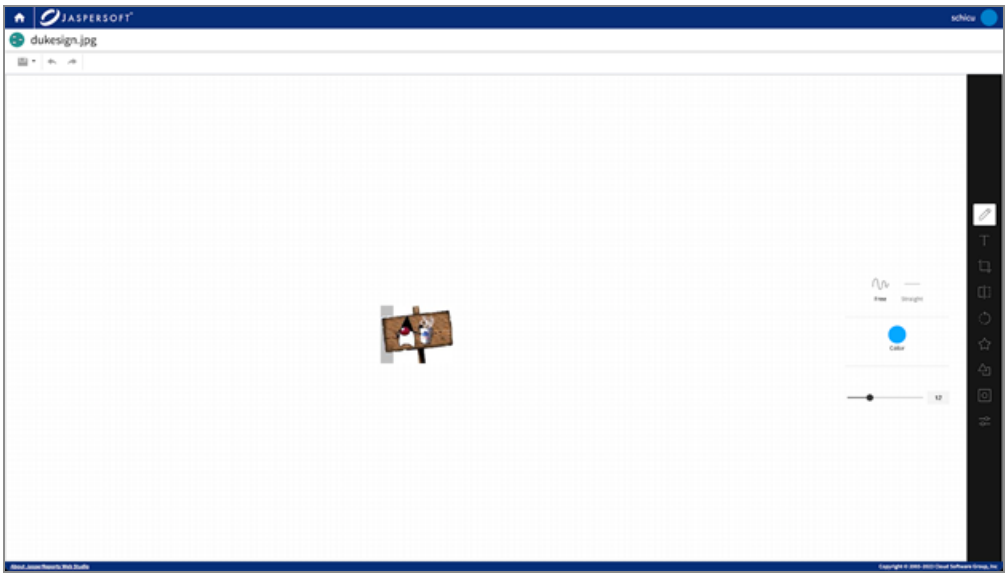


Image Editors

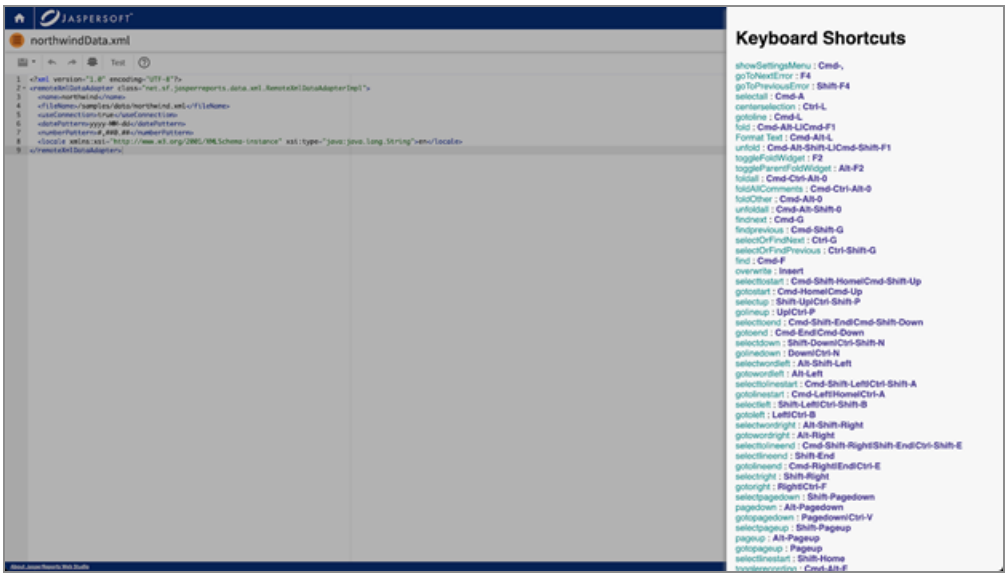
There is basic support for images. By default, JasperReports Web Studio shows an image supported by the browser. For some image types, there is an image editor which helps to modify an existing image.



Text Editors

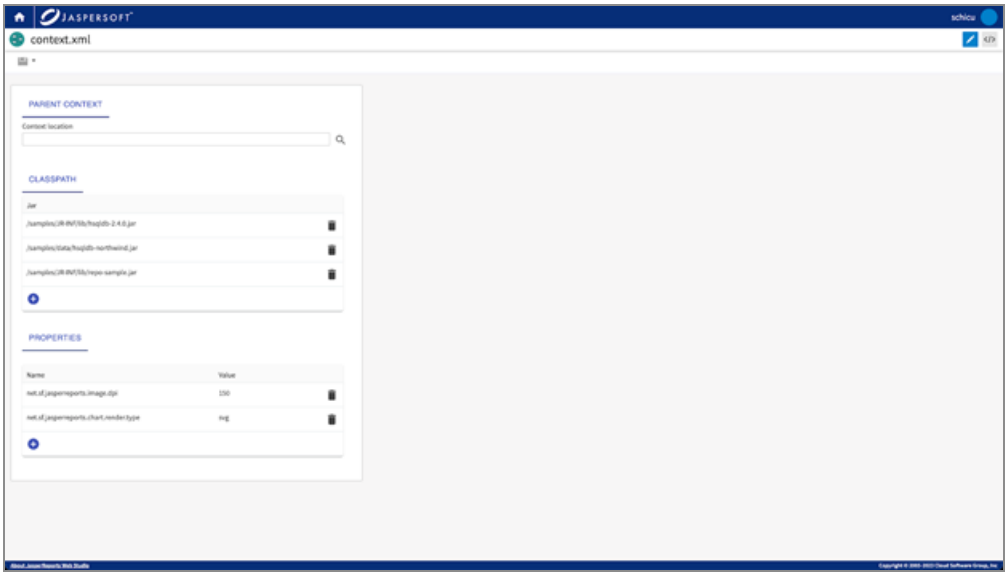
Most of the text files will be editable with a simple text editor. However, for many types, JasperReports Web Studio supports syntax highlighting and some more advanced editor functions like folding, and validation. This could be very useful for files like

properties, css, html, xml, json, sh, sql. The text editor supports some functionalities including search and replace text, pretty formatting. To see all the keyboard shortcuts, click on the question mark icon on the toolbar.



Editor for JR-INF/context.xml

These files provide configuration for report execution. It could contain some properties that are used for reports or classpath. To see a more detailed description of these files, refer to the JasperReports® IO guides.



Version Support

The standalone version JasperReports Web Studio 2.0 is supported by JasperReports® Server 8.2.0.

Supported JRS 8.2.0 features:

- Report Bursting (strictly linked to JRS)
- Various Types of Data Adapters
- Properties Support for all JRL Elements
- HighCharts
- Fusion
- Maps
- Barcodes
- CVC
- Improvements in Dataset configuration

Unsupported JRS 8.2.0 features:

- Table - Partial support
- Crosstab - Partial support

The standalone version of JasperReports Web Studio 1.0.0 is supported by JRS 8.0.4 and JRS 8.1.2.

JasperReports Web Studio Integration with JRS 1.0.0 is supported by JRS 8.1.2 and JRS 8.2.0.

Documentation and Support Services

For information about this product, you can read the documentation, contact Jaspersoft Support, and join Jaspersoft Community.

How to Access Jaspersoft Documentation

The JasperReports® Server documentation is available at:

https://docs.tibco.com/products/tibco-jasperreports-server (PDF only)

http://community.jaspersoft.com/documentation (PDF and HTML)

The following documents for this product can be found on the Jaspersoft Documentation site:

- JasperReports® Server Release Notes
- Jaspersoft® Platform Support Guide
- JasperReports® Server Installation Guide
- JasperReports® Server Upgrade Guide
- JasperReports® Server User Guide
- JasperReports® Server Administrator Guide
- JasperReports® Server Security Guide
- JasperReports® Server Data Management Using Domains
- JasperReports® Server REST API Reference
- JasperReports® Server Visualize.js Guide
- JasperReports® Server External Authentication Cookbook
- JasperReports® Server Source Build Guide
- JasperReports® Server Ultimate Guide
- Jaspersoft® for AWS User Guide
- Jaspersoft® Studio User Guide
- Jaspersoft® OLAP User Guide

How to Contact Jaspersoft Support

You can contact Jaspersoft Support in the following ways:

- For an overview of Jaspersoft Support, visit http://www.tibco.com/services/support.
- For accessing the Support Knowledge Base and getting personalized content about products you are interested in, visit the Jaspersoft Support portal at https://support.tibco.com.
- For creating a Support case, you must have a valid maintenance or support contract with Jaspersoft. You also need a user name and password to log in to Jaspersoft Support website. If you do not have a user name, you can request one by clicking **Register** on the website.

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