



# InterSystems Reports

2024-05-06

*InterSystems Reports*

InterSystems IRIS Data Platform 2024-05-06

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# 1

## Introduction to InterSystems Reports

InterSystems Reports is powered by Logi Report (formerly named JReport®), a product of insightsoftware® (formerly Logi Analytics®). InterSystems Reports is supported by InterSystems IRIS® and InterSystems IRIS for Health™. It provides a robust modern reporting solution that includes:

- Embedded operational reporting which can be customized by both report developers and end users.
- Pixel-perfect formatting that lets you develop highly specific form grids or other special layout elements for invoices, documents, and forms.
- Banded layouts that provide structure for aggregated and detailed data.
- Exact positioning of headers, footers, aggregations, detailed data, images, and sub-reports.
- A variety of page report types.
- Large-scale dynamic report scheduling and distribution including export to PDF, XLS, HTML, XML, and other file formats, printing, and archiving for regulatory compliance.

InterSystems Reports consists of:

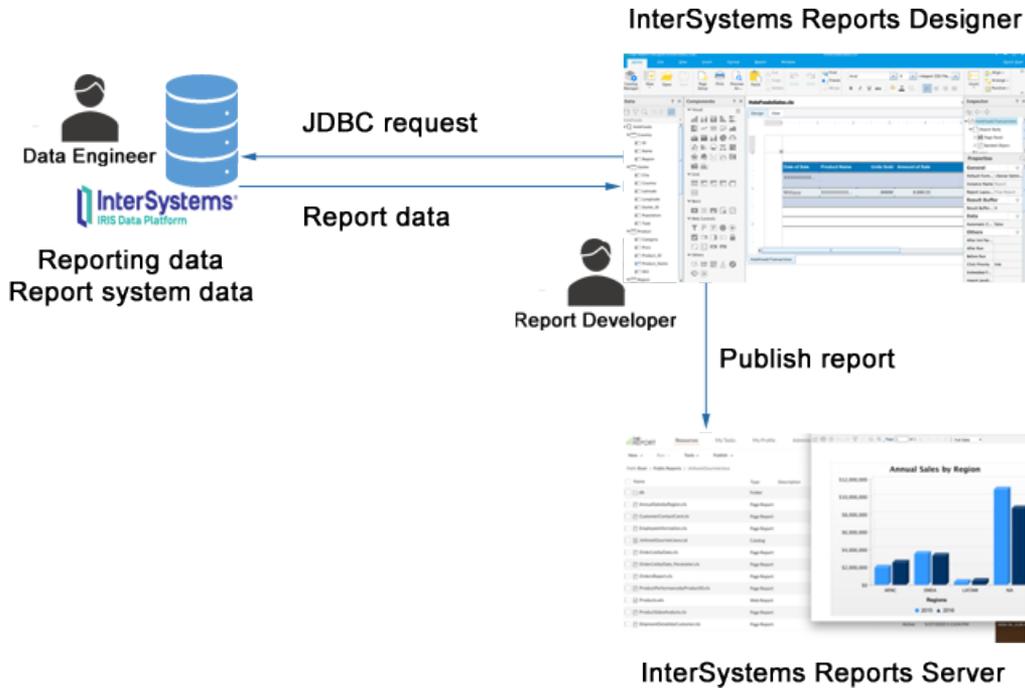
- A report designer, which provides Design and Preview Tabs that enable report developers to create and preview reports with live data.
- A report server which provides end users browser-based access to run, schedule, filter, and modify reports.

The basic workflow for InterSystems Reports has the following steps:

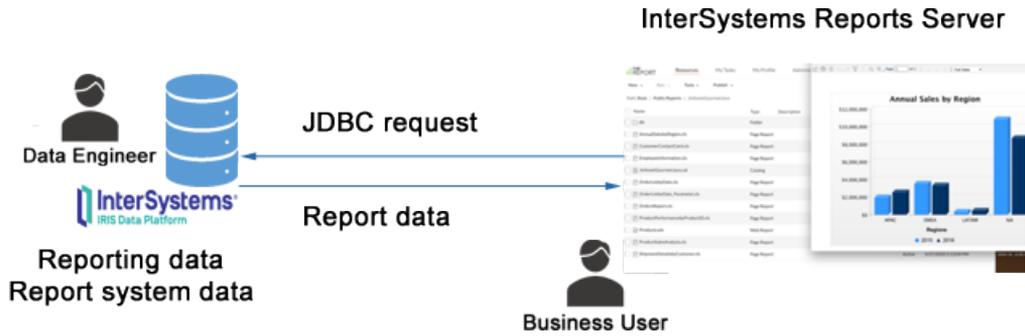
- The report developer uses InterSystems Reports designer to define and format the report. Data from InterSystems IRIS is available while developing the report.
- Once the report developer has completed the report they test it with InterSystems IRIS data and publish the report to the InterSystems Reports server.
- Once reports have been published to the server, business users log in to the server via a browser.
- From the server, users can:
  - Run, filter and modify reports.
  - Export to a variety of formats.
  - Schedule reports to be distributed via email or FTP.

The following illustration summarizes the process of report development. Report developers use the InterSystems Reports designer to define reports for end users. All source data from the InterSystems IRIS data platform are available to the report developer. Report system data, configuration of the report server and the report definitions, are also stored in InterSystems

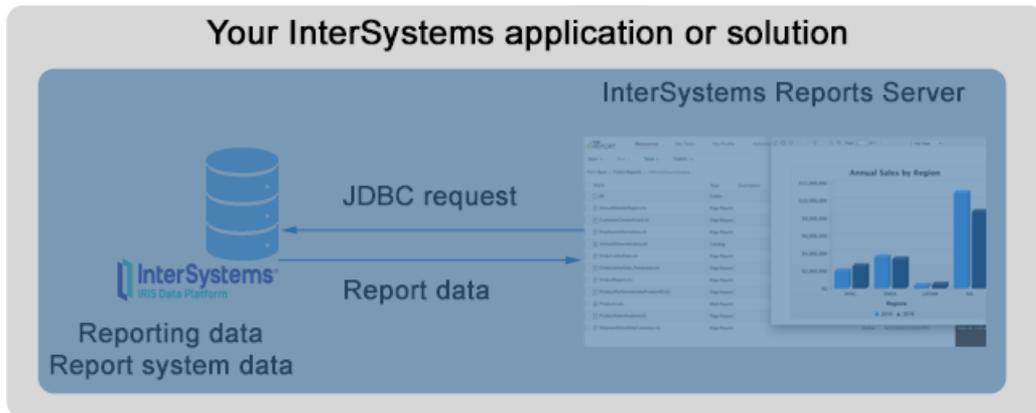
IRIS. The configuration does not have to be stored in the same InterSystems IRIS instance used as a report data source. When a report is complete, it is tested and published to the InterSystems Reports server.



The next illustration shows use of published reports by a business user.



The Reports Server and published reports can be embedded into an InterSystems application or solution.



All configuration and management data for InterSystems Reports is stored in InterSystems IRIS if you use the setup scripting provided in the deployment kit.

The documentation provided by Logi Analytics at [Logi Analytics documentation](#) provides information on installing and using InterSystems Reports.

If you have questions about using InterSystems Reports, contact the [Worldwide Response Center](#) (WRC).



# 2

## InterSystems Reports Designer

### 2.1 Designer Installation

Use the following steps to install the InterSystems Reports designer.

1. Make sure the machine where you are installing the InterSystems Reports designer meets the Logi Analytics minimum [System Requirements](#). Make sure a JDK supported by both Logi and InterSystems is installed somewhere on machine running the designer. See [Supported Java Technologies](#) for information on JDK supported by InterSystems IRIS, and [System Requirements](#) for JDK supported by Logi. Make a note of the path to the JDK. You need this information when you select a JDK later in the installation.
2. Download the InterSystems Reports Designer installation kit from WRC Distributions page, using the information you received when you purchased InterSystems Reports.
3. Click the downloaded file, and follow the steps through the Install Wizard. If you are installing on a Windows machine, and see a message *Windows protected your PC*, click *More Info*, then *Run Anyway*. When prompted to enter User ID and License Key, provide the values you received when you purchased InterSystems Reports.

**Note:** If you need to update the license for the InterSystems Reports Designer after the initial installation, you can do so by following the [instructions provided in the Logi Report documentation](#).

Accept defaults for the Installation Set, unless you want to put the designer in a different path.

To select the JDK, click **Browse** and browse to the path you noted in a previous step. Select the folder one level above bin.

Click **install**.

4. Create your first catalog. A catalog is a group of related reports and their components. Each catalog is stored in its own folder on disk.
  - a. Log on to the InterSystems Reports designer. If you see the Start page, click the **X** in the upper right corner to dismiss it. Click **File > New Catalog**.
  - b. Enter a name and a new folder for your catalog. Each catalog should be in its own unique folder. Best practice is to give the folder the same name as the catalog.

For Example:

- **Name:** WRCAnalytics.cat
- **Directory:** C:\LogiReport\Designer\Demo\MyReports\WRCAnalytics

Click **yes** to create the catalog.

5. Configure the JDBC connection.

After creating a new catalog, the Catalog Manager should be open. Right-click **Data Source 1** and select **New JDBC Connection**, then **InterSystems IRIS**. Enter fields as follows:

- Driver — Accept the default.
- Server — Enter the DNS or IP of your InterSystems IRIS server.
- Port — Enter the superserver port number.
- Namespace — Enter the Namespace where the data is located.
- User, Password — Enter a generic or system user that has access to the data.

Click the **Test Connection** button to confirm that the connection is functional. Click **OK**, then **Save Catalog**.

After you complete these steps, InterSystems Reports Designer is installed and ready to create reports. Useful data sources include Queries, Imported SQL, and Stored Procedures. You can consult the Tutorial included with the InterSystems Reports designer product and documented in: [Report Tutorial v23 Overview](#). Courses are also available from InterSystems Learning Services. Search the following web page for “InterSystems Reports”: <https://learning.intersystems.com/totara/coursecatalog/courses.php>.

# 3

## InterSystems Reports Server with InterSystems IRIS

The InterSystems Reports Server (powered by insightsoftware's Report Server) collects data from the InterSystems IRIS® or InterSystems IRIS for Health™ instance where you store your data and presents it to the user endpoint in a format which you specify using the InterSystems Reports Designer. The InterSystems Reports Server keeps track of the reports you configure by communicating with an InterSystems IRIS or InterSystems IRIS for Health instance where the report configuration information is maintained.

These three entities—the InterSystems Reports Server, the InterSystems IRIS data source, and the InterSystems IRIS report configuration instance—do not need to run on the same machine, as long as they can communicate with each other. InterSystems recommends that you configure a unique instance of InterSystems Reports Server for each data source. It is possible for the same instance of InterSystems IRIS to act as both the data source and the source for report configuration information.

### 3.1 Set Up the InterSystems Reports Server

When you [install](#) the InterSystems Reports Server, you must also configure an existing InterSystems IRIS or InterSystems IRIS for Health™ instance to store your report configuration information. InterSystems provides an installation script which guides you through both parts of this process.

If you want to upgrade your version of the InterSystems Reports Server, it is not necessary to perform the full installation procedure; refer to [Upgrade InterSystems Reports Server](#) for instructions on the upgrade process.

#### 3.1.1 Install the InterSystems Reports Server

Use the following steps to install and set up the latest version of the InterSystems Reports Server:

1. Make sure the machine where you are installing the InterSystems Reports Server meets Logi's minimum [System Requirements](#) for Report Server. Make sure a version of JDK supported by both Report Server and InterSystems IRIS is installed on the machine running the InterSystems Reports Server. See [Supported Java Technologies](#) for information on JDK supported by InterSystems IRIS, and [System Requirements](#) for JDK supported by Report Server. Make a note of the path to the JDK. You need this information when you select a JDK later in the installation.
2. Make sure that the instance of InterSystems IRIS you have installed to store your report configuration is reachable from the machine where you are installing InterSystems Reports Server. Make a note of the hostname or IP address for this instance, as well as the superserver port (you can find this in the About section of the [Management Portal](#)).

- Download and unzip the InterSystems Reports Server installation kit from the WRC Distributions page, using the information you received when you purchased InterSystems Reports. On a Unix or macOS system, you can unzip the kit file using the command line by navigating to the directory where you downloaded the kit file and issuing the following command, replacing `<kitFilename>` with the filename:

```
tar -xf <kitFilename>
```

The kit should include the following files:

- `intersystems-jdbc-<jdbcVersionNumber>.jar`
- `intersystems-reports-<reportsVersionNumber>.jar`
- `readme.txt`
- `server.exe` (for Windows) or `server.bin` (for Unix/macOS)
- `version.txt`

Where `<jdbcVersionNumber>` and `<reportsVersionNumber>` are version numbers for the components packaged within each `.jar` file.

- From the command line, navigate to the directory containing the kit files.
- For Unix and macOS systems, you must manually add execute permissions for both `.jar` files as well as the `server.bin` file before running the installer script. (On Windows, the necessary permissions should be added automatically.) To do so, issue the following command for each of the three files, replacing `<filename>` with the name of the file:

```
chmod u+x <filename>
```

- Run the installer script by issuing the following command:

- On Windows systems:

```
java -cp ../* com.intersystems.reports.Installer
```

- On Unix or macOS systems:

```
java -cp ../* com.intersystems.reports.Installer
```

This command uses a colon (`:`) instead of a semicolon (`;`), because the classpath delimiter is different on Unix and Windows.

- The installer script prompts you for the following information:
  - The hostname or IP address for your InterSystems IRIS instance.
  - The superserver port of your InterSystems IRIS instance.
  - The InterSystems IRIS namespace to be used by this InterSystems Reports Server. Note each InterSystems Reports Server requires a separate namespace. If the given namespace does not exist, the script will create it.
  - The unique name to assign to this InterSystems Reports Server (Logi Report Server Name).
  - The computer hosting this InterSystems Reports Server (Logi Report Server Host).

Note that InterSystems IRIS will use this address to access this Reports Server, so ensure it is reachable from the machine hosting the InterSystems IRIS instance. If the report configuration instance of InterSystems IRIS and the InterSystems Reports Server are being hosted on the same computer, please use `127.0.0.1`, the IP address, or the hostname rather than `localhost`.

- The port the InterSystems Reports Server will use. This port must be available and between 1 and 65535.

- g. Enable Single Sign-On — controls whether InterSystems IRIS will be able to use single sign-on to access this InterSystems Reports Server from the Management Portal.
- h. InterSystems IRIS user—this InterSystems Reports Server will connect as (Report User). If this user does not exist, the script will create it.
- i. Password for the report user specified in the last step.
- j. The license user from the user/key pair you received when you purchased InterSystems Reports.
- k. The license key from the user/key pair you received when you purchased InterSystems Reports.

**Note:** The Terminal does not display input when you enter the license key. If your installation fails, confirm that you entered the license key correctly and try again, or try [installing using a manual configuration file](#).

If you need to update the license for the InterSystems Reports Server at any point after the initial installation, you can do so by following the [instructions provided in the Logi Report documentation](#).

- l. The absolute path on this computer where you want to install the InterSystems Reports Server.
- m. The JDK path.

After you enter this information, the installer sets up the Reports Server and then uses a JDBC connection to connect to InterSystems IRIS and set up the report namespace and report user.

You should then see messages like the following:

```
=====
                          InterSystems Reports Installation
=====
Loaded configuration from C:\iscreports-sample\config.properties
Performing IRIS setup...
Waiting for JDBC connection to setup users and namespaces (as necessary)...
Successfully connected to jdbc:IRIS://127.0.0.1:1972/%SYS.
Successfully saved Report Server definition "report-server"
Using pre-existing report namespace "REPORTS".
Created report user "REPORT".
Successfully connected to jdbc:IRIS://127.0.0.1:1972/REPORTS.
Granted %DB_OBJECT_DEFINITION to REPORT
Installing Logi Report Server (this may take a few minutes)...
Configuring single sign on from IRIS to Logi Report server...
=====
                          InterSystems Reports Installation was successful.
=====
```

### 3.1.1.1 Alternative: Performing Manual Configuration and Installation

Instead of installing as described [above](#), you can edit a configuration file and use that in the installation. The steps are as follows:

1. Follow steps 1–3 of the [basic installation procedure](#), making sure of prerequisites and obtaining the kit.



3. Respond to the prompts in the installer according to your system configuration, selecting **Next** as needed to advance to the next step. Note the following:
  - a. You must provide your license user ID and license key again.
  - b. When the installer gives you the option to **Install** or **Upgrade** the server, select **Upgrade**.
  - c. When the installer gives you the option to **Upgrade** or **Overwrite**, select **Upgrade**.

## 3.2 Using the Management Portal

You can use the **Management Portal** to create, view, and edit InterSystems IRIS Reports server configurations. The installation process creates a report server, which is listed on the **InterSystems Reports** page on the **Management Portal**. To find this page, select **System Administration > Configuration > InterSystems Reports**. The following screen shot shows the page with the initial report server. The server name listed here is the one you supplied to the install script as **Logi Report Server Name**.

### InterSystems Reports New Report Server

**Server definitions define how to connect to InterSystems Reports, powered by Logi Analytics®. A list of defined report servers is shown below:**

Name	Host	Port		
IRISP284	127.0.0.1	8890	<a href="#">Edit</a>	<a href="#">Configure</a>

Selecting the **New Report Server** button opens the form shown below, which you can use to configure a new report server by entering the **Name**, **Host**, and **Port**, and using the **SSO Enabled** check box to determine whether single sign-on is enabled.

### InterSystems Reports Save Cancel Delete

**Use the form below to create a new Report Server definition:**

<b>Name</b>	<input style="width: 100%;" type="text"/>
	<small>Required.</small>
<b>Host</b>	<input style="width: 100%;" type="text"/>
	<small>Required.</small>
<b>Port</b>	<input style="width: 100%;" type="text" value="8888"/>
	<small>Required.</small>
<b>SSO Enabled</b>	<input type="checkbox"/>

Selecting a server in the list and using the **Edit** button opens the same form initialized with values from the selected server. You can modify the server configuration, or use the **Delete** button to remove it entirely. Selecting the **SSO Enabled** check box enables the Linked User Accounts feature, see [Enabling Linked User Accounts](#).

If Linked User Accounts has been enabled, you can access the Reports Server from the **Management Portal**. Select **System Administration > Configuration > InterSystems Reports** to navigate to the InterSystems Reports page, which lists existing reports servers. Select **Configure**.

# InterSystems Reports New Report Server

**Server definitions define how to connect to InterSystems Reports, powered by Logi Analytics®. A list of defined report servers is shown below:**

Page size: 0    Max rows: 1000    Results: 1    Page: |< << 1 >> >| of 1

Name	Host	Port		
IRISP284	127.0.0.1	8890	<a href="#">Edit</a>	<a href="#">Configure</a>

This action opens the **InterSystems Reports Configuration** page:

## Report Server Configuration

**Select a user to configure IRISP284 or sign in manually.**

Page size: 0    Max rows: 1000    Results: 3    Page: |< << 1 >> >| of 1

Report User	
TestUser	<a href="#">Select</a>
admin	<a href="#">Select</a>
guest	<a href="#">Select</a>

Clicking on **Select** opens Logi Report, logged in as TestUser.

### 3.3 Enabling Linked User Accounts

**Note:** InterSystems Reports does not support the use of the linked user account feature with the following versions of InterSystems IRIS data platform: 2022.3, 2023.1, 2023.2.

Linked user accounts is a feature that enables you to access the Reports Server directly from the InterSystems IRIS **Management Portal** without entering an additional Logi username and password. This functionality is achieved by linking a user account on the InterSystems IRIS server with a Logi user account. This linkage is made by assigning a role to the InterSystems IRIS user. The name of this role must follow a specific naming convention.

- The first part of the name is the name you supplied as the **Logi Report Server Name** during server installation.
- The second half of the name is the name of a Logi user.
- The two halves of the name are separated by an underscore character (\_).

For example, if the **Logi Report Server Name** is IRISP284 and there is a Logi user named TestUser, a role having the following name can link an InterSystems IRIS user to TestUser on Logi Report:

#### IRISP284\_TestUser

Logi users named **admin** and **guest** exist on Logi Report systems by default. When you enable linked user accounts on an InterSystems IRIS report server, that action creates roles to link InterSystems IRIS users to these Logi accounts. These roles are:

- *LogiServerConfigName\_admin*
- *LogiServerConfigName\_guest*

When the linked user accounts feature is disabled, these roles are not edited or deleted, but do not appear in the configure page. You can create additional roles for linking user accounts as you would create any other InterSystems IRIS roles, being careful to follow the naming convention.

Given a Logi server configuration name **IRISP284**, the following screen shot shows the default roles create by the installation script, and an additional role for Logi user TestUser created through the **Management Portal**.

## Roles

[Create New Role](#)
 Last update: 2021-08-02 18:26:34.949

### The following is a list of role definitions:

Name	Description	Created By	
<a href="#">IRISP284_admin</a>	Admin role on Report Server IRISP284	_SYSTEM	<a href="#">Delete</a>
<a href="#">IRISP284_guest</a>	Guest role on Report Server IRISP284	_SYSTEM	<a href="#">Delete</a>
<a href="#">IRISP284_TestUser</a>	TestUser role created manually on IRISP284	_SYSTEM	<a href="#">Delete</a>

The ability of users to configure report servers is influenced by the privileges assigned to them. Users with %Admin\_Secure have access to report server operations that indirectly manipulate roles, while users without that privilege do not. When creating a new report server, users without %Admin\_Secure are unable to toggle linked user accounts. The form is presented to such users with the **SSO Enabled** check box disabled. If a new report server is created with **SSO Enabled** selected, the default roles are created automatically.

If these roles already exist, they are not overwritten or updated upon creation of the report server. The **admin** and **guest** roles, whether generated manually or automatically, and other roles of the form "<ReportServer.Name>\_role" are updated automatically when you change the name of the report server. These roles are also deleted upon deletion of the report server.

