

IBM Maximo Application Suite  
IBM Maximo Manage 8.3

*Configuring a BIRT 4.8 Report Development Environment*



## Configuring BIRT 4.8

### **Note**

Before using this information and the product it supports, read the information in [“Notices”](#).

This edition applies to version 8, release 3 of IBM® Maximo Manage and to all subsequent releases and modifications until otherwise indicated in new editions.

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## Overview

Maximo Manage 8.3 uses Business Intelligence and Reporting Tool (BIRT) version 4.8.0.

If you want to create your own reports or modify existing reports, you must set up a report development environment. To set up a Maximo Manage report development environment and configure BIRT 4.8, complete the following tasks:

- Install the prerequisite 8.0 version of the IBM SDK
- Download and install BIRT 4.8
- Add Maximo Manage libraries, reports, script libraries, template files, and JAR files to your report development environment
- Configure BIRT for Maximo Manage reports
- Configure access to BIRT
- Create a Maximo Manage project in BIRT

After you create or modify reports, you can import them from your development environment into Maximo Manage.

## Prerequisites

A copy of IBM SDK or JRE 8.0 must be installed on the client machine before installing the BIRT Designer. Make sure you use either a 32-bit or 64-bit SDK that corresponds to a 32-bit or 64-bit Eclipse package.

Complete the following steps to download the IBM Development Package for Eclipse/Java SDK:

1. To download the Java SDK, log in to the following website with your IBM account credentials:  
<https://www.ibm.com/support/pages/java-sdk-downloads-eclipse>
2. Download the appropriate file for your operating system. For example, if you have a 64-bit Windows operating system, download the **IBM\_DevelopmentPackage\_for\_Eclipse\_Win\_X86\_64\_6.7.5.zip** file.
3. Install the Java SDK.

## Downloading and installing BIRT Report Designer 4.8

To download and install BIRT 4.8 complete the following steps:

1. To download BIRT 4.8, go to the following web site:  
<https://projects.eclipse.org/projects/birt/releases/4.8.0>
2. Click **Download**.
3. Select the folder for BIRT 4.8.
4. Download the **birt-report-designer-all-in-one-4.8.0** compressed file for your operating system.
5. Extract the compressed file to a local directory with a name does not include any spaces, for example C:\birt\_480.

## Copying files from Maximo Manage to the development environment

Some files in your Maximo Manage deployment are required for BIRT report development. You must copy the following files and folders to your local report development environment:

- Libraries  
The libraries directory contains library, resource, and property files that are required to support the report design files.
- Reports  
The reports directory contains content for the standard reports that are delivered with Maximo Manage.
- Script Libraries  
The script library contains script library classes and the **mxreportdatasources.properties** file used by BIRT Designer tool to connect to databases.
- Templates  
Twelve template files are used as starting point in creating report design files. When creating any report, you must start with one of the templates because they contain the required scripted data source and library files needed for the integration.
- JAR file for the JDBC driver for your database

There are two options for adding the files that you need for report development:

- Copy the files from an existing Maximo Manage instance to your development environment.
- Set up Maximo Manage on a local machine by storing a Maximo Manage image in an external registry, retrieving the contents of the image, and instantiating it by using a container engine, such as Docker. Then, copy the files from the local Maximo Manage image to your development environment.

## Option 1: Copy files from an existing Maximo Manage deployment to your development environment

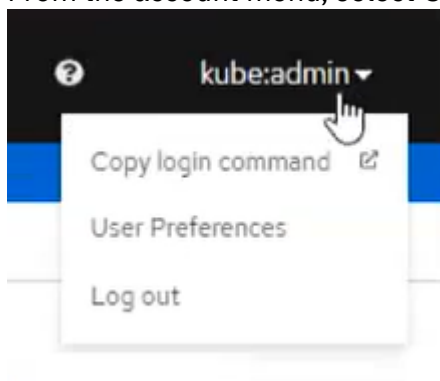
### Prerequisite

Before you begin the following procedure, install the rsync command line utility, which you can use to transfer files from Maximo Manage to your development environment. For information about transferring files, see [Transferring Files In and Out of Containers in OpenShift](#).

### Procedure

Complete the following steps to copy files from an existing Maximo Manage deployment to your report development environment:

1. To get the required access token for Maximo Manage, log in to the OpenShift Platform Console as an administrator and complete the following steps:
  - a. From the account menu, select **Copy login command**.



- b. Select **Display Token**.
- c. Copy the oc login command in the **Log in with this token** field:

```
Your API token is
sha256~KxFzBaxwI2xWsE4kADJLo5YW1_NEGa3-TsEzxBg6xw

Log in with this token

oc login --token=sha256~KxFzBaxwI2xWsE4kADJLo5YW1_NEGa3-TsEzxBg6xw --server=https://api.mule-ocp5.cp.fyre.ibm.com:6443

Use this token directly against the API

curl -H "Authorization: Bearer sha256~KxFzBaxwI2xWsE4kADJLo5YW1_NEGa3-TsEzxBg6xw" "https://api.mule-ocp5.cp.fyre.ibm.com:6443/apis/user.openshift.io/v1/users/~"

Request another token
Logout
```

2. In a Linux shell in your BIRT development environment, run the command that you copied for the login token.

3. To go to the Maximo Manage project, run the following command in the Linux shell:

```
oc project <name of the Maximo Manage project>
```

For example,

```
oc project mas-build-manage
```

4. To find the name for your Maximo Manage admin pod, open a Linux shell and enter the following command:

```
oc get pods
```

The admin pod is the pod that includes **maxinst** in the name. Make note of the full pod name because you specify this pod in step 5.

5. To copy the contents of the libraries, reports, scriptlibrary, and templates folders to the report development environment, run the following command:

```
oc rsync <admin pod name for your Maximo Manage instance>/opt/IBM/SMP/maximo/reports/birt .
```

The period character copies the files to Linux home directory in your local environment. You can also enter a specific file location instead of using the period character.

6. To copy the JDBC driver for your database to the report development environment, run the following command:

```
oc rsync <admin pod name for your Maximo Manage instance>/opt/IBM/SMP/maximo/applications/maximo/lib/<your_jdbc.jar> .
```

- For Oracle, specify the **oraclethin.jar** file.
- For SQL Server, specify the **sqljdbc.jar** file.
- For DB2, specify the **db2jcc.jar** and **db2jcc\_license\_cu.jar** file.

The period at the end of the command copies the file to the Linux home directory. You can specify another location if you prefer.

After you complete these steps, go to Configuring BIRT 4.8 for Maximo Manage reports.

## Option 2: Set up a local Maximo Manage instance and copy files to your development environment

If you do not have administrator access to an existing Maximo Manage instance, you can deploy a local instance of Maximo Manage. You can configure Maximo Manage to store images in an external registry. Then, you can retrieve the administrative image and instantiate it in a container engine, such as Docker.

To use this option, you must first install a container engine, such as Docker.

For information about storing Maximo Manage image in an external registry, see [Storing Maximo Manage images in an external registry](#).

For information about instantiating a Maximo Manage administrative image in a container engine such as Docker, see [Retrieving the contents of an administrative image](#).

After you set up the local Maximo Manage instance, you can use the steps in the preceding section to copy the files from that instance to your report development environment.

## Configuring BIRT 4.8 for Maximo Manage reports

Complete the following steps to configure BIRT for Maximo Manage reports:

1. For the script library, copy the folder that contains the script classes from the temporary location where you stored it to Eclipse, as shown in the following example:

Copy the classes folder from

```
<temporary_directory>/reports/birt/scriptlibrary/classes
```

to

```
<birt_480>/eclipse/plugins/org.eclipse.birt.report.viewer_4.8.0.v201806261756/birt/WEB-INF/
```

2. For the database driver, copy the database driver file from the temporary location where you stored it to the following location in Eclipse:

```
<birt_480>/eclipse/plugins/org.eclipse.birt.report.viewer_4.8.0.v201806261756/birt/WEB-INF/lib
```

3. Open the database jar file you copied and extract the contents of the jar file to

```
<birt_480>/eclipse/plugins/org.eclipse.birt.report.viewer_4.8.0.v201806261756/birt/WEB-INF/classes
```

4. The **mxreportdatasources.properties** file defines the connection from the BIRT designer to the Manage database. The file is in the following Eclipse directory:

```
<birt480>/eclipse/plugins/org.eclipse.birt.report.viewer_4.8.0.v201806261756/birt/WEB-INF/classes
```

Edit the file to provide values for the following parameters for your database:

- Database URL
- Database driver
- Database username
- Password schema owner

The following example is configured with sample values for a DB2 database in the outlined area.

```
#<DataSourceName>.<propertyName>=value
# driver for ORACLE
# oracle.jdbc.OracleDriver
# sample url for ORACLE
# jdbc:oracle:thin:@<HOST>:<PORT>:<SID>
# sample schemaowner for ORACLE
# maximo

# driver for SQLServer
# com.microsoft.sqlserver.jdbc.SQLServerDriver
# sample url for SQLServer
# jdbc:sqlserver://hostname:port;databaseName=dbname;integratedSecurity=false;
# sample schemaowner for SQLServer
# dbo

# driver for DB2
# com.ibm.db2.jcc.DB2Driver
# sample url for DB2
# jdbc:db2://localhost:50000/dbalias
# sample schemaowner for DB2
# maximo
```

```
maximoDataSource.url= jdbc:db2://IBM-A5:50000/DB2A
maximoDataSource.driver=com.ibm.db2.jcc.DB2Driver
maximoDataSource.username=henryl
maximoDataSource.password=henryl
maximoDataSource.schemaowner=maximo
```



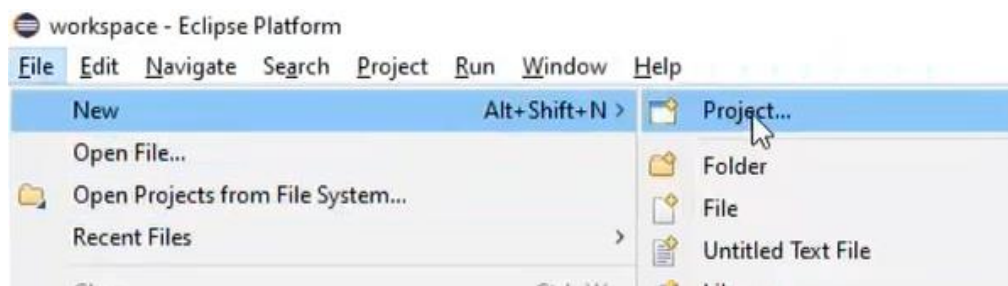
## Accessing BIRT

1. Create a shortcut to BIRT Designer 48 from eclipse.exe.
2. Update the target for the shortcut to include your JDK 1.8 path as shown in the following example:  
`C:/birt_480/eclipse/eclipse.exe -vm "C:/ibm/Java80/jre/bin/javaw.exe" -vmargs -Xmx512m`
3. Launch BIRT Designer from your new shortcut.
4. Select an applicable workspace location for your environment. Check **Use this as default** and click **OK** to open Eclipse.

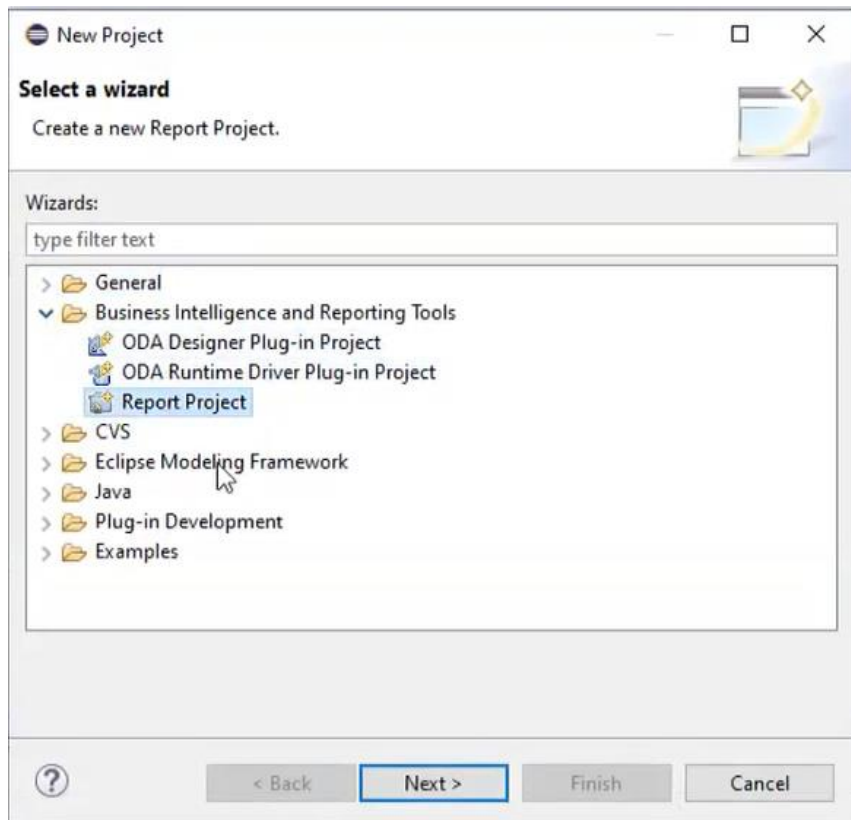
## Creating a Maximo Manage project

The following instructions explain how to create a new project. If you have an existing project file in your report libraries, you can click **File > Import** and import the existing file instead of creating a new one.

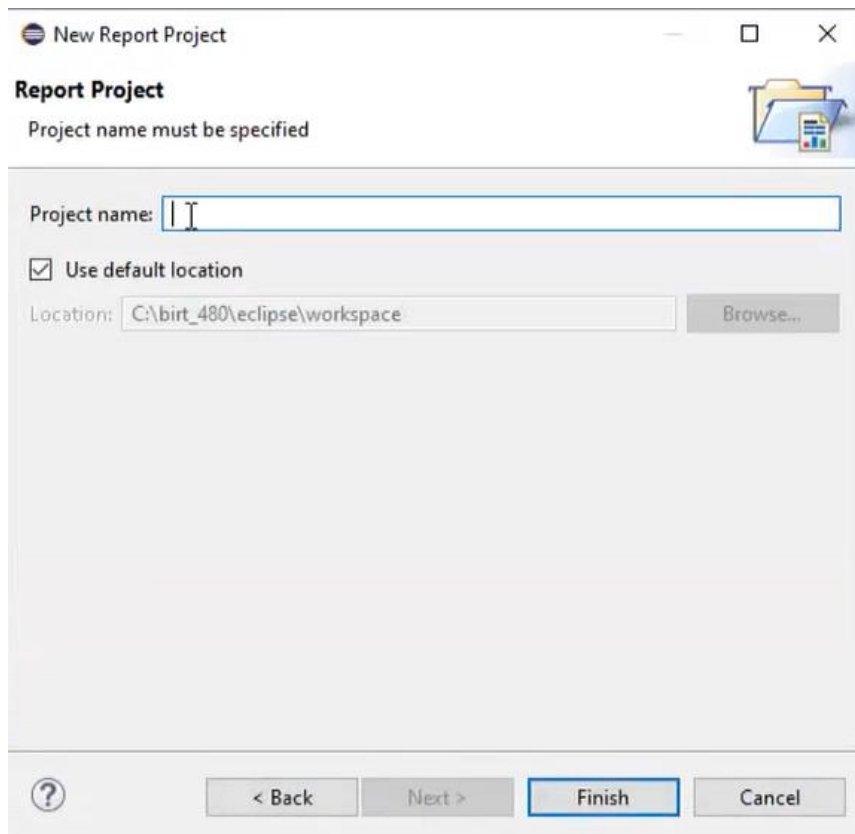
1. In Eclipse, select **File > New > Project**.



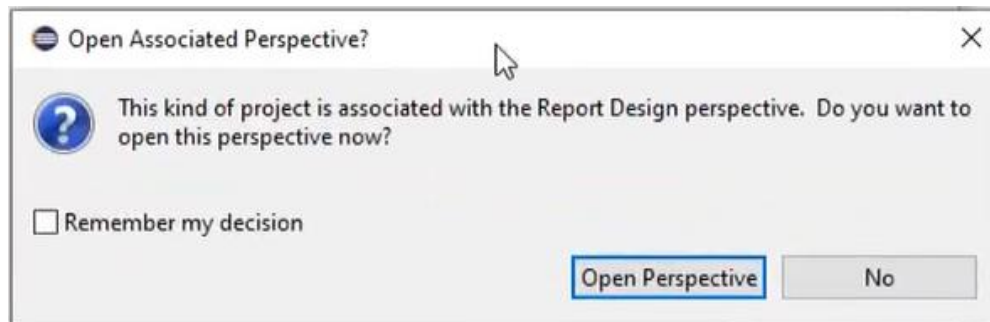
2. In the New Project window, expand **Business Intelligence and Reporting Tools**, select **Report Project**, and click **Next**.



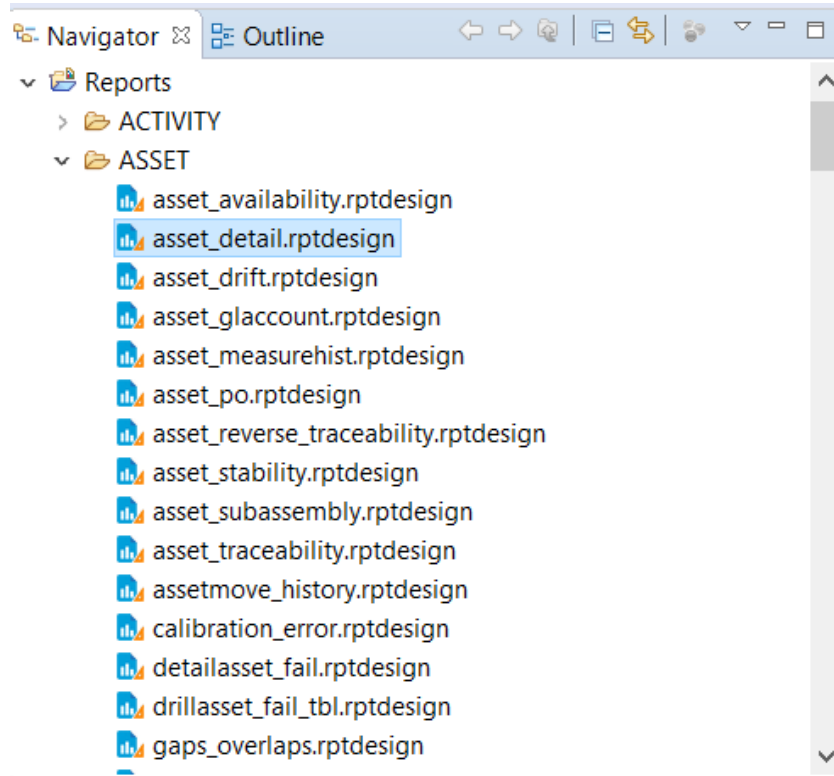
3. In the New Report Project window, enter a project name and click **Finish**.



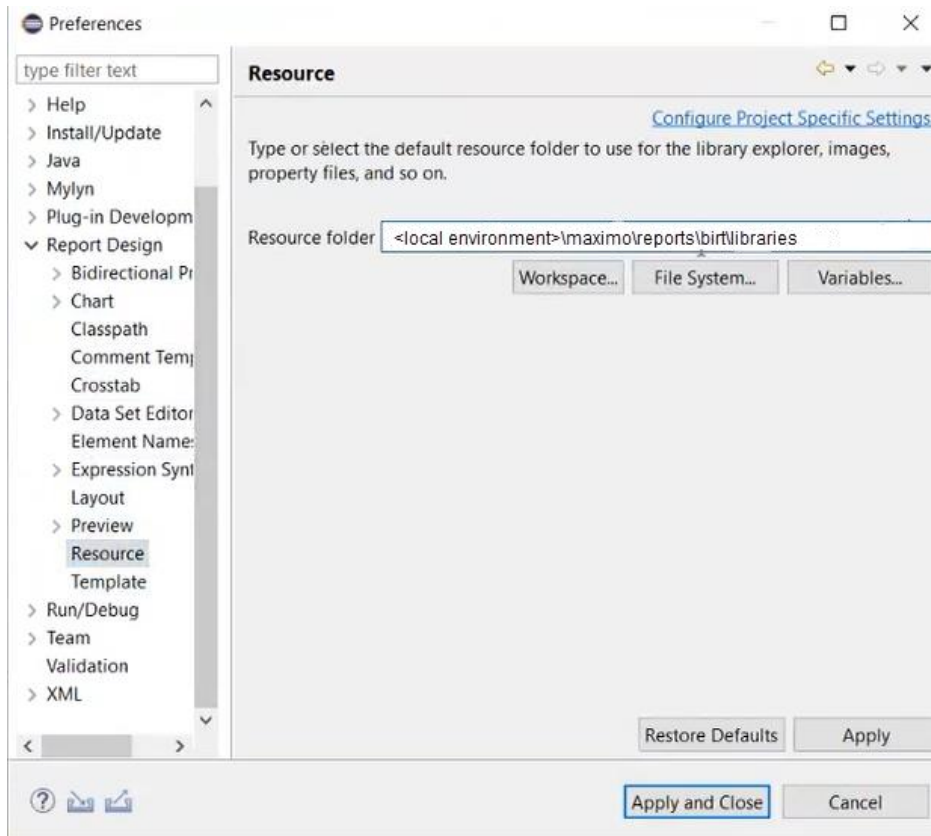
4. In the Open Associated Perspective window, click **Open Perspective**.



5. To confirm that the import was successful, on the Navigator tab, open a report.

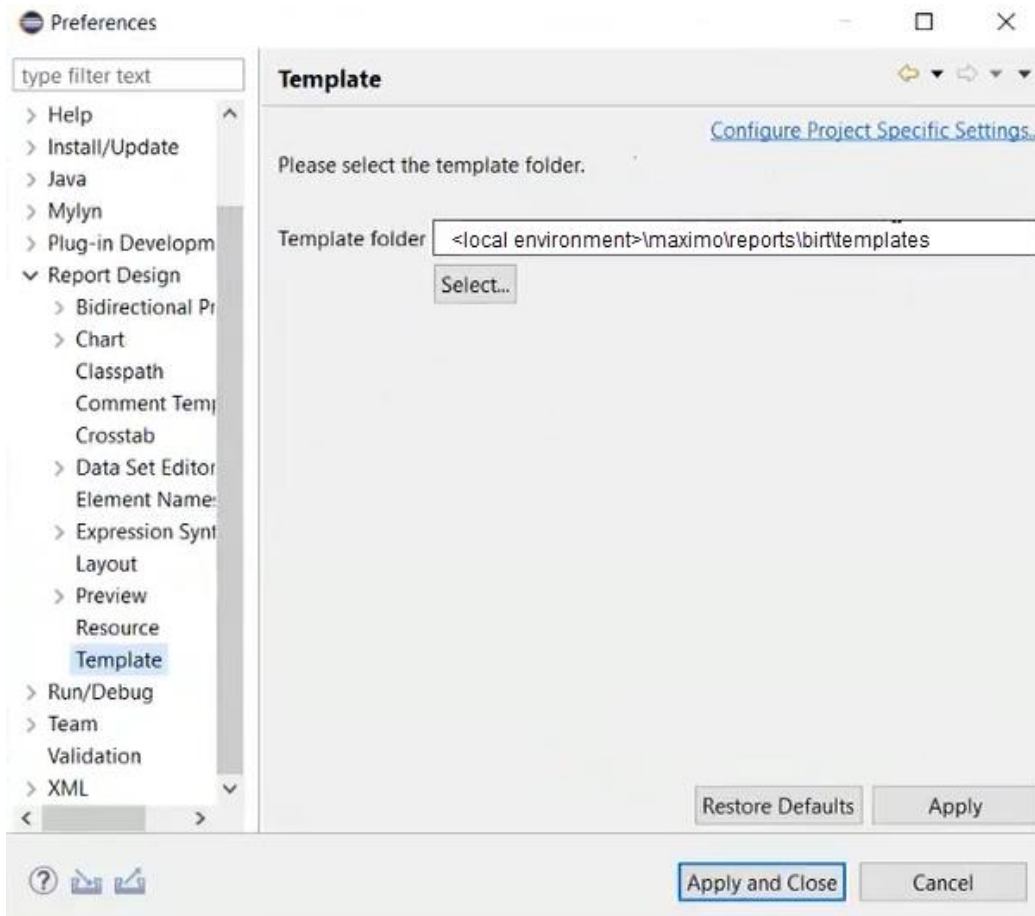


6. To add libraries to BIRT, complete the following steps:
  - a. From the Window menu in Eclipse, select **Preferences**.
  - b. Expand **Report Design** and select **Resource**.
  - c. Click **File System**.
  - d. To specify the location of the libraries, navigate to the libraries folder in your report development environment, as shown in the following example:



- e. Click **Apply**.

7. To add templates to BIRT, complete the following steps:
  - a. In the **Report Design** section, select **Template**.
  - b. In the **Template folder** field, specify the location of the templates in your report development environment, as shown in the following example:



- c. Click **Apply**.

8. Exit Eclipse and then restart it.

## Importing reports into Maximo Manage

After you create reports, you can import the reports into Maximo Manage.

For information about importing reports, see [Importing reports](#) in the Maximo Manage documentation in IBM Docs.

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