



IBM® Watson IoT® Software

Maximo Asset Management – Version 7 Releases

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Direct Maximo Cognos 10.1.1 Installation Guide  
Version 7

*Pam Denny*  
*Maximo Report Designer/Architect*



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# REVISION HISTORY

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Date	Version	Revised By	Comments
May 2917	7	PD	Updates include (1) Clarification of user on page 30 (2) Uppercase note for database schema on page 21 (3) Package path update on page 32
November 2014	6	PD	Updates include (1) Screenshot update of maximo namespace on page 19 and (2) Property Settings on page 21 and (3) End Point values on page 30
September 2014	5	PD	Clarification on SDK files in Step 8B
October 2013	4	PD	Updates include (1) Additional information on importing report in Cognos (2) Updated section 8
March 2013	3	PD	Updates include (1) Notes on page 10 (2) Information updates on JRE Version in Step 4C (3) Updated Formatting, Reference Material Section and miscellaneuos text corrections
	2	PD	Updates include (1) Note on Page 27 about sql server driver version required to prevent errors when running Cognos reports with specific date type combinations
	1	PD	Updates include (1) New screenshots for Step 12B in Report Studio (2) Updated example url on page 20
July 2012		PD	Initial Release

## Overview

Beginning with the Maximo® Base Services 7.5.0.3 Release, an integration to IBM Cognos® Reporting Version 10.1.1 is available. This integration supplements the existing Maximo Cognos Integration to Cognos Version 8.4.

The Maximo Cognos integration extends the current suite of reporting tools that Maximo enables into a deeper level of Strategic Reporting. This document details the installation steps required for the integration, the synchronization of the security groups, enabling of Maximo based Object structures to be published as Cognos metadata packages, and creation of Cognos Namespaces.

Due to the extent of this integration, it is highly recommended that you first review all aspects of the Maximo Cognos Integration. These are detailed for you in the Maximo Cognos Integration Guide. This guide can be found here <http://ibm.co/NPsTKR> or at its long url of <http://www-304.ibm.com/support/docview.wss?uid=swg21500935>

Additionally, the user performing the Integration Installation must be very experienced and knowledgeable with both the Maximo Architecture, and the Cognos Reporting Products. The integration installation requires in depth knowledge of Maximo Integration Applications, include Object Structures and End Points, as well as in depth knowledge in Cognos Administration Functionality, including defining data sources and creating namespaces.

Information at the end of the guide includes details on various logging features you can enable within Maximo, Cognos and your database, along with other troubleshooting techniques. This information will be updated as often as possible, so please be sure to check that you have the most recent revision of this document before starting the integration.

Finally, you can enable the Maximo Cognos Integration in different ways - either through your existing license of Cognos Reporting, or through your utilization of Tivoli Common Reporting. If you utilize your own license of Cognos, without TCR, it will be referred to as a *Direct Integration*. If you use Cognos thru TCR, it will be referred to as the *TCR integration*.

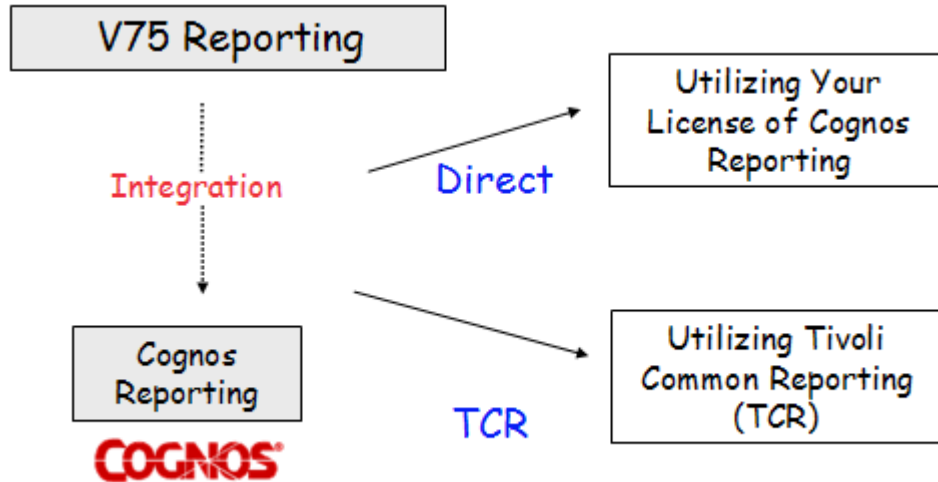
Due to the variations in the architecture of these two setups, separate guides are provided detailing the unique installation steps. *This guide is for the Maximo-Cognos Direct Integration*. For information on accessing the installation guide for the Maximo-Cognos TCR Integration, or for the Maximo-Cognos Direct Integration with Version 8.4.1, access the reference materials at the end of this guide.

### Note:

1. This document is specific for Maximo Version 7.5.0.3 and later.

## Maximo Cognos Integration Options

You can enable the Maximo Cognos Integration for Version 7.5.0.3 and beyond in two different ways - either through your existing license of Cognos Reporting, or through your utilization of Tivoli Common Reporting.



### Direct: Corporate Licensing of Cognos Reporting

If you have Cognos Reporting Licenses, you can enable the Maximo Cognos Integration through the use of these licenses within Maximo. You can then begin creating reports against the powerful Maximo data, along with any other relevant corporate data you may have. This is known as the Maximo Cognos Direct Integration.

\*NOTE: Your license must include the Cognos SDK used to publish Maximo metadata for Cognos

### TCR Indirect: Utilization of Tivoli Common Reporting

As a Maximo client, you are entitled to Tivoli Common Reporting (TCR). TCR includes the Cognos Reporting Products, and is designed for Tivoli Cross Product reporting. It utilizes the Tivoli Integrated Portal (TIP) as its platform basis.

Utilizing TCR enables you a license to the Cognos reporting products for Tivoli Software Products only. If you wish to use Cognos reporting against other databases in your corporate environment, you would need to acquire additional licensing. Additional information on TCR, including platform restrictions, is noted in the documentation referenced at the end of this guide.

### Which Option is best for Your Environment

Determining which integration option is best for you, depends on your unique business environment.

If you have existing Cognos licenses, utilizing the Maximo-Cognos direct integration will give you the most flexible, streamlined integration.

If you do not have Cognos licenses, and utilize multiple Tivoli Products, utilizing TCR can enable you to begin working with the Cognos Reporting Products.

## Maximo Cognos Version Support

The three different integration versions that are supported for the Maximo-Cognos Integration beginning with Version 7.5.0.3, include:

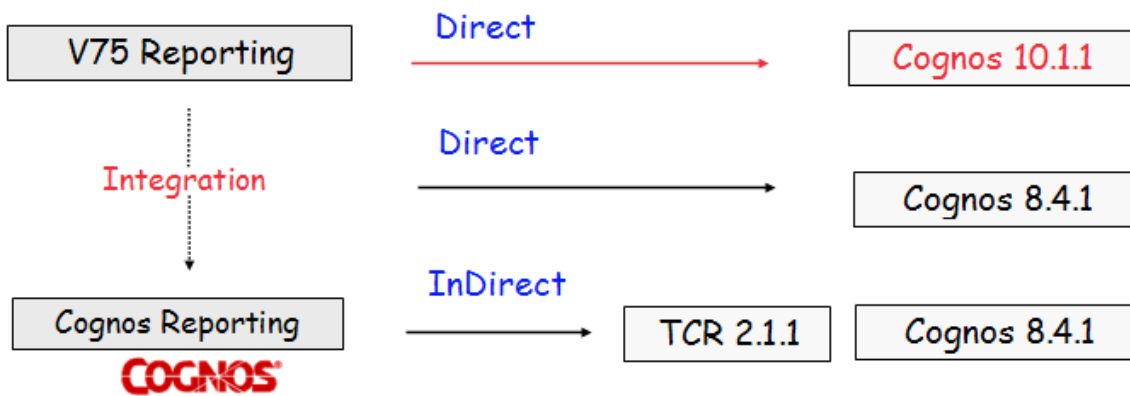
*Direct Integration:*

1. Cognos 8.4.1
2. Cognos 10.1.1.

*For the Indirect TCR Integration,*

3. Cognos 8.4.1 is available with TCR 2.1.1.

This version support is shown in the chart below.



Due to these 3 different configurations, 3 different installation guides are available. This installation guide is specific to the V75 Direct Installation of Cognos 10.1.1. Please be sure to review the chart below to insure you have the correct install guide before proceeding.

	Cognos Version	TCR Version	Installation Guide
Direct	10.1.1	NA	V75_DIRECTMaximo_Cognos10Install
Direct	8.4.1	NA	V75_DIRECTMaximo_Cognos84Install
Indirect TCR	8.4.1	2.1, 2.1.1	V75_INDIRECTMaximo_TCRCognos84Install

**Notes:**

1. You can access these documents, along with other V7 Report Reference Materials at this location:  
<http://ibm.co/1321Cul>
2. The TCR Integration is currently only available for Cognos 8.4.1 *TCR 2.1.1 enabled with this release does not support Cognos 10.1.1.*
3. For a full listing of supported product versions for the Maximo releases, reference this url:  
<http://ibm.co/NUsxUs>

## Integration Installation Overview

The integration installation includes the steps to dynamically create the Cognos metadata layer, synchronize security groups, pass information from Maximo to Cognos at run time and register utility reports within Maximo and Cognos. Due to the wide variety of tasks being performed, the integration steps below must be carefully performed.

1. Install Cognos 10.1.1
2. Create Unique Database User for use in Cognos Authorization
3. Configure and Copy mxccognosdatasources.properties file
4. Copy CSP and Database Jar Files from Maximo to Cognos
5. Create two Namespaces in Cognos Configuration for Security and Metadata Publishing
6. Configure Maximo Properties for Cognos
7. Create a Data Source in Cognos Administration
8. Configure Cognos SDK. Rebuild Maximo EAR file
9. Set End Point Properties
10. Publish Cognos Packages
11. Register Cognos Test Reports in Maximo's Report Administration application
12. Import Test Report Designs, Templates into Cognos. Verify Integration

Install	SetUp	Configure	Meta Data	Admin
Install 7.5.0.3	2. V75: Create Unique Database User for use in Cognos Authorization	5. Cognos: Create Namespaces. 1 for CSP, 1 for MetaData	8. Configure Cognos SDK. Rebuild Maximo EAR.	11. V75 Report Admin: Register Cognos Test Reports
1. Cognos: Install Cognos 10.1.1	3. V75: Edit & Copy mxccognosdatasources.properties file	6. V75: Configure Maximo Property Files for Cognos	9. Set End Point Properties	12. Cognos: Import Report Test Design Files to Cognos
	4. V75: Copy to Cognos (1) CSP Jar (2) Database Drivers (3) Images	7. Cognos: Create Data Source	10. Publish Cognos Packages	

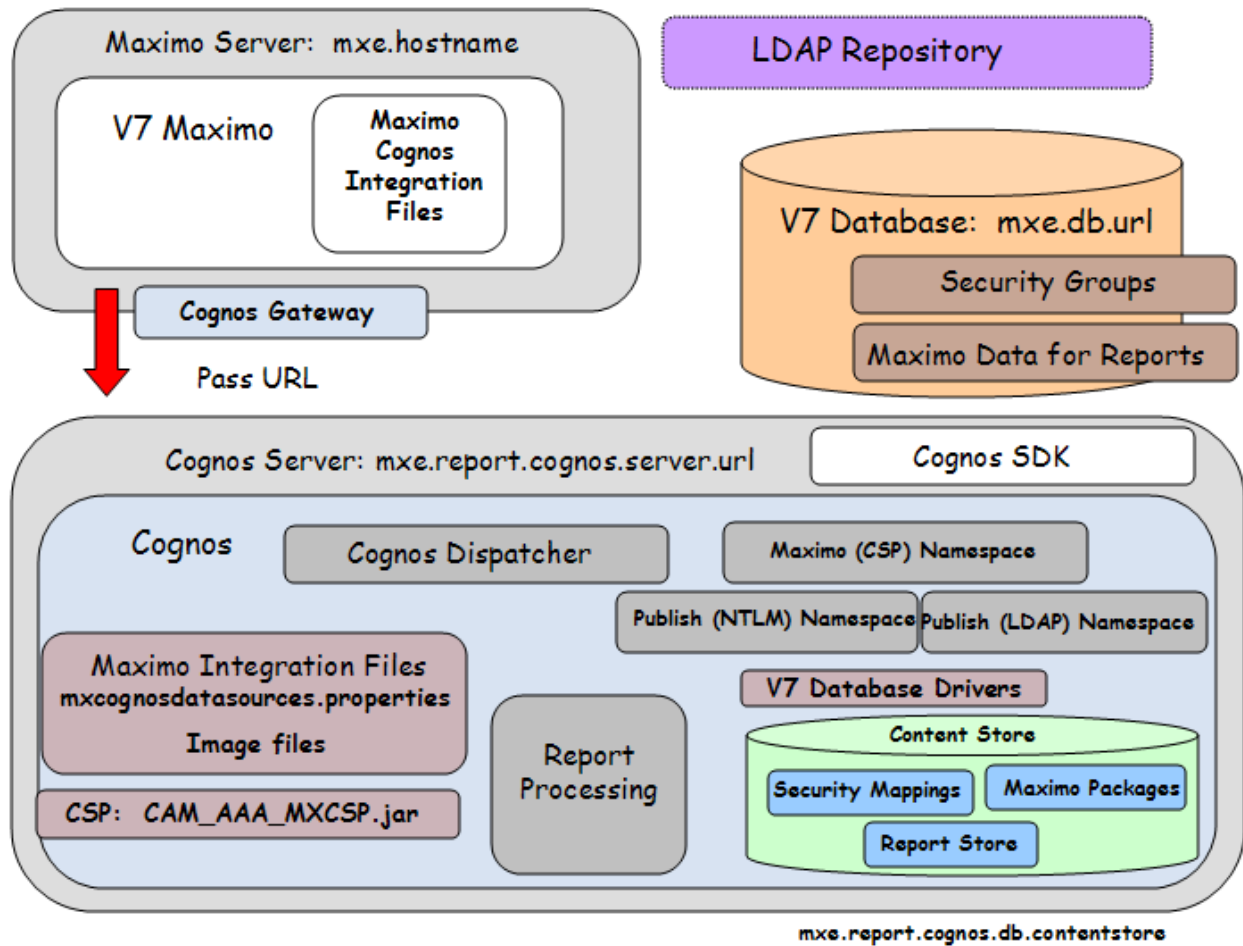
\*Note: Black Text indicates the work is done on the V7 Server, Red Text is for Cognos.



## Integration Architecture

As you use this guide to enable the integration, you will be building an architecture similar to what is shown below. Your specific architecture may vary from the diagram shown below depending on factors including your security group repository and your application server.

The key components that you will be enabling thru this integration install including the namespaces, components of the Content Store, CSP Jar files and Cognos SDK, are highlighted in the diagram below.



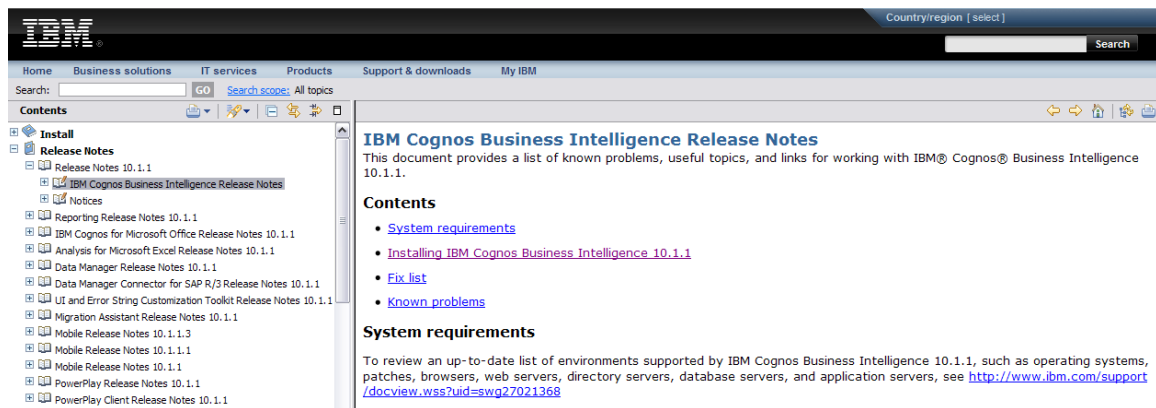
## 1. Install Cognos 10.1.1 for Direct Maximo Cognos Integration

This integration is developed for the Maximo Base Services 7.5.0.3 and later Releases with Cognos 10.1.1. Before beginning this integration installation, Cognos 10.1.1 Reporting must be installed and operational.

### Notes:

1. You must not install Cognos under a directory with any spaces. For Example, if you install Cognos under <c>\Program Files, problems will occur. Cognos must be installed in a directory path without any spaces.
2. If any Cognos web services will be installed on the Maximo server, ensure you configure Cognos to use a different web port as the default port 80 may already be in use.
3. For more details and troubleshooting techniques on installing Cognos, reference this online link to Cognos 10.1.1 Installation and Configuration Guide

[http://publib.boulder.ibm.com/infocenter/cbi/v1or1m1/index.jsp?topic=%2Fcom.ibm.swg.ba.cognos.rdm\\_cr.10.1.1.doc%2Fc\\_cognos8knownissues.html](http://publib.boulder.ibm.com/infocenter/cbi/v1or1m1/index.jsp?topic=%2Fcom.ibm.swg.ba.cognos.rdm_cr.10.1.1.doc%2Fc_cognos8knownissues.html)  
or <http://ibm.co/yQ8G1>



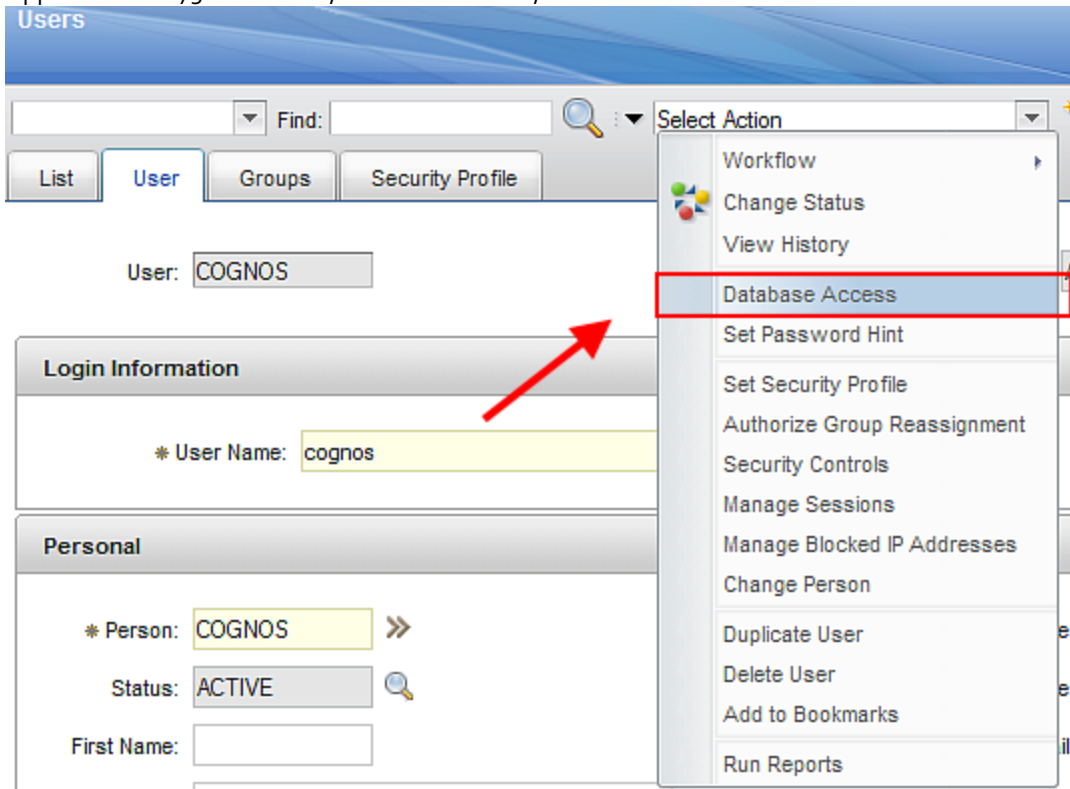
The screenshot shows the IBM Cognos Business Intelligence Release Notes page. The page has a dark blue header with the IBM logo and a search bar. Below the header is a navigation bar with links to Home, Business solutions, IT services, Products, Support & downloads, and My IBM. The main content area is titled "IBM Cognos Business Intelligence Release Notes" and includes a "Contents" section with links to "System requirements", "Installing IBM Cognos Business Intelligence 10.1.1", "Fix list", and "Known problems". The left sidebar shows a tree view of the release notes, with "IBM Cognos Business Intelligence Release Notes" selected.

## 1 Create Unique Database User for use in Cognos Authorization

You may want to create a unique user, who will be used to obtain user and security group information from the Maximo database for Cognos - or you can use the system maximo database user.

If you want to create a unique database user, you can do this in many different ways depending on your database type. The example below shows how a new database user of Cognos can be created.

If you are using Oracle or SQL Server, you can directly create a new database user through the User Application in V75. To do this, create a new user, and from the Action Menu select 'Database Access'.



Then, enter a database user name and password, and grant read only access to the MAXUSER, MAXGROUP, PERSON and GROUPEUSER Tables.

**Database Access**

User: **COGNOS**

**Database User Information**

Database User ID: cognos

Database Password: .....

Confirm Password: .....

Drop Database User

**Tables** Filter > 1 - 3 of 3

Object Name	Entity Name	Read	Insert	Update	Delete
MAXUSER	MAXUSER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GROUPEUSER	GROUPEUSER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PERSON	PERSON	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Details**

\* Object Name: PERSON Entity Name: PERSON

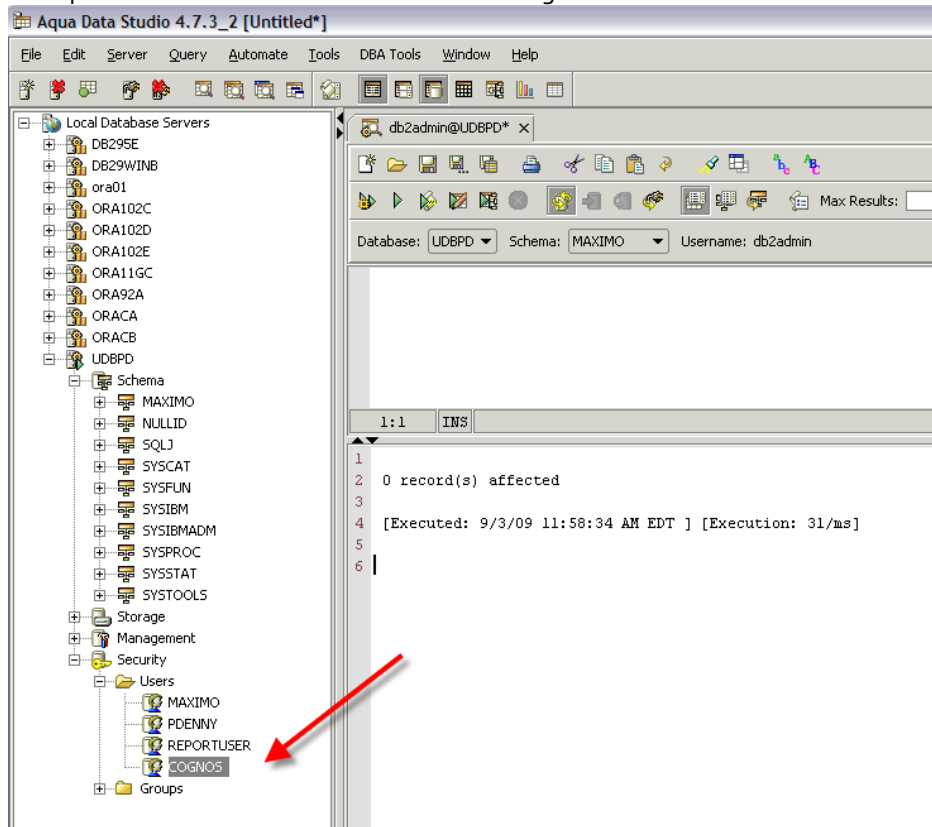
Read? ☒ Insert? ☐

OK Cancel

Note: If you are using DB2, the new database user must also be an Operating System (OS) User. Therefore, the DB2 user must first be added as an OS user before performing the action above.

The steps below show another example of how the unique database user can be added thru a Database Configuration Tool.

2A. Access the database querying tool, and locate the V75 Database. Add a new Database User. The example below shows a new database user of Cognos



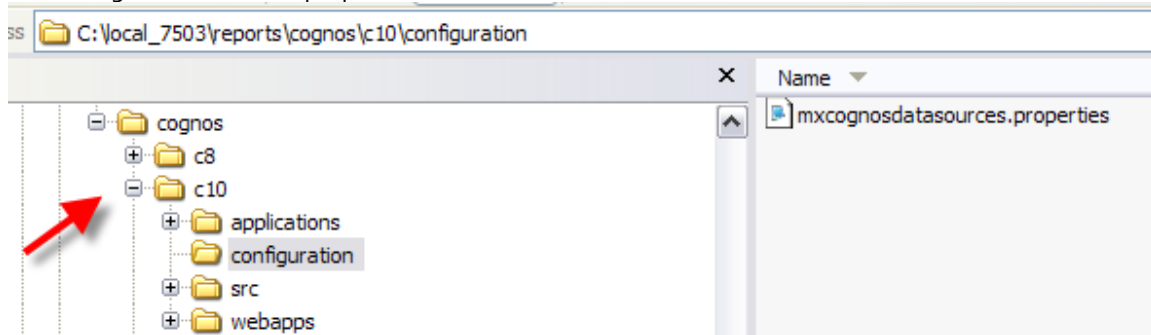
2B. Grant 'Read only' database privileges via scripts to the new user on the following database tables: MAXUSER, GROUPUSER, PERSON and MAXGROUP. Example scripts are shown here, which you may have to tailor for your unique database requirements.

```
select on MAXIMO.MAXUSER to cognos
grant select on MAXIMO.GROUPUSER to cognos
grant select on MAXIMO.PERSON to cognos
grant select on MAXIMO.MAXGROUP to cognos
```

### 3. Configure and Copy mxcognosdatasources.properties file

To enable the Maximo Security Authentication, also known as the CSP or MXCSP, you must configure the property file below for your unique environment.

3A. Navigate to your Version 7.5.0.3x Directory. Go to <v7503x>\reports\cognos\c10\configuration. Locate the mxcognosdatasources.properties



3B. Update the property file for your Version 7.5.x database and either the unique database user you created in step #2, or your Maximo system database user, and save.

Below are example values, using a system database user of maximo, highlighted in blue text.

```
# driver for ORACLE
# oracle.jdbc.driver.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://localhost:50001/UDBDP
maximoDataSource.driver=com.ibm.db2.jcc.DB2Driver
maximoDataSource.username=maximo
maximoDataSource.password=maximo
maximoDataSource.schemaowner=MAXIMO
```

3C. After updating the file, copy the mxcognosdatasources.properties file to

<cognos>\c10\configuration

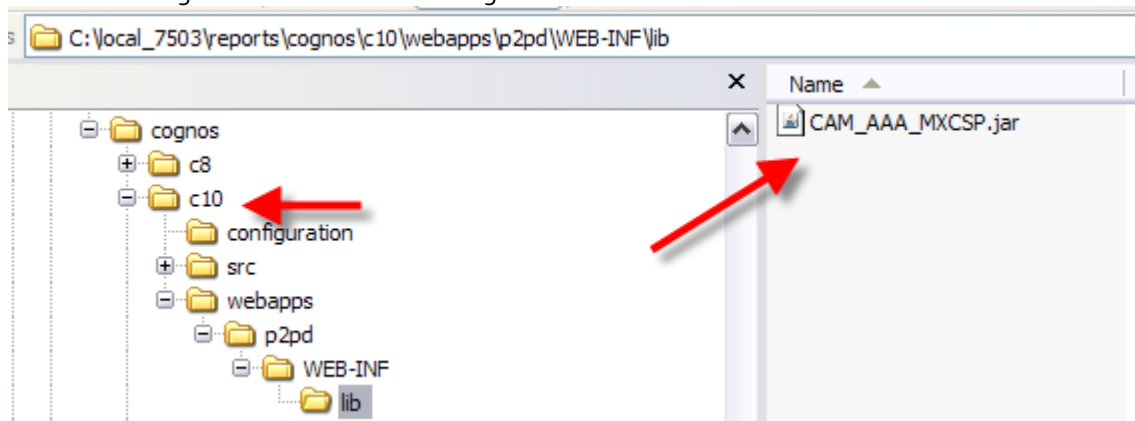
## 4. Copy CSP and Database Jar Files from Maximo to Cognos

### 4A. Copy the CSP jar file.

The CSP jar file, CAM\_AAA\_MXCSP.jar, is used to authenticate Maximo Users to Cognos. You need to copy this file from Maximo to Cognos.

4A1. From the Version 7.5.x Directory, go to <V7503>\reports\cognos\c10\webapps\p2pd\WEB-INF\lib. Locate CAM\_AAA\_MXCSP.jar.

\*Be sure to locate the CAM\_AAA\_MXCSP.jar file under the c10 directory. If you use the same file from the c8 directory, you will receive errors as noted in the 'Conflicting File Version' Subsection of the Troubleshooting Section noted later in this guide.



4A2. Copy CAM\_AAA\_MXCSP.jar file to the cognos directory <Cognos>\c10\webapps\p2pd\WEB-INF\lib.

### 4B. Copy Database Drivers

Cognos requires Database Drivers for the CSP Security Authentication.

4B1. Navigate to the V75 Directory <V75>\applications\maximo\lib and locate drivers for the database you are using.

For Oracle: oraclethin.jar  
For SQL Server: sqljdbc.jar  
For DB2: db2jcc.jar and db2jcc\_license\_cu.jar

4B2. Copy the applicable database driver to the directory

<Cognos>\c10\webapps\p2pd\WEB-INF\lib

#### 4C. Optional - Java Version Update

If you do not want to use JRE 1.6 supplied with Cognos 10, follow the steps below in 4C. If you are using JRE 1.6, skips these steps outlined in 4C and go directly to 4D.

4C1. Set the JAVA\_HOME system environment variable to use a 1.5 JRE.

4C2. Copy the bcprov-jdknn-nnn.jar file from the c10\_location/bin/jre/version/lib/ext directory to the Java\_location/jre/lib/ext directory.

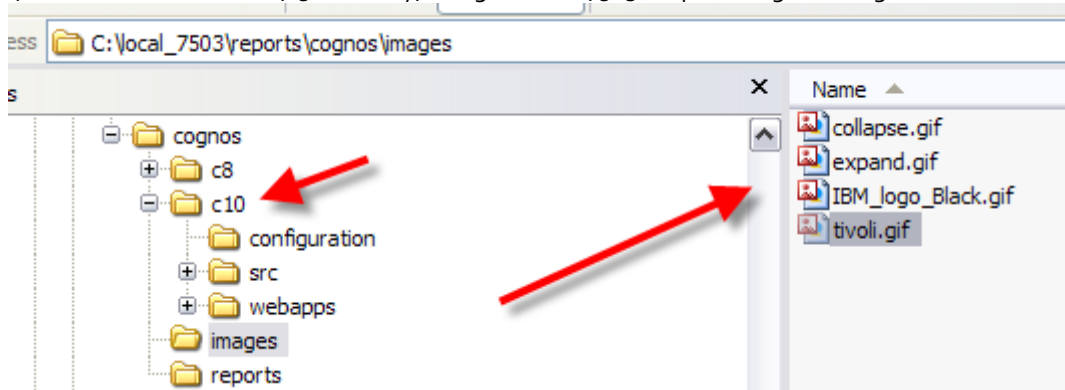
For example, copy bcprov-jdk14-134.jar to C:\Java50\jre\lib\ext

4C3. In Configuration Manager, save the configuration.

Note: If you do not have JAVA\_HOME specified and you are using Tomcat, Cognos will use the bundled JRE 1.6 version.

#### 4D. Copy Image files.

4D1. Within the Version 7.5 directory, navigate to <V7503>\reports\cognos\images.



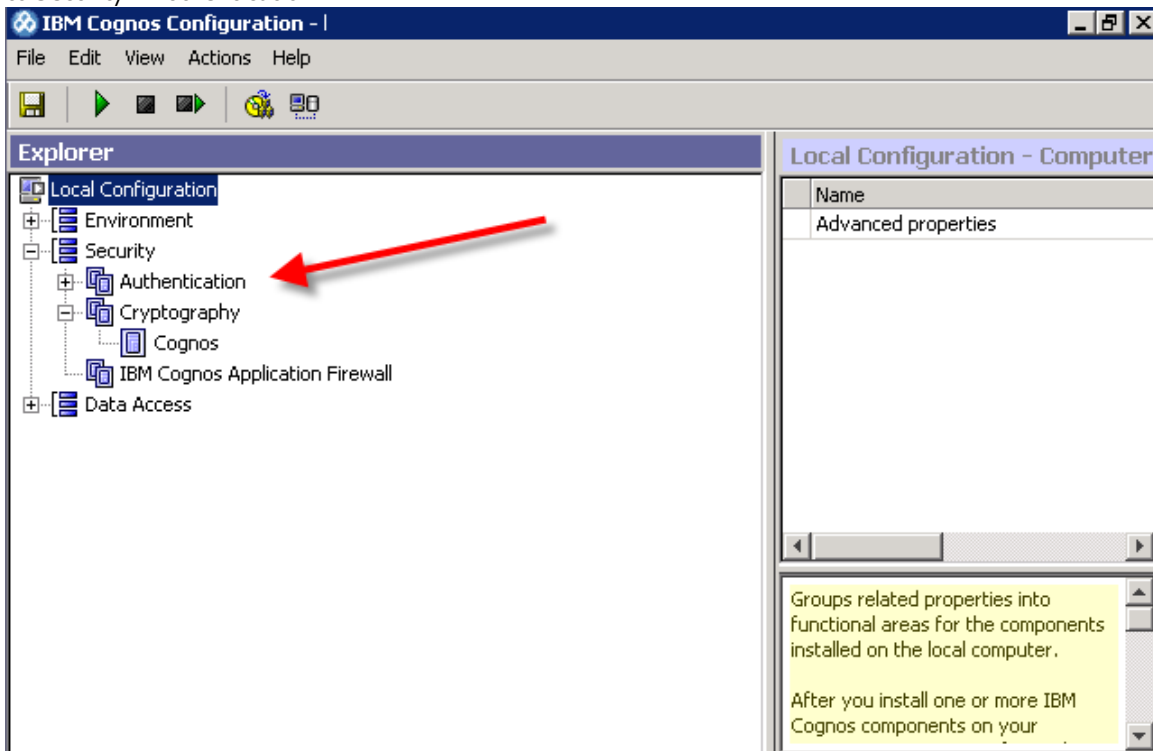
4D2. Copy the content of the images directory to a new folder you create in Cognos per path below:  
<Cognos>\c10\webcontent\tivoli\tcr\_common\images



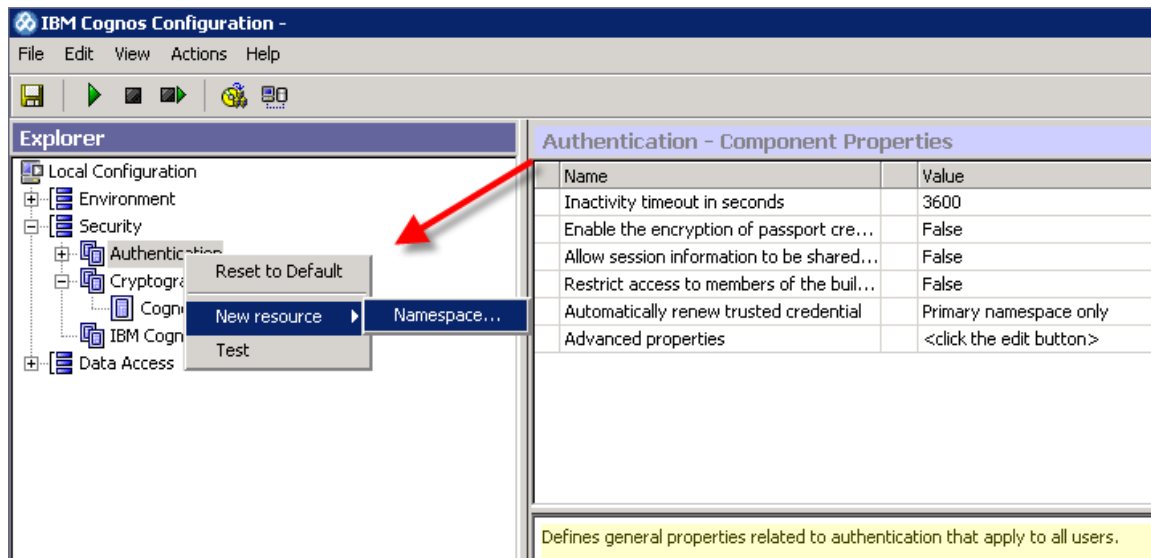
## 5. Create 2 Namespaces in Cognos Configuration for Security and Metadata

The Cognos namespace contains the Cognos Objects, such as groups, roles, data sources and contacts. In the Maximo Cognos Integration, two namespaces are required. One namespace is for the Security Group authorization, which is enabled thru the MXCSP or CSP, Custom Security Provider. The second namespace is for authentication used during the metadata publishing process.

5A. First, create a namespace which will be used for Security Group Authorization when reports are executed. To create the first namespace, access the client tool, Cognos Configuration, from your Program Menu. (Select Cognos – Cognos Configuration) In the Explorer View on the left hand side, navigate down to Security – Authentication



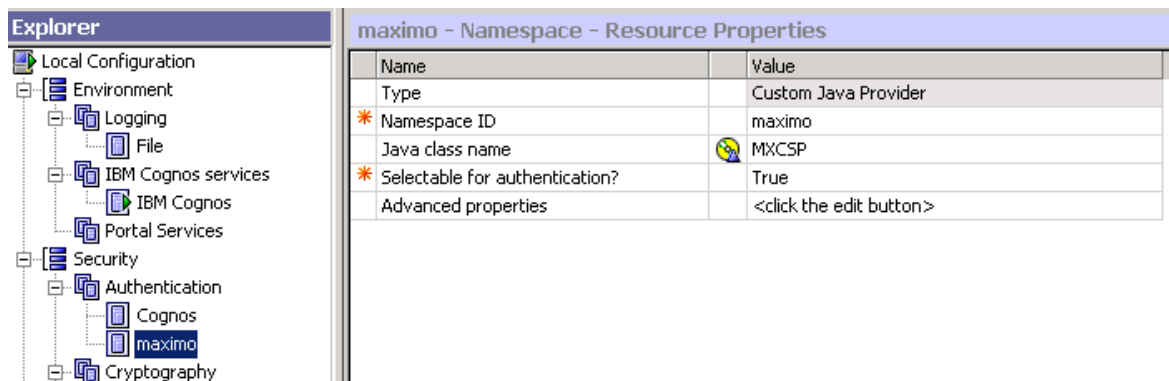
5B. Click on New Resource – Namespace.



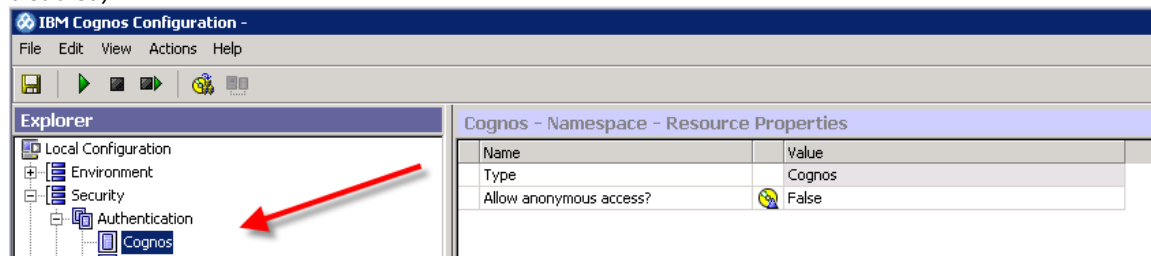
5C. Enter the values below to create the new maximo namespace.

Type: Custom Java Provider  
 Namespace ID: maximo  
 \*Java Class Name: MXCSP  
 Selectable for Authentication: True

\*Note: The MXCSP correlates to the MXCSP.class file in the CAM\_AAA\_MXCSP.jar that you copied to Cognos in step 4A.



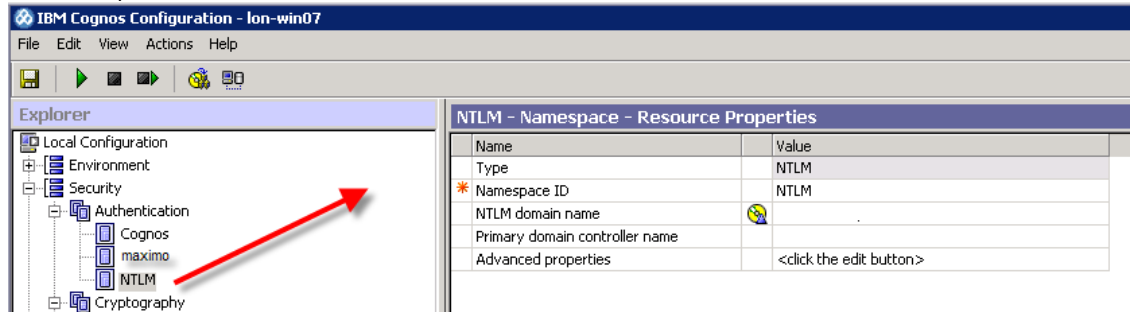
5D. Once the namespace has been created, make sure the Anonymous Authentication is set to false (or disabled).



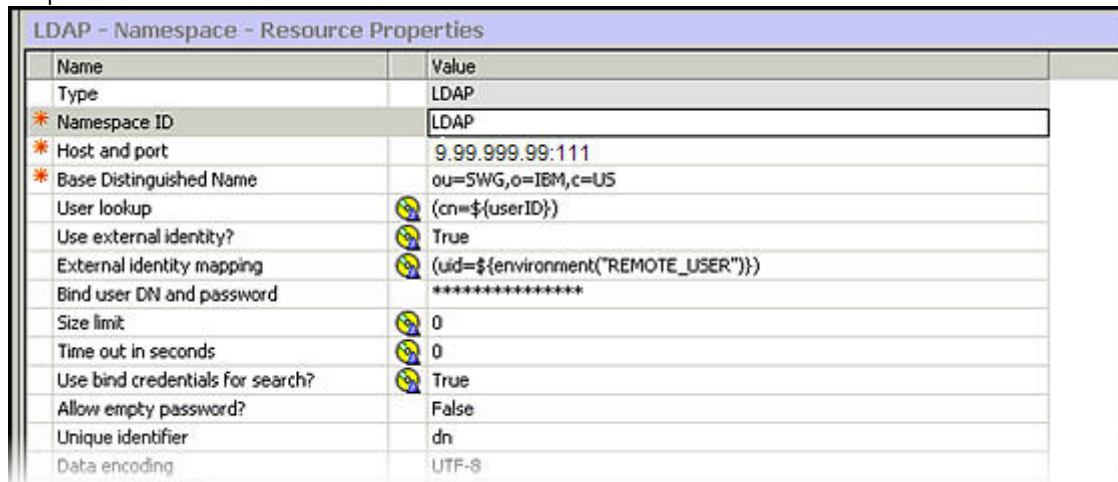
5E. Create the second namespace for authentication during the Maximo publishing process. Within the same Explorer View, navigate to Security - Authentication. Click on New Resource – Namespace.

**Note:** If you already have an LDAP or NTLM namespace configured for Cognos and wish to use it for the Maximo integration, note the details then skip the rest of this section.

5F. Enter values below to create the namespace. Supported types for this release are NTLM and LDAP. The example shown here is for NTLM.



If you are setting up an LDAP Namespace, you need to have all your LDAP Details available when configuring this. For more information on this, see details on creating an LDAP namespace in the Cognos 10.1.1 guides referenced throughout this document. An example of a LDAP Namespace Resource Properties is shown below .



### *Note: Cognos Namespace Reference Materials*

More information on Cognos namespaces can be found at: <http://bit.ly/qMKzPr>

For additional information on how to configure Cognos namespace properties, refer to the "IBM Cognos 10.1.1 Business Intelligence Installation and Configuration Guide" document. This is located at: <http://ibm.co/yQ8G1>

## 6 Configure Maximo Properties in Maximo System Property application

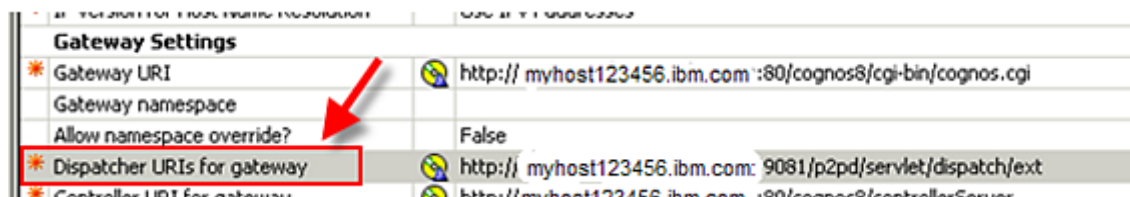
These property values are required so Maximo can pass the correct information to Cognos.

- 6A. Log into V75 as the System Administrator. Go to the System Properties application.  
6B. Locate the Cognos Property Values by selecting filter, and in the property name field, enter Cognos. A number of Cognos Property Settings display.  
6C. Define each of the values as described below, and then perform a 'Live Refresh' in the application.

	Property Name	Description	Used By
1	mxe.report.cognos.serverURL	Cognos Dispatcher/Gateway URI. Used for Maximo to access the Cognos Application.	Report Execution
2	mxe.report.cognos.namespace	Cognos Namespace which holds information on Users, Security Groups and Roles.	Report Execution
3	mxe.report.cognos.content.store.package.location	Content store folder where the Cognos packages are published from Maximo.	Package Creation
4	mxe.report.cognos.datasources	Connects to the Maximo database for report development and execution.	Package Creation
5	mxe.report.cognos.db.schemaName	Maximo database schema name	Package Creation
6	mxe.report.cognos.db.type	Maximo database type	Package Creation, Report Execution
7	mxe.report.cognos.db.sql.name	For clients using a SQL Server Database, this is the catalogue name associated with the database	Package Creation
8	mxe.report.cognos.querymode	Cognos query mode	Package Creation

**mxe.report.cognos.serverURL** The URL path to the Cognos Dispatcher URI (or Gateway URI). This is used by Maximo to access the Cognos applications.

Example: `http://myhost:port/p2pd/servlet/dispatch/ext`  
This value is the complete path to the Gateway, as shown below from Cognos Configuration.



Notes:

1. If Cognos is running on Tomcat (Default Setup), then the URI must point to the cgi Gateway URI  
Example: `http://9.28.228.104:80/ibmcognos/cgi-bin/cognos.cgi`
2. If Cognos is deployed to a webserver, the serverURI can be changed to point directly to the 'Dispatcher URI for gateway'. This configuration option can be used when using a dedicated dispatcher. You may have multiple Dispatcher URI's deployed using the same Content Store, but different namespaces to balance the report load.  
Example: `http://9.28.228.104:9080/p2pd/servlet/dispatch/ext`

An Example of this is:

WAS 9080 with namespace 'maximo' only  
WAS 9081 with namespace 'ldap' only  
WAS 9082 with namespace 'HR' only

**mxe.report.cognos.namespace** This is the Cognos Namespace for the CSP, Custom Security Provider. This Namespace is what you created in Step #5 in this document. The example here uses a namespace value of 'maximo'.

Notes: This value is case sensitive.

**mxe.report.cognos.content.store.package.location and mxe.report.cognos.datasource**  
The content store package location and data source properties will be overridden by the corresponding end point properties.

The intention from those properties is that the user can replace the Cognos end point in the invocation channel with the XML File end point. This will produce an action log file, which can be used to manually publish its associated metadata by using the BmtScriptPlayer.exe located in <Cognos SDK Installation Directory>\bin

**mxe.report.cognos.content.store.package.location**  
A location under the Cognos Content Store PUBLIC folder where the metadata package will be created. The package location specified in this property MUST exist in the Cognos Content Store, under the PUBLIC folder BEFORE initiating the publish process. This property will be overridden by the CONTENT\_STORE\_PACKAGE\_LOCATION property specified in the MXCOGNOS end point

**mxe.report.cognos.datasource**  
Defines the data source to which the metadata package will be associated with. This property will be overridden by the DATA\_SOURCE\_NAME property specified in the MXCOGNOS endpoint. This is the datasource that you will create in Step 7 below.

**mxe.report.cognos.db.type**  
This property can have 1 of the 3 Values below  
"DB2" for DB2  
"OR" for ORACLE  
"SS" for SQL-Server

**mxe.report.cognos.db.sql.name:** Required system value for installations running SQL Server database. Identifies the catalogue name associated with the database

**mxe.report.cognos.db.schemaName:** Defines the database schema name from which the metadata will be extracted.

\*NOTE: This value may have to be entered in Uppercase depending on your database type (ex. This is a requirement for Oracle and DB2)

**mxe.report.cognos.querymode** - Determines the mode of database querying. The recommended value is 'dynamic'. For more information on this, access the url below

[http://www-01.ibm.com/support/knowledgecenter/SSEP7J\\_10.2.1/com.ibm.swg.ba.cognos.inst\\_cr\\_winux.10.2.1.doc/c\\_rptconnsingle.html%23rptconnsingle?cp=SSEP7J\\_10.2.1%2Fo-17-5-5&lang=en](http://www-01.ibm.com/support/knowledgecenter/SSEP7J_10.2.1/com.ibm.swg.ba.cognos.inst_cr_winux.10.2.1.doc/c_rptconnsingle.html%23rptconnsingle?cp=SSEP7J_10.2.1%2Fo-17-5-5&lang=en)

6C. Next, if you are using MXCSP for authentication, you must review the additional property setting `mxe.rest.webappurl`. This property setting is used for token authentication.

The screenshot shows the 'System Properties' window. At the top, there's a navigation bar with 'Bullelins: (1)', 'Go To', 'Reports', 'Start Center', 'Profile', and 'Sign Out'. Below this is a 'Select Action' dropdown and a toolbar. The main area is divided into two sections. The top section, 'Global Properties', contains a table with columns 'Property Name', 'Description', and 'Current Value'. The table has one row with 'mxe.rest.webappurl' in the 'Property Name' column and 'Token Authentication Web Application URL.' in the 'Description' column. The bottom section, 'Global Properties Details', shows the configuration for the selected property. It includes fields for 'Property Name' (mxe.rest.webappurl), 'Description' (Token Authentication Web Application URL.), 'Global Value', 'Current Value', and 'Maximo Default'. To the right of these fields are various checkboxes and dropdowns: 'File Override?' (unchecked), 'Global Only?' (checked), 'Instance Only?' (unchecked), 'Online Changes Allowed?' (checked), 'Refresh?' (checked), 'Encrypted?' (unchecked), 'Security Level' (SECURE), 'User Defined?' (unchecked), 'Nulls Allowed?' (checked), 'Data Type' (ALN), 'Domain', and 'Masked?' (unchecked). A red arrow points to the 'Description' field in the details section.

Property Name	Description	Current Value
mxe.rest.webappurl	Token Authentication Web Application URL.	

Global Properties Details

Property Name: mxe.rest.webappurl

Description: Token Authentication Web Application URL.

Global Value:

Current Value:

Maximo Default:

File Override? ☐

Global Only? ☒

Instance Only? ☐

Online Changes Allowed? ☒

Refresh? ☒

Encrypted? ☐

Security Level: SECURE

User Defined? ☐

Nulls Allowed? ☒

Data Type: ALN

Domain:

Masked? ☐

The value of `mxe.rest.webappurl` is the URL for the maxrest application that validates the token issued by the Version 7 instance.

By default, if your Version 7 URL for example is:

`http://devserver1:9998/maximo`

then your REST URL would be:

`http://devserver1:9998/maxrest`

#### Notes:

1. If you define this property setting, be sure to include the maxrest application context path in the setting as highlighted below in red

`http://<V7Server>:<port>/maxrest`

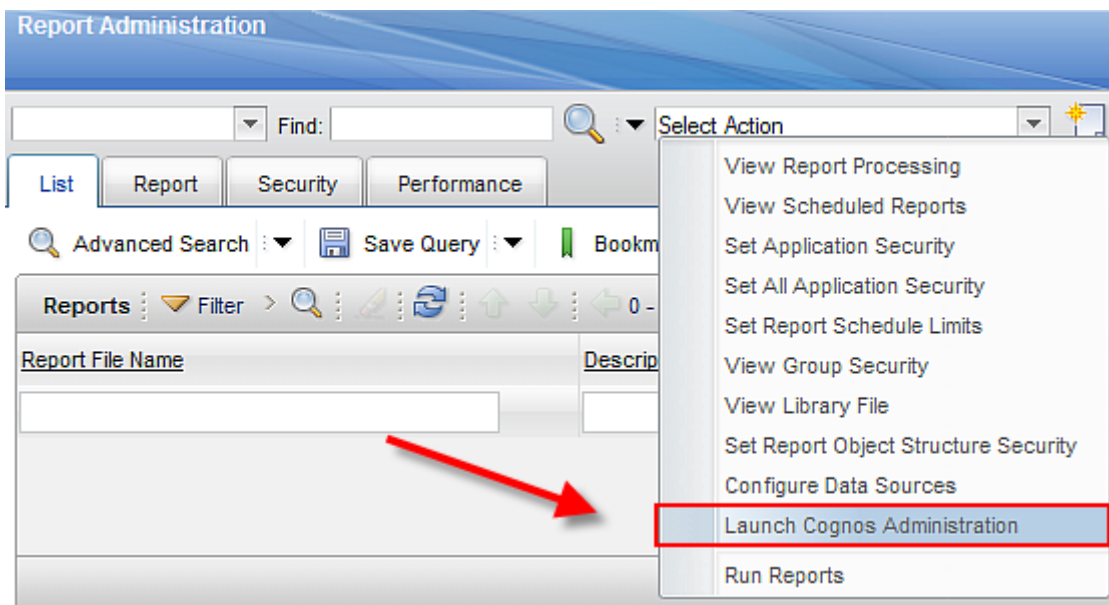
2. This property is not required. If it is not set, it will use the default value.

- With the default value, Cognos will authenticate by taking the base V7 URL like `http://devserver:9998`, and append "maxrest", for a final value of `http://devserver:9998/maxrest`.

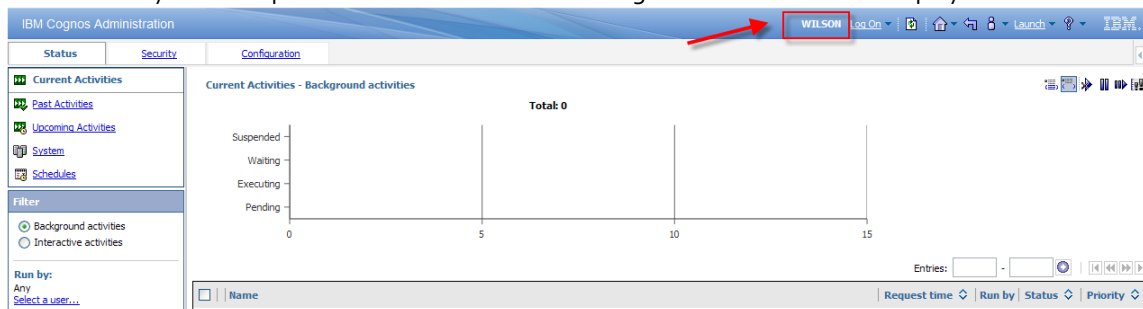
## 7. Create a Data Source in Cognos Administration

This Data Source will be used to develop reports in Report Studio and Query Studio, and also to execute the reports at run time. To create the Data Source, first access and confirm you can get to Cognos from Maximo.

1. First, make sure the Cognos server is started.
2. Next, log into Maximo as a user with both report administration privileges and security privileges to execute the Cognos Reports. In the example below, this will be user Wilson, who is the Maximo Administrator.
3. Insure you can launch directly to Cognos from Maximo. Access Maximo's Report Administration application. From the action menu, select 'Launch Cognos Administration'



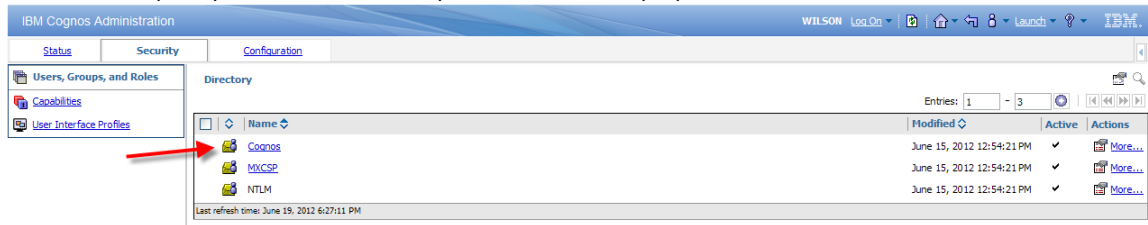
This will take you to a separate browser session where Cognos Administration is displayed.



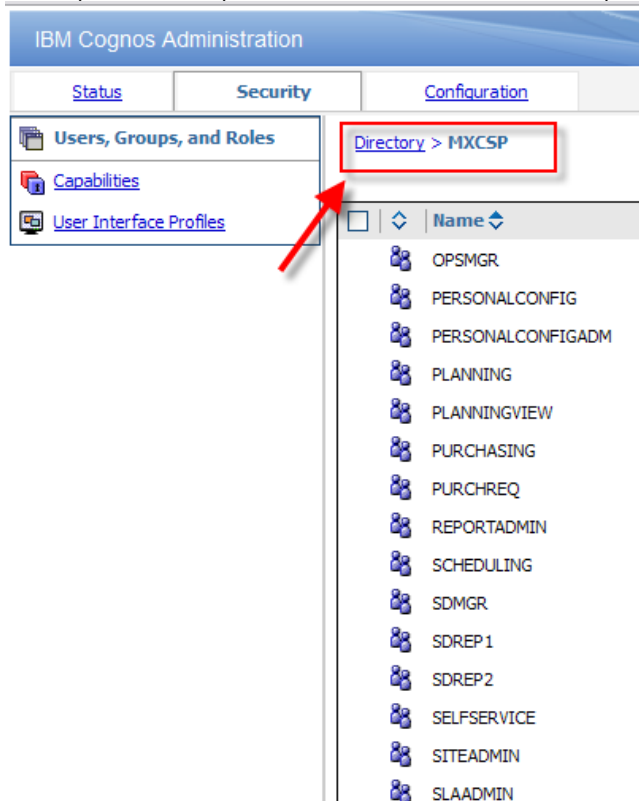
**\*NOTE:** If you receive an error when trying to access Cognos from Maximo's Report Administration Application, you can enable logging to troubleshoot this issue. An example of an error you may see is: "You can only use this namespace from a valid Maximo session"

You can enable the logging features by referencing the details under the Troubleshooting Tips Section, Maximo Logging Features.

To verify the CSP is bringing over the Maximo Users and Security Groups, click on the Security Tab. The Maximo Group (or your selected namespace value) will display.



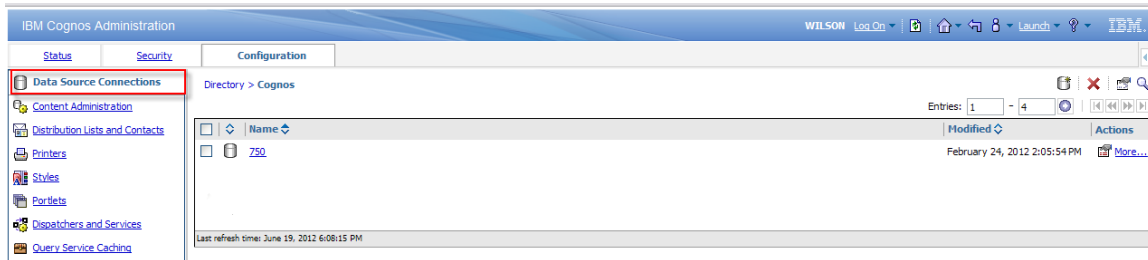
And if you select it, you should see the Maximo Security Groups and users.




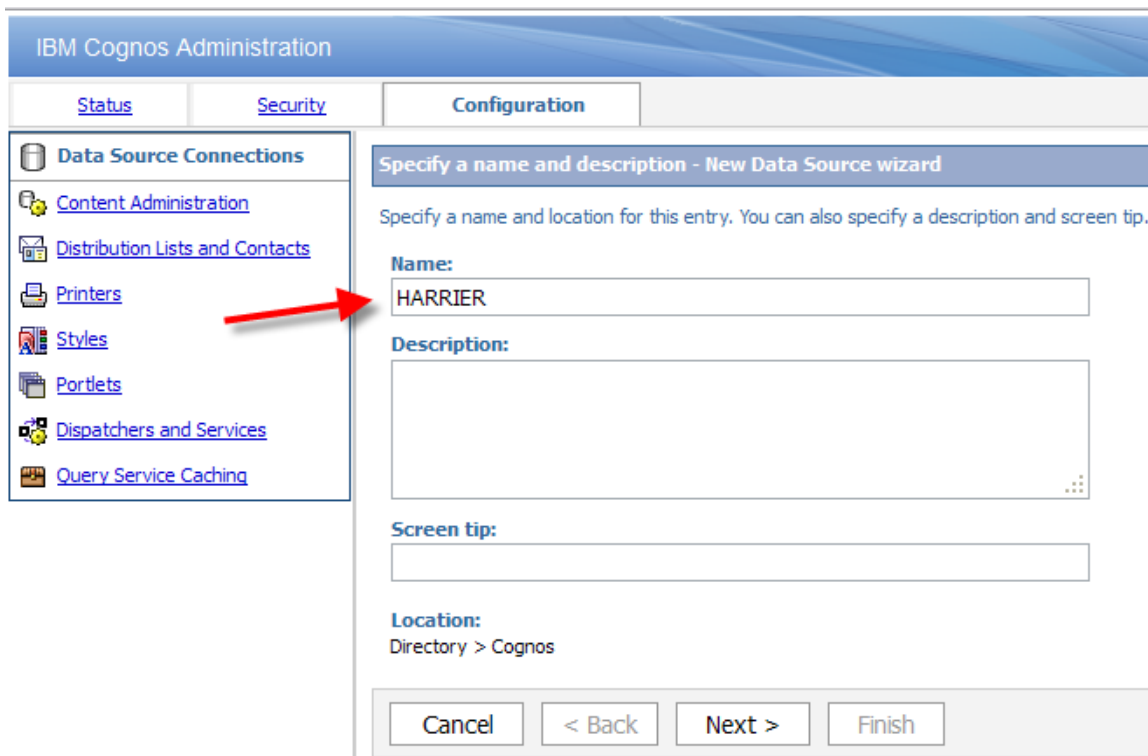
\*NOTE: For details on configuring Cognos Functional Access for the Security Groups, reference the 'Maximo Cognos Integration Guide' referenced at the end of this guide.

7A. Click on the Configuration tab and highlight Data Source Connections.

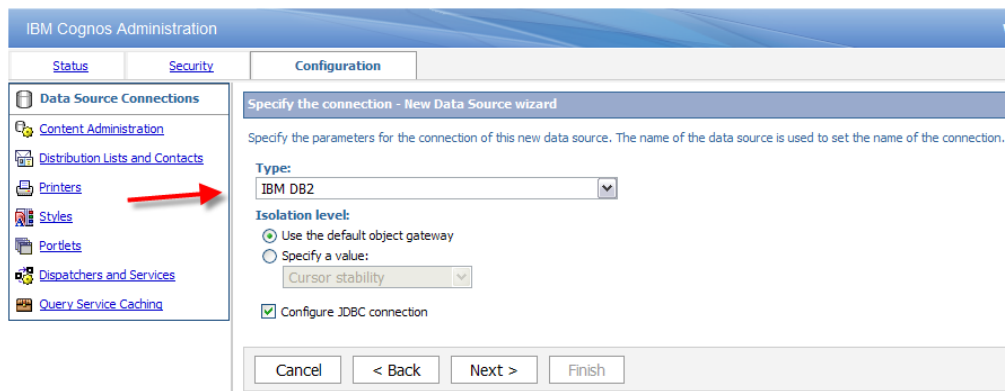




7B. Click on the new Data Source Icon . Enter the name of your database in UPPERCASE. In this example, the database name is HARRIER. Click Next.



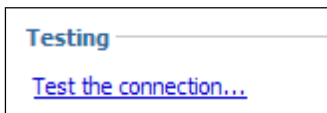
7C. Select a Database Type. In this example, the database type is IBM DB2. Click Next.



7D. Enter your DB2 database name. Check password under the Sign On Section, and then enter User ID and Password.

The screenshot shows the 'Configuration' tab in the IBM Cognos Administration interface. On the left is a navigation pane with 'Data Source Connections' selected. The main content area is titled 'Edit the parameters to build a DB2 connection string.' It contains several sections: 'DB2 database name:' with a text box containing 'db2ascii'; 'DB2 connect string:' with an empty text box; 'Collation sequence:' with an empty text box; an unchecked checkbox for 'Open asynchronously'; a 'Timeouts' section with 'Connect time:' and 'Reply time:' both set to '0'; a 'Signon' section with radio buttons for 'No authentication', 'An external namespace:', and 'Signons' (which is selected). Under 'Signons', there are checkboxes for 'Password' and 'Create a signon that the Everyone group can use:'. The 'Create a signon...' checkbox is checked, and below it are text boxes for 'User ID:' (containing 'maxlmo'), 'Password:' (masked with dots), and 'Confirm password:' (masked with dots). At the bottom of the configuration area is a 'Testing' section with a link 'Test the connection...'. At the very bottom of the window are buttons for 'Cancel', '< Back', 'Next >', and 'Finish'.

7E. Scroll down and click Test the connection...



7F. You should then receive a message that the test was completed successfully.

7G. Click Close and then Finish.

Your Data Source is now configured.

## Notes and Troubleshooting Tips

### 1. Missing dll's

If you test your Data Source Connection, and you receive a message that there are missing dll's, follow the steps below

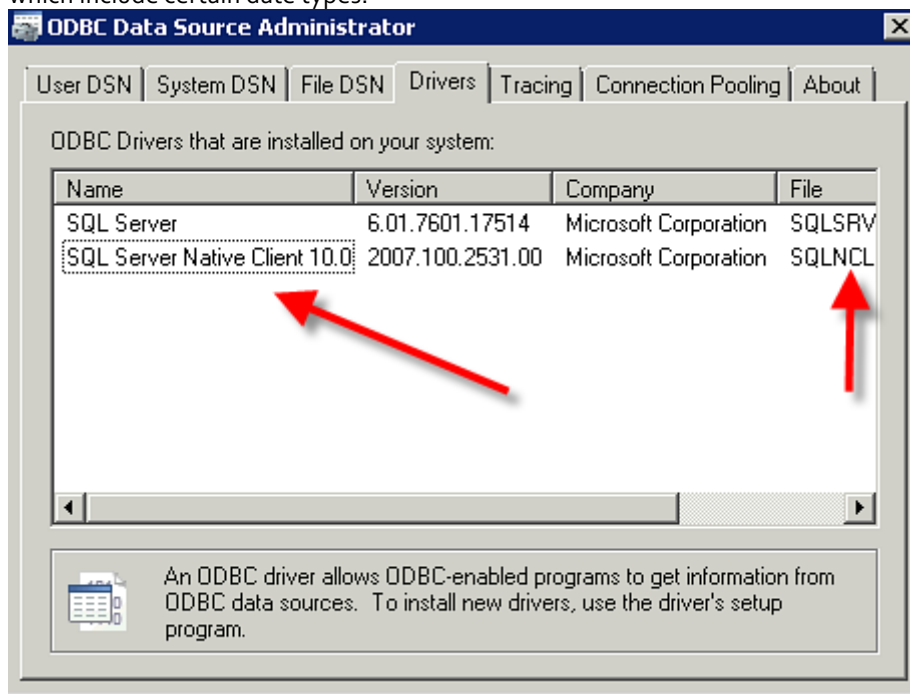
For Oracle: Copy the oci.dll from the client install of Oracle to <Cognos>\c10\bin

For DB2: Copy all dll's from the client install of DB2 to <Cognos>\c10\bin

### 2. SQL Server Driver

If you are using SQL Server, when creating your Cognos Data Source, be sure to specify the correct driver version. The specific version you should use is Microsoft SQL Server 2008 Native Client (SQL Server Native Client) as shown below.

If you do not specify the native SQL Server driver, you may run into issues when executing Cognos reports which include certain date types.



## 8. Configure Cognos SDK for Metadata

To enabling the publishing of the Report Object Structures as Cognos Packages, Cognos SDK Files are used. Follow the steps below to enable this functionality.

8A. Access the Cognos\_10\_Maximo\_Integration\_Files.zip file located in <7503>\reports\cognos\c10. This extracted zip file contains the two Maximo publishing classes, ActionLogPlayer.class and CognosManager.class

Extract the Cognos\_10\_Maximo\_Integration\_Files.zip to  
<V7503>\applications\maximo\businessobjects\classes\com\ibm\tivoli\maximo\report\cognos\metada  
ta\player

8B. If you are using Websphere Application Server, copy your two SDK jar files below to the application server lib directory. Example: <Websphere installation location>\AppServer\lib

*\*Note: You must have these two Cognos SDK files with your Cognos license. These files are not provided to you with the Maximo Cognos integration*

1. cognos-axis.jar
2. cognosClient.jar

8C. After the jar files are copied, rebuild and redeploy the Maximo Ear File. For more information on deploying the Maximo Ear File, access this IBM Tech Note: <http://ibm.co/XizSRF>

*\* If you are using IBM Websphere, and have Cognos installed on the Maximo server, you may want to stop the Cognos services first before redeploying.*

### Notes:

1. If you are using BEA Weblogic, add the following jar files to the server classpath:  
cognos-axis.jar  
cognosClient.jar  
commons-discovery.jar  
commons-logging.jar  
log4j-1.2.13.jar  
wsdl4j-1.5.1.jar  
xercesImpl.jar

The first 6 jar files are located in <Cognos SDK Installation Directory>\sdk\java\lib.  
The last jar can be found in <V7>\maximo\applications\maximo\lib.

*\*If you do not follow this step carefully, you will be unable to publish Report Object Structures as Cognos meta data packages. In this case, you will receive errors as shown in the 'Conflicting File Version' Subsection of the Troubleshooting Section noted later in this guide.*

## 9. Set End Point properties

The end point functionality is utilized within V75 to provide an interface for Cognos metadata creation and package publishing. To enable this functionality, values within this V75 application need to be defined. Follow the steps below to enable this.

9A. Login to the V75 application with Administrative Privileges. Access the Integration - End Points application.

9B. Access the End Point Name, MXCOGNOS.

9C. In the End Points details page, set the each of the values detailed below.

Property:	Value:
CONTENT_STORE_PACKAGE_LOCATION	PUBLISH
DATA_SOURCE_NAME	DB2
NAMESPACE_ID	NTLM
PASSWORD	
PROJECT_BASE_DIR	c:\IBM\cognos\My Projects\Metadata
URL	http://9.99.999.9080/p2pd/servlet/dispat
USERNAME	qaadmin

**CONTENT\_STORE\_PACKAGE\_LOCATION:** Folder where the package will be published on Cognos server. Identifies a location under the Cognos Content Store Public folders where the metadata package will be created. When provided, this end point property should override the system level value defined by `mxe.report.cognos.content.store.package.location`

*Note: This folder must be created within Cognos before you publish packages. If you have not created one, follow the steps to do this at the end of this section.*

*\*Additionally, the folder name cannot contain any spaces, or the publishing will fail.*

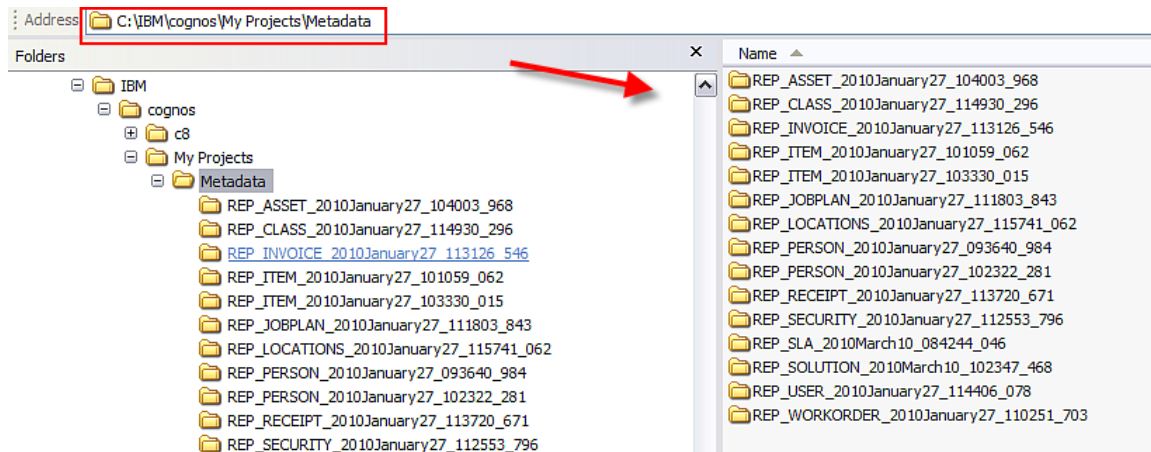
**DATA\_SOURCE\_NAME:** Name of the data source you created in Step #7. Identifies the Data Source Connection to which the metadata package is associated with. The Data Source Name must be upper case. If you do not enter a value, the publishing process will use the `mxe.report.cognos.datasource` system property value.

**NAMESPACE\_ID:** Identifies the Cognos Security Namespace to be used when publishing Maximo metadata to a Cognos BI server where Anonymous Authentication has been DISABLED. This value should match the name of the namespace created in Step 5G. This is *not* the namespace defined in the property value: `mxe.report.cognos.namespace`

**PROJECT\_BASE\_DIR:** Path on the Cognos Server where Cognos Framework Manager project files, associated with Maximo metadata, will be created.

For example: `<C>:\IBM\cognos\My Projects\Metadata`

The screen shot below shows how this project directory will be populated after the Cognos Packages are published.



*\*Note: If you want to open a Maximo published package in Cognos Framework Manager Tool, for additional modifications, access the .cpf file from this location.*

**URL:** Identifies the URL to be used to establish a connection with Cognos Business Intelligence integration service.

The value to be used in this property is part of Cognos 8 configuration. It should be the Dispatcher URL (Gateway URL value should NOT be used). This Cognos 8 configuration value can be found in the "IBM Cognos Configuration" tool in the following path: Local Configuration -> Environment -> Dispatcher URI for external applications.

Note: This is not the same value set for the property file `mxs.report.cognos.serverUrl`

Other URI Settings	
Dispatcher URI for external applications	http://localhost:9300/p2pd/servlet/dispatch
Content Manager URIs	http://localhost:9300/p2pd/servlet

**USERNAME:** Username to be used when authenticating with Cognos Business Intelligence Server. The username value should comply with authentication requirements defined by MXCOGNOS NAMESPACE\_ID definition: NTLM or LDAP.

For NTLM, this is an Operating System user.

**PASSWORD:** Password for the Username defined above. This is used when authenticating against Cognos server. It should be set as encrypted value.

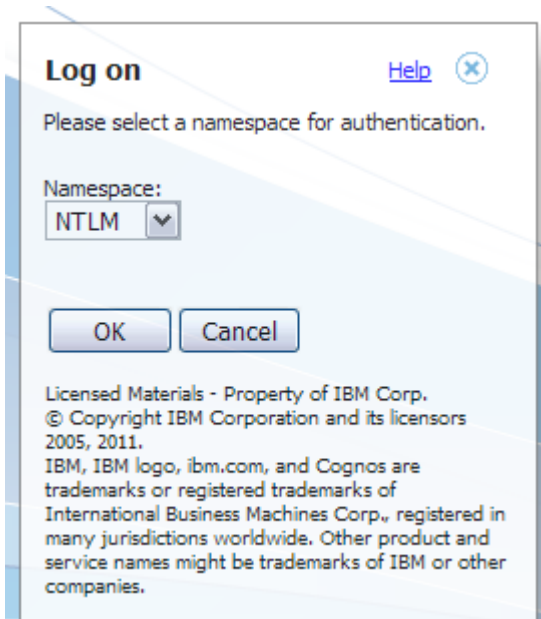
**MULTISERVER\_ENABLED:** Set this value to 1 if the Cognos environment is a multi-server installation.

## Reference: How to create a Folder Location in Cognos

These next steps detail how you can create a folder location in Cognos for the End Point Value:

**CONTENT\_STORE\_PACKAGE\_LOCATION**

A. Sign into the NTLM namespace. For example: `http://localhost/Cognos10`



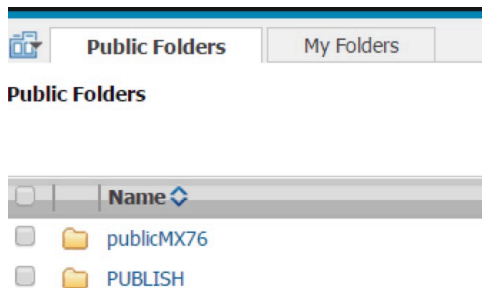
B. Once logged in, click on My home.

C. Next, you will create a new Folder, under the Public Folder Tab. To do this, click on the folder icon highlighted by the arrow.

D. Specify a folder name that does not contain any spaces. (In this example – it is 'PUBLISH'. Click Finish.

\*NOTE: If the folder name contains spaces, publishing of the Cognos packages will fail.

E. You now have a new folder which will hold your published Report Object Structures, or Cognos Packages.



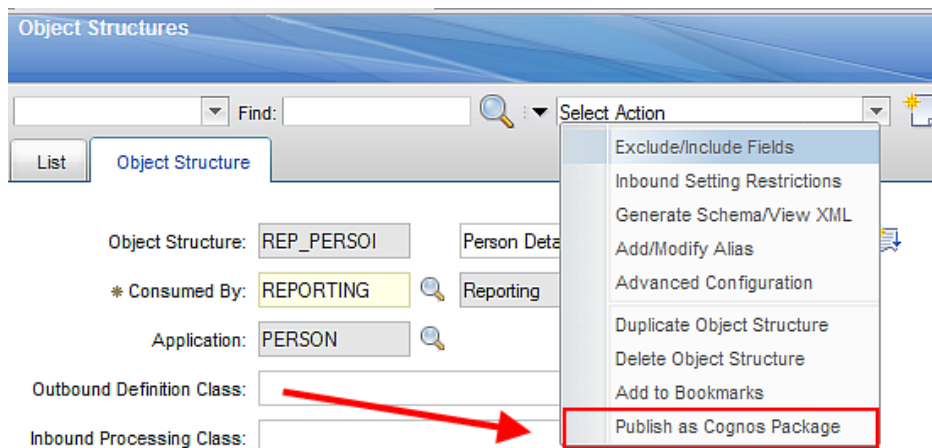
## 10. Publish Cognos Packages

Next, the Report Object Structures will be published as Cognos Packages.

10A. Log into Maximo as the System Administrator. Access the Object Structure application, and select a Report Object Structure (ROS). ROS are identified as a 'Consumed By = Reporting'

**\*\*NOTE:** It is **HIGHLY** recommended that the first time you publish a Cognos Package that you work with a small package like REP\_PERSON or REP\_USER. These ROS have a small number of database objects and attributes, and will enable you to confirm the publishing process is working correctly. Once you have successfully published a smaller package, then you can publish larger packages, with a greater number of objects.

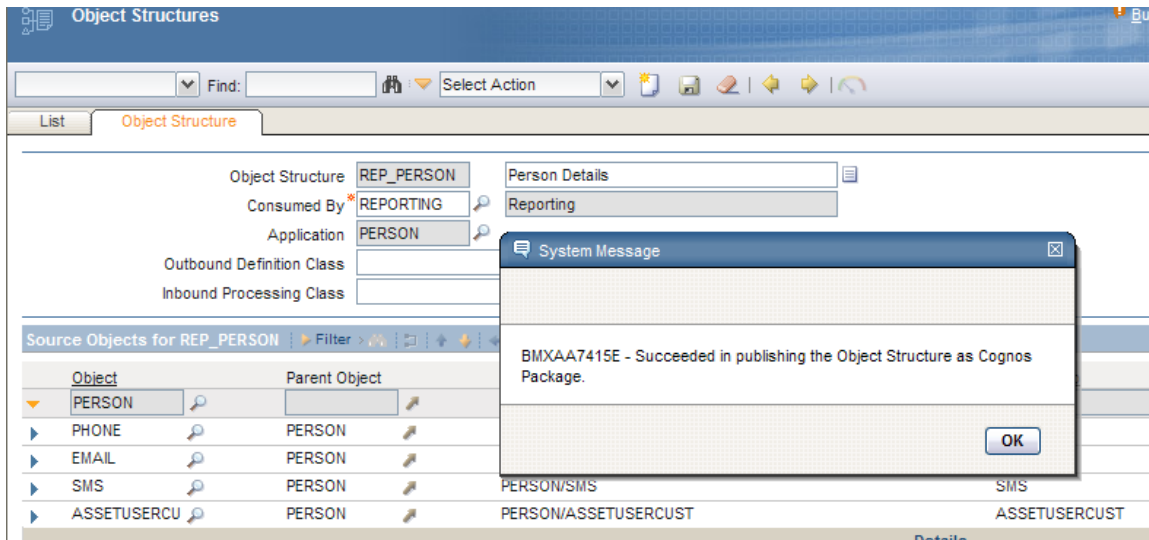
10B. Select the REP\_PERSON Report Object Structure. From the Object Structure Tab, select the Action menu. Select 'Publish as Cognos Package'.



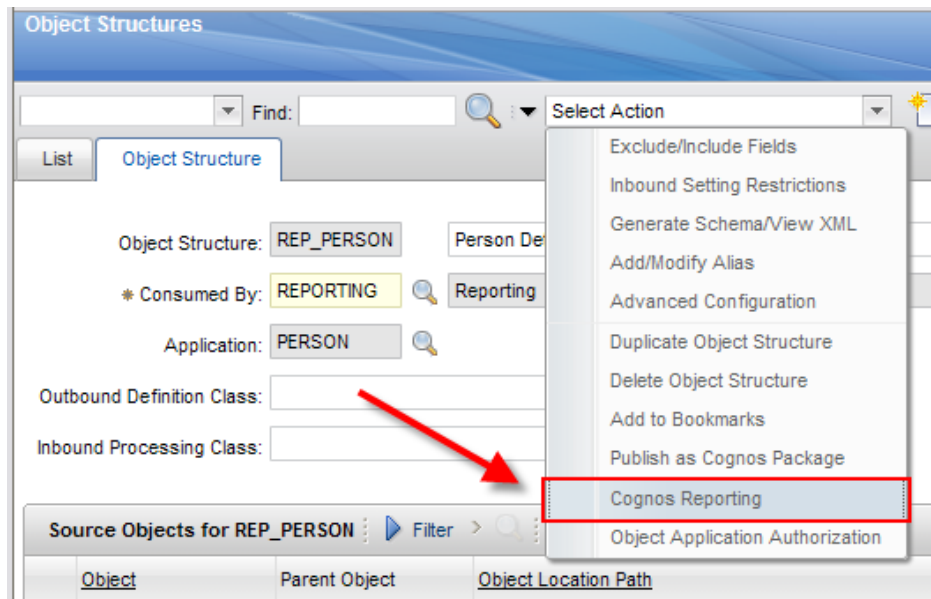
Source Objects for REP_PERSON				
Filter > 1 - 5 of 5				
	Object	Parent Object		Object Location Path
	PERSON		>>	PERSON
	PHONE	PERSON	>>	PERSON/PHONE
	EMAIL	PERSON	>>	PERSON/EMAIL
	SMS	PERSON	>>	PERSON/SMS
	ASSETUSERCUST	PERSON	>>	PERSON/ASSETUSERCUST



10C. Depending on the size of the ROS and the Network Connection, the publishing time of the package will vary. Once it has been completed successfully, a message will display.



10D. Next, access Cognos to verify the new package(s) by selecting 'Cognos Reporting'



Note: To enable the 'Cognos Reporting' Action, make sure you have enabled the 'Cognos Reporting' Action for the Object Structure in the Security Group application in Maximo.



10E. Once in Cognos, navigate to the Published Package Location. The published packages are available at the folder specified via the MXCOGNOS endpoint's CONTENT\_STORE\_PACKAGE\_LOCATION property.

In the screen shot below, the Package Location was defined as 'publish'. Within this folder, there are a number of published packages, including Asset and Inventory packages.

Note: The packages are identified by the description of the ROS, MAXINTOBJECT.DESCRPTION



## Troubleshooting Cognos Package Publishing

If the publishing functionality fails, review the following items

### Creation

The following system properties will cause package creation failures if not defined correctly

- mxe.report.cognos.db.schemaName
- mxe.report.cognos.db.sql.name
- mxe.report.cognos.db.type

Errors indicating this failure will appear in the application server log files.

For Websphere, this is the systemout.log file located in:

<InstallDirectory>WebSphere\AppServer\profiles\AppSrv01\logs\server1

For Weblogic, publish errors will appear in the console, or in the BEA Server log.

AdminServer.log.

### Post

Once the package is built, the metadata package is posted to the Cognos location specified in the end point (project\_base\_dir). (This value is set in Section 9 – Set End Point Properties)

If the publishing process fails, verify if the package has been created in this location.

If the package does not appear in this location, verify the End Point values are defined correctly. Also confirm the system properties above are defined correctly.

- NAMESPACE\_ID
- PASSWORD
- PROJECT\_BASE\_DIR
- URL
- USERNAME

Errors indicating this failure will appear in the application server log files.

For Websphere, this is the systemout.log file located in:

<InstallDirectory>WebSphere\AppServer\profiles\AppSrv01\logs\server1

For Weblogic, publish errors will appear in the console, or in the BEA Server log.

AdminServer.log.

## Publishing

Once the package is posted to the Cognos directory (project\_base\_dir), it will be moved/published/imported into Cognos where it will be validated against the database. If this fails, verify the below.

### ***System Properties***

mxe.report.cognos.content.store.package.location  
mxe.report.cognos.datasources

### ***End Point Values***

CONTENT\_STORE\_PACKAGE\_LOCATION  
DATA\_SOURCE\_NAME

Note:

If end point values are populated, it will use their values.

If no end point values are entered, it will use the system properties

Errors indicating this failure will appear in the application server log files.

For Websphere, this is the systemout.log file located in:

<InstallDirectory>\WebSphere\AppServer\profiles\AppSrv01\logs\server1

For Weblogic, publish errors will appear in the console, or in the BEA Server log.

AdminServer.log

Additionally, errors may display in the Cognos logs.

## Conflicting File Version

If you do not copy the Maximo MXCSP file located under the C10 directory in Maximo to Cognos, or you do not copy the correct Cognos 10.1.1 SDK Files to Maximo, errors will result when trying to publish report object structures. (These actions occur in Steps 4A and 8A above)

Errors of what you may see in the console and within Maximo's Object Structure application are shown below.

### Application Log Files

```
16 Jun 2012 13:12:40:984 [ERROR] [%s] [%q] Error while invoking the Cognos Playe
r class "ActionLogPlayer"
java.lang.NoSuchMethodError: com.cognos.developer.schemas.bibus._3.MetadataServi
ce_ServiceLocator.getmetadataService(Ljava/net/URL;)Lcom/cognos/developer/schema
s/bibus/_3/MetadataService_Port;
at com.ibm.tivoli.maximo.report.cognos.metadata.player.CognosManager.con
nectToCognosServer(CognosManager.java:101)
at com.ibm.tivoli.maximo.report.cognos.metadata.player.CognosManager.<in
it>(CognosManager.java:73)
at com.ibm.tivoli.maximo.report.cognos.metadata.player.ActionLogPlayer.<
init>(ActionLogPlayer.java:67)
at com.ibm.tivoli.maximo.report.cognos.metadata.adapter.CognosHandler.in
voke(CognosHandler.java:192).....
```

Error displayed within Maximo's Object Structure application

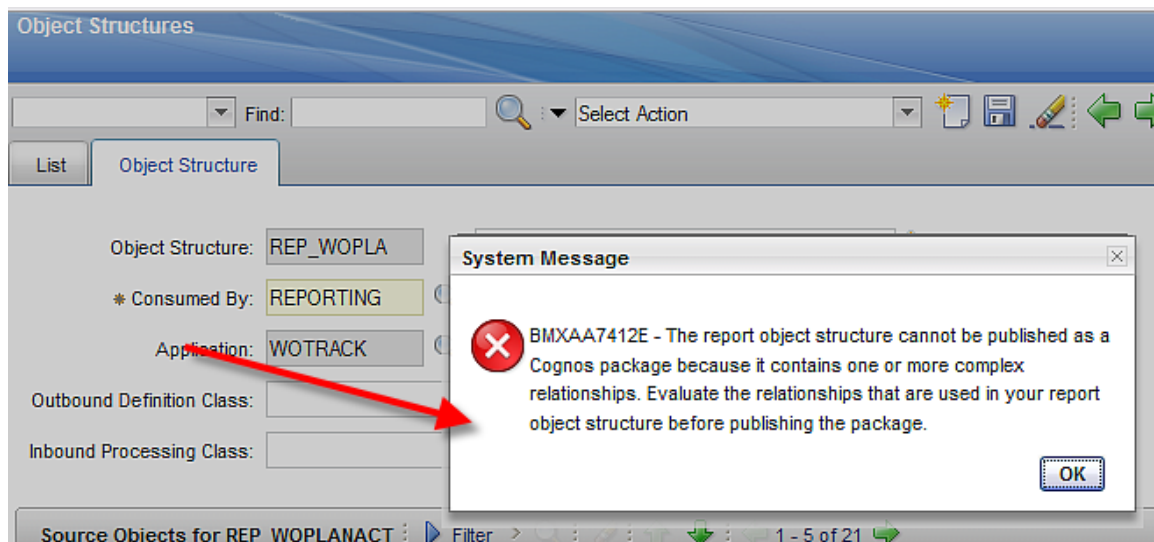
BMXAA7409E - The transformed object structures cannot be published to the Cognos server. To determine the cause, check the product log files.

## Publishing Package for Test Reports

1. Before going on to the next section to register the test reports, you must publish the Workorder Package, identified by its Object Structure name of REP\_WORKORDER, and description of Work Order Details. This package is required for the test reports to execute. The Workorder package is a large package with multiple objects and attributes, so it will take longer to publish than a smaller package like REP\_PERSON.

Note: Maximo's Cognos Metadata publishing process ONLY SUPPORTS column to column relationships (simple relationships). Therefore, you may find Report Object Structures included within Maximo that are *not* supported for Cognos Publishing. These include (1) REP\_ASSETACTIVITY and (2) REP\_WOPLANACT.

If you try to publish one of these unsupported packages, you will receive a message



For more details on the publishing process and the ROS it supports, see the 'Maximo Cognos Integration Guide' referenced at the end of this guide.

## 11. Register Cognos Reports in Maximo's Report Administration

You may want to test that the integration has been set up properly by using two V75 Cognos test reports. These two reports utilize the REP\_WORKORDER Package which you published in the step above.

### **Setup Steps:**

A. Obtain a copy of these test reports, by accessing the ISM Library Site at <http://bit.ly/tqkJGA>

B. Download and save the reports and templates to your V75 directory

<v75>\reports\cognos\c10\reports

Report Administration Registration Steps:

Next, you register these 2 reports in the V75 Report Administration application so they can be executed within the V75 applications.

11A. Sign into your V75 environment as an administrator, and access the Report Administration application.

11B. Create a new report entry for the report, Work Order Listing by Status. Its key values are:

Report File Name: Work Order Listing by Status

Application: WOTRACK

Report Type: COGNOS

\*Package Name: Work Order Details

Parameters: None. This report executes against the current/selected record set of the application.

The screenshot shows the 'Report Administration' application interface. At the top, there is a navigation bar with 'Bullets: (1)', 'Go To', 'Reports', 'Start Center', 'Profile', and 'Sign Out'. Below this is a search bar with 'Find:' and a 'Select Action' dropdown. The main content area has tabs for 'List', 'Report', 'Security', and 'Performance'. The 'Report' tab is active, showing a form with the following fields: 'Report File Name' (containing 'Work Order Listing by Status'), 'Application' (containing 'WOTRACK'), 'Report Type' (containing 'COGNOS'), 'Imported by' (empty), 'Package Name' (containing 'Work Order Details'), 'Report Folder' (empty), 'Last Import Date' (empty), and 'Package Location' (empty).

\*More details on Package Name and the other fields are in the Notes section below.

11C. Create a new report entry for the report, Overdue Work Orders by Location. Its key values are:

Report File Name: Overdue Work Orders  
Application: WOTRACK  
Report Type: COGNOS  
\*Package Name: Work Order Details

Parameters:

Parameter Name: site  
Attribute Name: siteid  
Sequence: 1  
Required: Yes (Enable Field)  
Display Name: Site

The screenshot displays the 'Report Administration' application interface. At the top, there is a navigation bar with 'Bullets: (0)' and a 'Go To' dropdown menu. Below this is a search bar with 'Find:' and a 'Select Action' dropdown. The main content area is divided into two sections. The top section contains form fields for 'Report File Name' (set to 'Overdue Work Orders by Location'), 'Report Type' (set to 'COGNOS'), 'Imported by:', 'Package Name' (set to 'Work Order Details'), 'Application' (set to 'WOTRACK'), 'Report Folder:', 'Last Import Date:', and 'Package Location:'. A red arrow points to the 'Report Type' field. The bottom section is titled 'Settings' and contains a table with the following data:

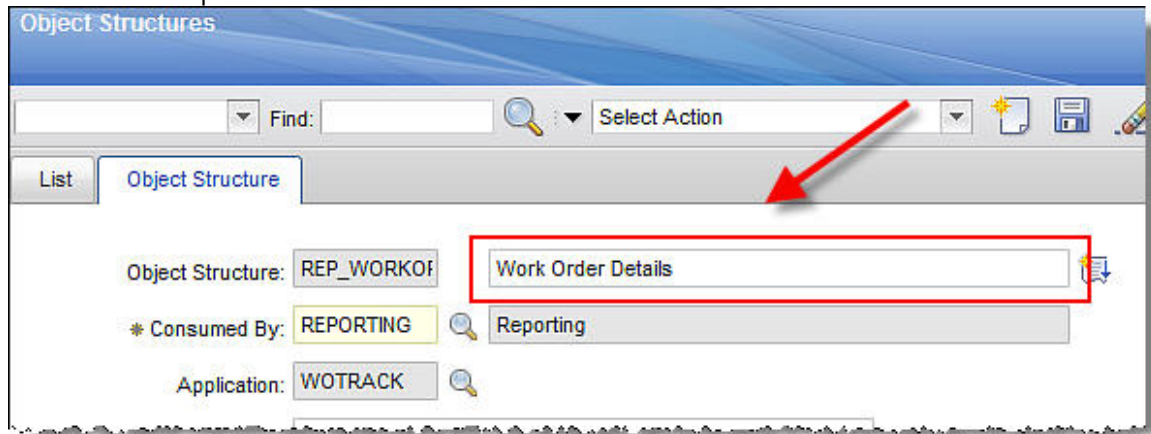
Parameter Name	Attribute Name	Sequence	Display Name	Required
site	siteid	1	Site	<input checked="" type="checkbox"/>

After registering these two test reports, generate the XML for them in the Report Administration application per the button on the bottom right hand side of the screen.



**\*Notes on Report Administration Registration:**

1. When you register Cognos reports, you must set the Report Type = Cognos.
2. The Package Name field is the description of the Report Object Structure you published to Cognos. In this example, the package name is 'Work Order Details', which is its Report Object Structure description.



3. The Report Folder field is the location of the report under the Package Name. It is an optional field, and by default, displays to the application name. *If your report is directly located under the package, the report folder field should not be populated.*
4. The Package Location is the folder where the Cognos package is located. If you have multiple folder locations within Cognos, you must specify which folder location your package is under. In the example below, the Cognos page has two folders: PRODUCTION and PUBLISH. In this scenario, you would need to specify the Package Location as either PRODUCTION or PUBLISH to indicate the location of the Cognos Package and report.



5. Finally, you must enable report security for these 2 new Cognos reports. You can do this in the Report Administration application by setting the security for the individual reports on the 'Security' Tab. Or it can be set by defining it via the Actions 'Set Application Security' or 'Set All Application Security' for the Work Order Application, and Cognos Report Type.

\* The MAXADMIN Security Group, by default, does not have security access to Cognos reports.

## 12. Import Report Designs, Templates into Cognos. Test Integration

The last step is to import two report test design files and one template file into the Cognos application. These are the two test reports and templates that you downloaded and registered in the previous section.

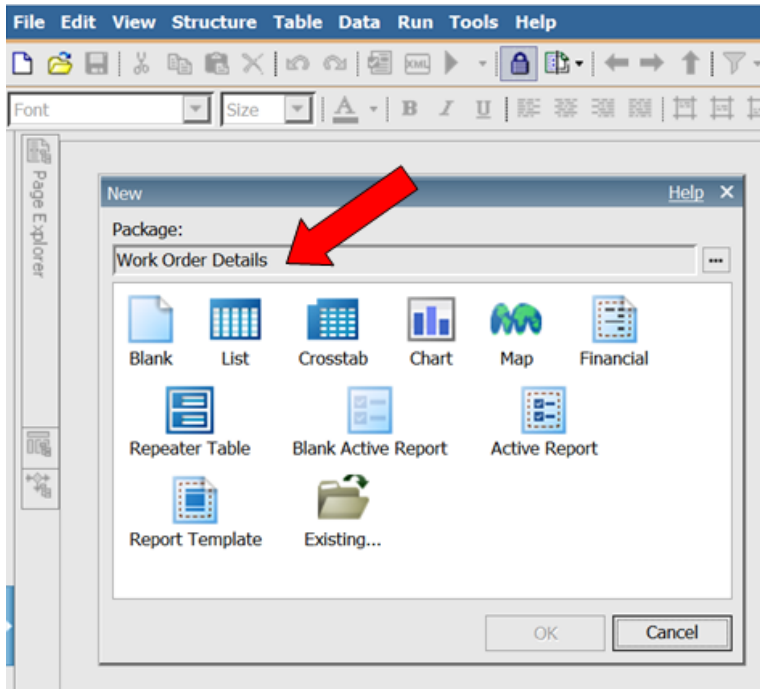
12A. From the action menu in Maximo's Report Administration application, select 'Launch Cognos Administration'. Once in Cognos, go to the Home Page. Launch to Report Studio, then navigate to the REP\_WORKORDER (also known as Work Order Details) package that you published in step 10.



12B. The screen below displays. Select 'Create new'



12C. The Work Order Details Package is displayed. Select Blank.

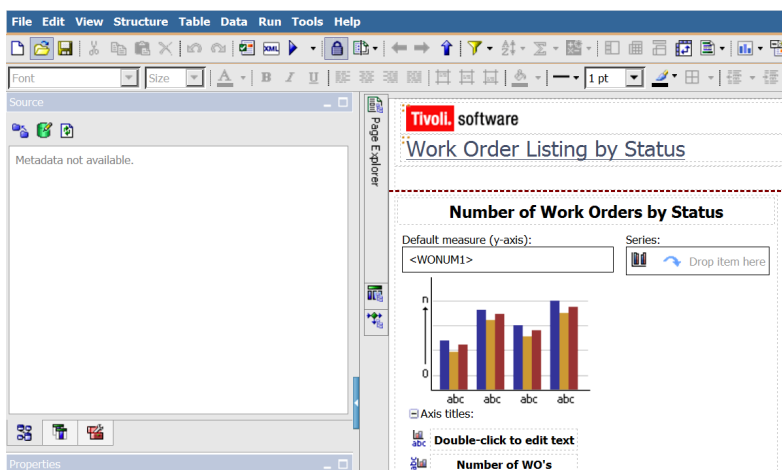


12D. Next, import the Work Order Listing by Status sample report. To do this, navigate to the location where you stored your downloaded report, Work Order Listing by Status.xml . (Note: Please remember that you need to download the reports and templates from IBM's ISM library here.

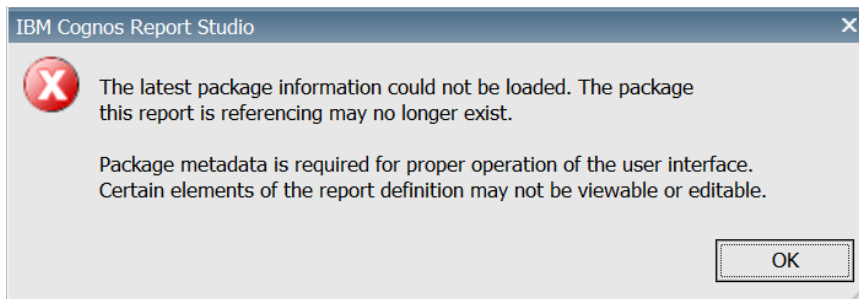
<https://www-304.ibm.com/software/brandcatalog/ismlibrary/details?catalog.label=1TW1oMA38>

12E. Open up the report file in a text editor. Copy its entire contents.

12F. Go back to Cognos Report Studio. From the menu, select Tools -> Open Report from Clipboard. This will bring the report xml file from memory into Report Studio. The screen should refresh with the content of the report.

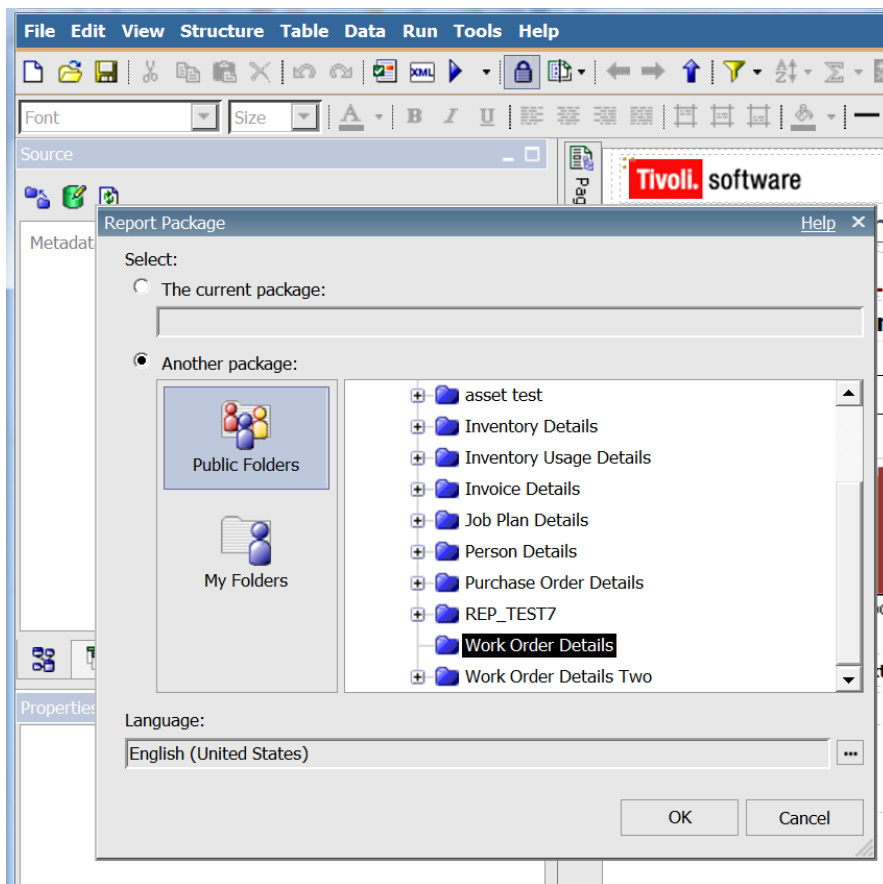


Additionally, the error message may display. Click OK as the package will be referenced in the next steps.



12G. To include the package, from the menu, Select File -> Report Package

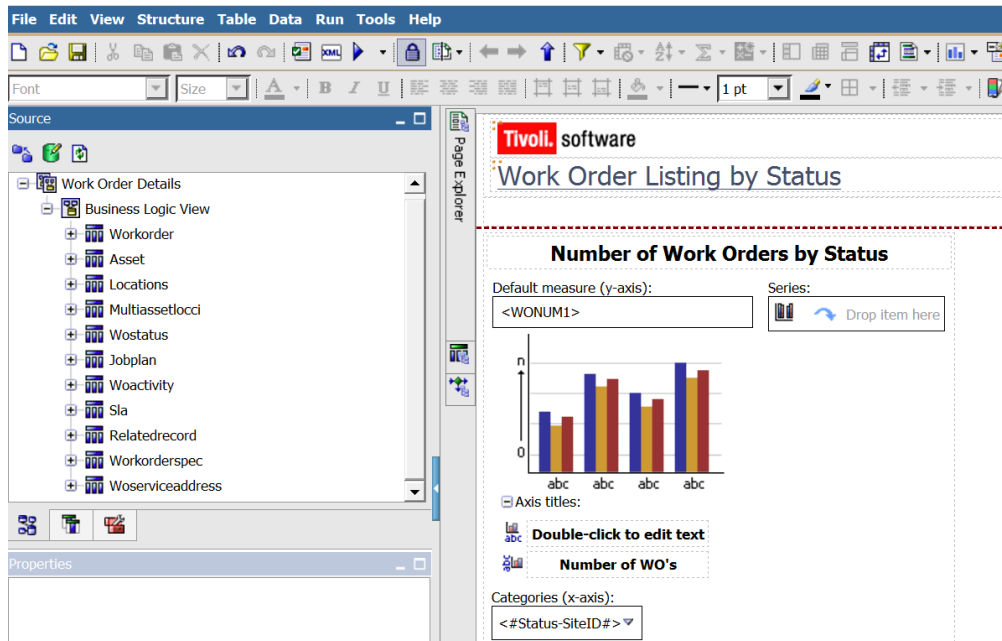
Navigate to the location of the Report Package the report design uses. Click OK.



Note: You may receive warning messages similar to what are shown below.



12H. The Work Order Listing by Status report is now available. Save this by selecting File - Save as, and saving the report.

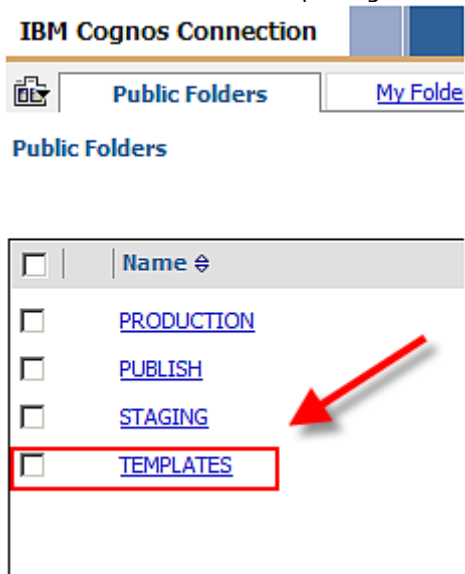


12I. Repeat this process for the second report test file, Overdue Work Orders.

12J. Next, import the Maximo template. This template can be used as a starting point for creating custom Cognos reports.

To import the Maximo template, follow the same process as importing the Maximo reports. Open the maximo\_template.xml file in Notepad, and copy/paste it into Report Studio. You can then save it in an existing folder, or create a new one called 'TEMPLATES' to find it quicker.

\*Note: Do not associate a package with the report template.

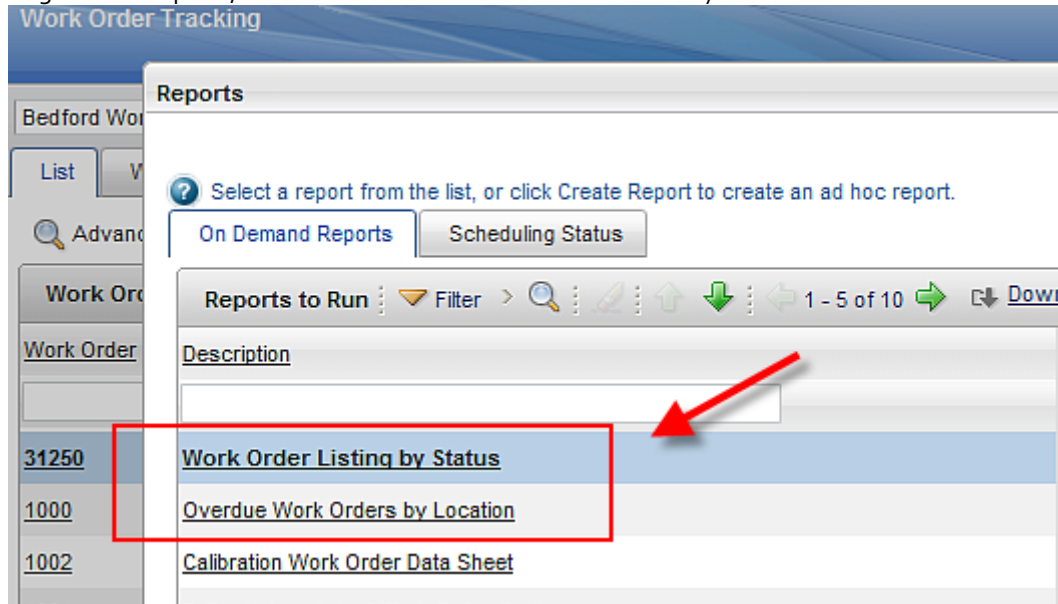


## Install Test

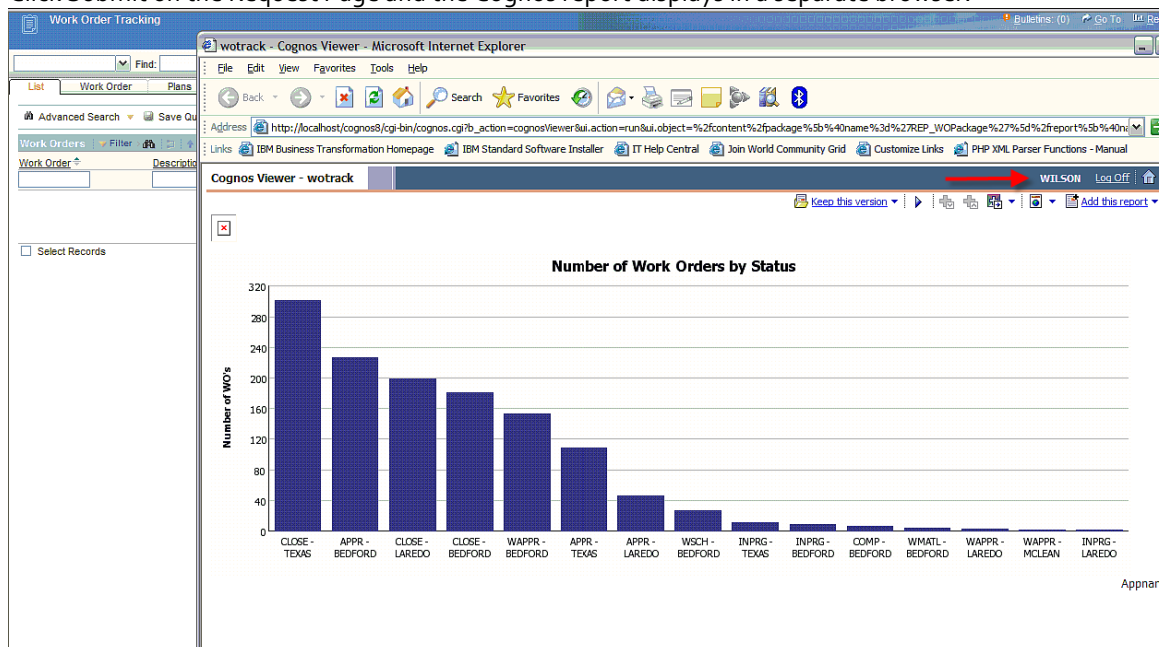
This last section will confirm that the integration has been successfully installed.

Next, go back to Maximo and test the report integration. Access the Work Order Tracking application, and select 'Run Reports' from the Menu. Select the Cognos Work Order Listing by Status report.

\*Note: You can also do this by staying in the Report Administration application. Access either of the Cognos Test reports, and click 'Preview' to execute them directly.



Click Submit on the Request Page and the Cognos report displays in a separate browser.



## 13 Troubleshooting Notes on Executing Cognos reports from Maximo

1. If you are unable to execute Cognos reports from within Maximo, review the following property files to insure they are defined correctly

```
mxe.report.cognos.namespace  
mxe.report.cognos.serverURL
```

Errors indicating this failure will appear in the application server log files.

For Websphere, this is the systemout.log file located in:

```
<InstallDirectory>\WebSphere\AppServer\profiles\AppSrv01\logs\server1
```

For Weblogic, publish errors will appear in the console, or in the BEA Server log.

```
AdminServer.log
```

Additionally, the MXCSP log called JDBC.log located c:\temp\log, will detail the errors. Steps to enable this log file are in the next section below.



## Troubleshooting: Logging Features

### Maximo Logging Features

To troubleshoot the integration between Maximo and Cognos, follow the steps below to initiate additional logging features.

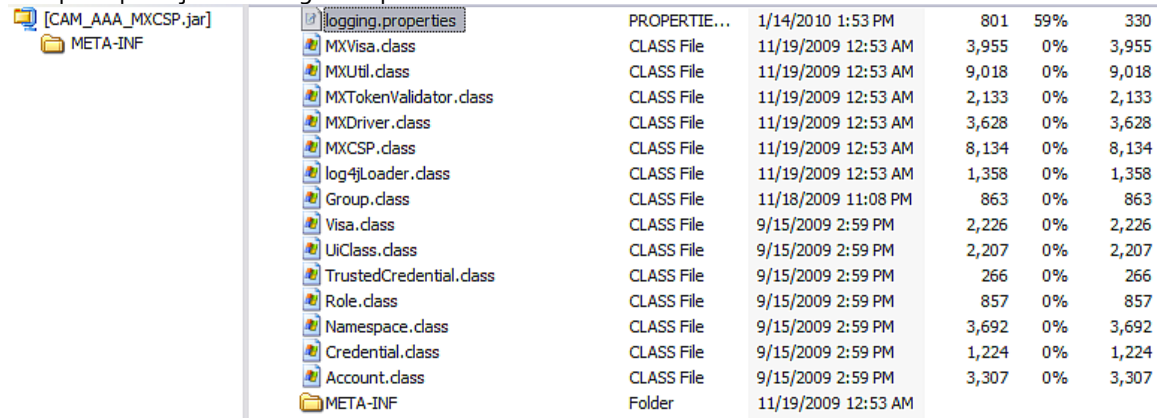
A. First, insure there is a temp directory under the root. Then, create a log subfolder under it. So, you will have a path like:

c:\temp\log

B. Shut down Cognos.

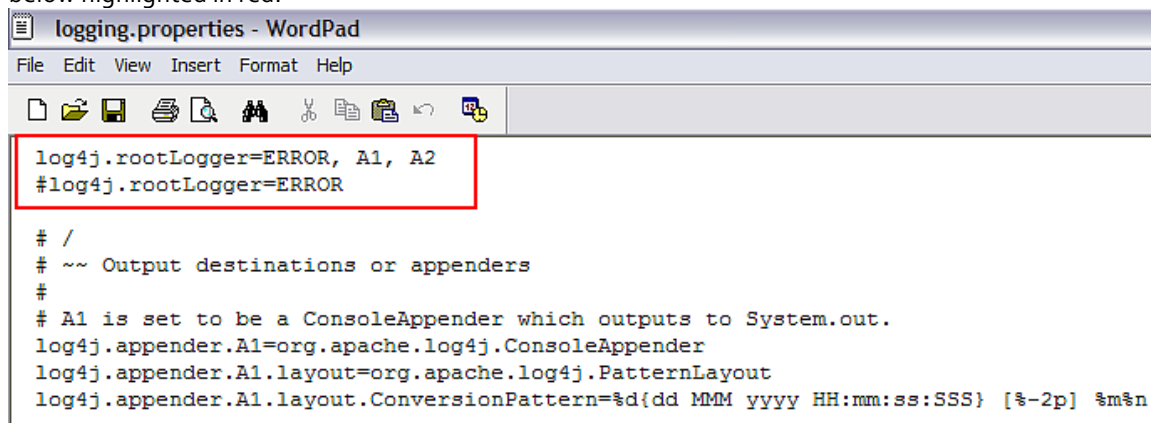
C. Navigate to the location of the csp jar file on Cognos: CAM\_AAA\_MXCSP.jar  
<Cognos>\c10\webapps\p2pd\WEB\_INF\lib

D. Open up the jar file using Winzip



E. Then, open up the logging.properties file.

F. Change the first 2 lines of the properties file by modifying the location of the # sign to what is shown below highlighted in red.



G. Save the change, close the file. Restart Cognos.

H. Then, try to enable the integration again - either by running a report directly from Cognos - or by accessing Cognos from the Maximo Report Administration application. A detailed log file called JDBC.log will be available under: c:\temp\log

### *Cognos Logging Features*

Additional Cognos log files can also be used to troubleshoot the integration. The Cognos Log file you should use is cogserver.log located in <Cognos>\c10\logs

### *Database Logging Features*

If reports not executing as expected, you may want to debug by enabling database log files.

*If you are using DB2,*

Navigate to <Cognos>\c8\binbin and locate cogdmd2.ini. Open that file, and locate the [TRACE] section. Uncomment the lines:

```
;[TRACE]  
;Output=<my trace file>
```

```
;Timer=yes
```

Next, specify the output file (and path) where you want to save the file in place of <my trace file>. Restart the Cognos Server.

*If you are using Oracle,*

Navigate to <Cognos>\c8\bin and locate cogdmor.ini. Open that file, and locate the [TRACE] section. Uncomment the lines:

```
;[TRACE]  
;Output=<my trace file>
```

```
;Timer=yes
```

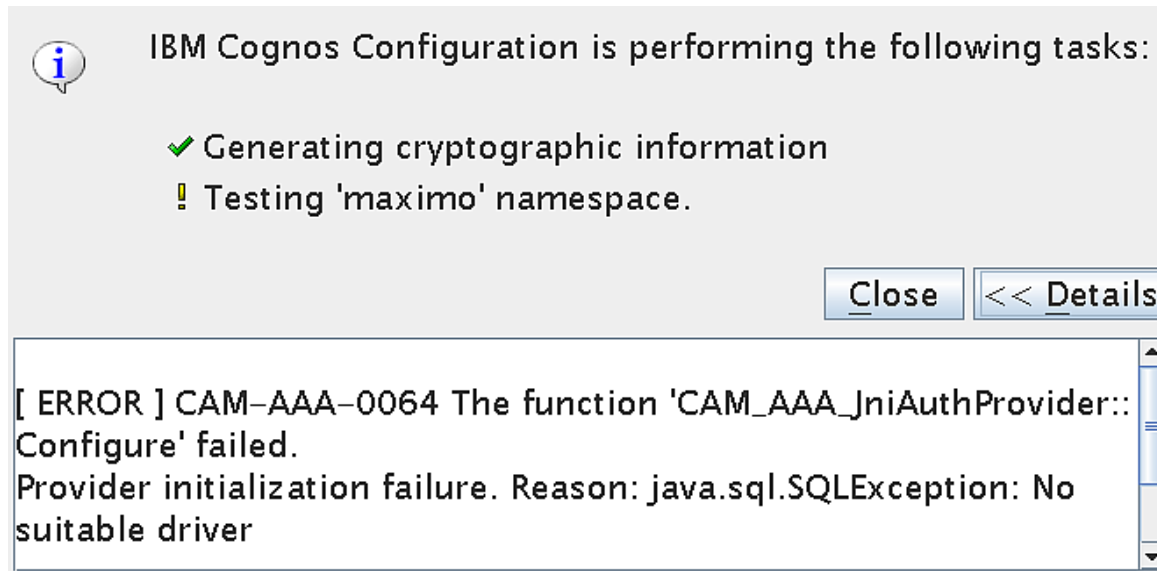
Next, specify the output file (and path) where you want to save the file in place of <my trace file>. Restart the Cognos Server.

## Troubleshooting: Frequently Seen Error Messages

### *Cognos: Namespace Property Setting*

After creating the maximo namespace, it needs to be tested. If you receive an error message within Cognos Configuration that the correct driver is not loaded, this often means that the mxccognosdatasource.properties is not correct.

This occurs because when a Connection request is issued, the DriverManager asks each loaded driver if it understands the URL sent. If no driver responds that it understands the URL, then the "No Suitable Driver" message is returned.



This error can be seen in the Maximo Log Files by something like

```
13 Oct 2012 16:57:48:241 [INFO] Logging initialized.  
13 Oct 2012 16:57:48:247 [INFO] MXCSP INIT Method  
13 Oct 2012 16:57:48:317 [INFO] Provider initialization failure. Reason: java.sql.SQLException: No suitable driver
```

In this case, confirm that the data source property value has been configured properly in V75. For example, an incorrect Data Source Value that would return this error is highlighted below with its incorrect syntax in red.

maximoDataSource.url=**mx**e.db.url=jdbc:db2://linux12.syr.swg.com:50000/MX7503

Its Correct Value is shown here.

maximoDataSource.url=jdbc:db2://linux12.syr.swg.com:50000/MX7503

## *Cognos: Namespace Jar File Extraction*

An error may be received when creating a Maximo Namespace in Cognos, similar to what is shown below.

MXCSP INIT Method

```
java.lang.ClassNotFoundException: com.ibm.db2.jcc.DB2Driver
    at java.lang.Class.forName(Class.java:130)
    at MXDriver.setDriver(MXDriver.java:36)
    at MXCSP.init(MXCSP.java:68)
    at com.cognos.CAM_AAA.authentication.proxy.CustomProviderProxy.pCAM_AAA_
Configure(CustomProviderProxy.java:526)
    at com.cognos.CAM.AAA.TestConfiguration(Native Method)
    at com.cognos.CAM.configtest.AAACnfgTask.run(AAACnfgTask.java:124)
    at com.cognos.crconfig.data.CnfgTask.run(CnfgTask.java:109)
    at com.cognos.crconfig.data.CnfgActionEngine$CnfgActionThread.run(CnfgAc
tionEngine.java:384)
[INFO] Provider initialization failure. Reason: java.sql
.SQLException: No suitable driver
```

In this case, you may need to copy and unzip the CSP and Database jar files copied in Step 4 to an additional location in Cognos. To do this:

1. Stop Cognos.
2. Copy the CSP jar file from this location in Maximo  
    <V7503>\reports\cognos\c10\webapps\p2pd\WEB-INF\lib  
to this location in Cognos  
    <Cognos>\c10\webapps\p2pd\WEB-INF\classes
3. Copy your applicable database jar files from this location in Maximo  
    <V7503>\applications\maximo\lib  
to this location in Cognos  
    <Cognos>\c10\webapps\p2pd\WEB-INF\classes
4. Once copied, unzip the all the jar files you just copied.
5. Restart Cognos.



# REFERENCE MATERIALS

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To access additional Maximo Report Reference materials, access this IBM Maximo Wiki Page:

<https://www.ibm.com/developerworks/mydeveloperworks/wikis/home?lang=en#/wiki/IBM%20Maximo%20Asset%20Management/page/Reporting%20Documentation>

or its shortened url of <http://ibm.co/1321Cul>

This page contains the latest listing of report reference materials, including description, revision levels and hyperlinks to the documentation. Included within these pages are the reference guides listed below

## Version 75 [Direct](#) Maximo [Cognos 8.4.1](#) Installation

This guide details the configuration steps to enable the Direct Maximo-Cognos Integration. This enables the use of Cognos 8.4.1 within Maximo.

## Version 75 [Indirect TCR](#) Maximo [Cognos 8.4.1](#) Installation

This guide details the configuration steps to enable the indirect Maximo-Cognos Integration using TCR, Tivoli Common Reporting. This enables the use of Cognos 8.4.1 within Maximo.

## Version 75 Maximo Cognos Integration Details

This guide details how the Maximo Cognos Integration is enabled. It includes information on the metadata layer, and how to create Report Object Structures for Cognos Packages. Also, it details how you can set security in both the Maximo and Cognos Applications, how you can develop Reports in Cognos for the Maximo Integration, along with other Best Practices and functionality considerations.

Additionally, to access Cognos 10.1.1 Documentation for detailed manuals on the Cognos Reporting Products, access this url:

<http://bit.ly/mTNfIH>

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