



IBM Maximo Asset Management  
V7.5 Cognos Integration Install Instructions

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## Overview

Within the Maximo® Base Services 7.5 Releases, an IBM Cognos® Reporting Integration is enabled. This 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 at the url below.

<http://www.ibm.com/support/search.wss?q=7cognos>

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 two different ways - either through your existing license of Cognos Reporting, or through your utilization of Tivoli Common Reporting. Due to the variations in the architecture of these two setups, throughout this guide there will be different steps for these two different systems. To highlight these to you, 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 an Indirect or TCR integration.

Note: This document is specific for the 7.5 Releases

## 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 performed.

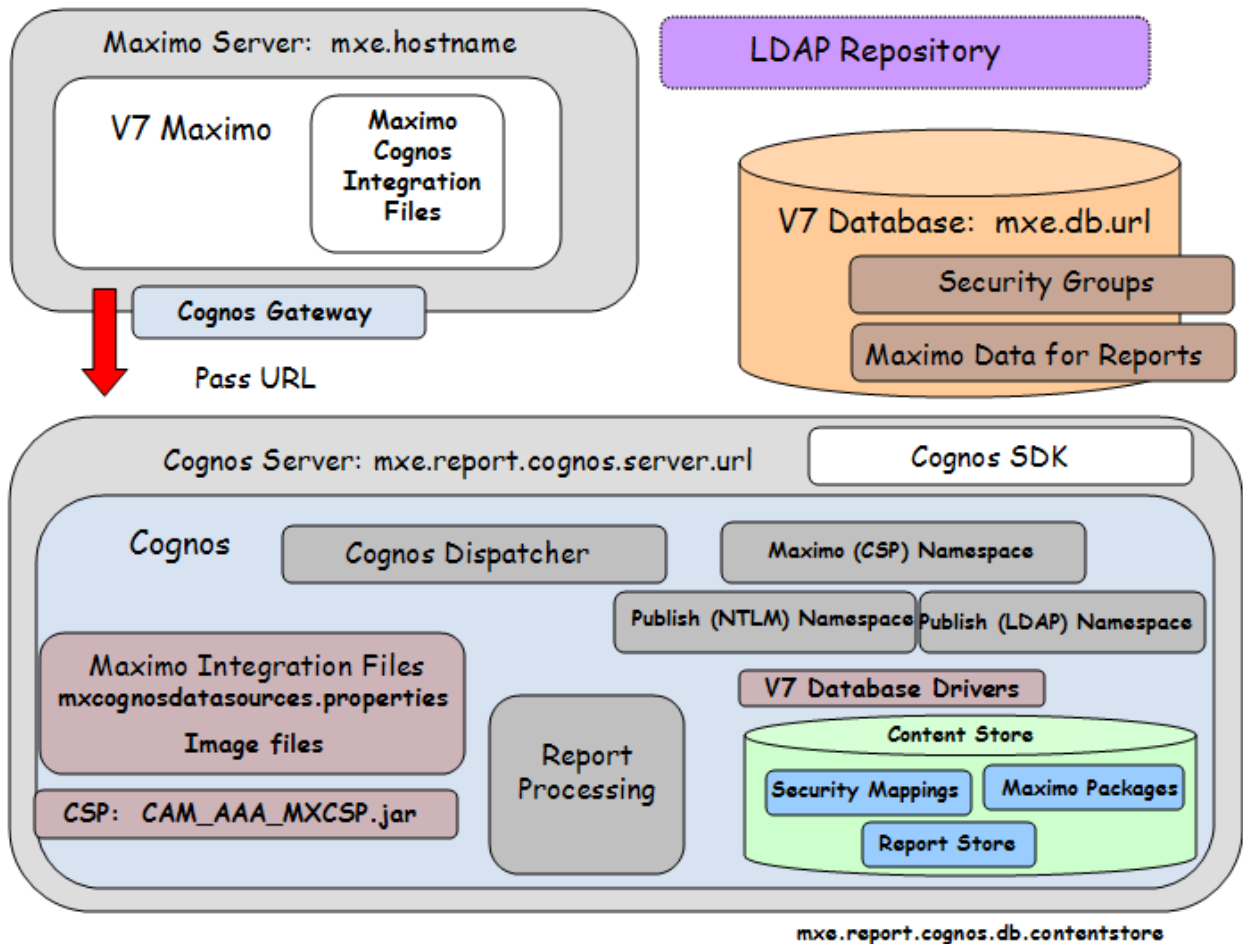
1. Install Cognos
2. Create Unique Database User for use in Cognos Authorization
3. Configure and Copy mxcognosdatasources.properties file
4. Copy CSP and Database Jar Files from Maximo to Cognos
5. Create two Namespaces in Cognos Configuration for Security and Metadata Publishing
6. Configure Maximo Properties for Cognos
7. Create a Data Source in Cognos Administration
8. Configure Cognos SDK
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
V7: Upgrade to V7.1.1.6	2. V7: Create Unique Database User for use in Cognos Authorization	5. Cognos: Create Namespaces. 1 for CSP, 1 for MetaData	8. Configure Cognos SDK	11. V7 Report Admin: Register Cognos Test Reports
1. Cognos: Install Cognos 8.4 (Optional TCR Install)	3. V7: Edit & Copy mxcognosdatasources.properties file	6. V7: Configure Maximo Property Files for Cognos	9. Set End Point Properties	12. Cognos: Import Report Test Design Files to Cognos
	4. V7: Copy to Cognos (1) CSP Jar (2) Database Drivers (3) Images	7. Cognos: Create Data Source	10. Publish Cognos Packages	

## 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, your application server and whether or not TCR is utilized in your environment.

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 8.4.

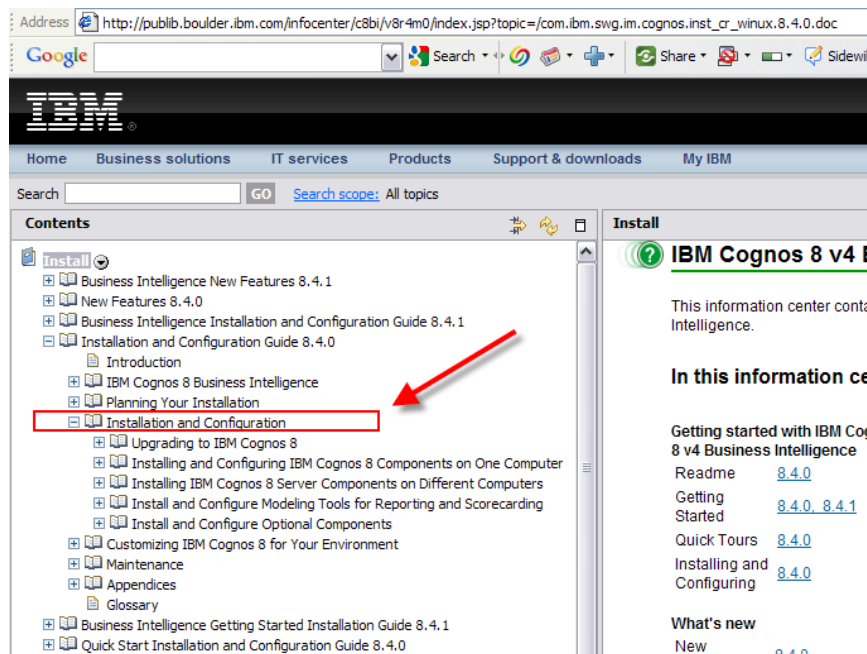
This integration is developed for the Maximo Base Services 7.5 and later Releases with Cognos 8.4 Service Pack 1 Reporting Release. Before beginning this integration installation, Cognos 8.4 SP1 Reporting must be installed and operational. The installation of Cognos 8.4 SP1 can be enabled through either one of the configurations below.

- A. Your own corporate licensing and installation of Cognos 8.4 SP 1 Reporting. This is referred to as a Direct Integration.
- B. Thru the Tivoli Common Reporting (TCR) 2.1 which enables Cognos 8.4 SP1 Reporting. This is referred to as an Indirect or TCR Integration.

**NOTES:** *If you are using the Direct Integration with your own corporate licensing of Cognos:*

- 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. For more details and troubleshooting techniques on installing Cognos, reference this online link to Cognos guides

<http://bit.ly/aaJYTs>



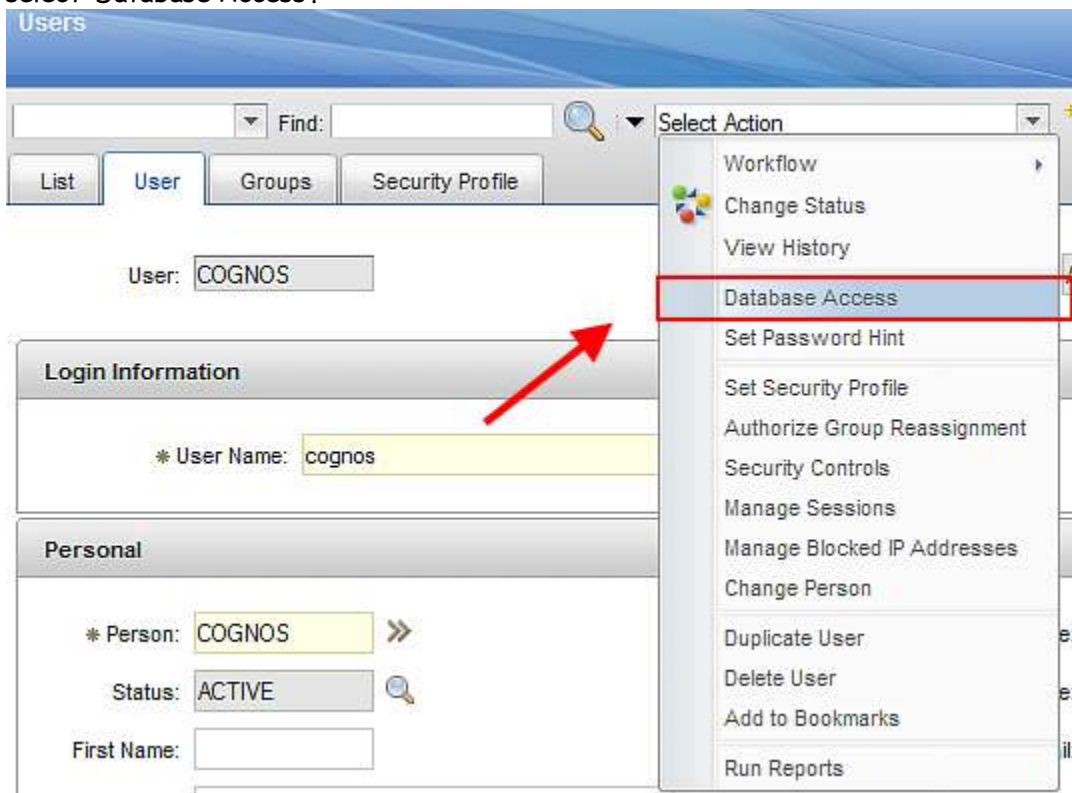
**Notes:** *If you are installing Cognos Reporting by using Tivoli Common Reporting 2.1, reference the appendix for additional details.*

## 2. Create Unique Database User for use in Cognos Authorization

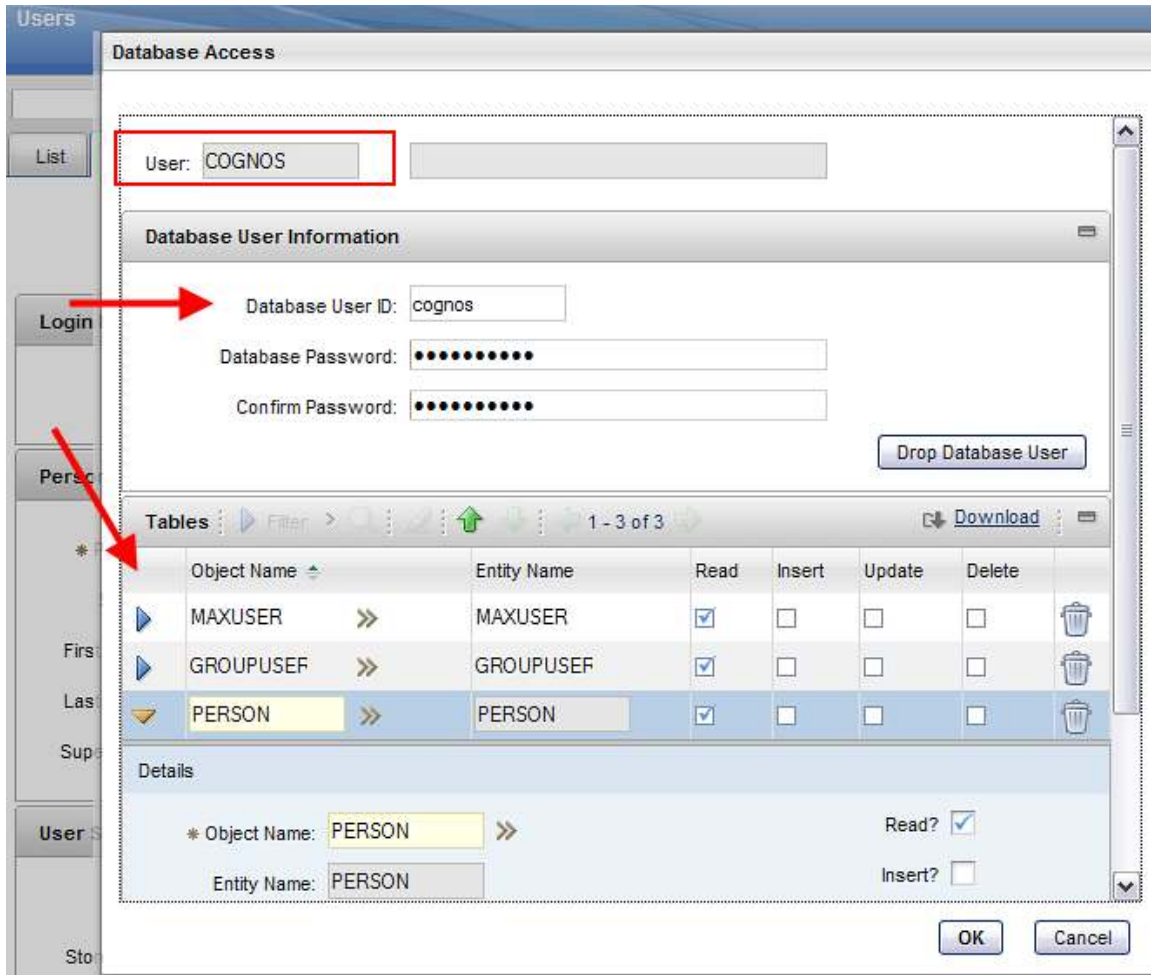
If you want, you can create a unique user, who will be used to obtain user and security group information from the V75 database for Cognos - or you can use the system maximo database user.

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 GROUPUSER Tables.

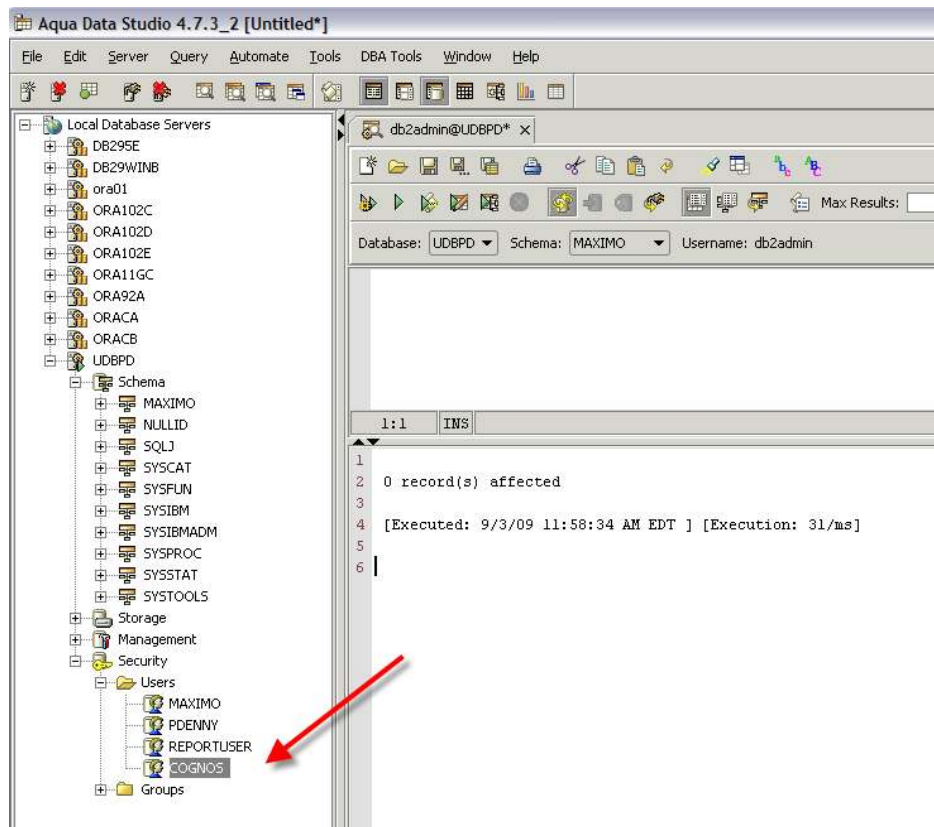


Note: If you are using DB2, the new database user must also be an Operating System (OS) User. Therefore, the DB2 user must first be added as an OS user before performing the action above.



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

grant select on MAXIMO.MAXUSER to cognos

grant select on MAXIMO.GROUPUSER to cognos

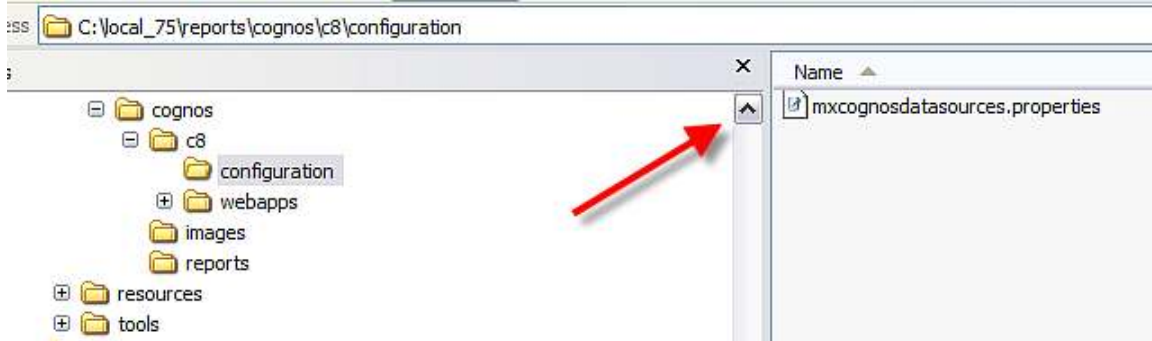
grant select on MAXIMO.PERSON to cognos

grant select on MAXIMO.MAXGROUP to cognos

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

This property file is used for security authentication of the Maximo users to Cognos.

3A. Navigate to the Version 7.5 Directory. Go to <v75>\reports\cognos\c8\configuration and locate the mxcognosdatasources.properties file.



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

```
mxcognosdatasources.properties - WordPad
File Edit View Insert Format Help
[Icons]
# This file is used by Cognos to read the Maximo Security Groups and Users, so the Cognos Administrator
# can set Cognos security privileges for those users and groups in Cognos.
# The database user specified in this file should only have read only access to the
# MAXUSER, GROUPUSER, PERSON and MAXGROUP Tables.
# This file should be copied to <cognos>\c8\configuration.
#
# 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=
maximoDataSource.driver=
maximoDataSource.username=
maximoDataSource.password=
maximoDataSource.schemaowner=
```

This example uses the Maximo system database user of maximo as shown in the red text below.

```
# 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/UDBPD
maximoDataSource.driver=com.ibm.db2.jcc.DB2Driver
maximoDataSource.username=maximo
maximoDataSource.password=maximo
maximoDataSource.schemaowner=MAXIMO
```

3C. Copy the `mx Cognos datasources.properties` file to the directory below depending on which configuration you are using:

If you are using the direct integration between V7 and Cognos, copy the `mx Cognos datasources.properties` file to the cognos directory  
<cognos>\c8\configuration

If you are using TCR, copy `mx Cognos datasources.properties` to  
<TIP\_components\_dir>\TCRComponent\cognos\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 Directory, go to <V75>\reports\cognos\c8\webapps\p2pd\WEB-INF\lib and locate *CAM\_AAA\_MXCSP.jar*.



4A2. Copy *CAM\_AAA\_MXCSP.jar* file to the cognos directory <Cognos>\c8\webapps\p2pd\WEB\_INF\lib.

### TCR NOTE:

For Clients using the TCR Integration, copy the jar file to the locations below:

4A3. Copy *CAM\_AAA\_MXCSP.jar* file to

<tip install>\profiles\TIPProfile\installedApps\TIPCell\IBM Cognos 8.ear\p2pd.war\WEB-INF\lib

*and*

<tip install>\products\tr\Cognos\c8\webapps\p2pd\WEB-INF\lib

\*Note: If you do not copy the jar file to the second location when using the TCR Integration, you will receive a failure when testing the namespace from the Cognos Configuration.

#### 4B. Copy Database Drivers

Cognos requires Database Drivers for the CSP Security Authentication.

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

For Oracle: oraclethin.jar

For SQL Server: sqljdbc.jar

4B2. For Oracle and Sql Server only, copy the applicable database driver to the directory below depending on which configuration you are using:

If you are using the direct integration between V7 and Cognos, copy the database driver(s) to

<Cognos>\c8\webapps\p2pd\WEB-INF\lib

If you are using the TCR Integration, copy the Oracle or SQL Server database drivers to  
<TIP\_components\_dir>\TCRComponent\cognos\webapps\p2pd\WEB-INF\lib

**\*\*For DB2:** Note - with the Cognos 8.4 SP1 release, you *do not* have to copy DB2 Drivers to Cognos. If you do copy the drivers over, Cognos will fail to connect to the database. This applies whether you are using the Direct Maximo Cognos Integration, or the TCR integration.

#### 4C. Update the Java Version

If you haven't already updated your Cognos Application server to use JRE 1.6, you must do so now. The steps to do this are

4C1. Set the JAVA\_HOME system environment variable to use a 1.6 JRE.

4C2. Copy the bcprov-jdknn-*nnn*.jar file from the *c8\_location*/bin/jre/version/lib/ext directory to the *Java\_location*/jre/lib/ext directory.

For example, copy bcprov-jdk14-134.jar to C:\Java60\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 1.5 version.

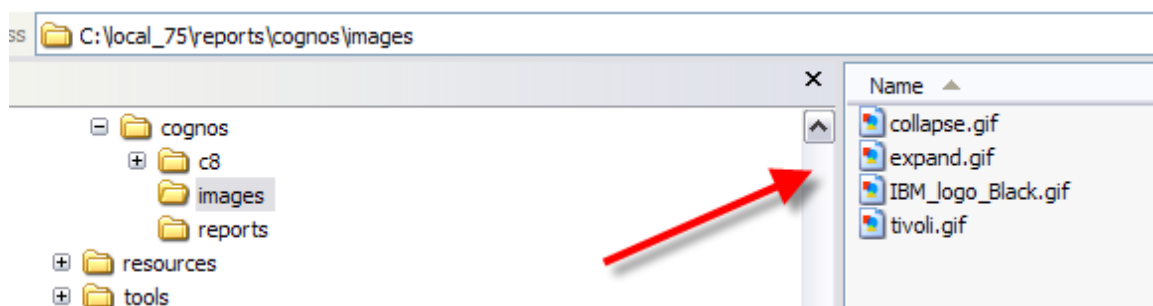
You can also find these steps documented on the Cognos Installation and Configuration Guide on page 125. This guide and other Cognos documentation can be found at the url below

<http://bit.ly/mTNfIH>

[NOTE: This next section applies only to Clients utilizing the direct integration between Maximo and Cognos.](#)

#### 4D. Copy Image files.

4D1. Within the Version 7.5 directory, navigate to <V75>\reports\cognos\images.



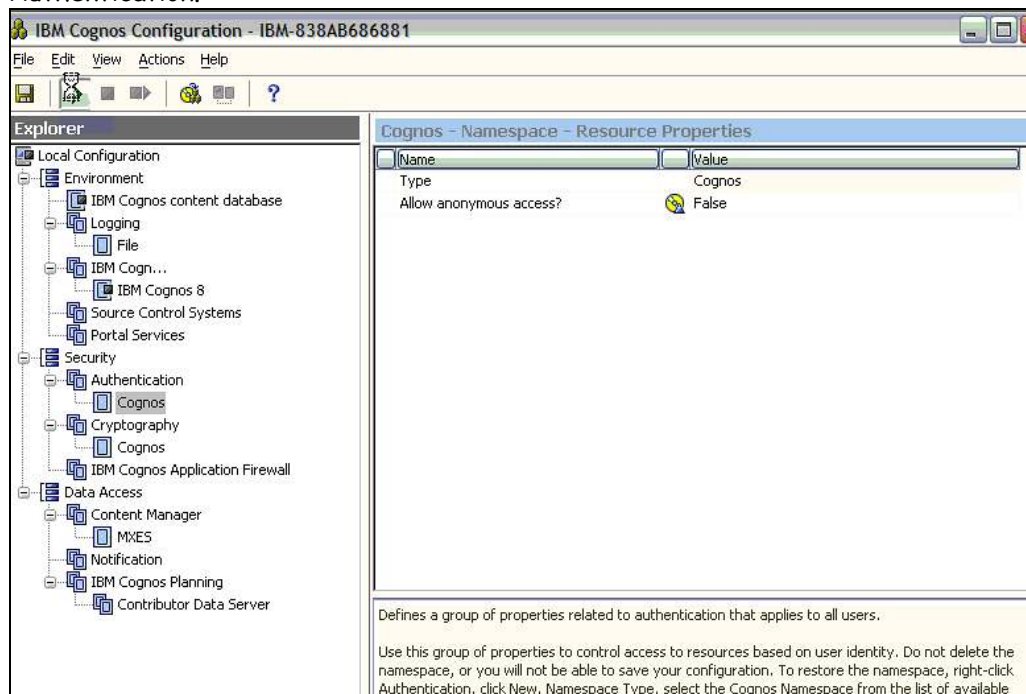
4D2. Copy the images directory to a new folder you create in Cognos per path below:  
<Cognos>\c8\webcontent\tivoli\tcr\_common\images

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

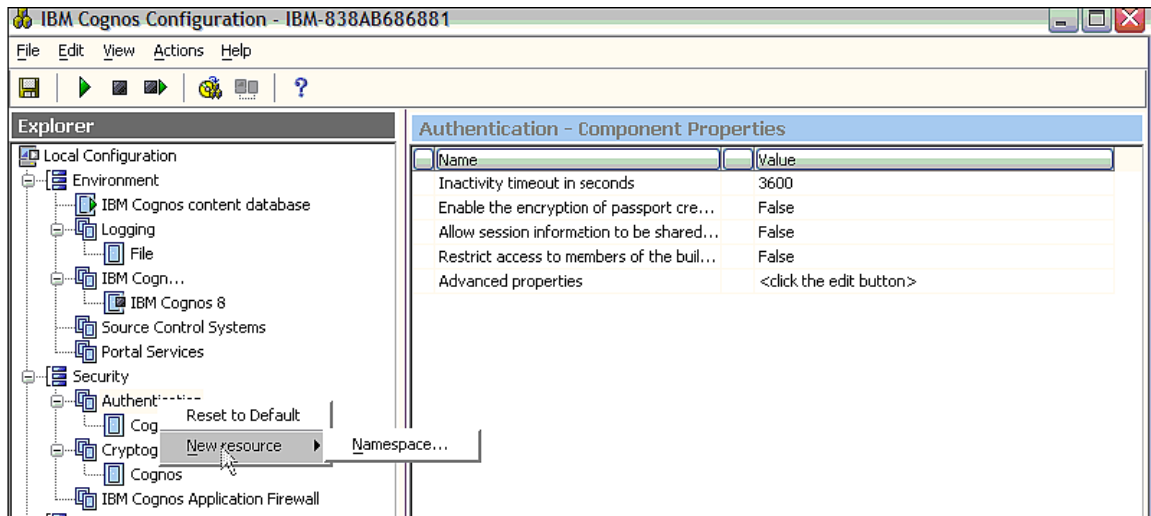
The Cognos namespace contains the Cognos Objects, such as groups, roles, data sources and contacts. In the Maximo Cognos Integration, two namespaces are required. One namespace is for the Security Group authorization, which will be enabled thru the CSP, Custom Security Provider. The second namespace is for authentication used during the metadata publishing process. More information on namespaces can be found via the url below.

<http://bit.ly/qMKzPr>

5A. First, a namespace which will be used for Security Group Authorization using the CSP, will be created. To create the first namespace, access Cognos - Cognos Configuration from your Program Menu. In the Explorer View on the left hand side, navigate down to Security - Authentication.



5B. Click on New Resource - Namespace.



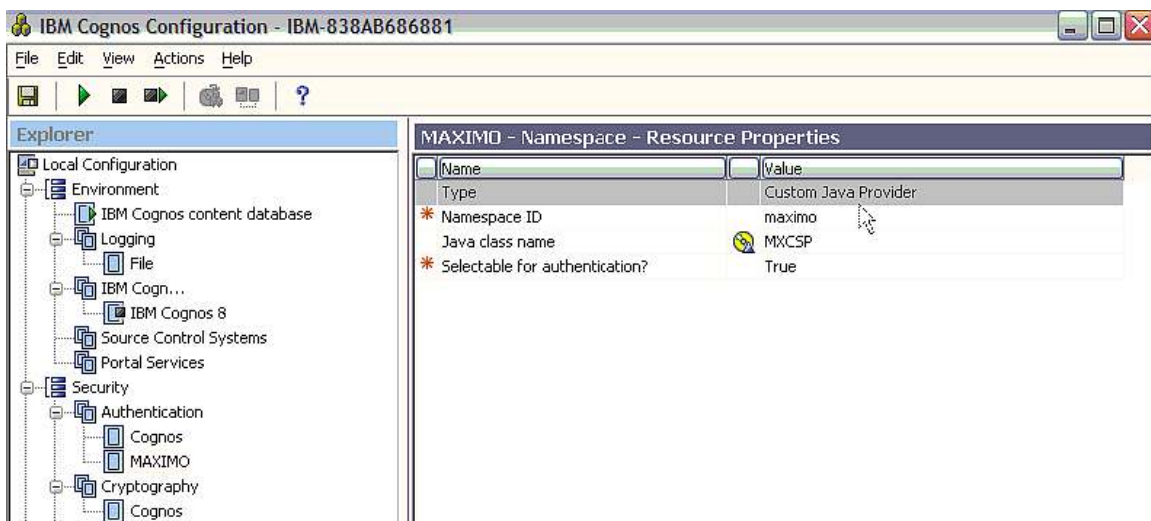
5C. Enter the values below to create the namespace. A dialog will then appear that the namespace is being created.

Type: Custom Java Provider

Namespace ID: maximo

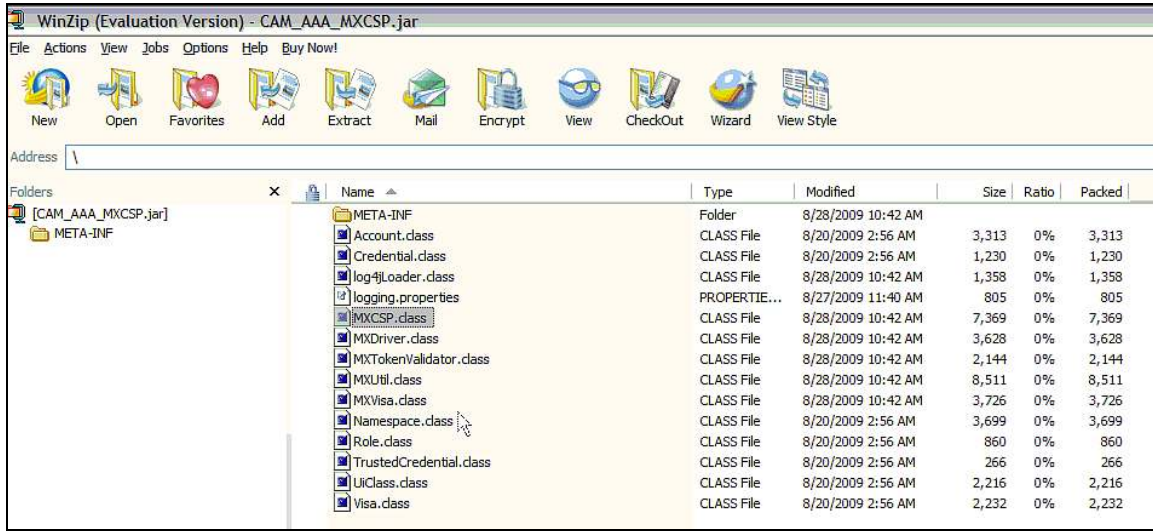
Java Class Name: MXCSP\*

Selectable for Authentication: True

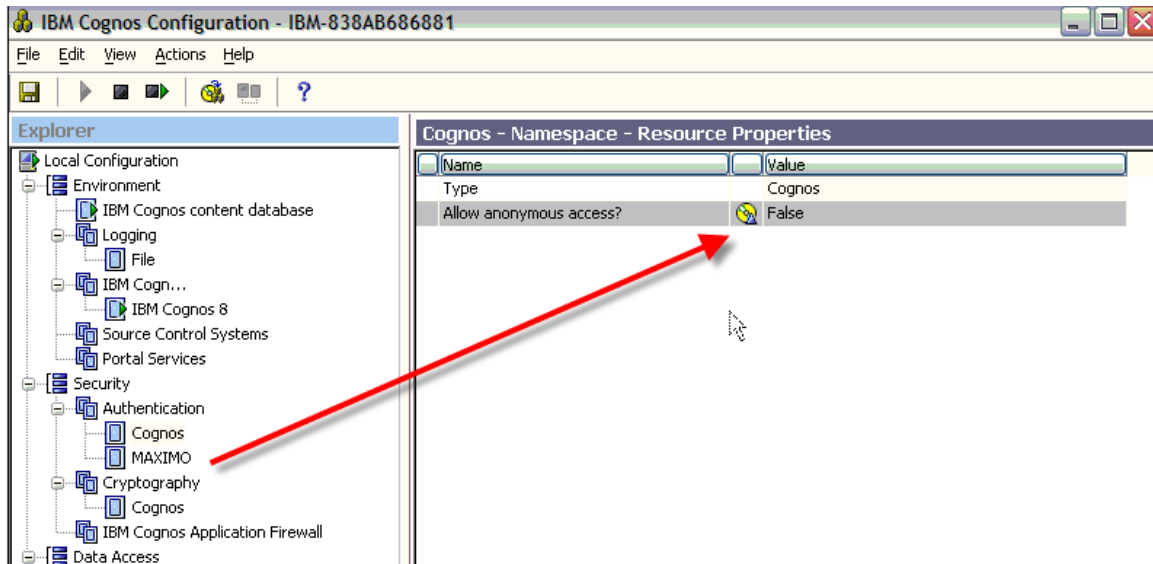




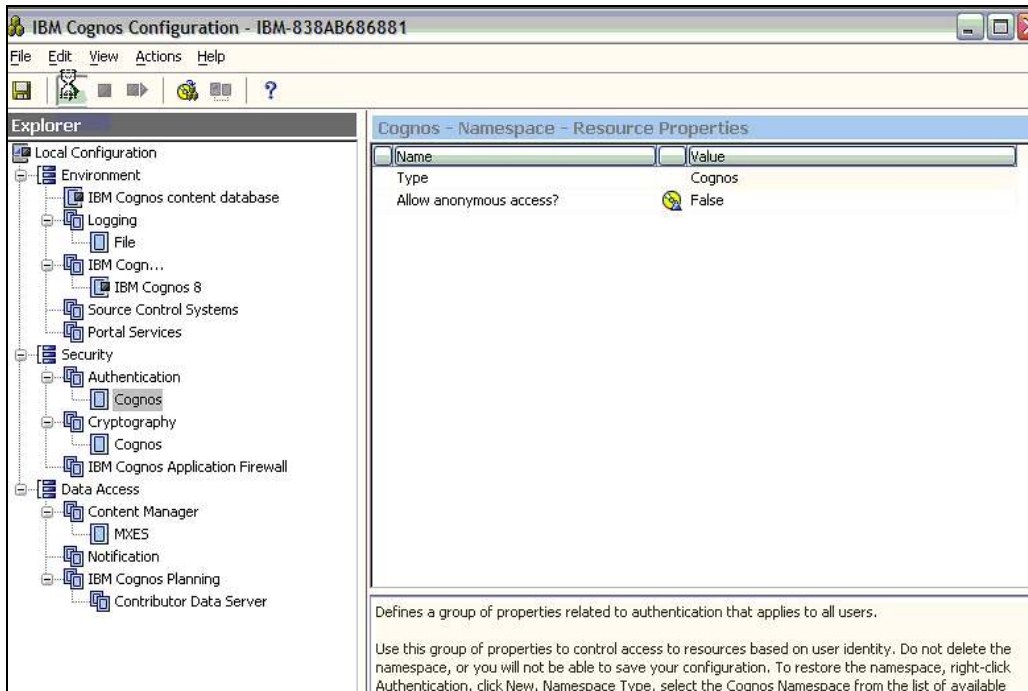
\*Note: This correlates to the MXCSP.class file in the CAM\_AAA\_MXCSP.jar



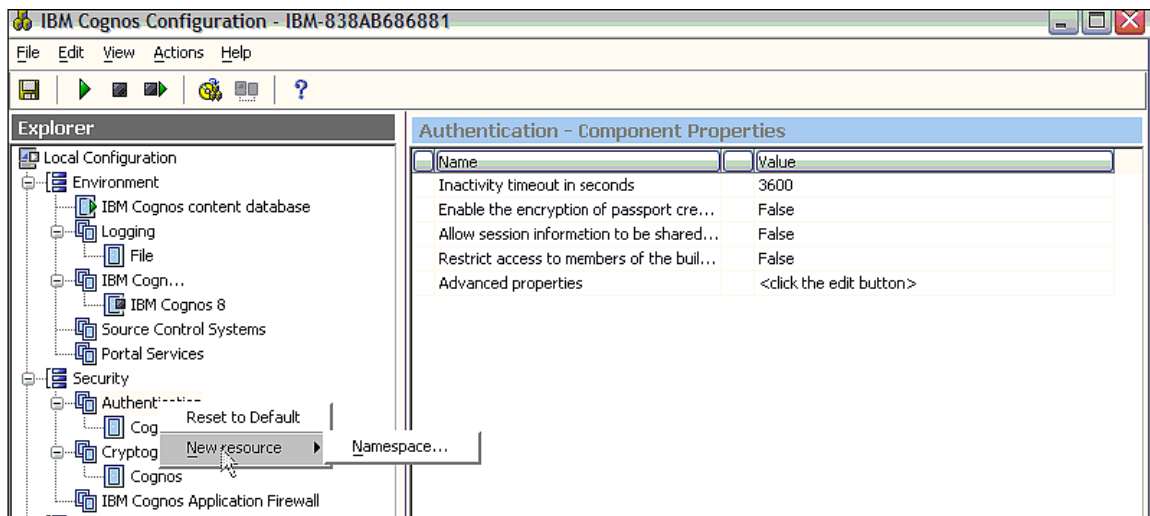
5D. Once the namespace has been created, make sure the Anonymous Authentication is set to false (or disabled).



5E. Next, create the second namespace to be used for authentication during the Maximo publishing process. Within the same Explorer View of Cognos Configuration on the left hand side, navigate down to Security - Authentication.



5F. Click on New Resource - Namespace.















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

The screenshot shows the IBM Cognos configuration interface. On the left, the 'Explorer' pane displays a tree view of configuration categories. Under the 'Security' category, the 'Authentication' sub-category is expanded, and the 'NTLM' option is highlighted with a red box. A red arrow points from this 'NTLM' option to the 'NTLM - Namespace - Resource Properties' pane on the right.

The 'NTLM - Namespace - Resource Properties' pane contains a table with the following data:

Name	Value
Type	NTLM
* Namespace ID	NTLM
NTLM domain name	
Primary domain controller name	
Advanced properties	<click the edit button>

An example of a LDAP Namespace Resource Properties is shown here.

LDAP - Namespace - Resource Properties	
Name	Value
Type	LDAP
* Namespace ID	LDAP
* Host and port	9.28.228.99:389
* Base Distinguished Name	ou=SWG,o=IBM,c=US
User lookup	 (cn=\${userID})
Use external identity?	 True
External identity mapping	 (uid=\${environment("REMOTE_USER")})
Bind user DN and password	*****
Size limit	 0
Time out in seconds	 0
Use bind credentials for search?	 True
Allow empty password?	False
Unique identifier	dn
Data encoding	UTF-8
SSL certificate database	
Advanced properties	<click the edit button>
<b>Folder mappings (Advanced)</b>	
Object class	 organizationalunit,organization,container
Description	description
Name	 ou,o,cn
<b>Group mappings (Advanced)</b>	
Object class	 groupofnames
Description	description
Member	 member
Name	cn
<b>Account mappings (Advanced)</b>	
Account object class	inetorgperson
Business phone	telephonenumber
Content locale	
Description	description
Email	mail
Fax/Phone	facsimiletelephonenumber
Given name	givenname
Home phone	homephone
Mobile phone	mobile
Name	 displayName
Pager phone	pager

Specifies a unique identifier for the authentication namespace.

## Cognos Namespace Reference Materials

For additional information on how to configure Cognos NTLM or LDAP namespace properties, refer to the "IBM Cognos 8 Business Intelligence Installation and Configuration Guide" document. This is located at:

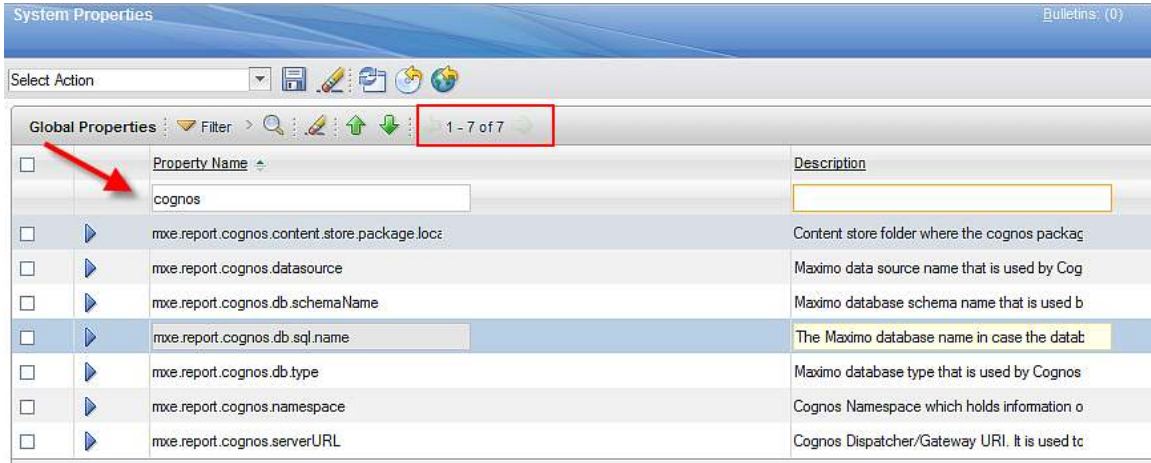
<http://bit.ly/mTNfIH>

## 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. The 7 Cognos Property values below display. Configure these values for your unique environment. Details on these are below.



Property Name	Description	Used By
mxe.report.cognos.serverURL	Cognos Dispatcher/Gateway URI. It is used to launch Cognos reports. This is used for V7 to access the Cognos Application. For example: http://myhost:port/p2pd/servlet/dispatch/extend	Integration for Report Execution
mxe.report.cognos.namespace	Cognos Namespace which holds information on Users, Security Groups and Roles.	Integration for Report Execution
mxe.report.cognos.content.store.package.location	Content store folder where the cognos package will be published.	Package Creation
mxe.report.cognos.datasource	Maximo data source name that is used by Cognos adapter	Package Creation
mxe.report.cognos.db.schemaName	Maximo database schema name that is used by Cognos adapter	Package Creation
mxe.report.cognos.db.type	Maximo database schema name that is used by Cognos adapter for both publishing packages and executing reports	Package Creation and for Report Execution
mxe.report.cognos.db.sql.name	For clients using a SQL Server Database, this is the catalogue name associated with the database	Package Creation

**mxereport.cognos.serverUrl** The URL path to the Cognos Dispatcher URI (or Gateway URI). This is used for V75 to access the Cognos applications. For example:  
 http://myhost:port/p2pd/servlet/dispatch/ext

The value of the mxereport.cognos.serverURL is the complete path to the Gateway, as highlighted below from Cognos Configuration.

Property Name	Value
<b>Gateway Settings</b>	
* Gateway URI	http://vm-win05.lon.swg.ibm.com:80/cognos8/cgi-bin/cognos.cgi
Gateway namespace	
Allow namespace override?	False
* Dispatcher URIs for gateway	http://vm-win05.lon.swg.ibm.com:9081/p2pd/servlet/dispatch/ext
* Controller URI for gateway	http://vm-win05.lon.swg.ibm.com:80/cognos8/controllerServer
<b>Dispatcher Settings</b>	
* External dispatcher URI	http://vm-win05.lon.swg.ibm.com:9081/p2pd/servlet/dispatch
* Internal dispatcher URI	http://vm-win05.lon.swg.ibm.com:9081/p2pd/servlet/dispatch
Dispatcher password	*****

Note additional details on this property setting:

1. If Cognos isn't deployed to a webserver (running on Tomcat) then the URI must point to the cgi

Ex. http://9.28.228.104:80/cognos8/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. A client may have multiple Dispatcher URI's deployed (IBM Cognos 8 ear/was) using the same Content Store, but different namespaces to balance the report load.

Ex. 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

3. If you are utilizing TCR and its prerequisite for LDAP Authentication, you can set this property to either prompt the user for a separate signon when accessing Cognos, or not.

More details on this are in the 'Troubleshooting Tips' Section below.

**mxereport.cognos.namespace** This is the Cognos Namespace for the CSP, Custom Security Provider. This Namespace was what you created in Step #5 in this document. The example here uses a namespace value of 'maximo'. \*NOTE: This value is case sensitive.

### **mxereport.cognos.content.store.package.location and mxereport.cognos.datasouce**

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

**mxereport.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

**mxereport.cognos.datasouce** 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 datasouce that you will create in Step 7 below.

**mxereport.cognos.db.type.** This property can have 1 of the 3 Values below

"DB2" for DB2

"OR" for ORACLE

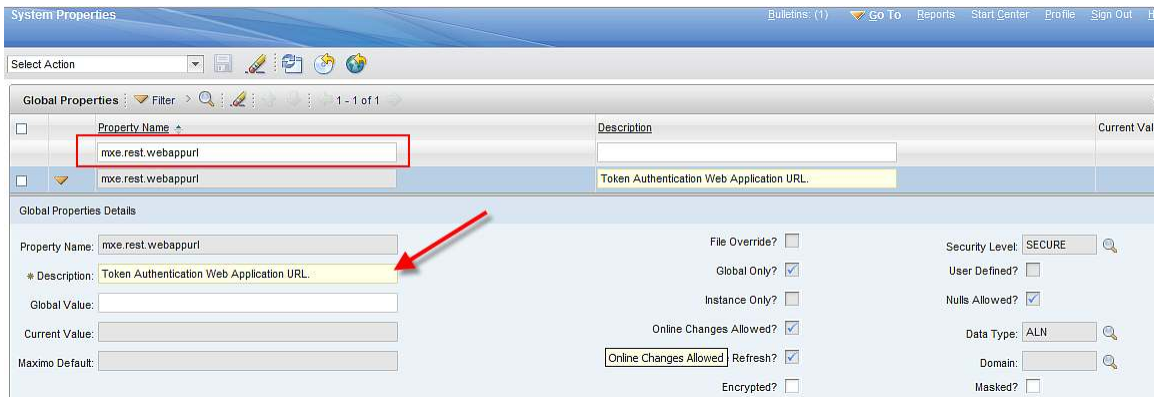
"SS" for SQL-Server

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

**mxereport.cognos.db.schemaName.** Required system value that defines the database schema name from which the metadata will be extracted.



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 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`.

### *Troubleshooting Tips - TCR*

1. If you are utilizing TCR and its prerequisite for LDAP Authentication, you have three different namespace property setting options.

A. You can use the ldap namespace instead of the CSP. In this scenario,

mxe.report.cognos.namespace would be the ldap namespace  
mxe.report.cognos.serverURL would be "http(s)://IP:Port/tarf/servlet/component"

B. You can use the CSP with an extra ldap security layer. This configuration would present an additional username and password log in before accessing the Cognos Portal. In this case,

mxe.report.cognos.namespace would be the CSP namespace  
mxe.report.cognos.serverURL would be "http(s)://IP:Port/tarf/servlet/component"

You may have to configure the LDAP repository on the TIP portal with this option. Otherwise, you cannot use your Maximo user account when logging in to the Cognos Administration tools. This configuration however, is not required when executing reports.

C. You can use the CSP only. This configuration would *not* present an additional username and password log in before accessing the Cognos Portal from Maximo.

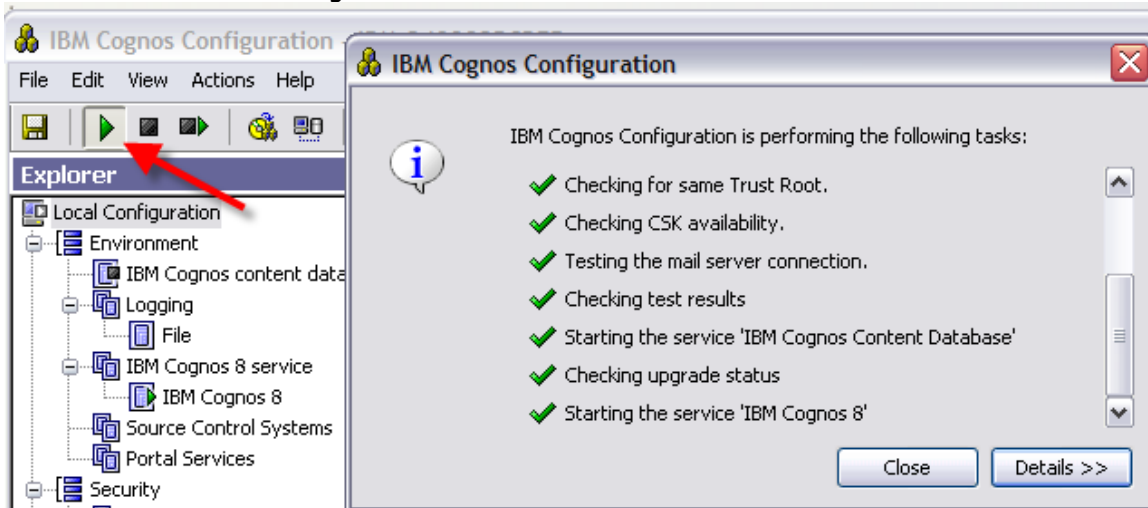
mxe.report.cognos.namespace would be the CSP namespace  
mxe.report.cognos.serverURL would be "http://IP:Port/cognos8/cgi-bin/cognos.cgi"

\*More details on these system property values are in the next section below, and also in the separate TCR section at the end of this document.

## 7. Create a Data Source in Cognos Administration

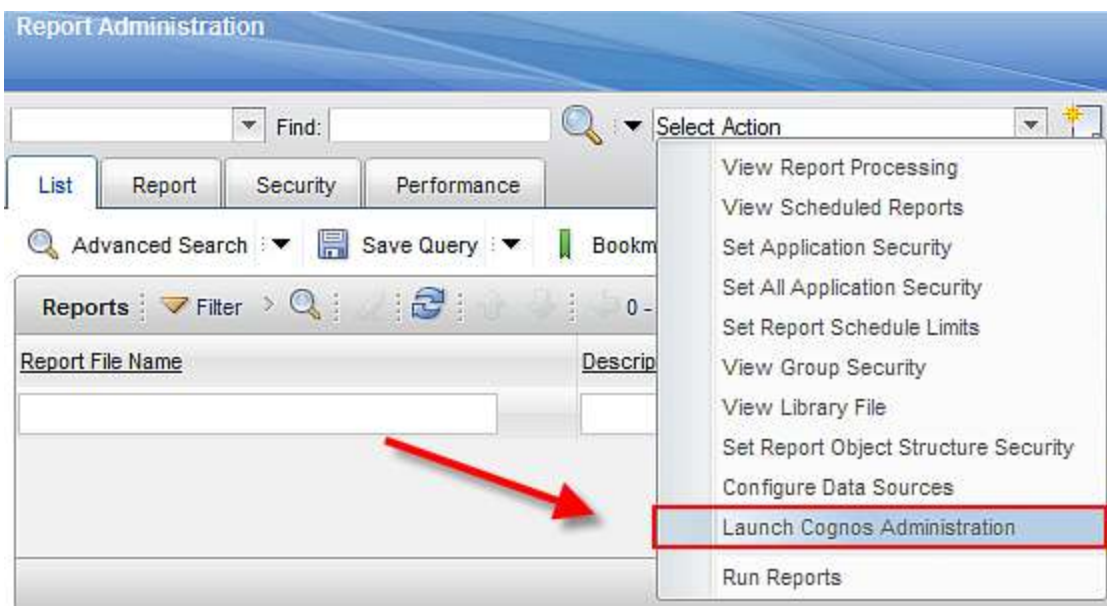
This Data Source will be used to develop reports in Report Studio and Query Studio, and also to execute the reports at run time. To create the Data Source, first access and confirm you can get to Cognos from Maximo.

1. First, make sure the Cognos server is started.

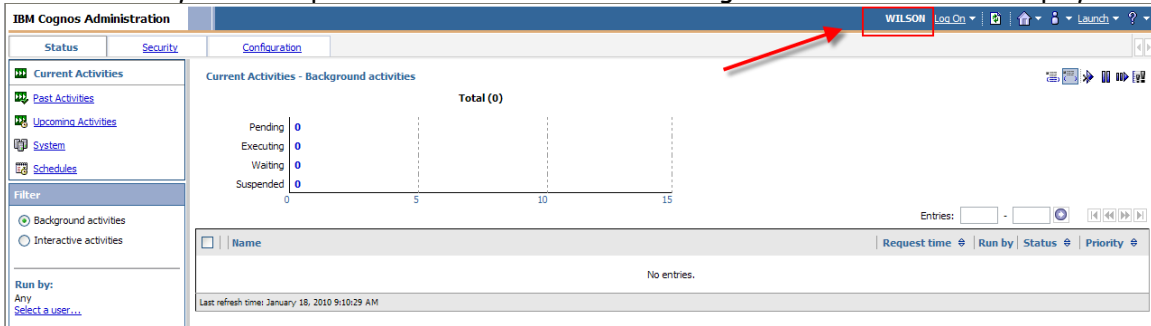


2. Next, log into Maximo as a user with both report administration privileges and security privileges to execute the Cognos Reports. In the example below, this will be user Wilson, who is the Maximo Administrator.

3. Insure you can launch directory to Cognos from Maximo. Access Maximo's Report Administration application. From the action menu, select 'Launch Cognos Administration'



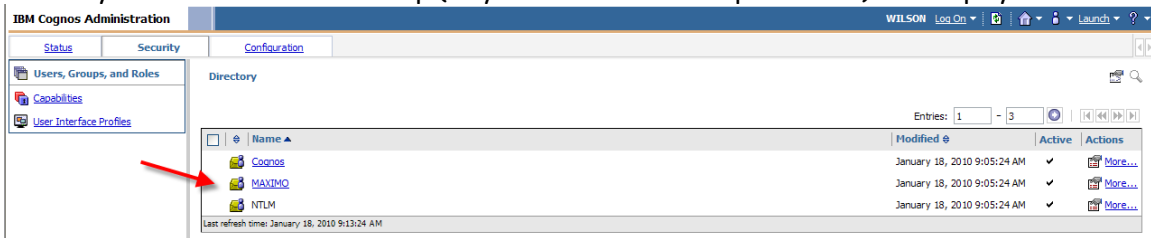
This will take you to a separate browser session where Cognos Administration is displayed.



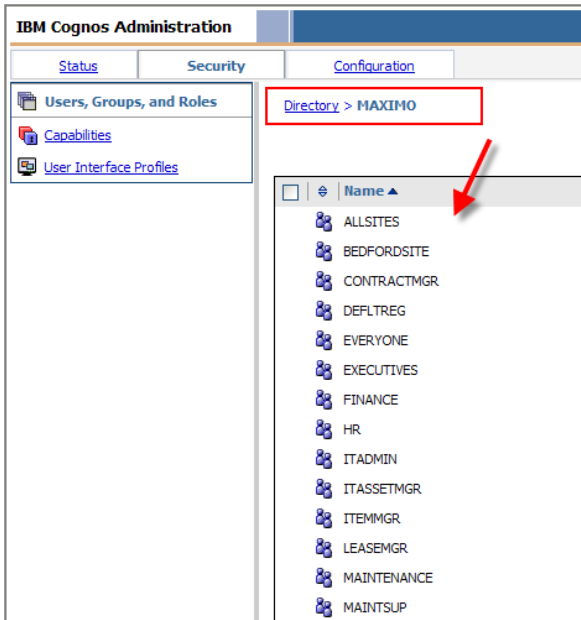
\*NOTE: If you receive an error when trying to access Cognos from Maximo's Report Administration Application, you can enable logging to troubleshoot this issue. An example of an error you may see is: "You can only use this namespace from a valid Maximo session"

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.

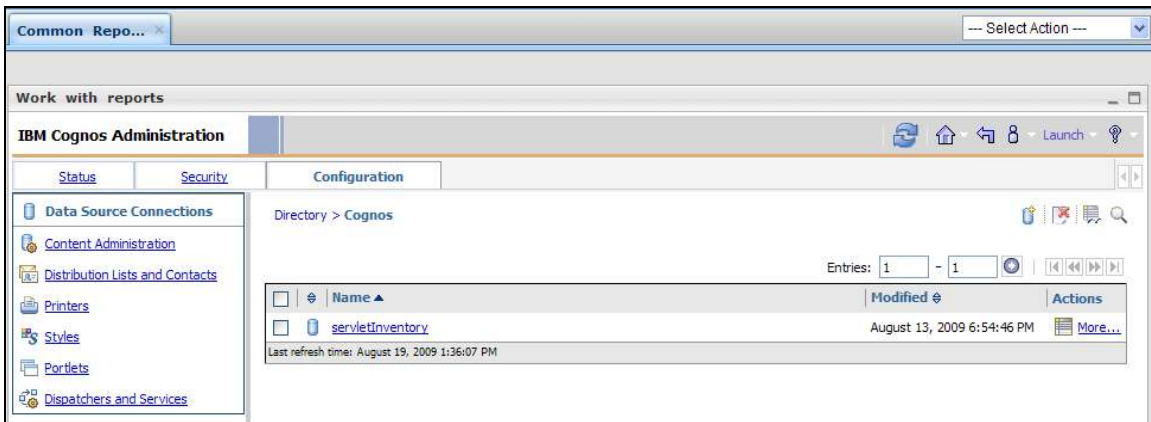


And if you select it, you should see the Maximo Security Groups and users.

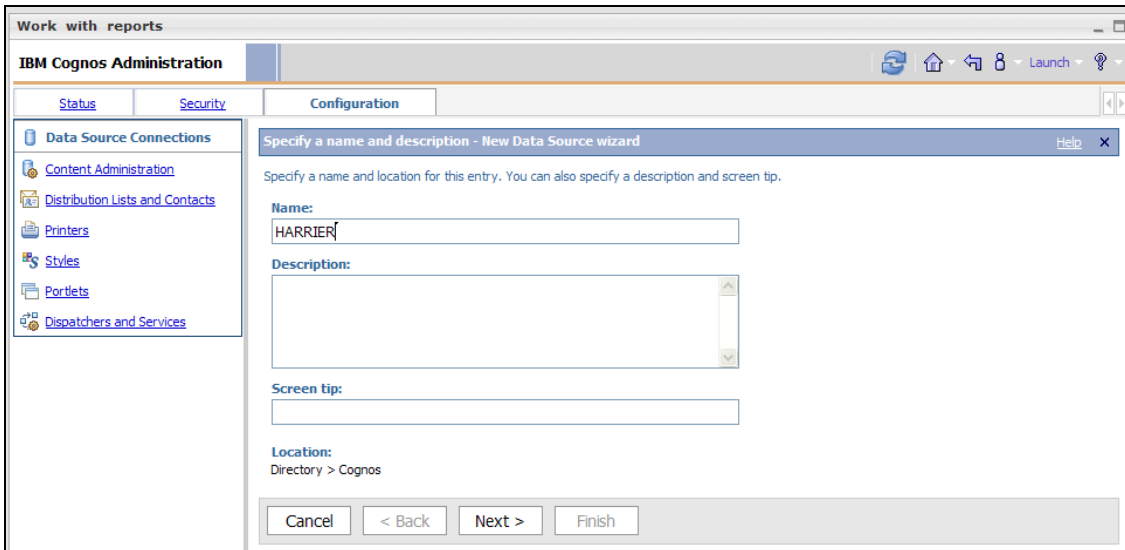


\*NOTE: For details on configuring Cognos Functional Access for the Security Groups, reference the 'Maximo Cognos Integration Guide' referenced at the end of this guide.

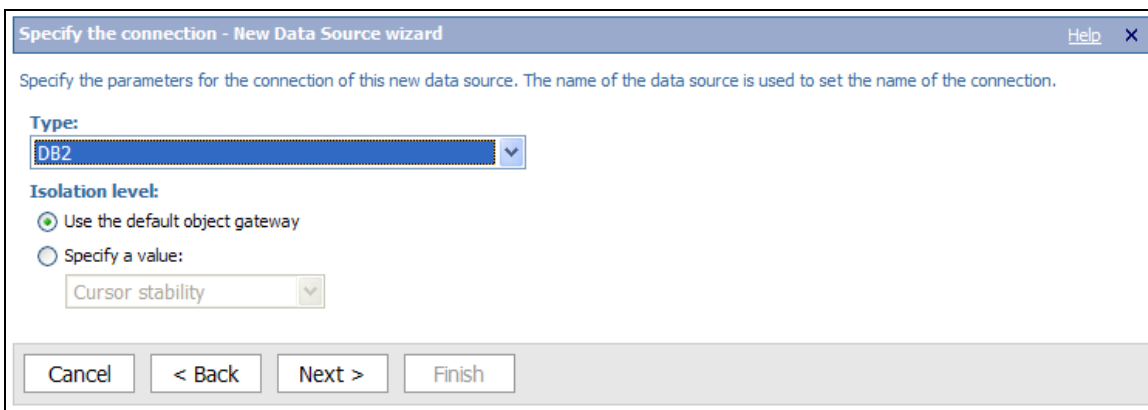
7A. Click on the Configuration tab and highlight Data Source Connections.



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.



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



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

**Specify the DB2 connection string - New Data Source wizard**

Edit the parameters to build a DB2 connection string.

**DB2 database name:**  
db2ascii

**DB2 connect string:**  
[Empty text box]

**Collation sequence:**  
[Empty text box]

Open asynchronously

Trusted context

---

**Timeouts**

Specify the time in seconds, in which you want the database to connect or wait for your reply before timing out.

**Connect time:**  
0

**Reply time:**  
0

---

**Signon**

Select whether or not authentication is needed, and if so, the type of authentication to use, whether a password is required and whether to create a signon.

No authentication

An external namespace:  
VMMProvider (Active)

Signons

Password

Create a signon that the Everyone group can use:

**User ID:**  
maximo

**Password:**  
[Masked password]

**Confirm password:**  
[Masked password]

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

**Testing**

[Test the connection...](#)

**Test the connection - New Data Source wizard**

Test the parameters that make up the database connection.

**Connection string:**  
 ^\User ID:^?Password;;LOCAL;D2;DSN=db2ascii;UID=%s;PWD=%s;@ASYNC=0@0/0@COLSEQ=

**Dispatcher:**  
 http://fsafstro:16345/tarf (Configuration)


**Test the connection using:**

**User ID:**

**Password:**

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

**View the results - Test the connection**

...	Name	Status	Message
	...	http://fsafstro:16345/tarf	Succeeded

7H. Click Close twice to get back to the "Specify the DB2 connection string - New Data Source wizard" screen. Click Finish.

Your Data Source is now configured.



## Troubleshooting Tips

### Missing dll's

If you test your Data Source Connection, and it displays 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>\c8\bin

For DB2: Copy all dll's from the client install of DB2 to <Cognos>\c8\bin

## 8. Configure Cognos SDK for Metadata

To enabling the publishing of the Report Object Structures as Cognos Packages, Cognos SDK Files will be used. In these next steps, the Cognos SDK JAR files will be added to the classpath of the application server.

If you are using Websphere Application Server

Copy the following jars from <Cognos SDK Installation Directory>\sdk\java\lib to the application server lib directory:

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

*NOTE: After the jar files are copied, restart the Application Server.*

If you are using BEA Weblogic Application Server

Add the following jar files to the server classpath:

1. cognos-axis.jar
2. cognosClient.jar
3. commons-logging.jar
4. commons-discovery.jar
5. xercesImpl.jar
6. xalan.jar
7. log4j-1.2.13.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.

*NOTE: After the jar files are copied, restart the Application Server.*

For Tivoli Common Reporting Users, the jar files are located at:

<http://www.ibm.com/eserver/support/fixes/fixcentral/swgquickorder?fixes=1.3.0.0-TIV-TCR-IF0001&productid=IBM%20Tivoli%20Common%20Reporting&brandid=4>

or

<http://ibm.co/kyoVdy>

## 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 data source name, content store package location, Cognos server URL, project base directory, Cognos namespace id, Cognos username, and password.

The screenshot shows the 'End Points' application interface. At the top, there is a navigation bar with 'Bullstins: (0)', 'Go To', 'Reports', 'Start Center', 'Profile', 'Sign Out', and 'Help'. Below this is a search bar with 'Find:' and a 'Select Action' dropdown. A 'List' button is visible. The main content area shows the details for the 'MXCOGNOS' endpoint, which is described as a 'Cognos endpoint that uses Cognos handler' with a 'Handler' of 'COGNOS' and is 'Consumed By: INTEGRATIO'. Below this is a table titled 'Properties for End Point MXCOGNOS' with 7 columns: Property, Value, Encrypted Value, and Allow Override. The table contains the following data:

Property	Value	Encrypted Value	Allow Override
CONTENT_STORE_PACKAGE_LOCATION	PUBLISH		<input type="checkbox"/>
DATA_SOURCE_NAME	DB2		<input type="checkbox"/>
NAMESPACE_ID	NTLM		<input type="checkbox"/>
PASSWORD	*****		<input type="checkbox"/>
PROJECT_BASE_DIR	c:\IBM\cognos\My Projects\Metadata		<input type="checkbox"/>
URL	http://9.28.228.104:9080/p2pd/servlet/dspat		<input type="checkbox"/>
USERNAME	qaadmin		<input type="checkbox"/>

### Notes on Values:

**CONTENT\_STORE\_PACKAGE\_LOCATION:** Folder where the package will be published on Cognos server. Identifies a location under the Cognos Content Store PUBLIC folder 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.*

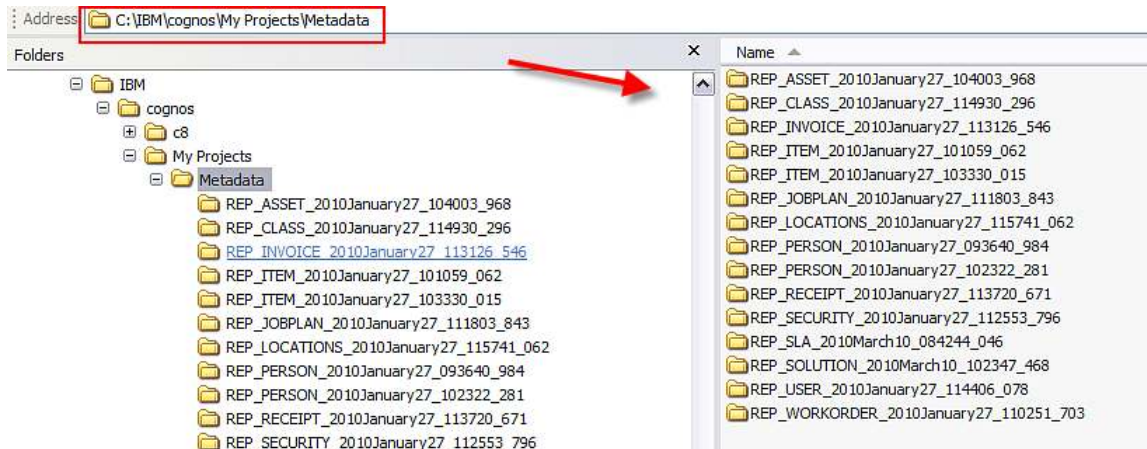
**DATA\_SOURCE\_NAME:** Name of the data source you created in Step #7. Identifies the Data Source Connection to which the metadata package is associated with. When not provided the publishing process will use the `mxe.report.cognos.datasource` system property value.

**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`

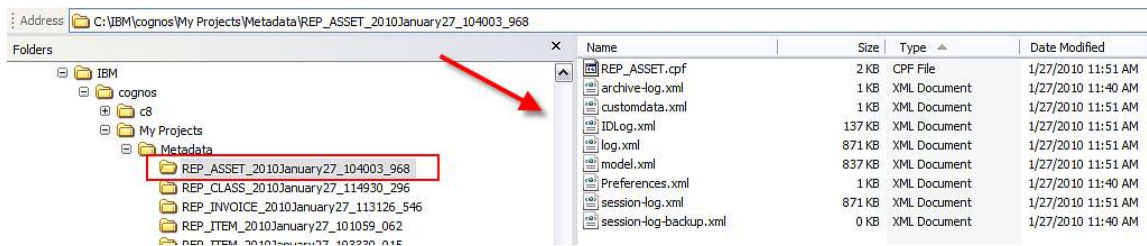
**PROJECT\_BASE\_DIR:** Path on the Cognos Server where Cognos Framework Manager project files, associated with Maximo metadata, will be created.

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.



And this shows the file contents within the individual Cognos Packages.



*\*Note: If you want to open a Maximo published package in Cognos Framework Manager Tool at a future time, you can access the .cpf file in Framework Manager 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 `mxe.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.

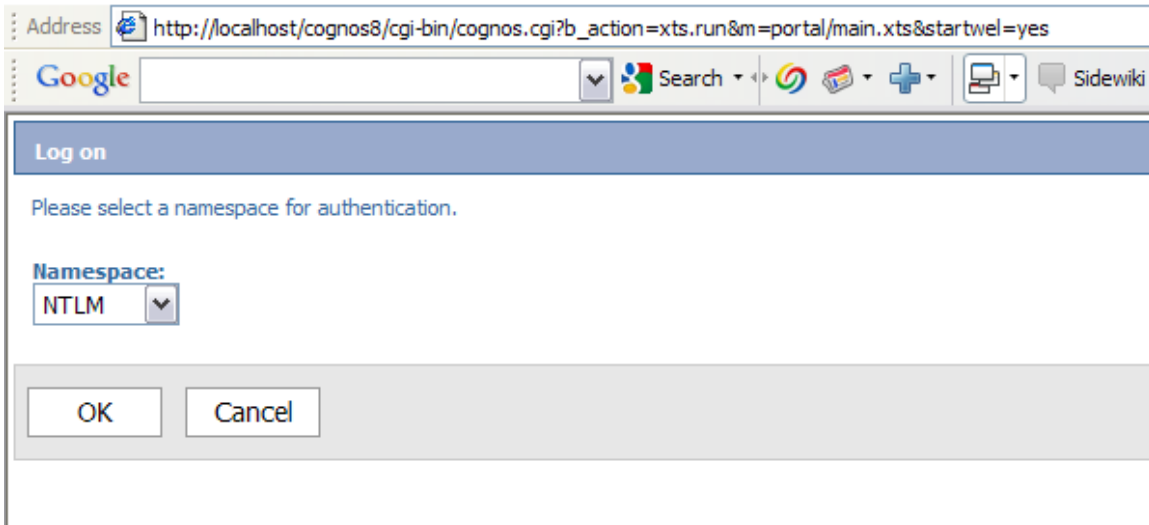
For example: If NTLM with DB2 database, this is may be your Operating System user.

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

## 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**

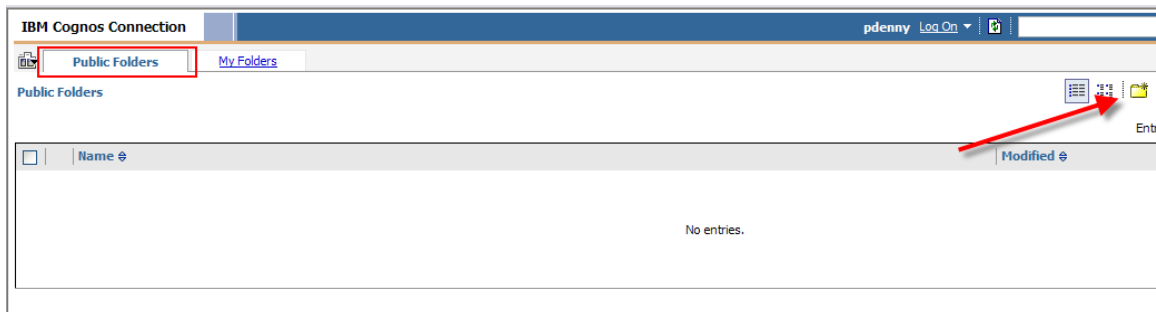
A. Sign into the NTLM namespace. For example: `http:\\localhost\Cognos8`



B. Once logged in, click on My home.

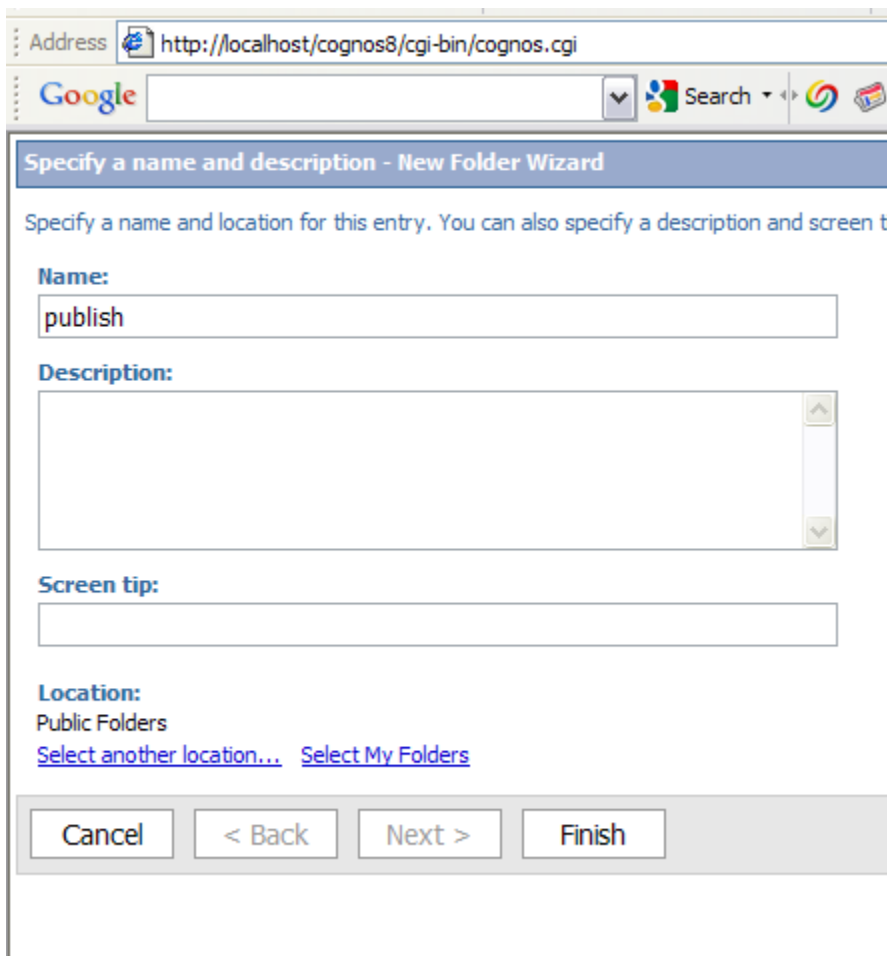


C. Next, you will create a new Folder, under the Public Folder Tab. To do this, click on the folder icon highlighted by the arrow.

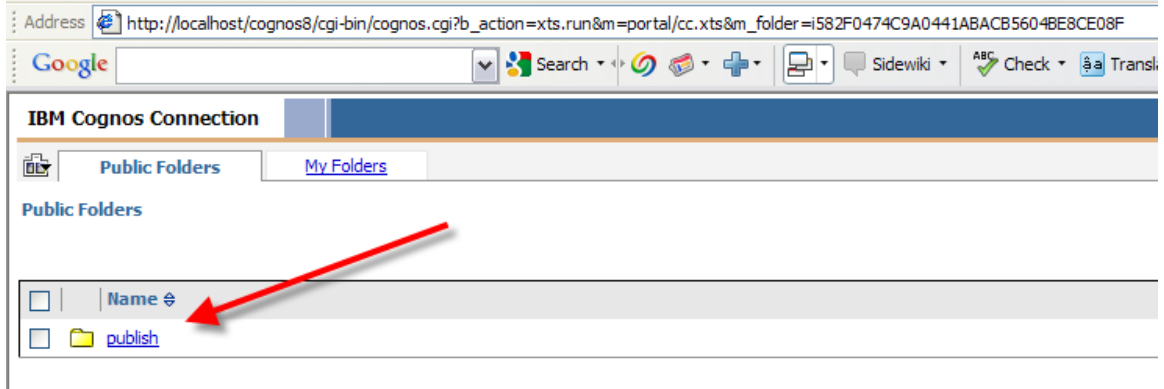


D. Specify a folder name that does not contain any spaces. Click Finish.

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



E. You know have a new folder. This subfolder will be used to hold your published Report Object Structures, or Cognos Packages.





## 10. Publish Cognos Packages

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

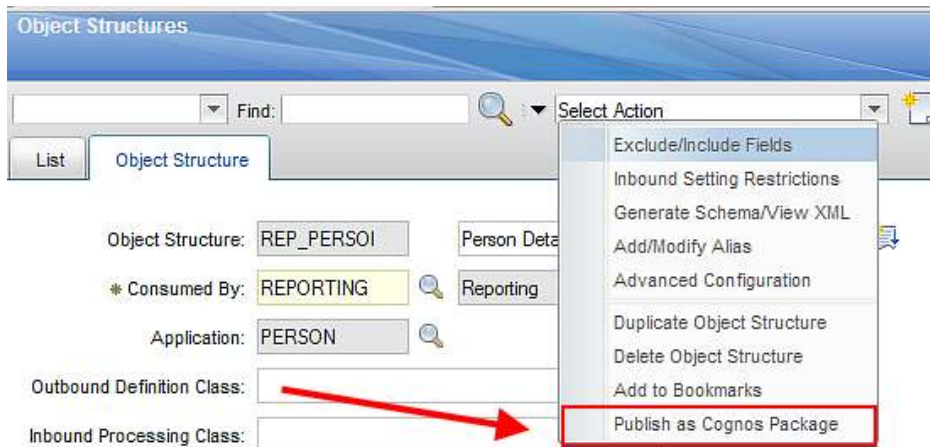
10A. Log into V75 as the System Administrator. Access the Object Structure application, and select a Report Object Structure (ROS). ROS are identified as a 'Consumed By = Reporting'

### \*\*NOTES

It is HIGHLY recommended that the first time you publish a Cognos Package that you first work with a smaller package like REP\_PERSON, REP\_USER or REP\_INVOICE. This will enable the publishing process to be proven out. Once you have successfully published a smaller package, then you can publish larger packages like Asset or Work Order.

In the example below, the Report Object Structure will be published as a Cognos Package.

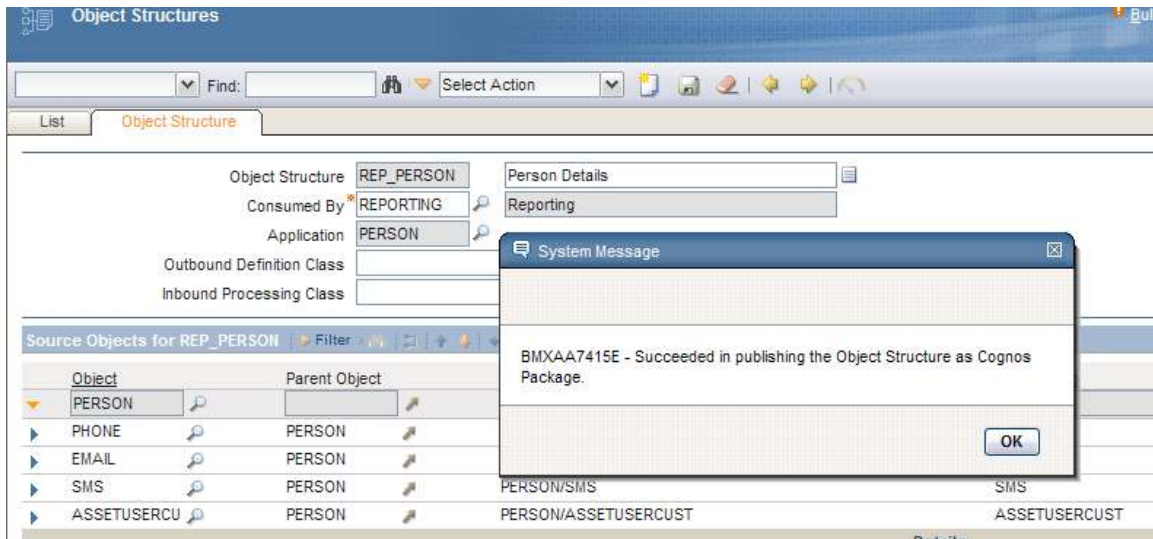
10B. Select the REP\_PERSON Report Object Structure. From the Object Structure Tab, select the Action menu. Select 'Publish as Cognos Package'.



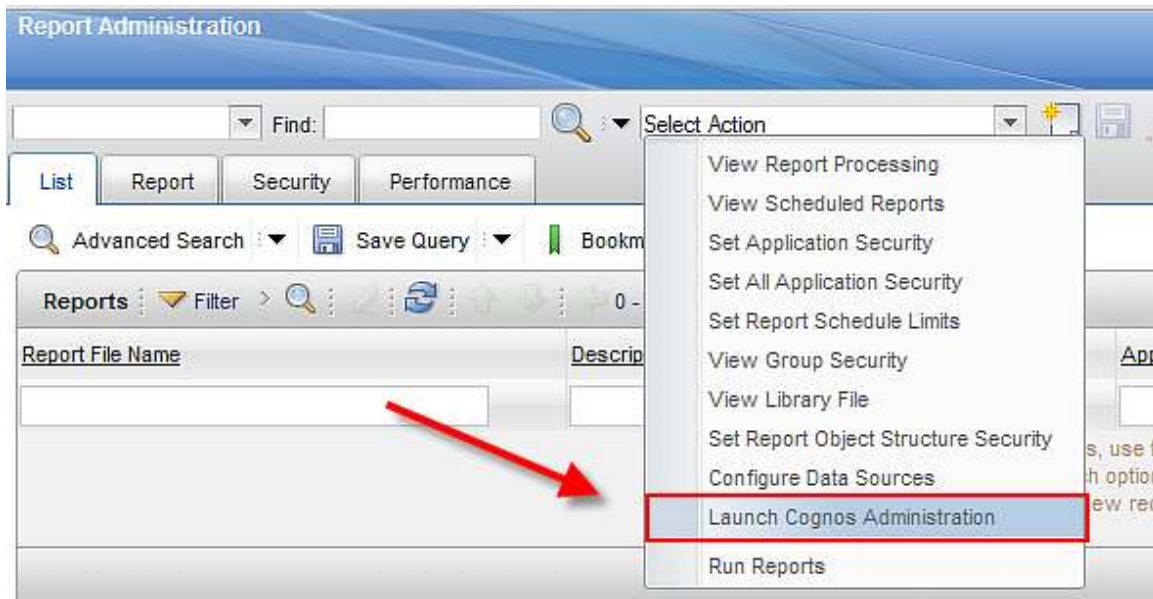
Source Objects for REP\_PERSON Filter [ ] 1 - 5 of 5

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.



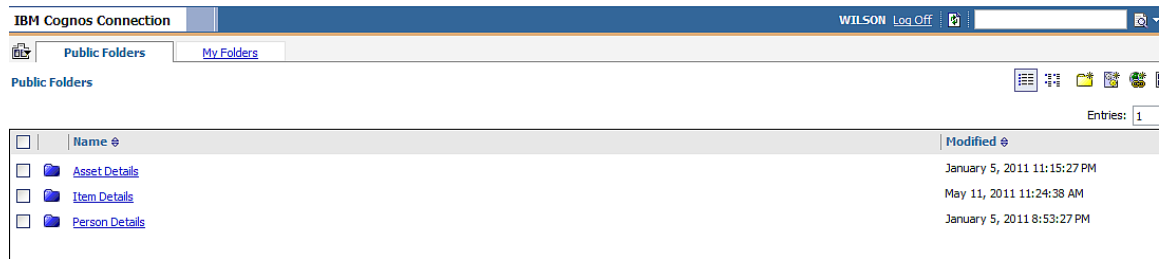
10D. Next log into the Cognos BI Server to see the newly created package(s). You can launch to Cognos as a Maximo User from the Report Administration application by selecting 'Launch Cognos Administration' from the Action Menu.



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 the Person Package and the Work Order Package.

Note: The V75 packages are identified by the description of the ROS, MAXINTOBJECT.DESCRPTION



## Notes on Publishing Cognos Packages

### Troubleshooting

1. If the publishing functionality fails, review the following items

#### Creation

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

mxr.report.cognos.db.schemaName  
mxr.report.cognos.db.sql.name  
mxr.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***

mxr.report.cognos.content.store.package.location  
mxr.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

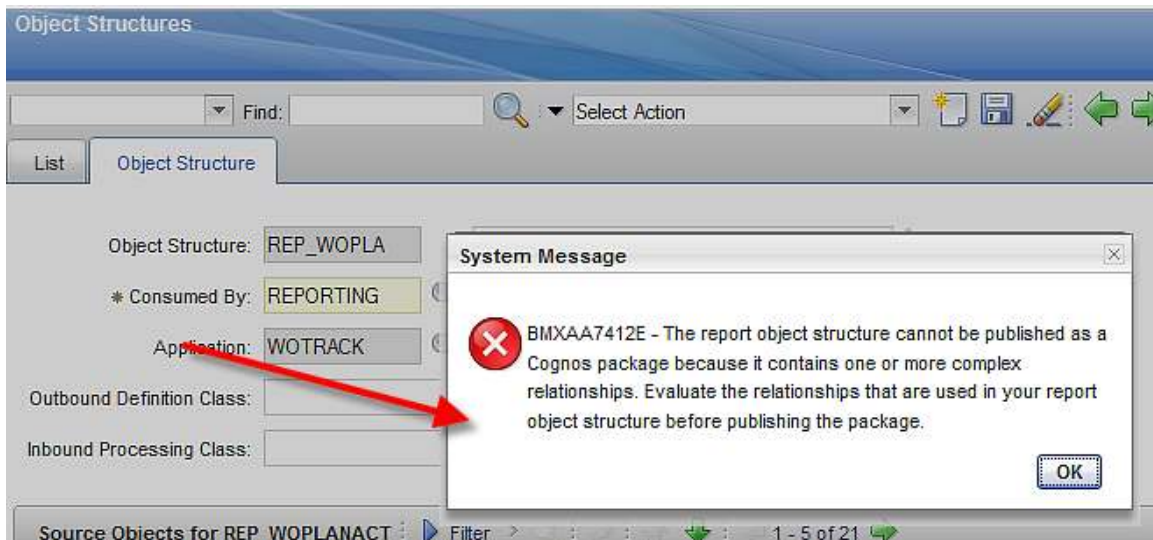
Additionally, errors may display in the Cognos logs.

## Publishing Package for Test Reports

1. Before going on to the next section to register the test reports, you must publish the Workorder Package (REP\_WORKORDER.) 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.

2. The Cognos Metadata publishing process V75 ONLY SUPPORTS column to column relationships (simple relationships). Therefore, you may find Report Object Structures included within V75 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 application

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. One report runs against the application query passed from Maximo (known also as a Launch in Context report), while the second report uses parameter values input by the user at run time.

### **Setup Steps:**

A. Obtain a copy of these test reports, by accessing the ISM Library Site at url below

<https://www-304.ibm.com/software/brandcatalog/ismlibrary/details?catalog.label=1TW10MA38>

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

<v75>\reports\cognos\reports

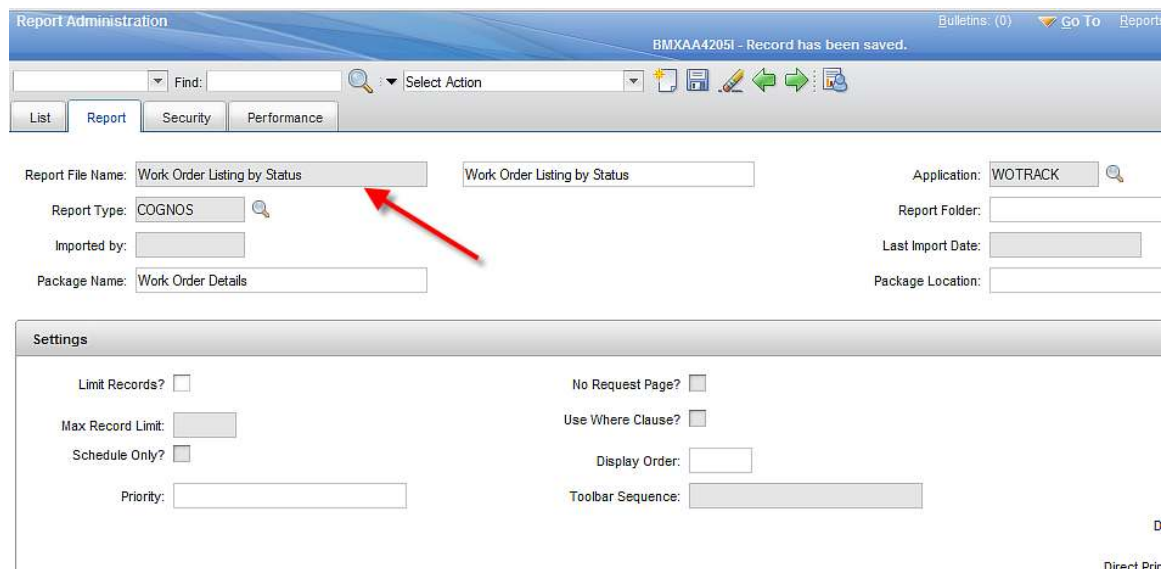
Below you will find the steps to register these 2 reports so they can be visible from V75.

### **Report Administration Registration Steps:**

11A. Sign into Maximo as a Report Administrator. Register each of the 2 Cognos test reports within the Report Administration application.

1. Work Order Listing by Status (No parameters defined)

File Name: Work Order Listing by Status



The screenshot shows the Maximo Report Administration application interface. The top navigation bar includes 'List', 'Report', 'Security', and 'Performance' tabs. The main form contains the following fields:

- Report File Name: Work Order Listing by Status (highlighted with a red arrow)
- Report Type: COGNOS
- Imported by: [Empty field]
- Package Name: Work Order Details
- Application: WOTRACK
- Report Folder: [Empty field]
- Last Import Date: [Empty field]
- Package Location: [Empty field]

The 'Settings' section below the main form includes the following options:

- Limit Records?
- Max Record Limit: [Empty field]
- Schedule Only?
- Priority: [Empty field]
- No Request Page?
- Use Where Clause?
- Display Order: [Empty field]
- Toolbar Sequence: [Empty field]

## 2. Overdue Work Orders by Location (This report has a required parameter of Site)

File Name: Overdue Work Orders by Location

Report Administration

BMXAA4205I - Record has been saved.

Find: Select Action

List Report Security Performance

Report File Name: Overdue Work Orders by Location Overdue Work Orders by Location Application: WOTRACK

Report Type: COGNOS Report Folder:

Imported by: Last Import Date:

Package Name: Work Order Details Package Location:

Settings

Parameters: Filter 1 - 1 of 1 Download

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.

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

1. When you register the reports, set the Report Type = Cognos.
2. Make sure to define the Package Name it utilizes.
3. Evaluate the Report Folder field. The Report Folder 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. Evaluate the Package Location Field. The package location is the folder where the Cognos package is located. This means that if you have multiple folder locations within Cognos, you must specify which folder location your package is under.

The screen shot below shows the Cognos Home page with 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.

IBM Cognos Connection

Public Folders My Folders

Public Folders

Name
<input type="checkbox"/> PRODUCTION
<input type="checkbox"/> PUBLISH



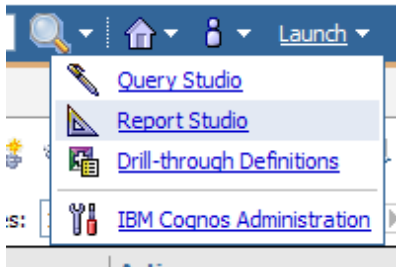
5. Make sure report security in Maximo is enabled for the new reports. This can be done by setting the security for the individual reports on the 'Security' Tab. Or it can be set by defining it via the Actions 'Set Application Security' or 'Set All Application Security' for the Work Order Application, and Cognos Report Type.

\* The Security Group, MAXADMIN, does not automatically have security access to these 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 Portal Page. Navigate to locate the REP\_WORKORDER package that you published in step 10.



12B. Next, launch Cognos Report Studio. The screen below displays. Select 'Create a new report or template'



12C. Select Blank. Notice the REP\_WORKORDERPackage is enabled.

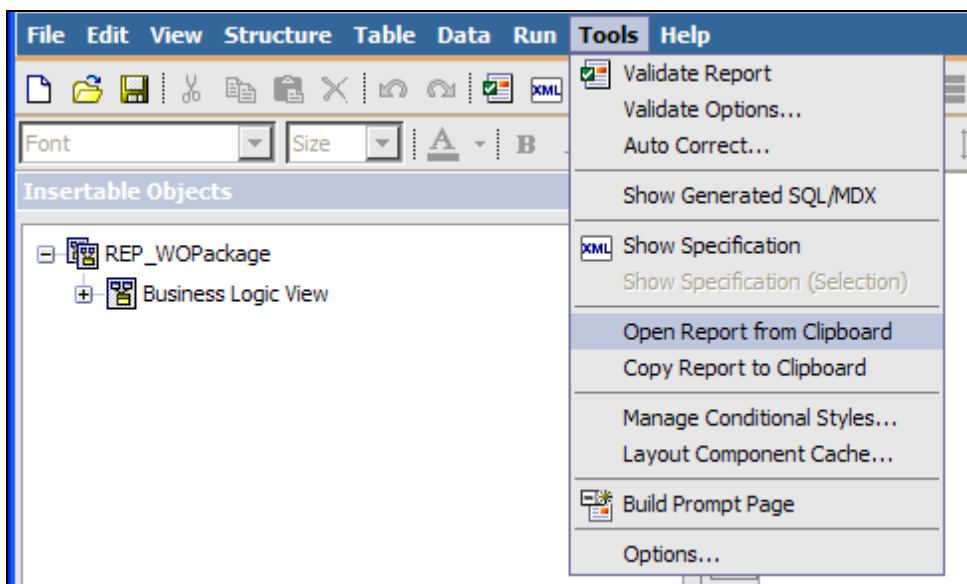


12D. Import the Work Order Listing Report first. Navigate to the location where you stored your downloaded report

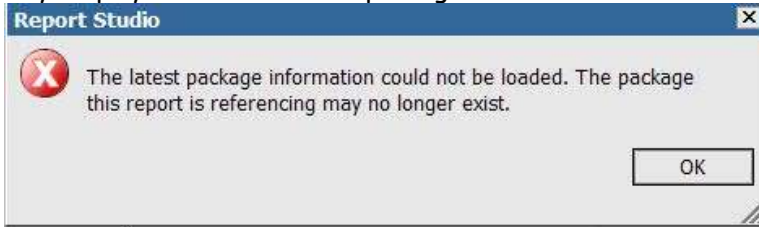
<V75>reports\cognos\reports and highlight wotrack.xml.

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

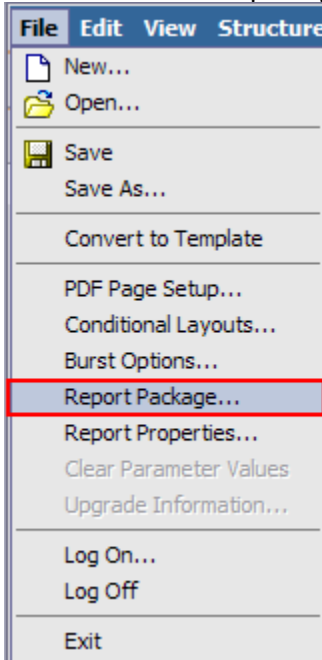
12F. Go back to Cognos Report Studio. From the menu, select Tools -> Open Report from Clipboard. This will bring the report xml file from memory into Report Studio.



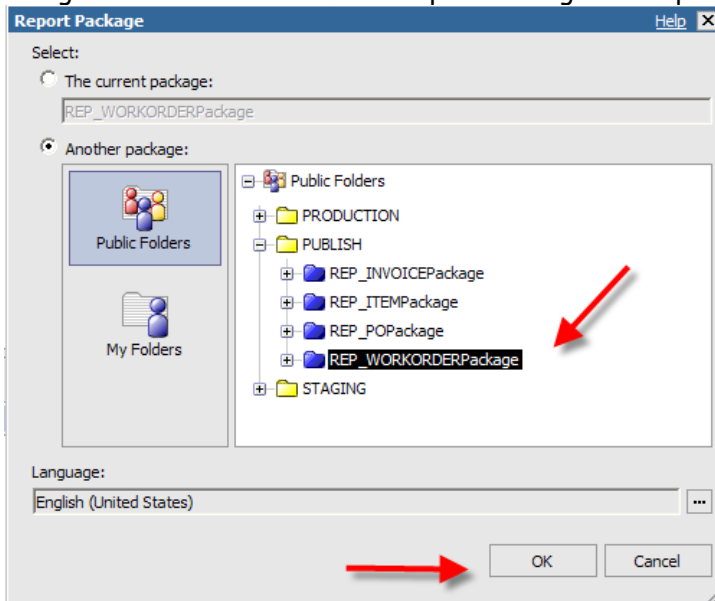
The screen should refresh with the content of the report. Additionally, the error message may display. Click OK as the package will be referenced in the next steps.



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



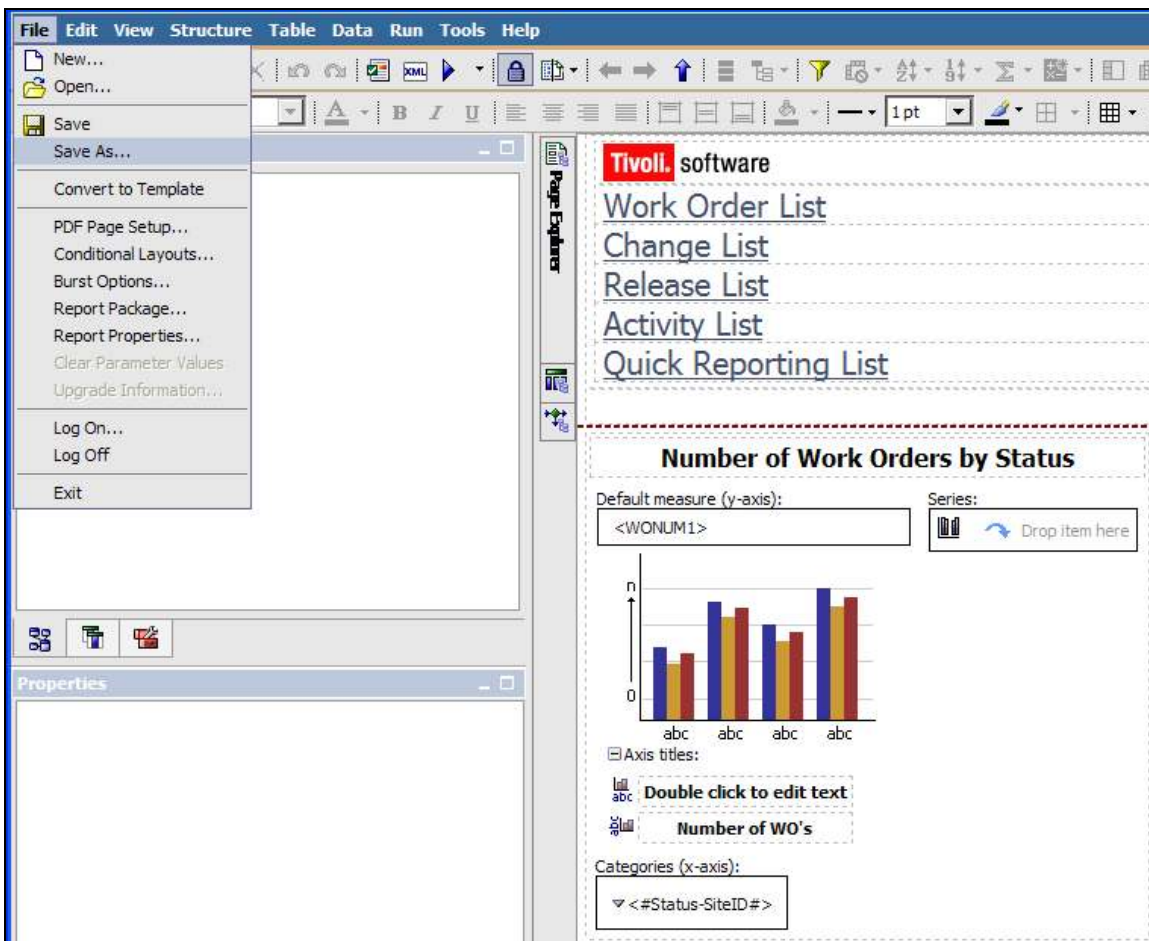
Navigate to the location of the Report Package the report design uses. Click OK.



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



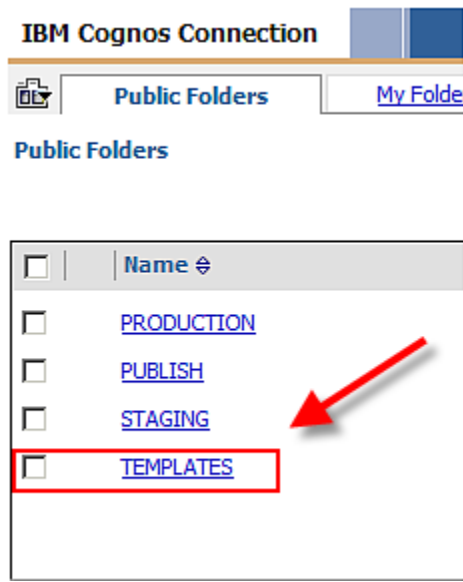
12H. The Work Order Listing report is now available. Save this by selecting File - Save as, and saving the report as wotrack.



12I. Repeat this process for the second report test file, wo\_overdue\_by\_location.

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.

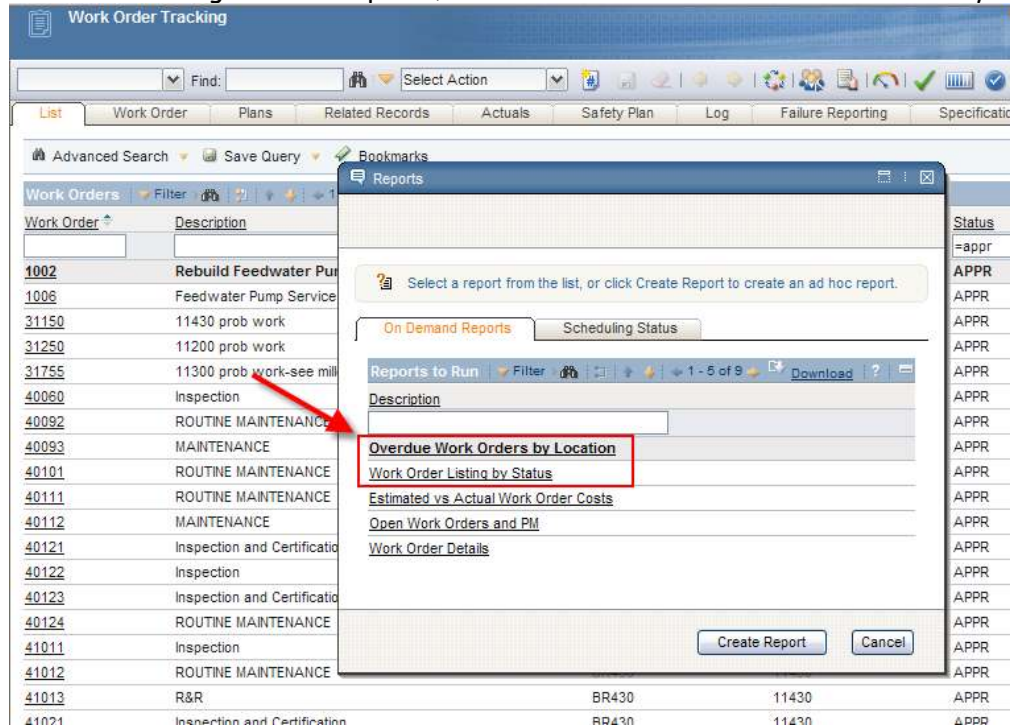


## Install Test

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.

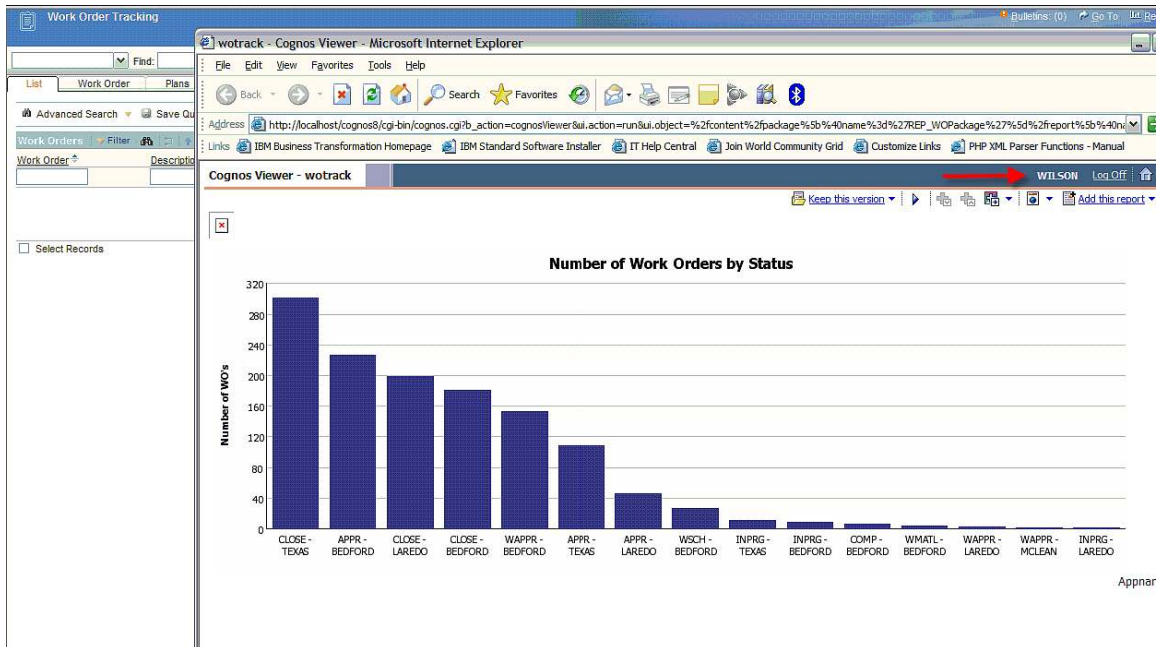
\*Note: You can also do this by staying in the Report Administration application. Access either of the Cognos Test reports, and click 'Preview' to execute them directly.



The screenshot shows the 'Work Order Tracking' application interface. A 'Reports' dialog box is open, displaying a list of reports. The report 'Overdue Work Orders by Location' is highlighted with a red box. A red arrow points from the 'Work Order Listing by Status' report in the list to the 'Overdue Work Orders by Location' report in the dialog box. The dialog box also includes a 'Create Report' button and a 'Cancel' button.

Work Order	Description	Status
1002	Rebuild Feedwater Pur	APPR
1006	Feedwater Pump Service	APPR
31150	11430 prob work	APPR
31250	11200 prob work	APPR
31755	11300 prob work-see mill	APPR
40060	Inspection	APPR
40092	ROUTINE MAINTENANCE	APPR
40093	MAINTENANCE	APPR
40101	ROUTINE MAINTENANCE	APPR
40111	ROUTINE MAINTENANCE	APPR
40112	MAINTENANCE	APPR
40121	Inspection and Certificat	APPR
40122	Inspection	APPR
40123	Inspection and Certificat	APPR
40124	ROUTINE MAINTENANCE	APPR
41011	Inspection	APPR
41012	ROUTINE MAINTENANCE	APPR
41013	R&R	APPR
41021	Inspection and Certificat	APPR

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



## Notes on Executing Cognos reports from Maximo

### Troubleshooting

1. If the you are unable to execute Cognos reports from the V7 environment, 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 Tips: 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:

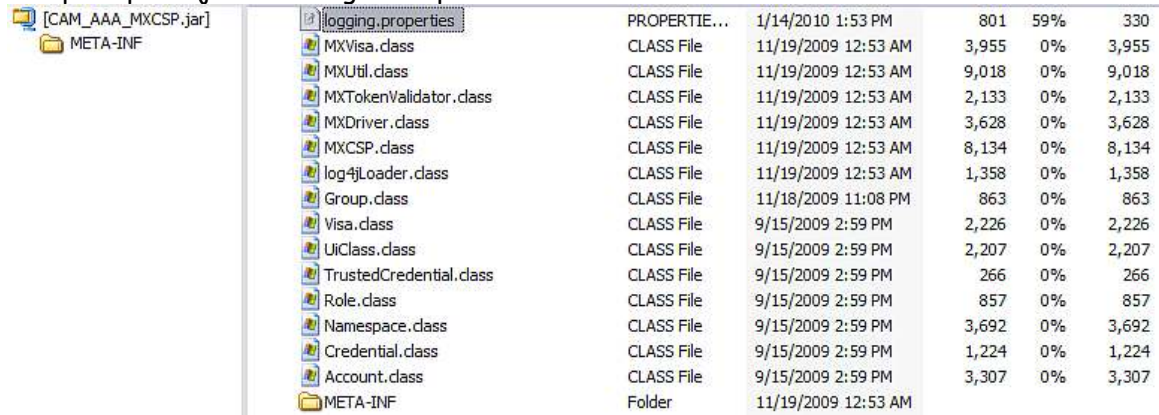
`c:\temp\log`

B. Shut down Cognos.

C. Navigate to the location of the csp jar file on Cognos: `CAM_AAA_MXCSP.jar`

`<Cognos>\c8\webapps\p2pd\WEB_INF\lib`

D. Open up the jar file using Winzip



File Name	Type	Modified	Size	Compression	Uncompressed Size
[CAM_AAA_MXCSP.jar]					
META-INF	Folder				
logging.properties	PROPERTIES File	1/14/2010 1:53 PM	801	59%	330
MXVisa.class	CLASS File	11/19/2009 12:53 AM	3,955	0%	3,955
MXUtil.class	CLASS File	11/19/2009 12:53 AM	9,018	0%	9,018
MXTokenValidator.class	CLASS File	11/19/2009 12:53 AM	2,133	0%	2,133
MXDriver.class	CLASS File	11/19/2009 12:53 AM	3,628	0%	3,628
MXCSP.class	CLASS File	11/19/2009 12:53 AM	8,134	0%	8,134
log4jLoader.class	CLASS File	11/19/2009 12:53 AM	1,358	0%	1,358
Group.class	CLASS File	11/18/2009 11:08 PM	863	0%	863
Visa.class	CLASS File	9/15/2009 2:59 PM	2,226	0%	2,226
UiClass.class	CLASS File	9/15/2009 2:59 PM	2,207	0%	2,207
TrustedCredential.class	CLASS File	9/15/2009 2:59 PM	266	0%	266
Role.class	CLASS File	9/15/2009 2:59 PM	857	0%	857
Namespace.class	CLASS File	9/15/2009 2:59 PM	3,692	0%	3,692
Credential.class	CLASS File	9/15/2009 2:59 PM	1,224	0%	1,224
Account.class	CLASS File	9/15/2009 2:59 PM	3,307	0%	3,307
META-INF	Folder	11/19/2009 12:53 AM			

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.

```
log4j.rootLogger=ERROR, A1, A2
#log4j.rootLogger=ERROR

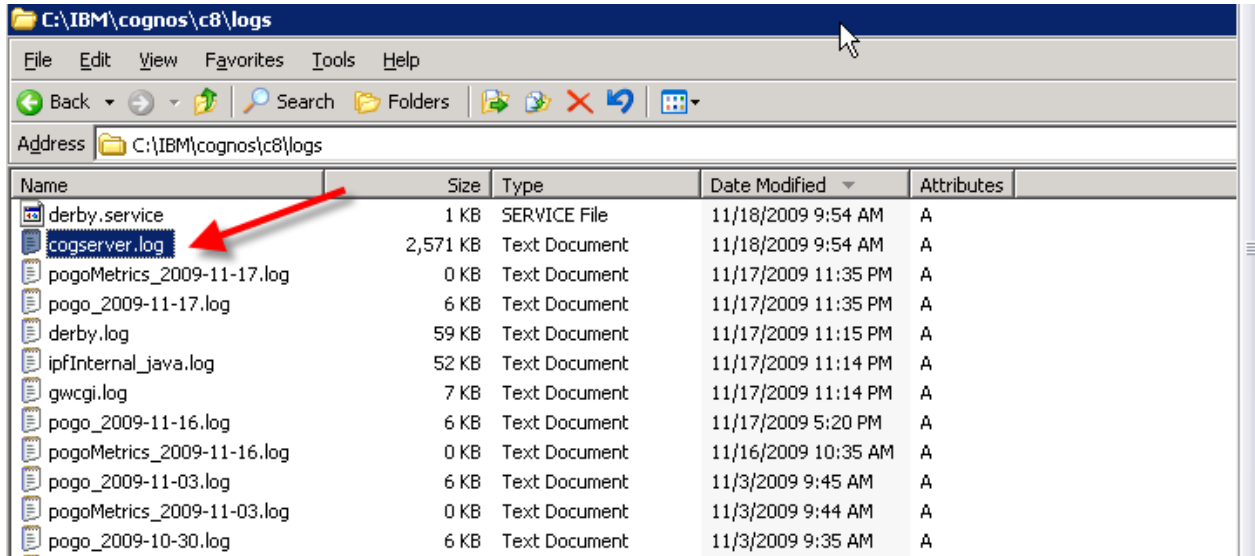
# /
# ~~ Output destinations or appenders
#
# A1 is set to be a ConsoleAppender which outputs to System.out.
log4j.appender.A1=org.apache.log4j.ConsoleAppender
log4j.appender.A1.layout=org.apache.log4j.PatternLayout
log4j.appender.A1.layout.ConversionPattern=%d{dd MMM yyyy HH:mm:ss:SSS} [%-2p] %m%n
```

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>\c8\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>
```

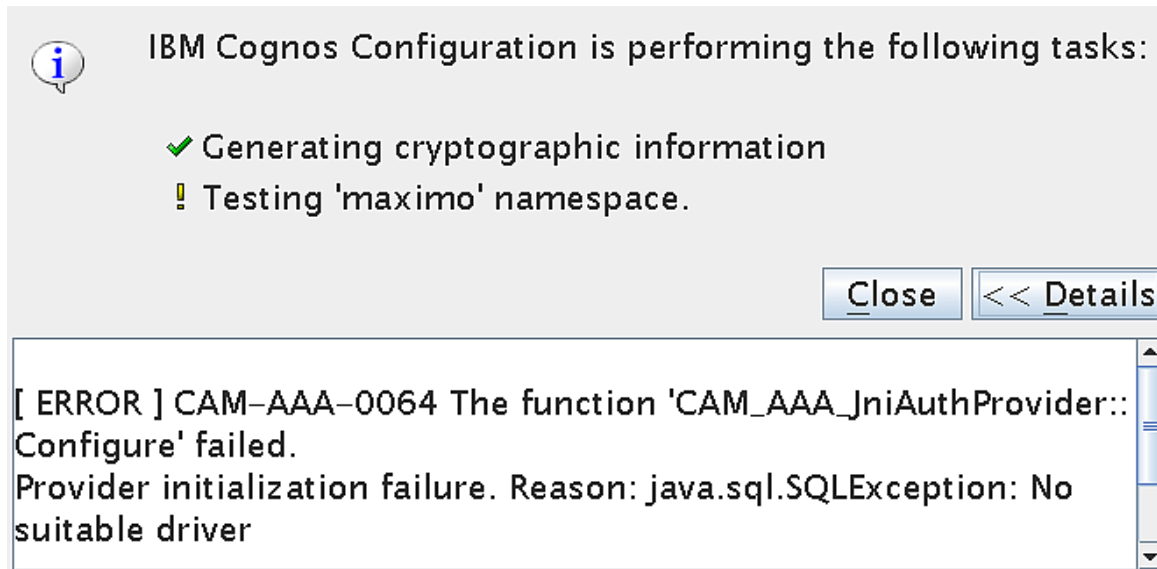
```
;Timer=yes
```

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 Tips: 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 JDBC Database URL passed from Maximo to Cognos is not properly constructed. 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.



The screenshot shows a dialog box titled "IBM Cognos Configuration is performing the following tasks:". It contains two items: a green checkmark for "Generating cryptographic information" and a yellow warning icon for "Testing 'maximo' namespace.". At the bottom right are "Close" and "<< Details" buttons. Below the dialog box is a scrollable text area containing the following error message:

```
[ ERROR ] CAM-AAA-0064 The function 'CAM_AAA_JniAuthProvider::
Configure' failed.
Provider initialization failure. Reason: java.sql.SQLException: No
suitable driver
```

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

```
13 Oct 2009 16:57:48:241 [INFO] Logging initialized.
13 Oct 2009 16:57:48:247 [INFO] MXCSP INIT Method
13 Oct 2009 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=mxe.db.url=jdbc:db2://linux12.syr.swg.com:50000/MX7116
```

Its Correct Value is shown here.

```
maximoDataSource.url=jdbc:db2://linux12.syr.swg.com:50000/MX7116
```

## 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

<R7.1>\reports\cognos\c8\webapps\p2pd\WEB-INF\lib

to this location in Cognos

<Cognos>\c8\webapps\p2pd\WEB-INF\classes

4. Copy your applicable database jar files from this location in Maximo

<R7.1>\applications\maximo\lib

to this location in Cognos

<Cognos>\c8\webapps\p2pd\WEB-INF\classes

5. Once copied, unzip the all the jar files you just copied.

6. Restart Cognos.

## Appendix - Install Cognos Reporting thru TCR

If you are utilizing the V75 Maximo Cognos Reporting Integration thru the enablement of Tivoli Common Reporting 2.1, please note the information below.

### Platform Issues to Note

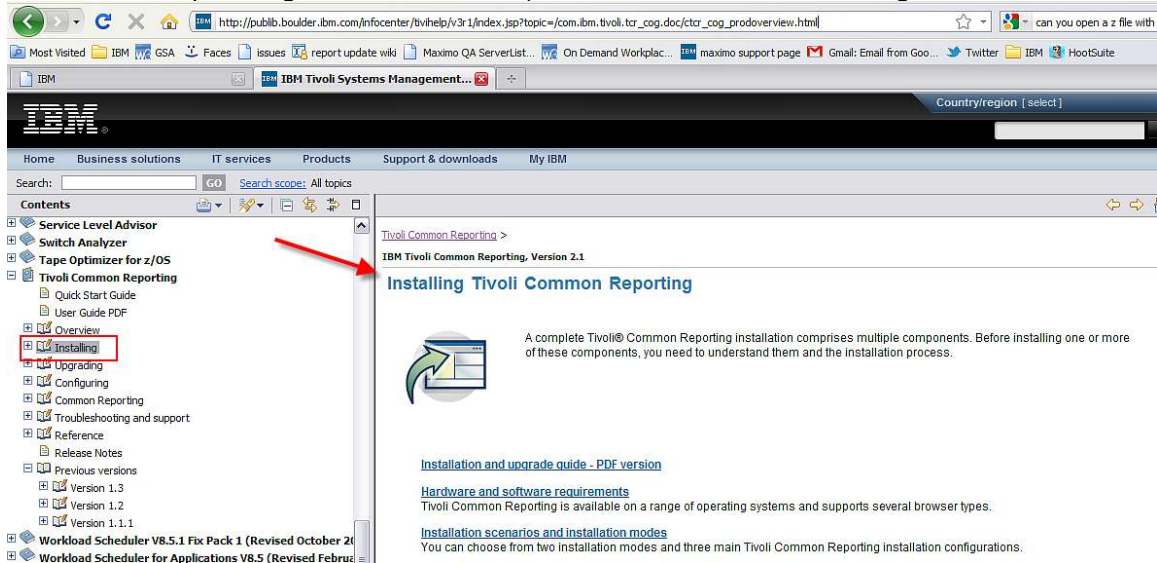
1. TCR 2.1 supports only an IBM Websphere ® Application Server Deployment. Oracle BEA ® is not supported.
2. Cross product platforms are not supported. This means that a configuration of Maximo on Oracle BEA, and TCR/Cognos on IBM Websphere is not supported.
3. TCR 2.1 supports only an LDAP Enabled Security Environment. Tivoli Common Reporting is not able to authenticate with security groups held in a relational database.
4. The BIRT Engine that is available for deployment from the TCR Install is not supported by Maximo. Therefore, you should *not* select to install the BIRT Engine during the TCR Install program. If you want to use BIRT with your Maximo based products, you should utilize the BIRT Engine that is deployed through the Maximo Framework.
5. TCR 2.1 for V75 is not supported for installation in an existing Tivoli Integrated Portal Environment. The install must be done in an environment that does not have a preexisting TIP Server.
6. It is recommended that you perform a Distributed System Installation of TCR. The single computer installation is only recommended for small, development environments.
7. This release of the Maximo Cognos Integration through TCR is supported for English only.

## Tivoli Common Reporting Installation Instructions

For details on using Tivoli Common Reporting (TCR) 2.1, reference the TCR documentation link below.

[http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/index.jsp?topic=/com.ibm.tivoli.tcr\\_cog.doc/ctcr\\_cog\\_prooverview.html](http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/index.jsp?topic=/com.ibm.tivoli.tcr_cog.doc/ctcr_cog_prooverview.html)

For information on installing TCR, reference the TCR installation guide, which details pre-installation steps, along with hardware requirements and troubleshooting.



Additionally, below please review the information below which supplements the information in the TCR Installation Guide for the Maximo 75 based clients.

1. When you access the TCR Installer, you will be presented with a Product Overview. As noted above, it is recommended that you perform a Distributed System Installation of TCR. The single computer installation is only recommended for small, development environments.
2. During the TCR installation, you may see information and options to install the BIRT-based Tivoli Common Reporting engine.

Please note that the BIRT Engine available for deployment from the TCR install is not supported by Maximo. The version of BIRT used through TCR is different than what is used within the Maximo Framework, and it is not integrated with Maximo. (ex. Security Groups not synchronized, security, emailing and the scripted data source not enabled.)

If you want to use BIRT with your Maximo V75 based products, you should utilize the BIRT Engine that is deployed through the Maximo V75 Framework.



## Tivoli Common Reporting Installation Notes

1. If you are installing TCR 2.1 with Cognos, an HTTP Server is not required if the Maximo Property Settings utilize the TCR Gateway URI. Examples of this are shown below:

HTTP Server not required

A. If you use the ldap namespace instead of the CSP. The ldap namespace would be specified in system properties and use the "http(s)://IP:Port/tarf/servlet/component" URL

B. If you use the CSP with an extra ldap security layer. In this case, the CSP namespace would be used in system properties and use the "http(s)://IP:Port/tarf/servlet/component" URL

HTTP Server required

C. If only the CSP is used. You would specify the CSP namespace in system properties and use the "http://IP:Port/cognos8/cgi-bin/cognos.cgi" URL

2. Information on downloading and installing the Cognos Framework Manager product for TCR can be found here: <http://bit.ly/or6EzK>

## Reference Materials

\*For a complete listing of V7 Report Reference Materials, including the V7 Cognos documents listed below, use this url:

<http://ibm.co/pxUyp6>

### Version 75 Maximo Cognos Integration

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, 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.

You can access this guide or other report support guides by following the steps below:

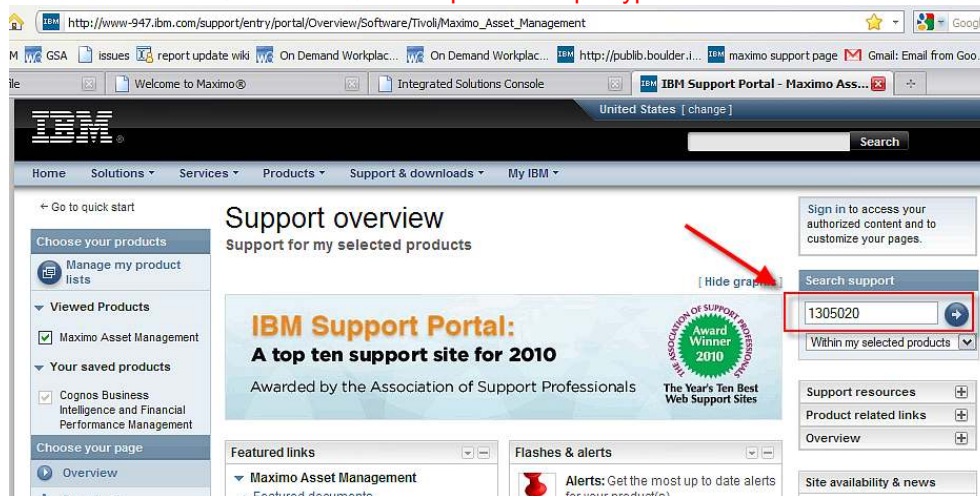
1. Access IBM's support site at the URL below:

[http://www-947.ibm.com/support/entry/portal/Overview/Software/Tivoli/Maximo\\_Asset\\_Management](http://www-947.ibm.com/support/entry/portal/Overview/Software/Tivoli/Maximo_Asset_Management)

or its shortened url of

<http://bit.ly/iWtyQG>

2. Input the reference number or the document title of the guide you are looking for. You can obtain this information from <http://ibm.co/pxUyp6>



3. This leads to the page below. Find the specific guide from the list and click on it.  
\*Note: Many of the report documents have a key in front of them. This indicates that you must first sign in to IBM support before downloading.

**Search**

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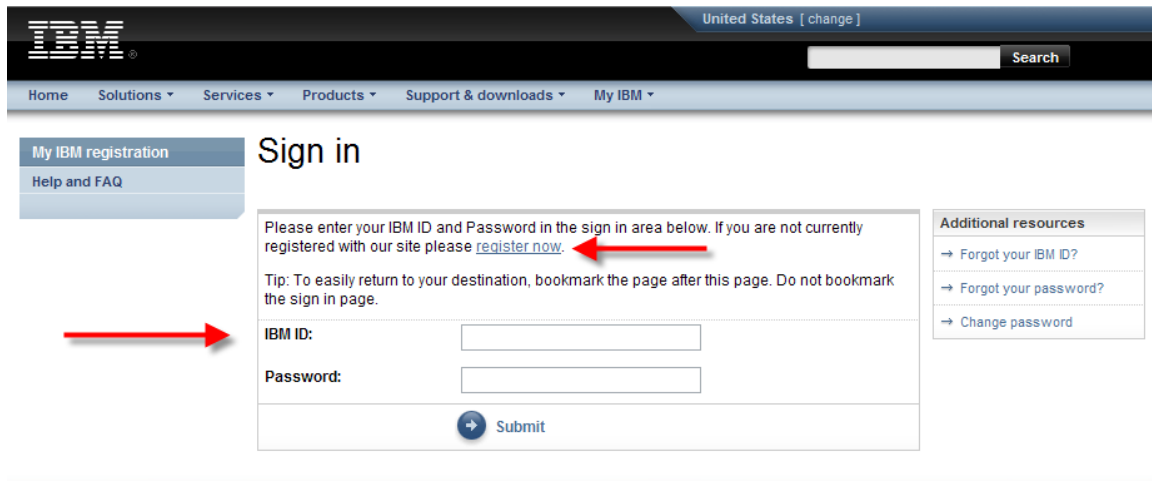
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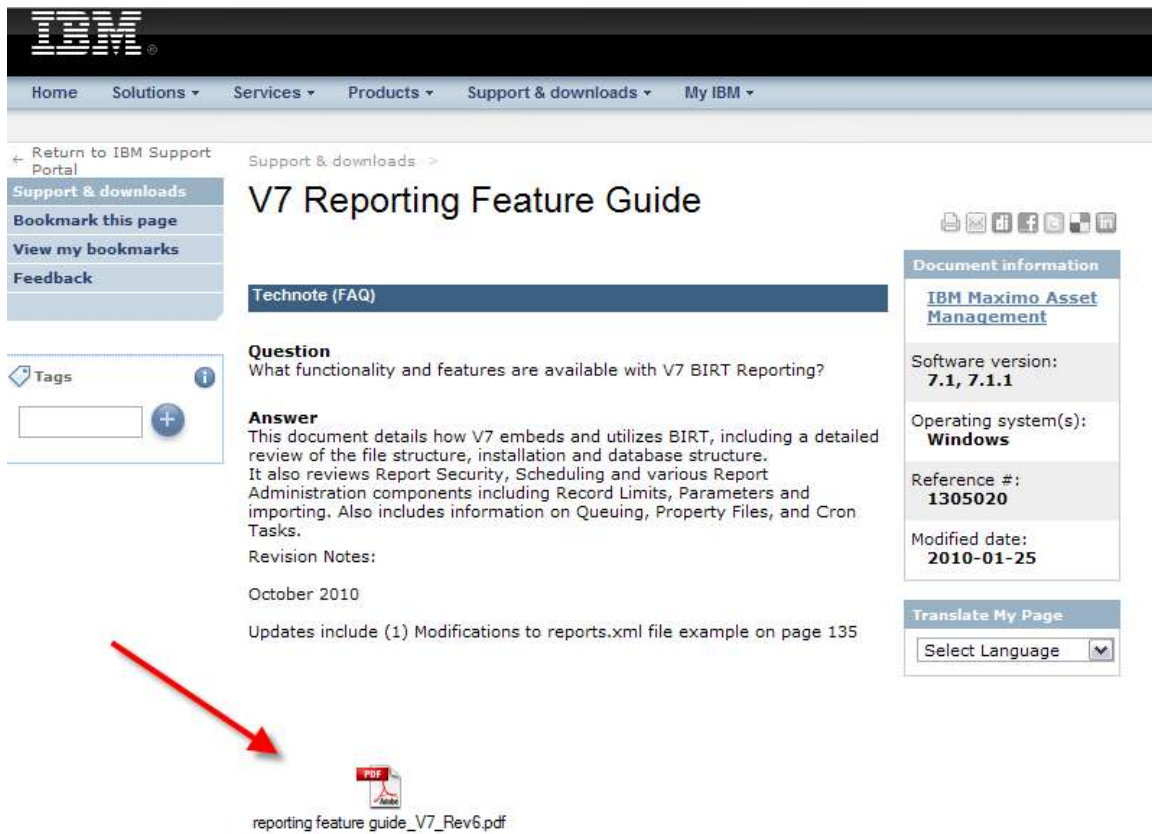
**Search results details:**

- V7 BIRT Report Page Size and Orientation Information**  
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- V7 Reporting Feature Guide**  
...IBM Maximo Asset Management Essentials Segment Product Component Platform Version Edition 1305020 1305020 US 191 IBM Maximo Asset Management 7.1 7.1.1 1305020 Windows swg21305020 Attachmenttext reporting feature guide\_V7\_Rev6.doc...  
Last modified date: 25 Jan 2010

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5. After you have signed in, you will be brought to the page where the document can be downloaded.



## Cognos 8.4 Documentation

Central Location for detailed manuals on the Cognos Reporting Products.

<http://bit.ly/mTNfIH>

The screenshot shows a web browser displaying the IBM Cognos 8.4 documentation page. The address bar shows the URL: [http://publib.boulder.ibm.com/infocenter/c8bi/v8r4m0/index.jsp?topic=/com.ibm.swg.im.cognos.inst\\_cr\\_winux.8.4.0.doc](http://publib.boulder.ibm.com/infocenter/c8bi/v8r4m0/index.jsp?topic=/com.ibm.swg.im.cognos.inst_cr_winux.8.4.0.doc). The page features the IBM logo and a navigation menu with options: Home, Business solutions, IT services, Products, Support & downloads, and My IBM. A search bar is present with the text "Search scope: All topics".

The main content area is divided into two sections: "Contents" and "Install".

**Contents**

- Install
  - Business Intelligence New Features 8.4.1
  - New Features 8.4.0
  - Business Intelligence Installation and Configuration Guide 8.4.1
  - Installation and Configuration Guide 8.4.0
    - Introduction
    - IBM Cognos 8 Business Intelligence
    - Planning Your Installation
    - Installation and Configuration** (highlighted with a red box and a red arrow pointing to it)
    - Upgrading to IBM Cognos 8
    - Installing and Configuring IBM Cognos 8 Components on One Computer
    - Installing IBM Cognos 8 Server Components on Different Computers
    - Install and Configure Modeling Tools for Reporting and Scorecarding
    - Install and Configure Optional Components
    - Customizing IBM Cognos 8 for Your Environment
    - Maintenance
    - Appendices
    - Glossary
  - Business Intelligence Getting Started Installation Guide 8.4.1
  - Quick Start Installation and Configuration Guide 8.4.0

**Install**

**IBM Cognos 8 v4 E**

This information center contains information on IBM Cognos 8 v4 E Business Intelligence.

**In this information center**

- Getting started with IBM Cognos 8 v4 Business Intelligence
  - Readme [8.4.0](#)
  - Getting Started [8.4.0, 8.4.1](#)
  - Quick Tours [8.4.0](#)
  - Installing and Configuring [8.4.0](#)
- What's new
  - New [8.4.0](#)

## Revision History

### Revision 2 - October 13, 2011

Updates for Clarification on TCR Settings. Updates include (1) Clarification that installation steps may be different from Direct Maximo-Cognos integration versus indirect TCR Integration (2) Updated Steps 3C and 4B (3) Additional information on TCR Troubleshooting Tips on page 26

### Revision 1 - October 2011

(1) Added notes that Cognos Folder Location, identified by End Point Value, `CONTENT_STORE_PACKAGE_LOCATION`, cannot have a space in its name. (2) Added details on property setting value, `mxe.rest.webappurl` on page 25 (3) Updated reference material links

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