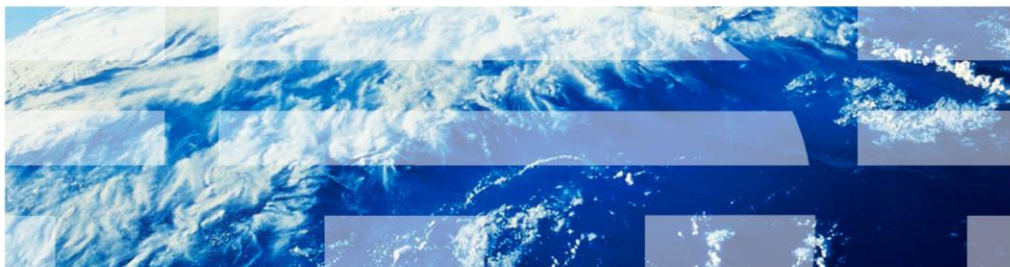


InfoSphere Information Server

Relocating the XMeta repository for Information Server version 8.5 and 8.7



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This presentation describes the steps needed to move the XMeta repository from one database server to another for Information Server version 8.5 and 8.7. If you are using a WebSphere® cluster with your Information Server installation, see the Relocating XMeta presentation for clustered WebSphere.

Objectives

- Backing up XMeta, IS, and key files
- Update Information Services Framework (ISF) configuration
- Update WebSphere Application Server configuration

The objectives of this presentation are to describe what needs to be backed up and how to update the Information Services Framework configuration, referred to as the ISF configuration. This presentation also describes what changes need to be made to WebSphere.

Backup and restore

- Backup
 - Backup XMeta, Information Server, and WebSphere
 - Backup all files being changed
 - InformationServer/ASBServer/bin/sql/database.properties
 - InformationServer/ASBServer/apps/lib/ojb-conf.jar
 - Do not leave copy of ojb-conf.jar in Information Server or WebSphere folder hierarchy
 - Backup XMeta database
- Restore
 - Restore XMeta to new target system

Before you make any changes to XMeta, Information Server, or WebSphere, it is good practice to take a complete backup of all three installations. It is safest to do a cold backup of the WebSphere Application Server by stopping WebSphere before you do the backup. It is also good practice to make a copy of all the files that are changed during this process to make it easier to revert back if necessary. The files that are key to make copies of are displayed on this slide. Ensure the backup of ojb-conf.jar is not left in the IBM Information Server or WebSphere folder hierarchy.

Backup the XMeta database on the source system and restore to the target system using the backup and restore tools provided with the database. Backup the affected files before changing them in this procedure.

Update ISF and WebSphere Configuration (1 of 5)

- Stop WebSphere Application Server
- Edit database.properties

Linux® or UNIX®:

```
vi /opt/IBM/InformationServer/ASBServer/bin/sql/database.properties
```

Windows®:

```
write C:\IBM\InformationServer\ASBServer\bin\sql\database.properties
```

- Find and update URL parameter

DB2®	url=jdbc:db2://NewServer.com:50008/XMeta
Oracle	url=jdbc:ibm:oracle://host:port;SID=SID
Oracle RAC	url=jdbc:ibm:oracle://host:port;serviceName=service;alternateServer=(host:port, host:port, host:port, ...)
SQL Server	url=jdbc:ibm:sqlserver://host:port;DatabaseName=dbname
SQL Server - Named Instance	url=jdbc:ibm:sqlserver://host\instance_name:port;DatabaseName=dbname

4

Relocating the XMeta repository for Information Server version 8.5

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The first step is to stop the WebSphere Application Server. Next, edit the database.properties file in the InformationServer/ASBServer/bin/sql directory. Find and update the URL parameter to reflect the new repository server name and port. After updating, save the file.

Update ISF and WebSphere Configuration (2 of 5)

- Create temporary empty directory on your Domain Server and make it current working directory
 - **Windows:**

```
mkdir c:\tmp\isftmp
cd \tmp\isftmp
```
 - **Linux or UNIX:**

```
mkdir /tmp/isftmp
cd /tmp/isftmp
```
- Extract ojb-conf.jar into temp directory
 - **Linux or UNIX:**

```
/opt/IBM/WebSphere/AppServer/java/bin/jar xf /opt/IBM/InformationServer/ASBServer/apps/lib/ojb-conf.jar
```
 - **Windows:**

```
C:\IBM\WebSphere\AppServer\java\bin\jar xf c:\IBM\InformationServer\ASBServer\apps\lib\ojb-conf.jar
```

Next, create a temporary directory on your domain server and set it as your current working directory.

While in your newly created temp directory, extract the ojb-conf.jar file using the jar utility of a JDK for example, the JDK in WebSphere.

This slide displays example commands. This command will extract ojb-conf.jar and place the contents in your temp directory.

Update ISF and WebSphere Configuration (3 of 5)

- Edit repository_database.xml
 - Linux or UNIX:** vi repository_database.xml
 - Windows:** write repository_database.xml
- File contains multiple dbalias entires
 - Update all dbalias attributes

DB2	dbalias="//host:port/dbname" Example: dbalias="//db2host:50000/xmeta"
Oracle	dbalias="oracle://host:port;SID=dbname" Example: dbalias="oracle://oracleHost:1521;SID=xmeta"
Oracle RAC	dbalias="oracle://host:port;ServiceName=SID;AlternateServers=(host:port, host:port, host:port, ...)" Example: dbalias="oracle://rac1:1521;serviceName=orcl;alternateServers=(rac1:1521,rac2:1521,rac3:1521)"
MS SQLServer	dbalias="sqlserver://host:port;DatabaseName=dbname" Example: dbalias="sqlserver://sqlHost:1433;DatabaseName=xmeta"
MS SQLServer using Named Instance	dbalias="sqlserver://host\named_instance:port;DatabaseName=dbname" Example: dbalias="sqlserver://sqlHost\my_instance:1433;DatabaseName=xmeta"

6

Relocating the XMeta repository for Information Server version 8.5

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The next step is to edit the repository_database.xml file that is in your temp directory. Use the vi command for Linux and UNIX or open the file in Wordpad by using the write command if on Windows. Search for all of the dbalias attributes. Use the table displayed on this slide to correctly update this field. Edit every dbalias attribute in the file with the new host, port and dbname value, and save the file.

If you are using Sql Server named instances, note that the format is sqlserverHostname\named_instance.

Update ISF and WebSphere Configuration (4 of 5)

- Rejar ojb-conf.jar
 - **Linux or UNIX:**
`/opt/IBM/WebSphere/AppServer/java/bin/jar cf /opt/IBM/InformationServer/ASBServer/apps/lib/ojb-conf.jar .`
 - **Windows:**
`c:\IBM\WebSphere\AppServer\java\bin\jar cf \IBM\InformationServer\ASBServer\apps\lib\ojb-conf.jar .`
- Copy ojb-conf.jar to WebSphere
 - **Linux or UNIX:**
`cp /opt/IBM/InformationServer/ASBServer/apps/lib/ojb-conf.jar
/opt/IBM/WebSphere/AppServer/profiles/InfoSphere/informationServer/apps/lib`
 - **Windows:**
`copy c:\IBM\InformationServer\ASBServer\apps\lib\ojb-conf.jar
c:\IBM\WebSphere\AppServer\profiles\InfoSphere\informationServer\apps\lib`
- Remove temp directory

After updating the dbalias attribute, re-jar ojb-conf.jar with the updated repository_database.xml file using the jar utility of a JDK. For example, the JDK in WebSphere. Be sure you are still in your temp directory. This slide displays example commands. Be sure your paths are correct for your install. You must remember to put the “space dot” at the end of the jar command.

Next, copy the ojb-conf.jar file to the WebSphere installation using the example command displayed on this slide. After this step is complete, delete the temp directory.

Update ISF and WebSphere Configuration (5 of 5)

- If XMeta password has changed
 - Run AppServerAdmin command
 - Linux or UNIX:**

```
/opt/IBM/InformationServer/ASBServer/bin/AppServerAdmin.sh -db  
-user <xmetaUser> -password <xmetaPassword>
```
 - Windows:**

```
\opt\IBM\InformationServer\ASBServer\bin\AppServerAdmin.bat -db  
-user <xmetaUser> -password <xmetaPassword>
```
 - **“AppServerAdmin -db” at 8.5 will also run File Propagator Tool**
 - Be sure to have 1.25GB+ free space in /tmp (AIX/Linux), /var/tmp (Solaris, HPUX) or %TEMP% (Windows)
 - AppServerAdmin will take much longer to run than in previous versions
- Test changes
 - **Linux or UNIX**

```
ASBServer/bin/PropertyAdmin.sh -d
```
 - **Windows**

```
ASBServer\bin\PropertyAdmin.bat -d
```
- Restart WebSphere Application Server

If your XMeta password has changed, you will need to run AppServerAdmin to update the XMeta password. The AppServerAdmin -db command will run the FilePropagator tool so the command will take longer to complete than in previous versions of Information Server and requires at least 1.25GB of free space in temp.

Run the AppServerAdmin command as displayed in the example on this slide.

Once AppServerAdmin is complete, it is a good idea to check that the new obj-conf.jar is correct. To do this, run the PropertyAdmin command in ASBServer/bin. Be sure that this command returns successfully. If it does not, go back and check the changes you made to obj-conf.jar before continuing. If the test is successful, restart WebSphere.

Update Version.xml

- Update <IS_HOME>/Version.xml on InformationServer server
- Open Version.xml in text editor
 - Locate XML element
 - <PersistedVariable encrypted="false" name="xmeta.db.hostname" persistent="true" readonly="false" value="myserver"/>
 - Modify "value" attribute with new XMeta server name
 - SQL Server with named instances required format
 - value="myserver\named_instance"
 - Locate next XML element
 - <PersistedVariable encrypted="false" name="xmeta.db.port" persistent="true" readonly="false" value="50000"/>
 - Modify "value" attribute with new port number

Next, update the values in the Version.xml file. This file contains the installation records that are used by the installation program. Keeping the file current avoids problems with future installations. The Version.xml file is located in the IBM InfoSphere® Information Server installation directory on the same server as the obj-conf.jar file.

Open the Version.xml file in a text editor and locate the PersistedVariable XML element that has the name attribute equal to xmeta.db.hostname. You will need to modify the value attribute to contain the correct XMeta server name. Note that if you are using SQL Server with named instances, you will need to use the format of servername\named_instance for the XMeta server name.

Next you need to locate the PersistedVariable XML element that has the name attribute equal to xmeta.db.port. Modify the value for port if your port number has changed. Save your changes.

DB2 clustered or HADR configurations ONLY

- Update automatic client reroute with new host name and port information
 - Login to primary node
 - Run the following command
 - db2 update alternate server for database database using hostname standby_IP port port

Example:

```
db2 update alternate server for database XMeta using hostname 192.0.2.7 port 60000
```

- Restart WebSphere

In an IBM InfoSphere Information Server installation with a clustered DB2 database system setup, you must update the automatic client reroute with the new host name and port information. This slide displays the format of the update alternate server command along with an example of the command. Once that is complete, restart WebSphere.

If you are not using Information Server with a clustered DB2 database, skip this step.

Update WebSphere Application Server configuration (1 of 6)

- Login to WebSphere Application Server Administrative console
- 8.7 - Change all 4 data sources highlighted in yellow
- 8.5 – ASB Staging Repository JDBC DS is **NOT** in 8.5

The screenshot displays the 'Data sources' configuration page in the WebSphere Application Server Administrative Console. The left-hand navigation pane shows the following structure:

- Resources
 - Schedulers
 - Object pool managers
 - JMS
 - JDBC
 - JDBC providers
 - Data sources** (WebSphere Application Server V4)

The main content area shows the 'Data sources' configuration page. The 'Scope' dropdown menu is set to 'All scopes'. The table below lists the data sources:

Select	Name	JNDI name	Scope	Provider	Description	Category
<input checked="" type="checkbox"/>	ASB JDBC DataSource	jdbc/ASBDataSource	Node=ippsaix00035Node01.Server=server1	ASB JDBC Provider	ASB JDBC Provider	Data source template
<input checked="" type="checkbox"/>	ASB JDBC XA DataSource	jdbc/ASBDataSourceXA	Node=ippsaix00035Node01.Server=server1	ASB XA JDBC Provider	ASB XA JDBC Provider	Data source template
<input checked="" type="checkbox"/>	ASB Staging Repository JDBC DS	jdbc/StagingDataSource	Node=ippsaix00035Node01.Server=server1	ASB Staging Repository JDBC Provider	ASB Staging Repository JDBC Provider	Data source template
<input checked="" type="checkbox"/>	Default DataSource	DefaultDataSource	Node=ippsaix00035Node01.Server=server1	Derby JDBC Provider	Default DataSource	Datasource for the WebSphere Default Application
<input checked="" type="checkbox"/>	JRreport JDBC DataSource	jdbc/JRreportDataSource	Node=ippsaix00035Node01.Server=server1	ASB JDBC Provider	JRreport JDBC DataSource	Data source template

11 Relocating the XMeta repository for Information Server version 8.5 © 2012 IBM Corporation

Login to the WebSphere Application Server Administrative Console. Click the Resources tab on the left side and then click JDBC and then Data sources underneath. This will display four data sources in version 8.5 and five data sources in 8.7. In addition to the four in 8.5, 8.7 also includes the ASB Staging Repository JDBC data source. The changes described in the next few slides will need to be done on all of the data sources highlighted in yellow on this slide. To start, click the first data source, ASB JDBC DataSource. If you do not see the data sources displayed on this slide, go to the Scope section, click the drop down and select All scopes. All of the data sources should now appear in the box.

Update WebSphere Application Server configuration (2 of 6)

- Modify connection properties – DB2

Name	Value
* Driver type	4
* Database name	xmeta
* Server name	orr.swg.usma.ibm.com
* Port number	50000

Apply OK Reset Cancel

For XMeta on DB2, scroll to the bottom of the screen for the data source and modify the connection properties as required. Click Apply.

Update WebSphere Application Server configuration (3 of 6)

- Modify connection properties – Oracle

JDBC providers

JDBC providers > ASB JDBC Provider > Data sources > ASB JDBC DataSource

Use this page to edit the settings of a datasource that is associated with your selected JDBC provider. The datasource object supplies your application with connections for accessing the database.

Configuration

Test connection

General Properties

- Scope: cells:orffnode01:Cell:nodes:orffnode01:servers:server1
- Provider: ASB JDBC Provider
- Name: ASB JDBC DataSource
- JNDI name: jdbc/ASBDataSource
- Use this data source in container managed persistence (CMP)

Additional Properties

- Connection pool
- WebSphere Application Server data source
- Custom properties**

Related Items

- J2EE - J2C authentication data

Select	Name	Value	Description	Required
<input type="checkbox"/>	serverName	dbdev2		false
<input type="checkbox"/>	portNumber	1521		false
<input type="checkbox"/>	databaseName	orffland		false
<input type="checkbox"/>	webSphereDefaultIsolationLevel	2		false
<input type="checkbox"/>	enable2Phase	false		false
<input type="checkbox"/>	SID	orffland		false

Total 6

13

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For XMeta on Oracle, on the Configuration tab, click Custom Properties on the right side under the Additional Properties heading. Once in Custom Properties, click the settings that have changed and set them to the appropriate values. Click Apply.

Update WebSphere Application Server configuration (4 of 6)

- Modify connection properties – Oracle RAC

JDBC providers

JDBC providers > ASB JDBC Provider > Data sources > ASB JDBC DataSource

Use this page to edit the settings of a datasource that is associated with your selected JDBC provider. The datasource object supplies your application with connections for accessing the database.

Configuration

General Properties

- Scope: [cells:orffnode01:Cell:nodes:orffnode01:servers:server1]
- Provider: [ASB JDBC Provider]
- Name: [ASB JDBC DataSource]
- JNDI name: [jdbc/ASBDataSource]
- Use this data source in container managed persistence (CMP)

Additional Properties

- Connection pool
- connections
- WebSphere Application Server data source properties
- Custom properties

Related Items

- JAS - J2C authentication data

Select	Name	Value	Description	Required
<input type="checkbox"/>	serverName	rac1		false
<input type="checkbox"/>	portNumber	1521		false
<input type="checkbox"/>	webSphereDefaultIsolationLevel	2		false
<input type="checkbox"/>	enable2Phase	false		false
<input type="checkbox"/>	serviceName	orcl		false
<input type="checkbox"/>	alternateServers	(rac1:1521,rac2:1521,rac3:1521)		false

14

Relocating the XMeta repository for Information Server version 8.5

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This slide displays an example of an Oracle RAC configuration. Click the values that have changed and set the values appropriately.

Update WebSphere Application Server configuration (5 of 6)

- Modify connection properties – SQL Server

JDBC providers

JDBC providers > ASB JDBC Provider > Data sources > ASB JDBC DataSource

Use this page to edit the settings of a datasource that is associated with your selected JDBC provider. The datasource object supplies your application with connections for accessing the database.

Configuration

Test connection

General Properties

- Scope: [cells:omnode01:Cell:nodes:omnode01:servers:server1]
- Provider: [ASB JDBC Provider]
- Name: [ASB JDBC DataSource]
- JNDI name: [jdbc/ASBDataSource]
- Use this data source in container managed persistence (CMP)

Additional Properties

- Connection pool
- WebSphere Application Server data source
- Custom properties

Related Items

- JAS - J2C authentication data

New Delete

Select	Name	Value	Description	Required
You can administer the following resources:				
<input type="checkbox"/>	serverName	IBM-KPOWERS\SQLEXPRESS		false
<input type="checkbox"/>	portNumber	1433		false
<input type="checkbox"/>	databaseName	xmeta		false
<input type="checkbox"/>	webSphereDefaultIsolationLevel	2		false
<input type="checkbox"/>	enable2Phase	false		false
Total 5				

15

Relocating the XMeta repository for Information Server version 8.5

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This slide displays an example on SQL Server. Click the settings that have changed and set them to the appropriate values. If you are using SQLServer named instances, be sure your server name is in the format of servername\instance name as displayed in the example on this slide. Click Apply.

Update WebSphere Application Server configuration (6 of 6)

JDBC providers

JDBC providers

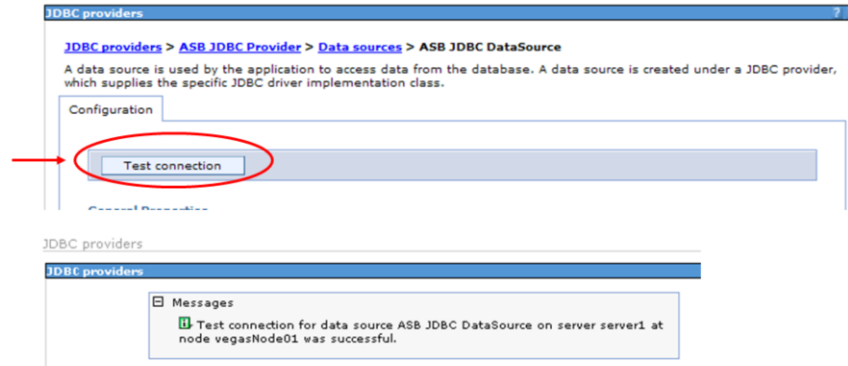
Messages

- ⚠ Changes have been made to your local configuration. Click [Save](#) to apply changes to the master configuration.
- ℹ The server may need to be restarted for these changes to take effect.

In the messages box at the top of the page, click Save to save to the master configuration.

Test connection

- Test connection



The screenshot shows the 'JDBC providers' configuration page. The breadcrumb trail is 'JDBC providers > ASB JDBC Provider > Data sources > ASB JDBC DataSource'. A description states: 'A data source is used by the application to access data from the database. A data source is created under a JDBC provider, which supplies the specific JDBC driver implementation class.' In the 'Configuration' section, a 'Test connection' button is highlighted with a red circle and a red arrow points to it from the left. Below the configuration page, a 'Messages' box shows a green checkmark and the text: 'Test connection for data source ASB JDBC DataSource on server server1 at node vegasNode01 was successful.'

- Stop and restart WebSphere

Once the changes have been saved, test your new connection by clicking the Test connection button at the top of the Data Sources page where you made the server changes. If the connection is successful, you will see a message at the top of the screen indicating success. If it is unsuccessful, go back and check the modified data source settings.

Once the test completes successfully, go back and modify the remaining data sources in the same manor. After all changes have been made, saved, and successfully tested, stop and restart WebSphere.

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