

InfoSphere Information Server

Relocating the XMeta repository for Information Server version 8.0.1 and 8.1



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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 8.0.1 and version 8.1.

Objectives

- Backing up XMeta, IS, and key files
- Update Information Services Framework (ISF) configuration
- Update XMeta username and password
- 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 will also describe how to update the XMeta user name and password, and 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/obj-conf.jar – 8.1
 - InformationServer/ASBServer/apps/sql/obj/obj-conf.jar – 8.0.1
 - InformationServer/ASBServer/apps/sql/obj-conf-pojo.jar – 801 only
 - InformationServer/ASBServer/etc/package.compiler.properties – 801 only
 - Do not leave copy of obj-conf.jar in Information Server 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 will be 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 obj-conf.jar is not left in the IBM Information Server 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.

Updates to ISF configuration (1 of 3)

- Stop WebSphere Application Server
 - cd /opt/IBM/WebSphere/AppServer/bin
 - ./stopServer.sh server1 –username <wasuser> –password <password>
- Create temporary empty directory and make it current working directory
 - mkdir /tmp/isftmp
 - cd /tmp/isftmp
- Extract ojb-conf.jar into temp directory
 - 8.0.1
 - /opt/IBM/WebSphere/AppServer/java/bin/jar xf /opt/IBM/InformationServer/ASBServer/apps/sql/ojb/ojb-c.conf.jar
 - 8.1
 - /opt/IBM/WebSphere/AppServer/java/bin/jar xf /opt/IBM/InformationServer/ASBServer/apps/lib/ojb-conf.jar

The next step is to update the ISF configuration. To do this, first you will need to stop WebSphere. cd into the Websphere/AppServer/bin directory and run ./stopServer.sh server1 –username <user> –password <password>, where <user> is your wasadmin username and <password> is your wasadmin password.

After stopping the WebSphere Application Server, create a temporary directory and set it as your current working directory by running:

```
mkdir /tmp/isftmp then cd /tmp/isftmp
```

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. Use the command shown on this slide for your version of Information Server. You will need to adjust your path to the Information Server base directory to match your installation. This command will extract ojb-conf.jar and place the contents in your temp directory.

Updates to ISF configuration (2 of 3)

- Edit repository_database.xml

Linux® or UNIX®:

vi repository_database.xml

Windows®:

Notepad repository_database.xml

| | |
|--------------|---|
| DB2® | dbalias="//host:50000/dbname" |
| Oracle | dbalias="oracle://host:1521;SID=dbname" |
| MS SQLServer | dbalias="sqlserver://host:1433;DatabaseName=dbname" |

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 Notepad if on Windows. Search for the dbalias attribute. Use the table displayed on this slide to correctly update this field. Edit the dbalias attribute with the right host, port and dbname value, and save the file.

Updates to ISF configuration (3 of 3)

- Rejar ojb-conf.jar with updated information
 - Version 8.0.1
`/opt/IBM/WebSphere/AppServer/java/bin/jar cf /opt/IBM/InformationServer/ASBServer/apps/sql/ojb/ojb-conf.jar .`
 - Version 8.1
`/opt/IBM/WebSphere/AppServer/java/bin/jar cf /opt/IBM/InformationServer/ASBServer/apps/lib/ojb-conf.jar .`
- 8.1 - Remove temp directory
- 8.0.1 - Delete all files within temp directory

After updating the dbalias attribute, you can now 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. Use the command displayed on this slide for your version of Information Server to rejar the file. You will need to adjust your path to the Information Server base directory to match your installation.

You must remember to put the “space dot” at the end of the jar command. After this step is completed, you need to clean up the temp directory. If you are using 8.1, you should delete the temporary directory. If you are on 8.0.1, you need to remove all the files under the temp directory but leave the directory itself as you will need to use it again in the next step.

Updates to ISF configuration – 8.0.1 ONLY (1 of 2)

- Repeat dbalias modification to ojb-conf-pojo.jar
- Extract ojb-conf-pojo.jar
`/opt/IBM/WebSphere/AppServer/java/bin/jar xf /opt/IBM/InformationServer/ASBServer/apps/sql/ojb-conf-pojo.jar`
- Change dbalias in repository_database.xml
- Jar ojb-conf-pojo.jar
`/opt/IBM/WebSphere/AppServer/java/bin/jar cf /opt/IBM/InformationServer/ASBServer/apps/sql/ojb-conf-pojo.jar .`

The next steps are for the Information Server 8.0.1 only. If you are using version 8.1, skip this step.

Next, while in your temp directory, you will need to extract the ojb-conf-pojo.jar file using the jar utility of a JDK™. For example, the JDK in WebSphere. Repeat the same modification of the dbalias attribute in the repository_database.xml file as you just made for the ojb-conf.jar file and then re-jar ojb-conf-pojo.jar.

Updates to ISF configuration – 8.0.1 ONLY (2 of 2)

- Edit InformationServer/ASBServer/etc/package.compiler.properties
- Look for correct Parameter Key

| | |
|--------------|---|
| DB2 | PackageCompiler.connectionURL.db2_8_nls |
| Oracle | PackageCompiler.connectionURL.oracle10g_nls |
| MS SQLServer | PackageCompiler.connectionURL.sqlserver_nls |

- Parameter value format

| | |
|--------------|--|
| DB2 | jdbc:db2://host:50000/dbname |
| Oracle | jdbc:ibm:oracle://host:1521;SID=dbname |
| MS SQLServer | jdbc:ibm:sqlserver://host:1433;DatabaseName=dbname |

The next steps are still for Information Server 8.0.1 only. If you are using version 8.1, skip this step.

Edit the package.compiler.properties file located in the InformationServer/ASBServer/etc directory. Look for the PackageCompiler.connectionURL parameter key associated with your XMeta database. Update the host, port and dbname with the new values and save the file.

Updates to ISF configuration

- Edit database.properties

Linux or UNIX:

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

Windows:

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

- Update URL parameter

Example:

```
url=jdbc\:db2\://NewServer.com\:50008/XMeta
```

Edit the database.properties file in the InformationServer/ASBServer/bin/sql directory. Update the URL parameter to reflect the new repository server name and port. After updating, save the file.

Update XMeta username and password

- Run AppServerAdmin.sh command

Linux or UNIX:

```
/opt/IBM/InformationServer/ASBServer/bin/AppServerAdmin.sh -db -user <username> -password  
<password>
```

Windows:

```
C:\IBM\InformationServer\ASBServer\bin\AppServerAdmin.bat -db -user <u> -password <p>
```

- Start WebSphere Application server as root
cd /opt/IBM/WebSphere/AppServer/bin
./startServer.sh server1

To complete the updates to the ISF configuration, run the AppServerAdmin.sh command to update the XMeta username and password. The command can be found in the InformationServer/ASBServer/bin directory. Replace the <username> with your XMeta Database username and the <password> with the correct password. Once the AppServerAdmin command has run successfully, as root, restart WebSphere. cd to the WebSphere/AppServer/bin directory and type ./startServer.sh server1.

Update Version.xml

- Update <IS_HOME>/Version.xml on InformationServer server
- Open Version.xml in text editor
 - Locate XML element
 - <Property name="XMetaDatabaseHost" value="xmeta.db.hostname "/>
 - Example:
 - <Property name="XMetaDatabaseHost" value="myserver.newco.com "/>
 - Modify "value" attribute with new XMeta server name
 - SQLServer with named instances required format
 - value="myserver\named_instance"
 - Locate next XML element
 - <Property name="XMetaDatabasePortNumber" value="xmeta.db.port "/>
 - Example:
 - <Property name="XMetaDatabasePortNumber" value="5000"/>
 - Modify "value" attribute with new port number

Next, update 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 Property name = "XMetaDatabaseHost" XML element. 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 Property name="XMetaDatabasePortNumber" XML element. Modify the value for the port number if your port number has changed. Save your changes.

Update WebSphere Application Server configuration (1 of 6)

- Login to WebSphere Application Server Administrative console

<https://<hostname>:9043/ibm/console>

Welcome wasadmin | [Logout](#) | [Support](#) | [Help](#)

[Welcome](#)
[Guided Activities](#)
[Servers](#)
[Applications](#)
[Resources](#)
 JMS Providers
JDBC Providers
 Resource Adapters
 Asynchronous beans
 Schedulers
 Cache instances
 Object pool managers
 Mail Providers
 URL Providers
 Resource Environment Providers
 Security
 Environment
 System administration
 Monitoring and Tuning
 Troubleshooting
 Service integration
 UDDI

JDBC providers

JDBC providers are used by the installed applications to access data from databases.

Scope: Cell=**vegasNode01Cell**, Node=**vegasNode01**, Server=**server1**

Cell : vegasNode01Cell
 Node : vegasNode01
 Server : server1

Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it works, [see the scope settings help](#)

Apply

Preferences

New Delete

| Select | Name | Description |
|-------------------------------------|---|---|
| <input checked="" type="checkbox"/> | ASB JDBC Provider | |
| <input type="checkbox"/> | ASB XA JDBC Provider | |
| <input type="checkbox"/> | Cloudscape JDBC Provider | Cloudscape S1 embedded JDBC2-compliant Provider |
| <input type="checkbox"/> | Cloudscape JDBC Provider (XA) | Built-in Cloudscape JDBC Provider (XA) |

Total 4

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Login to the WebSphere Application Server Administrative Console. Click the Resources tab on the left side and then click JDBC Providers underneath. In the middle of the screen, select the server : server1 radio button, and click Apply. Next click ASB JDBC Provider link in the box below the Apply button.

Update WebSphere Application Server configuration (2 of 6)

JDBC providers

Messages

Modifying the implementation class name will eliminate the ability to create data sources and data sources version 4 from templates.

JDBC providers > ASB JDBC Provider

JDBC providers are used by the installed applications to access data from databases.

Configuration

General Properties

- * Scope
cells:vegasNode01Cell:nodes:vegasNode01:servers:server1
- * Name
ASB JDBC Provider

Description

Additional Properties

- Data sources
- Data sources (Version 4)

In the ASB JDBC Provider window, click Data sources under Additional Properties on the right side of the screen.

Update WebSphere Application Server configuration (3 of 6)

- Open each data Source listed and perform steps listed

JDBC providers

JDBC providers > ASB JDBC Provider > Data sources

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.

Preferences

Manage state...

| Select | Name | JNDI name | Description | Category |
|-------------------------------------|---|------------------------|----------------------|----------|
| <input checked="" type="checkbox"/> | ASB JDBC DataSource | jdbc/ASBDataSource | Data source template | |
| <input type="checkbox"/> | JReport JDBC DataSource | jdbc/JReportDataSource | Data source template | |

Total 2

You may have more than one data source listed. Perform the steps described on each data source in the list. Click the link for the data source to be modified.

Update WebSphere Application Server configuration (4 of 6)

- Modify connection properties – DB2

DB2 Universal data source properties

* Database name
xmeta

* Driver type
4

* Server name
vegas

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 (5 of 6)

- Modify connection properties – Oracle and SQL Server

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

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.

Configuration

Test connection

General Properties

Additional Properties

Scope
[path:/Node01/Cell:nodes/fjNode01/servers/server]

Name
ASB JDBC DataSource

JNDI name
jdbc/ASBDataSource

Use this Data Source in container managed persistence (CMP)

Connection pool properties

WebSphere Application Server data source properties

Custom properties

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

Total 6

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For XMeta on Oracle and SQL Server, 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 (6 of 6)

JDBC providers

JDBC providers

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In the Messages box at the top of the page, click Save to save to the master configuration. Next, click the Save button in the next page.

Test connection

Test connection

The screenshot shows the configuration page for a data source. The breadcrumb trail is: **JDBC providers** > **ASB JDBC Provider** > **Data sources** > **ASB JDBC DataSource**. Below the breadcrumb, there is a description: "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." Underneath, there is a "Configuration" section with a "Test connection" button highlighted by a red circle and a red arrow. 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

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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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