External Driver Configuration for Process Integration 7.0

Applies to:

This article will applies to XI3.0 and PI 7.0. If it needs to talk to the other database, we'll need to deploy the drivers in PI.

Summary

A Business Scenario with communication to a database or a messaging system using XI-3.0/PI 7 Adapter Framework requires additional drivers to be installed on the J2ee engine. The external drivers provided as Java archives (jars) by the corresponding Vendor of the Database or Messaging Systems are required for the JDBC and JMS Adapters.

You have to deploy these drivers to make them usable for the adapters in the SAP J2EE Server. For this purpose, the Adapter Engine installation provides the archive aii_af_jmsproviderlib.sda, to which you have to add the required driver files. If PI does not have an external JDBC driver, you can not use JDBC adapters to connect to external DB servers.

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Overview

The following steps are a summary of the step by step configuration described in this document.

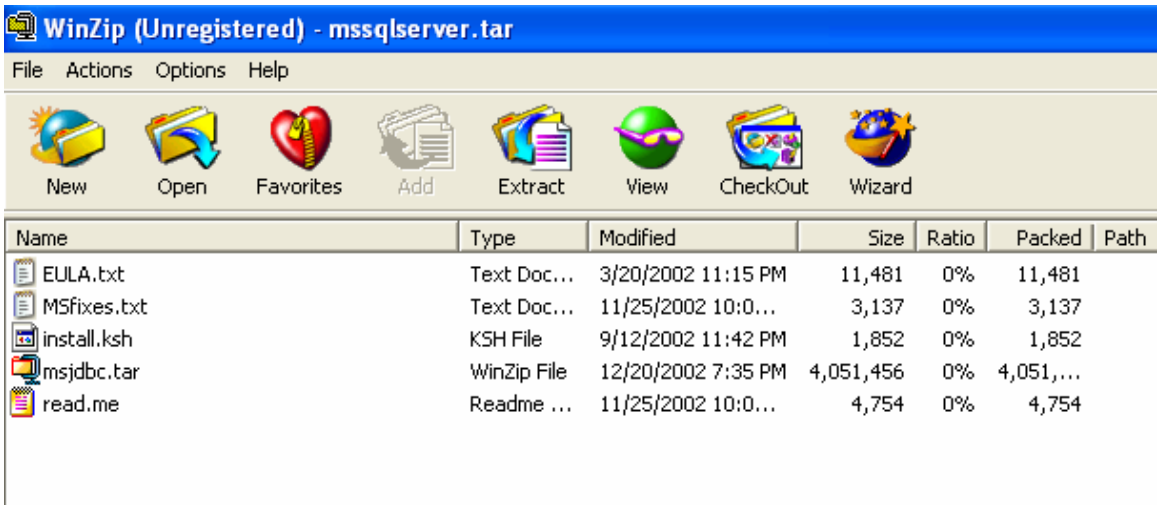
1. Download the required JDBC driver from DB manufacturer's side. Note that the Driver version shall be considered, you can get the DB version first, and then determine which JDBC driver version you shall user.
2. Download the "How to Install and Configure external drivers fro JDBC&JMS" from how-to page of SAP. One important SDM tool is packed in the guide.
3. Using this tool, add your JDBC driver files (they should be JAR files) to file aii_af_jmsprovider.sda.
4. Start SDM (in windows, using Remote under program folder of SDM directory), and deploy the changed aii_af_jmsprovider.sda. The program will automatically restart your J2EE server, when done, the JDBC driver will be available.

Prerequisites: Download the Jar files for Oracle and SQL

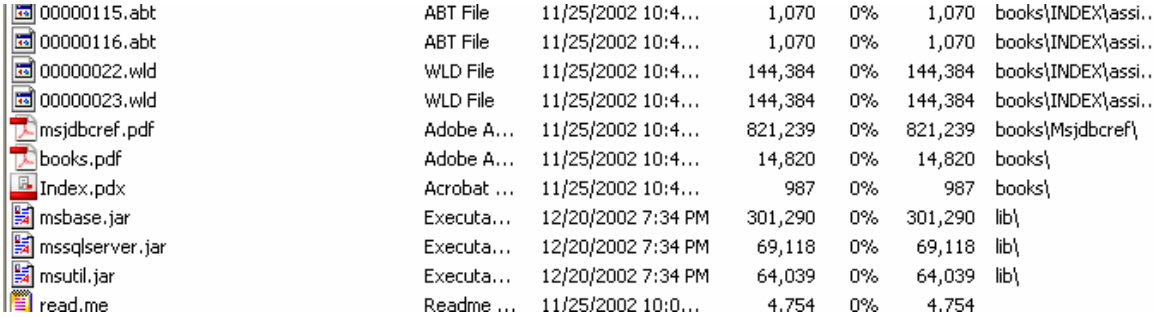
For Downloading the JAR files for SQL. Go to this below link:

http://www.microsoft.com/downloads/details.aspx?FamilyID=4F8F2F01-1ED7-4C4D-8F7B-3D47969E66AE&displaylang=en

Download **mssqlserver.tar** on the bottom of the page. If you unzip it, under it will be like the below screen shot.



Then Unzip the tar msjdbc.tar files you will find msbase.jar,mssqlserver.jar and msutility.jar .



00000115.abt	ABT File	11/25/2002 10:4...	1,070	0%	1,070	books\INDEX\assi..
00000116.abt	ABT File	11/25/2002 10:4...	1,070	0%	1,070	books\INDEX\assi..
00000022.wld	WLD File	11/25/2002 10:4...	144,384	0%	144,384	books\INDEX\assi..
00000023.wld	WLD File	11/25/2002 10:4...	144,384	0%	144,384	books\INDEX\assi..
msjdbcref.pdf	Adobe A...	11/25/2002 10:4...	821,239	0%	821,239	books\Msjdbcref\
books.pdf	Adobe A...	11/25/2002 10:4...	14,820	0%	14,820	books\
Index.pdx	Acrobat ...	11/25/2002 10:4...	987	0%	987	books\
msbase.jar	Executa...	12/20/2002 7:34 PM	301,290	0%	301,290	lib\
mssqlserver.jar	Executa...	12/20/2002 7:34 PM	69,118	0%	69,118	lib\
msutil.jar	Executa...	12/20/2002 7:34 PM	64,039	0%	64,039	lib\
read.me	Readme ...	11/25/2002 10:0...	4.754	0%	4.754	

Then copy the three jar files and add into the **aii_af_jmsproviderlib.zip** file.

Same thing for downloading the Oracle file: follow the below link:

http://www.oracle.com/technology/software/tech/java/sqlj_jdbc/index.html

Download the classes.12 zip.

Installation Steps

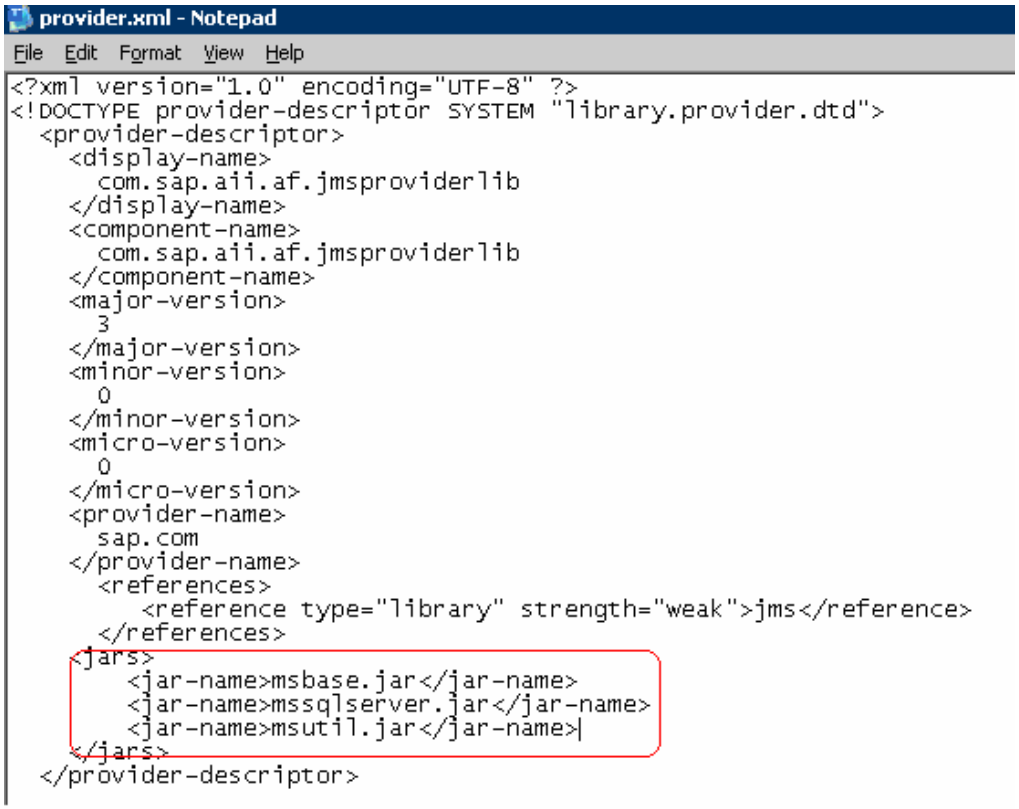
Edit the provider.xml File

Zipping the downloaded jar files with this file aii_af_jmsproviderlib.sda

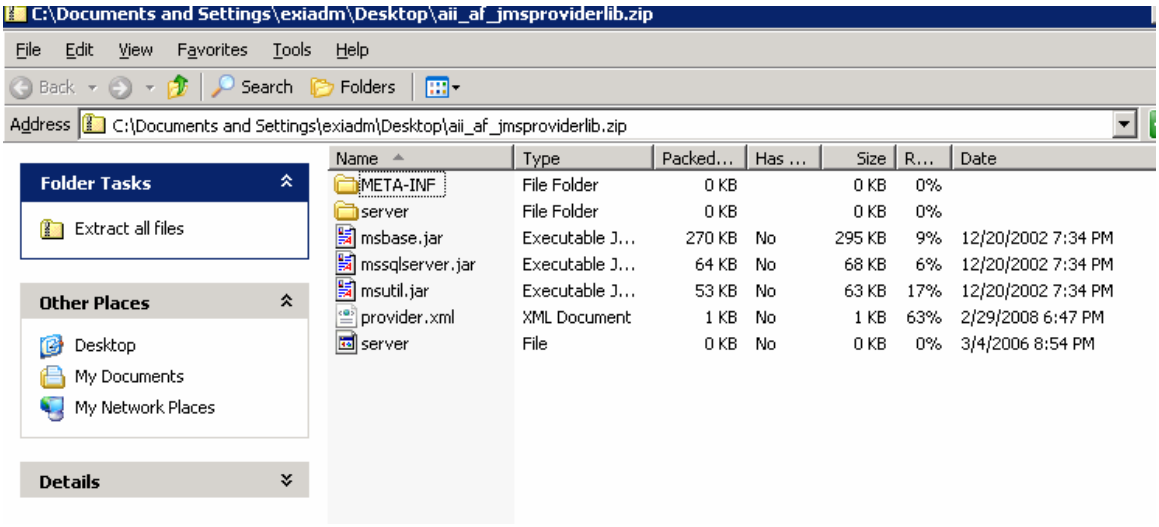
- Copy the file aii_af_jmsproviderlib.sda from the path:
  D:\usr\sap\SID\DVEBMGS00\SDM\root\origin\sap.com\com.sap.aii.af.jmsproviderlib
  to some other local drive.

Note: This SDA file named aii_af_jmsproviderlib.sda which is shipped as an empty stub with your XI installation.

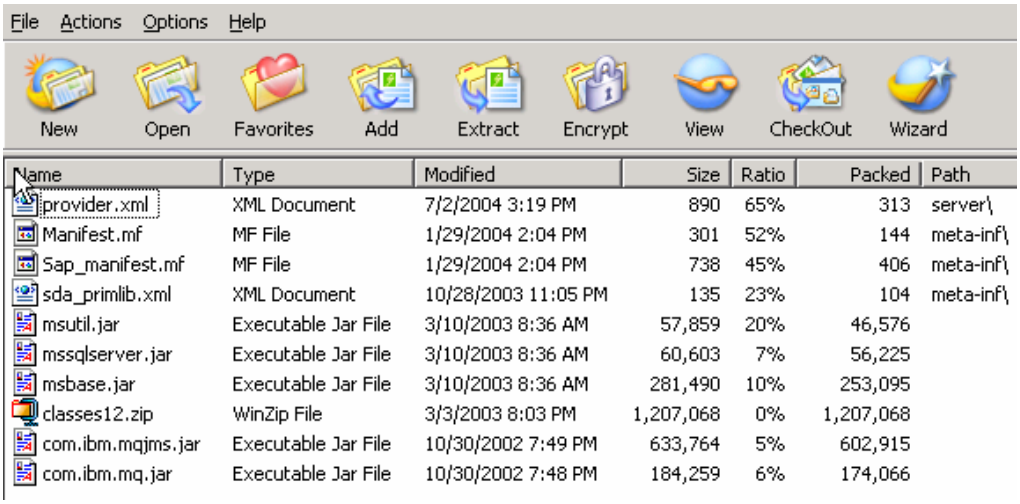
- Unzip the file **aii_af_jmsproviderlib.sda**. After unzipping the archive there are 2 folders created under the provided directory 1. META-INF and 2. Server. In that server folder there will be a provider.xml file
- Edit that file by mentioning the jar file, which I did below.



After mentioning the JAR files in the provider.xml then you need to zip the file. At last the file has to look like this.



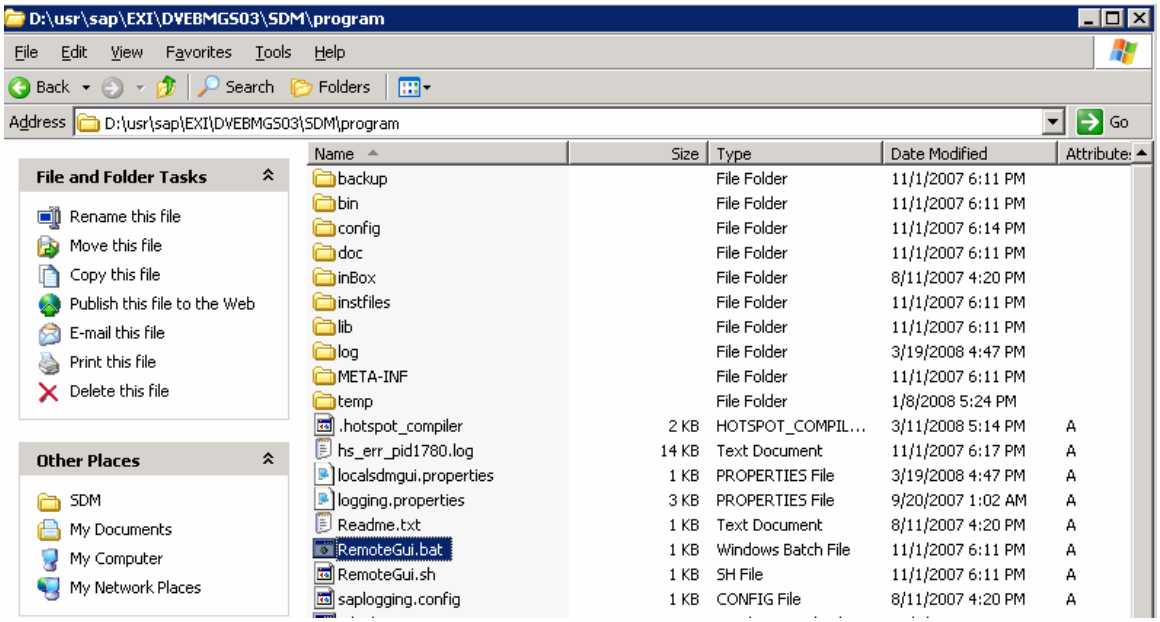
Note: In my case it's for only SQL if you are doing for oracle and IBM then see the below picture.



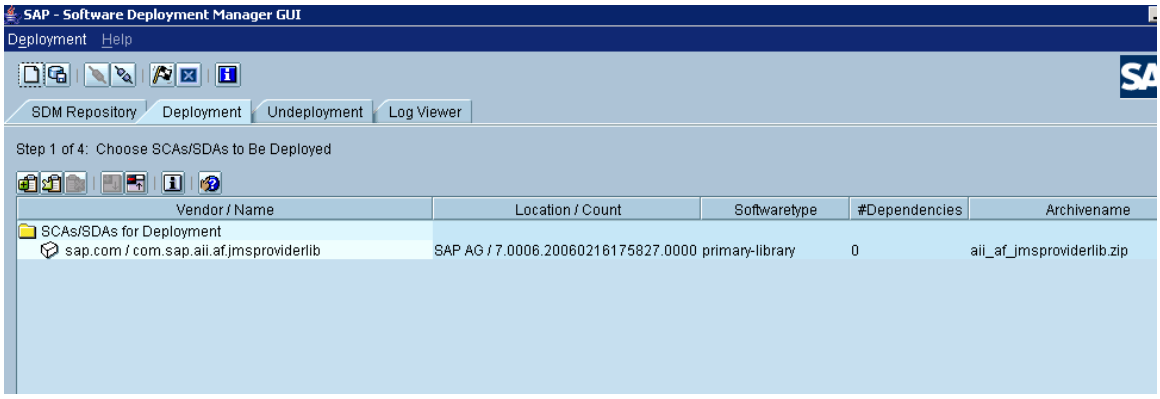
Deploy in SDM

Now deploy the file: aii_af_jmsproviderlib.zip on the j2ee engine using SDM

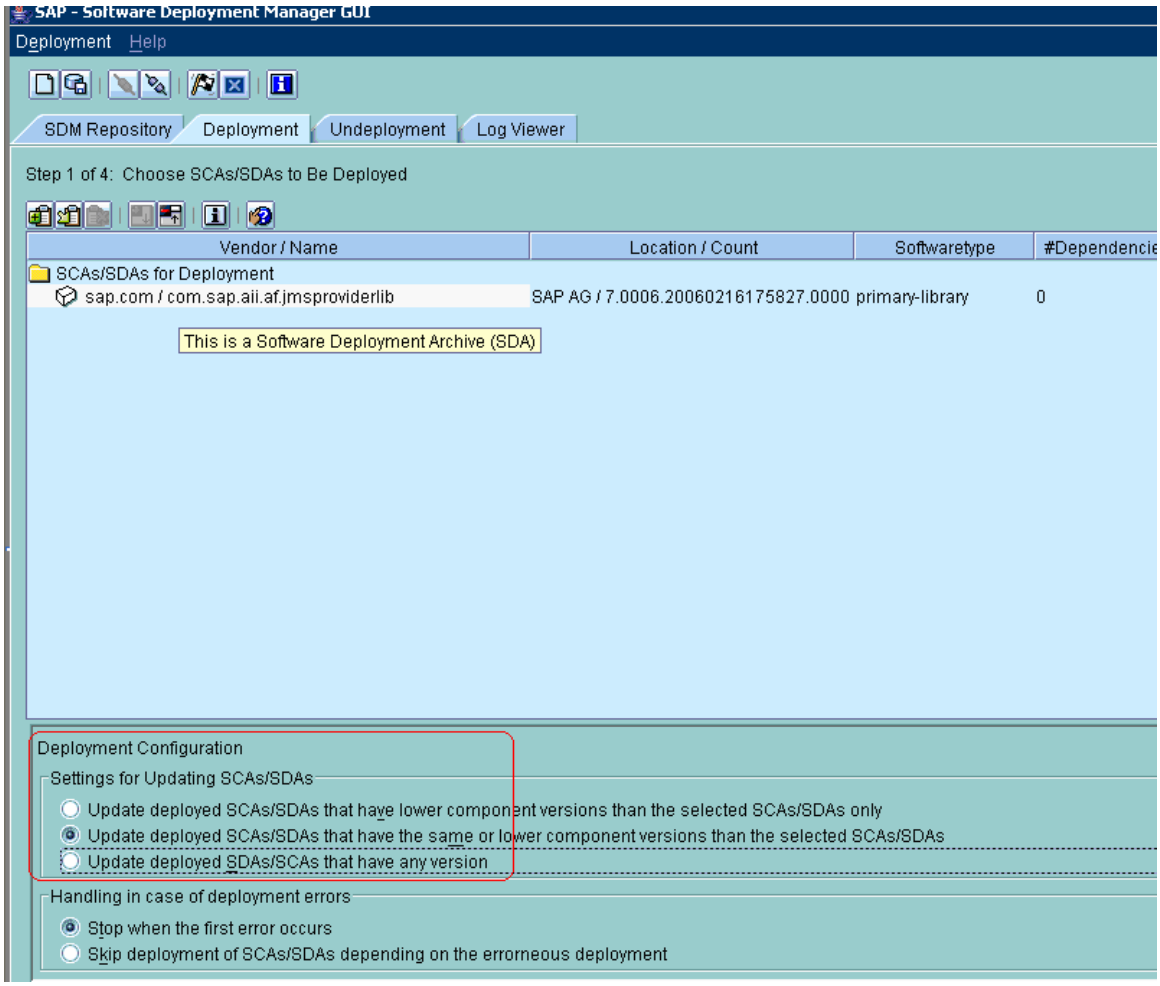
Start the SDM GUI and Login with SDM user



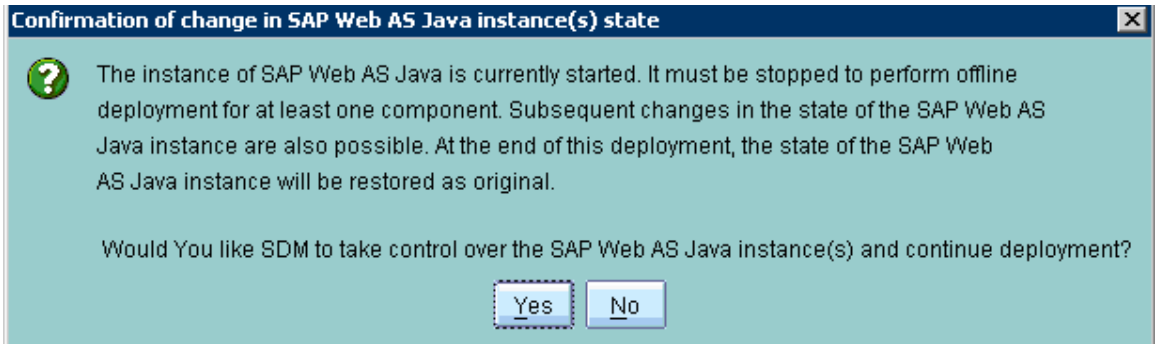
Then choose deployment tab and choose the import icon from that choose the zip file which we altered.



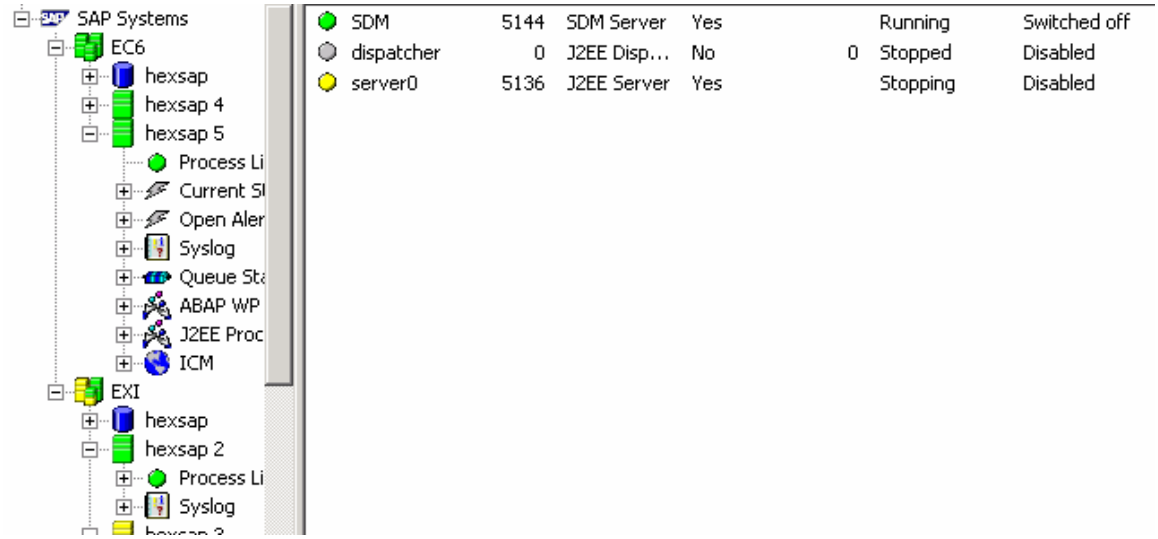
Then before pressing the next button choose the action which is mentioned below or else it will throw an error by mentioning (i.e.) in the same version. This action is mandatory before proceeding further.



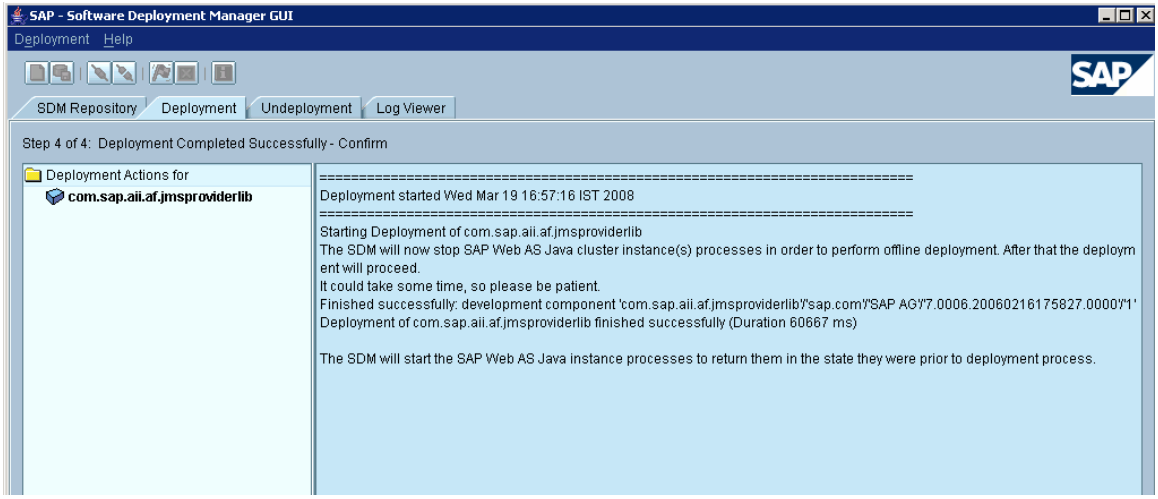
After pressing the next button it will start the process for deployment before proceeding it will show the warning message as the system will restart due to some offline activities.



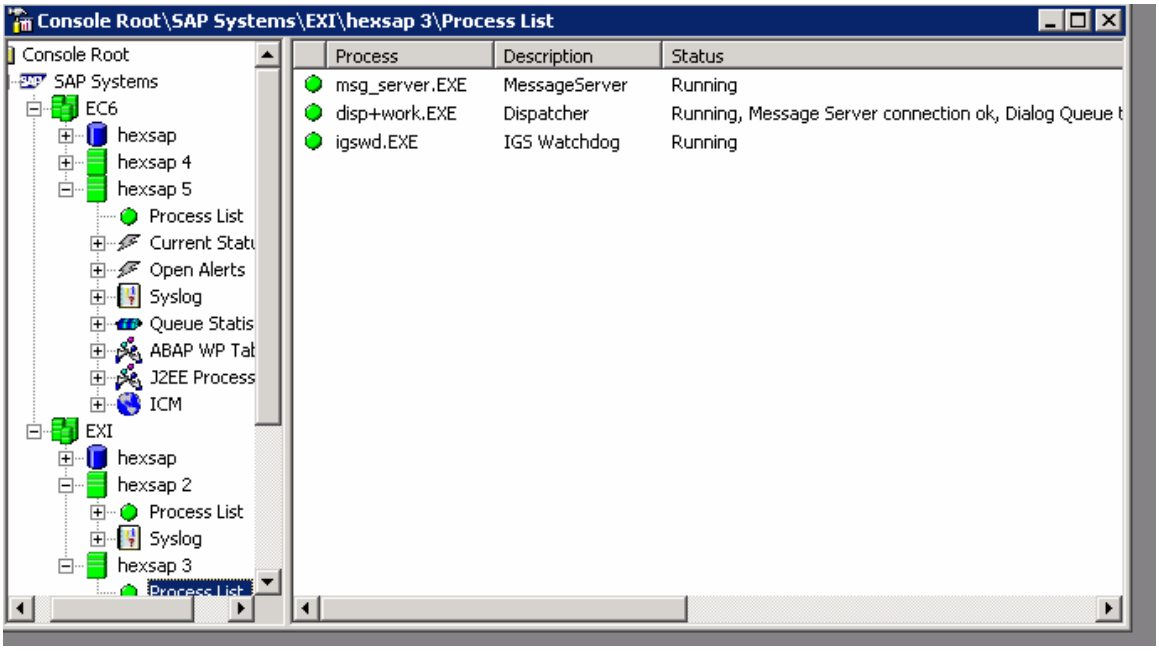
Due to this java instance will get stopped you can monitor the instance status in MMC



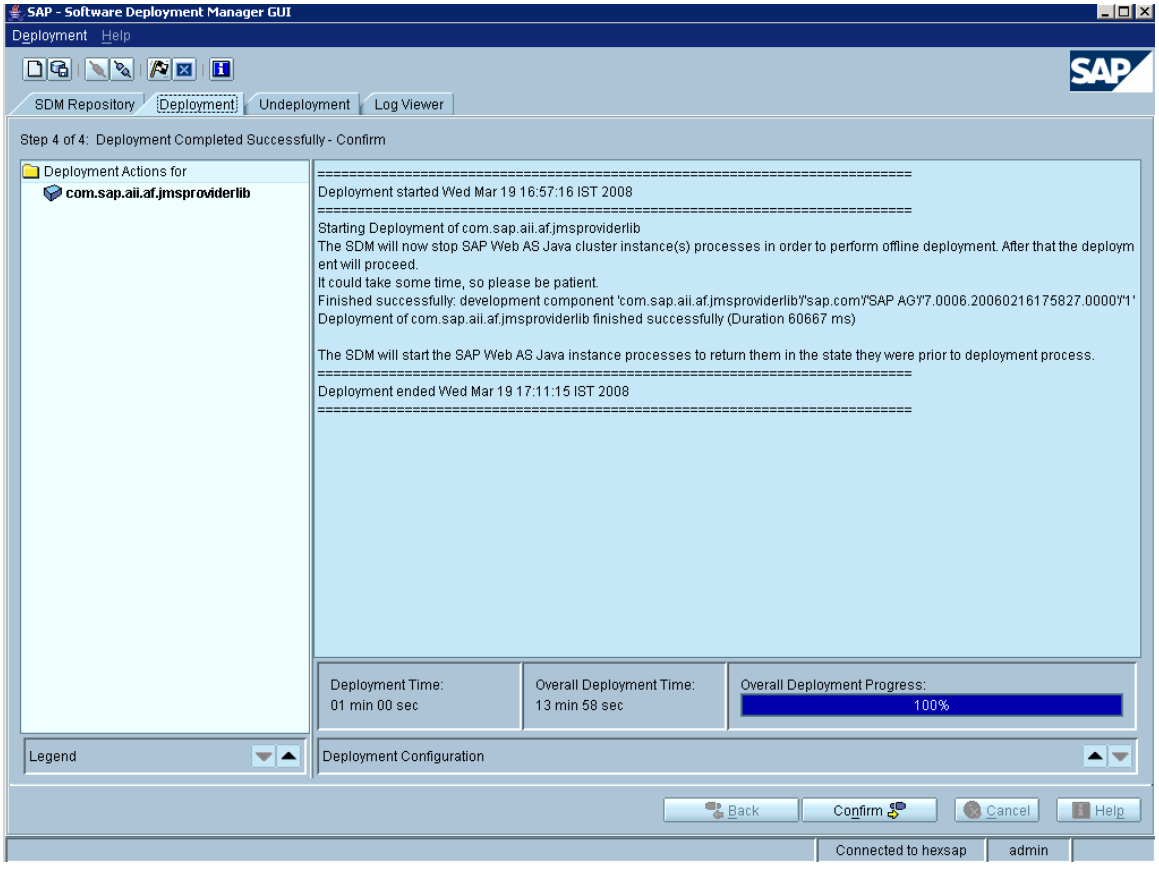
Then after changing in to the offline mode it will show this status message in SDM



Once the server is up you can check the instance status in MMC it will show the green status.

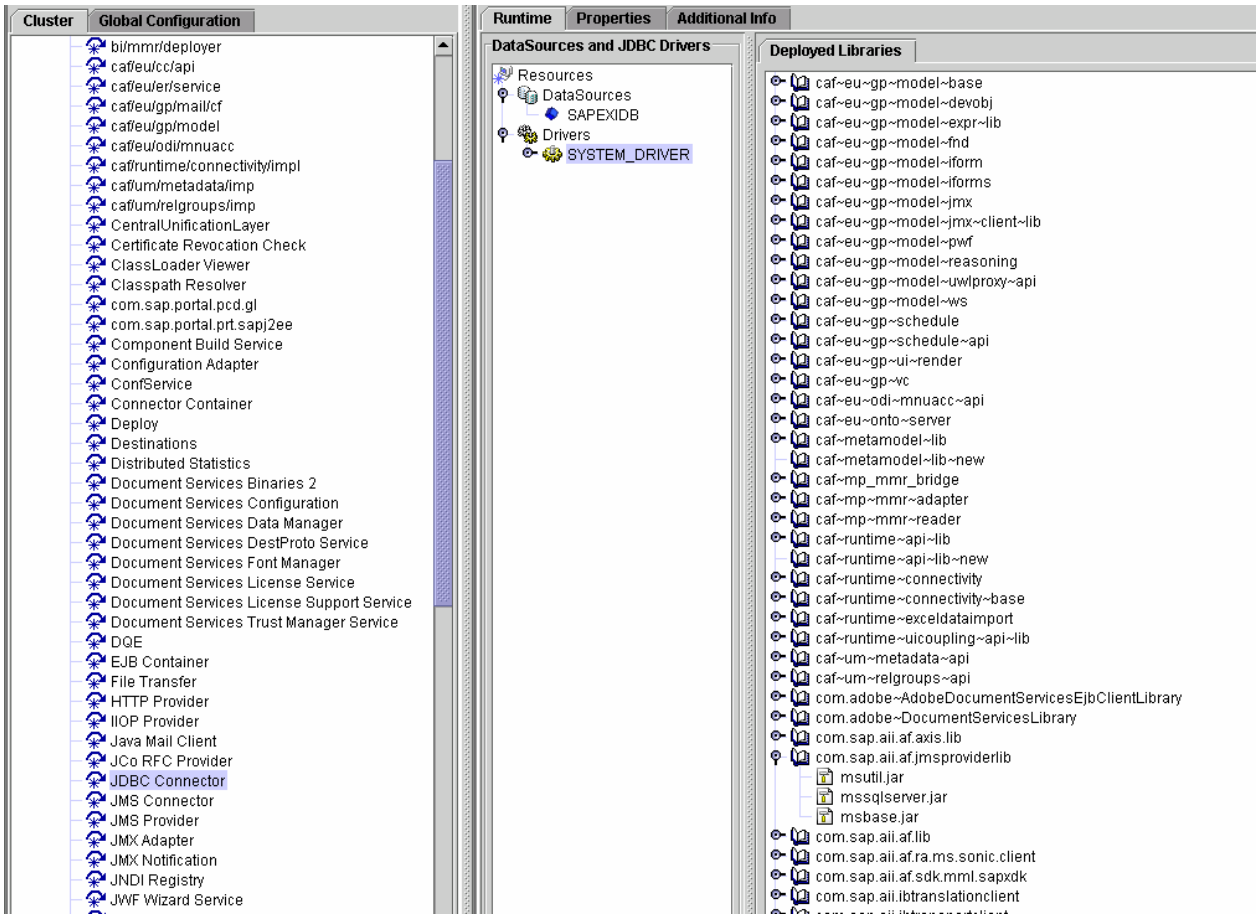


It will ask for the confirmation for the deployment.



Verification in Visual Administrator

For verification check the files in Visual administrator→JDBC Connector→system driver→com.sap.aii.af.jmsprovider.lib



By doing this you can check the deployed jdbc connector in your server.

Appendix

Useful Sap notes:

Note 831162 - FAQ: XI 3.0 / PI 7.0 / PI 7.1 JDBC Adapter

Note 941317: Known problems and incompatibilities with certain JDBC drivers are also documented in

Important Note from SDN

Oracle JDBC Driver (classes12.zip / classes12.jar) Deadlocks

Unfortunately, I frequently notice hanging database connections. A thread dump taken according to the instructions in note 710154 shows one or more blocking JDBC Sender/Receiver threads and optionally that the JVM has detected a deadlock.

The Oracle classes12.zip / classes12.jar driver is compatible with JDK 1.2 and 1.3 only, but not with JDK 1.4. Upgrade to a current version of the driver (ojdbc14.jar). For details, refer to note 941317.

Make sure that you remove classes12.zip / classes12.jar from aii_af_jmsproviderlib.sda prior to adding the new driver as per the instructions in the answer to question #1 above as you will get a class name collision otherwise (all JARs from aii_af_jmsproviderlib.sda are loaded into the same class loader and the driver class name of both driver versions is the same).

Before deploying the updated driver, ensure that the new version is still compatible with your Oracle database server release. For details, refer to the release notes provided by Oracle.

References

www.help.sap.com

www.sdn.sap.com

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