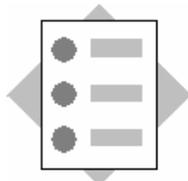




## Import XI Support Packages



In this exercise you will:

- Patch all ABAP Components related to XI
- Patch Java Components related to XI

## Import XI Support Packages

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This description focuses on the procedure to patch a One-Host-Installation on the XI host  
In the chapter *Install XI Patches* other forms of installations are described.

General remarks:

- If you copy files to the application server make sure that you copy them as binaries.
- Please read the notes carefully.
- Make sure that you have installed Java Web Start 1.0.1. Test that your web start installation is working by logging on to the Integration Repository or Integration Directory.
- This describes all the patches necessary to patch to XI SP3

### ***1-1 Backup***

Make a full database backup.

Make a backup of the directories */usr/sap/<SID>/global* and */usr/sap/<SID>/DVEBMGS<INSTANCE NUMBER>*. This is especially necessary for directories related to the J2ee part of the WEB AS.

### ***1-2 Lock the productive clients***

For each productive client:

Goto transaction SU10:

Choose in the field *User Selection* the button *Address data*.

Select all users you want to lock with *F4*.

Choose Transfer.

Choose lock.

### ***1-3 Patch the kernel. We do implement a full kernel patch.***

Make a backup of the directory `/sapmnt/<SID>/exe/`.

Stop the sap system including the database.

Goto the service marketplace.

Alias patches → SAP WEB AS → SAP WEB AS 6.20 → Binary Patches → SAP Kernel 6.20  
<Bit of your platform> **Unicode** → <your platform> → Database independent

Select:

- TP
- R3TRANS
- Disp+Work
- librfc
- saposcol

Unpack these files and copy them into `/sapmnt/<SID>/exe/`.

Special: Disp+Work####.SAR contains the file FRFC.SAR. Unpack it copy it to the directory  
`/usr/sap/<SID>/DVEBMGS<Instance number>/j2ee/os_libs/`.

Goto the service marketplace.

Alias patches → SAP WEB AS → SAP WEB AS 6.20 → Binary Patches → SAP Kernel 6.20  
<Bit of your platform> → <your platform> → SAP DB independent

Select

- LIB\_DBSL

Unpack all files and copy them into `/sapmnt/<SID>/exe/`.

Start the SAP System and check if login is possible.

### ***1-4 Install the latest SAINT/SPAM Update.***

Goto the service marketplace (service.sap.com).

Alias patches → SAP SAINT/SPAM UPDATE

Update SAINT/SPAM in client 000.

## ***1-5 Patch the SAP JCO***

### **In a Unix System**

Make a copy of the following directories:

*/usr/sap/<SID>/DVEBMGS<INSTANCE NUMBER>/j2ee/cluster/server/additional-lib*  
*/usr/sap/<SID>/DVEBMGS<INSTANCE NUMBER>/j2ee/os\_libs*

Goto the service marketplace.

Alias patches → SAP WEB AS → SAP WEB AS 6.20 → Binary Patches → SAP JCO 2.0.  
→ <your platform>

Select

- JCO20

Note:

- The current JCO20\_09 leads to Jco core dumps in combination with the adapter engine. Therefore we did not patch it.  
The problem is that JCO20\_08 is not on the service market places any more. If you want to patch it you can find a current version on the XI 2.0 SR1 Installation CD in the directory JLIBS/UNIX/<your platform>.

Unpack the JCO20.SAR.

Make sure that the J2EE is shutdown in transaction SMICM: Administration → J2ee Server  
→ Send Hard Shutdown → Without restart.

Copy the files to the following directories:

- sapjco.jar → */usr/sap/<SID>/DVEBMGS<INSTANCE NUMBER>/j2ee/cluster/server/additional-lib*
- librfccm.so → */usr/sap/<SID>/DVEBMGS<INSTANCE NUMBER>/j2ee/os\_libs*
- libsapjcorfc.so → */usr/sap/<SID>/DVEBMGS<INSTANCE NUMBER>/j2ee/os\_libs*
- Unpack FRFC.SAR from disp+work: frfclib.so →  
*/usr/sap/<SID>/DVEBMGS<INSTANCE NUMBER>/j2ee/os\_libs* – Already done during kernel patch

### **In a Windows system**

Add *\usr\sap\<SID>\DVEBMGS<INSTANCE NUMBER>\j2ee\os\_libs* to the PATH variable of user <SID>adm if necessary (at the end)

Stop j2ee engine with hard shutdown in TA SMICM (if not, librfc32.dll cannot be renamed).

Unpack the SAPJCO.SAR file.

Copy the included files to the following directories:

- librfc32.dll – part 1:
  - o In *\Winnt\system32*: Change extension of librfc32.dll. to dll\_old.
  - o Copy librfc32 into *\Winnt\system32*
  - o Register librfc32.dll: *regsvr32 <path to lib32.dll>\librfc32.dll*
  - o Reboot the host.
  - o Stop the J2ee engine in TA SMICM with Hard Shutdown.

- librfc32.dll – part 2:
  - o Copy librfc32.dll into \usr\sap\<SID>\DVEBMGS<INSTANCE NUMBER>\j2ee\os\_libs
- sapjcorfc.dll → \usr\sap\<SID>\DVEBMGS<INSTANCE NUMBER>\j2ee\os\_libs
- Unpack FRFCLIB32.SAR from disp+work: frfclib.dll → \usr\sap\<SID>\DVEBMGS<INSTANCE NUMBER>\j2ee\os\_libs
- sapjco.jar → \usr\sap\<SID>\DVEBMGS<INSTANCE NUMBER>\j2ee\cluster\server\additional-lib

## **1-6 Install the latest Basis Support Packages**

See note *447925 OCS: Known problems with Supp. Packages in Basis Rel.6.20*

### **Confirm open repairs.**

Release transport requests for these repairs. If you do not want to do this, there will be an error during test import if the object is changed in one of the support packages.

### **Define Import queue.**

Log on to client 000 and unpack to directory */usr/sap/<SID>/trans.*

Take care for the split points defined in note 447925.

- SP n to 25.
- Make sure that you plan in SP26 in a separate queue.
- SP 27 to latest SP.

## ***1-7 Install the XI APPINT SP with SPAM***

See note 439915: *Exchange Infrastructure Integration Server 2.00.*

Goto the service marketplace.

Alias patches → SAP EXCHANGE INFRASTRUCTURE → SAP SAP EXCHANGE INFRASTRUCTURE 2.0 → Support Packages → SAPK-20000<latest number>INAPPINT

Log on to client 000 and unpack to directory `/usr/sap/<SID>/trans`.

Generate the SAP\_XI\* roles in transaction PFCG.

Select Utilities → Mass Generation

Role: SAP\_XI\*

Check Generate automatically

Choose Execute.

Generate new profiles Online.

## ***1-8 Upgrade the J2EE Engine***

**Goto the service marketplace.**

Alias patches → SAP WEB AS → SAP WEB AS 6.20 → Binary Patches → J2EE <your platform>

Download SAPJ2EE620C\_##-10001433.SAR.

**Stop the J2EE Engine with a Hard Shutdown:**

Goto Transaction SMICM → Administration → J2EE-Server → Send Hard Shutdown → Without restart.

Check the process list that no java processes are active any more (`ps -ef | grep java`).

If you still see jco processes, you can also check the integration builder start page

<http://sap<SID>:50000/rep/start/index.jsp>

**Update J2ee Engine**

Logon as <SID>adm:

Unpack the file SAPJ2EE620C\_##-10001433.SAR into a temporary directory.

Change right for all shell scripts to 755 if necessary.

Start an X-Client Software, e.g. Exceed.

Set the environment variable for the workstation you are working on.

setenv DISPLAY <IP of your workstation>:0.0

Execute the update program in the temporary directory: `./visual.sh`

The following entries have to be made:

- Choose *Next* on the first screen.
- Choose *Next*.
- Choose as destination directory: `/usr/sap/<SID>/DVEBMGS<INSTANCE NUMBER>/j2ee`.
- Choose *Upgrade*.
- Choose *Start*
- Exit the program with *Exit* .

### **Start the J2ee Engine.**

Goto transaction SMICM → Administration → J2EE-Server → Restart

If you have several J2EE instances, first start the J2EE server on the central instance.

Check the j2ee Engine is running with: `http:<xi hostname>:50000`

You need to wait a couple of minutes until the j2ee engine is started.

## ***1-9 Upgrade SDM***

(See Note 532892)

Goto the service marketplace.

Alias patches → SAP WEB AS → SAP WEB AS 6.20 → Binary Patches → SAP JAVA SL 6.20

Log on as <SID>adm:

Save the directory `/usr/sap/<SID>/DVEBMGS<INSTANCE NUMBER>/SDM` with all subdirectories.

Unpack the latest file `SDMKIT#####.jar` into a temporary directory: `jar -xvf SDMKIT#####.jar`

Change the rights for the update program in the temporary directory: `chmod 755 update.csh`

Call the update program in the temporary directory: `./update.csh`

Exactly The following entries have to be made:

SDM standard installation directory (`/usr/sap/sdm_home`):

`/usr/sap/<SID>/DVEBMGS<INSTANCE NUMBER>/SDM/program/`

Point of Presence of SDM-files (Location of update program): `.` (this is the directory from which `update.csh` was called)

Check in /usr/sap/<SID>/DVEBMGS<INSTANCE NUMBER>/SDM/program that all scripts have the execution rights (755). Change it if necessary.

### ***1-10 Save the configuration of the adapter engine***

Stop the adapter engine. Check that the adapter engine is stopped (http:<XI host name>2:8200 cannot be displayed).

Make a copy of the directory /sapmnt/<SID>/global/tech\_adapter with all its subdirectories.

Switch to the directory tech\_adapter and execute the following files:

```
save_baseconfiguration.cmd  
save_configuration.cmd
```

- If you get the messages  
cp: cannot stat `token.keystorage': No such file or directory  
cp: cannot stat `jms.jar': No such file or directory  
this is not problem. Save\_configuration.cmd cannot find these files. In our case jms.jar was not used, and no tokens have been maintained.

Besides the directory tech\_adapter, the system creates a new directory adapter\_configuration.backup that contains all relevant files for adapter configuration and user management.

Rename the directory tech\_adapter. This is later required for patching the Adapter Engine.

After the import of the XI Support Packages you have to restore this configuration as described in chapter *Restore settings of the adapter engine 1-13*.

### ***1-11 Install XI Support Packages***

See note 588568 for the XI patch procedure.

See Note 544979 Importing Java Support Packages with SDM.

### **One-Host-Installation XI Host**

To patch other Business Systems other than the XI Host, see chapter *Optional – Other Business Systems*.

You always have to apply the XI Support Packages 3 on all components.

If patches are available these can be deployed independently.

The patches are full patches. This means that you only have to deploy the XI Support Package 4.

Goto the service marketplace

Alias patches → SAP EXCHANGE INFRASTRUCTURE → SAP SAP EXCHANGE  
INFRASTRUCTURE 2.0 → Binary Patches

From there download patches for the following components to patch the XI host.<sup>1</sup>

- → SAP BASIC JAVA LIBS 6.20 → OS independent → SAPJBASIS\_<latest patch>.sca
- → XI JAVA CORE 2.0 → OS independent → SAPXIJCORnn\_4.sca
- → INTEGRATION SERVICES SE 2.0 → OS independent → SAPINTSERnn\_4.sca
- → XI CONNECTIVITY SE → OS independent → SAPXICONSnn\_4.sca
- → INTEGRATION BUILDER 2.0 → OS independent → SAPINTBUInn\_4.sca
- → SYSTEM LANDSCAPE DIRECTORY 2.0 → OS independent → SAPSLDnn\_4.sca

Rename all the files (delete the suffix .ZIP)

### Call the Software Delivery Manager (SDM)

See note 544979 Importing Java Support Packages with SDM.

See note 544244 Calling the Software Delivery Manager (SDM).

Start an X-Client Tool and log on as <sid>adm.

Goto the directory /usr/sap/<SID>/DVEBMGS<INSTANCE NUMBER>/SDM/program.

Set the environment variable for the workstation you are working on.

setenv DISPLAY <IP of your workstation>:0.0

Call the SDM with the command ./startSDM.sh

Important: Import SAPJBASIS\_4.sca first!!!.

The SDM Gui starts. Select the 'Deployment' tab.

- Step 1: Select the SCAs downloaded via the *Add SCA/SWC/SDA to deployment list* button and add them to the list of archives to be deployed.  
**Important:** Set the Deployment Configuration to *Use Existing Deployment Parameters* and *Skip SCA's.. of unchanged versions*. Therefore you have to click on the icon in the lower right corner.
- Step 2 to 4: Choose *Next*.
- Step 5. *Start* deployment.
- Step 6: Deployment completed successfully – *Confirm*.

Restart the SAP System including the database.

---

<sup>1</sup> Assuming we have a one-host-installation which out a marketset adapter.

## ***1-12 Update SLD content***

Stop the SLD Server:

Choose Administration → *Stop Server*.

Repeat the persistency settings:

Choose *Administration* → *Persistence Settings*.

In the section *Persistence*:

- Select *Database*.
- Choose *Set*.

In the section *Database Connection Parameters*:

- Specify the Password for User XILDUSER (Default xipass).
- Choose *Set*.

*Start* the SLD server.

Copy the following files from the server to your workstation from which you start the SLD.  
If you start the SLD directly on the XI host you do not need to perform that step.

- usr/sap/<SID>/SYS/global/sld/model/cim26sap12.zip`
- usr/sap/<SID>/SYS/global/sld/model/CR\_Content.zip

Choose the link *Administration*

Choose the link *Import*

Import File: Browse to the file usr/sap/<SID>/SYS/global/sld/model/cim26sap12.zip`

Check *Modify Existing Objects*.

Check *Upgrade CR Content*.

Check after each import that all objects have been loaded.

The number of loaded objects is displayed during the load.

All objects need to be loaded.

- cim26sap12.zip: around 340 objects

Choose the link *Import*

Import File: Browse to the file usr/sap/<SID>/SYS/global/sld/model/CR\_Content.zip

Check *Modify Existing Objects*.

Check *Upgrade CR Content*.

Check after each import that all objects have been loaded.

Check after each import that all objects have been loaded.  
The number of loaded objects is displayed during the load.  
All objects need to be loaded.  
- CR\_Content.zip: around 24000 objects

Check the SLD log if any errors occurred during the upload.  
Additionally check the following directory if there are problems:  
/usr/sap/<SID>/DVEBMGS<INSTANCE  
NUMBER>/j2ee/cluster/managers/console\_logs/Error\_Log#####

If the load terminates due to a OutOfMemory exception check the memory settings:  
Give the J2EE Engine more Memory.

The settings are stored in the file  
/usr/sap/<SID>/DVEBMGS<number>/j2ee/cluster/server/cmdline.properties:

```
IBM/Compaq: JavaParameters=-Dmemory.manager\=1024M -Xmx1024M
```

```
SUN or HP-UX JDK: JavaParameters=-Dmemory.manager\=1024M -Xmx1024M -  
Xms1024M
```

Restart the J2EE engine that the new settings are activated.  
After the load you can reduce the memory settings again.

### ***1-13 Restore the settings of the adapter engine***

Log on as <SID>adm.  
Go to the directory /sapmnt/<SID>/global/tech\_adapter.  
Change the permissions for the executables to 755 if necessary.  
Execute *./restore\_configuration.cmd*

Start the adapter engine in the background.

If there are errors, check if the copied servlet.jar, jms.jar and other jdbc.jar files are still available in the directory tech\_adapter. If not, copy them from the backup tech\_adapter directory into the current tech\_adapter directory.

Check if a new servlet.jar...was supplied by the j2ee engine patch. If that is the case change these files in directory /usr/sap/<SID>/SYS/global/tech\_adapter

## ***1-14 Start Integration Repository and Integration Directory the first time after the import of the XI Support Packages/Patches***

### **1. Start Integration Repository:**

Call the Integration Repository: `http:<sap xi host>:50000/rep`  
Choose the link *Repository*:

When you start the integration Repository the following side:

### **WebStart(TM) applications being prepared**

This procedure may take a few minutes

Try later again [Close...](#)

Check for the process *jarsigner*. This process is responsible for signing jar resources. Do not restart the J2ee Engine while signing the jar resources.

Wait until the process is not running any more. Try to start the Integration Repository again.

Sometimes this process is not displayed with `ps -efx | grep jarsigner`.

In that case check with the command `top` if the java process show a lot of activities.

If the activity goes down, try to start the Integration Repository again.

Troubleshooting:

If you start the Integration Repository too early you will get a download error. In that case close WebStart, wait for a couple of minutes, and try again.

If that does not help see Note 580351 for further information.

### **2. Start the Integration Directory**

Call the Integration Repository: `http:<sap xi host>:50000/rep`  
Choose the link *Directory*:

When you start the integration Directory the following side

### **WebStart(TM) applications being prepared**

This procedure may take a few minutes

Try later again [Close...](#)

Again check for the process *jarsigner*. This process is responsible for signing jar resources. Do not restart the J2ee Engine during the signing of the jar resources.

### ***1-15 Unlock all users***

Unlock the users in SM10 and notify them that the System is available again.

### ***1-16 Test your Business Scenarios***

Make a rough test of the XI functionality:

- SLDCHECK: No errors have to occur
- SXI\_CACHE: A green light has to be displayed.  
Choose *XI Directory Cache* → *Start Complete Cache Refresh*. The update has to work.
- In Integration Repository: Import Test Software component TEST
- In Integration Directory: Create Business Scenario as described in the XI installation guide and activate it.

It is important that you test all Business Scenarios due to possible changes in the XI support packages.

### ***1-17 Optional: Other Business Systems***

#### **Local adapter engine on your business system.**

From there download patches for the following component if you have installed a local adapter engine on your business system.

- → XI CONNECTIVITY SE 2.0 → OS independent → SAPXICONSnn\_4.sca

#### **ABAP proxy runtime on Business System based on WEB AS 6.20**

Install the required BASIS support Packages for the APPINT Add-on (see above).  
No XI patches have to be implemented

#### **Java proxy runtime on your business system based on WEB AS 6.20.**

See note 588435 Installation Messaging System & Java Proxy Runtime.