How to System Copy for ABAP+Java

Applies to:
SAP NetWeaver 7.0 SR2 ABAP+Java on Oracle+Linux.

Summary
This is a how-to document for performing a homogeneous system copy for a ABAP with a JAVA-add in. It describes the steps for which need to be done on the source system and on the target system.

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Preparations

General Information
This document is focused on the JAVA part of the homogeneous system copy. It doesn’t describe all the necessary steps for the ABAP part. I assume that this is more or less well-know.

Documentation
I have used the following documentation:
- System Copy for SAP Systems Based on SAP NetWeaver 7.0 SR2 ABAP+Java.pdf
- Note 784118 - System Copy Java Tools
- Note 831812 - Config Tool shows incorrect parameters after System Copy
- OraBRCopy.pdf

DVDs
You need to have the following DVDs:
- Installation Master
- Kernel Unicode
- Kernel NonUnicode
- JAVA Components
- Oracle Client

Note: you only have to use the NonUnicode DVD if you have a non unicode system.

Source System
This section describes the action which have to be taken on the Source System. How to create the MIGRATION EXPORT CD image. This image contains the data of the exported system, and which you use to install the target system.

<table>
<thead>
<tr>
<th></th>
<th>Create an offline backup of the source database, preferably a backup on disk.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Create an installation directory:</td>
</tr>
<tr>
<td></td>
<td>mkdir /usr/sap/trans/systemcopy (or whatever you like)</td>
</tr>
<tr>
<td></td>
<td>chmod 777 systemcopy</td>
</tr>
<tr>
<td></td>
<td>Note: Preferably the target system should also be able to access this directory.</td>
</tr>
<tr>
<td>3</td>
<td>Download ORABRCOPY.SAR according to note 784118 and copy the archive to the installation directory.</td>
</tr>
<tr>
<td></td>
<td>Unarchive ORABRCOPY.SAR</td>
</tr>
<tr>
<td></td>
<td>SAPCAR -xvf ORABRCOPY_2-20001410.SAR</td>
</tr>
<tr>
<td>4</td>
<td>Execute the OraBRCopy Tool</td>
</tr>
<tr>
<td></td>
<td>Logon as the ora user on the source system</td>
</tr>
<tr>
<td></td>
<td>.ora_br_copy.sh -generateFiles -targetSid &lt;TARGET_DBSID&gt; -tnsAlias</td>
</tr>
<tr>
<td></td>
<td>&lt;SOURCE_DBSID&gt; -password &lt;system's password&gt;</td>
</tr>
</tbody>
</table>
As a result of this action you will find three additional files in your installation directory:
- CONTROL.SQL
- CONTROL.TRC
- ora_br_copy.log

5 Extract the SAP installation software from the Installation_Master DVD
Logon as a root user
`cd /usr/sap/trans/systemcopy` (the directory you have created at step 2)
`<path of the Installation_Master DVD>/sapinst --extract`

6 Start SAPinst
`.sapinst SAPINST_USE_HOSTNAME=<central_instance_hostname> <path of the Installation_Master DVD>/product.catalog`

7 Choose the following path:
Additional Software Life-Cycle Tasks
  System Copy
    Oracle
      Source System
      Distributed system
      Central Instance Export
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Choose Next

8 For the parameter mode choose Typical.

Choose Next

9 Fill in your profile directory.
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10 In this step I received this error message:

```
root@ : Input Error
SAP system is a ABAP or double stack system. Cannot switch this to a Java standalone system.
```

Choose OK

**Note:** *I'm not sure if this is a general issue or just an issue on our site.*

10 The profile directory screen appeared again.
Choose Next

11 Fill in the Database Parameters of the source database, DBSID and Host.

```
Database Parameters

Database ID (DBSID): [Enter the database ID]

Ergolocal Host: [Enter the local host]
```

Choose Next

12 Mark the Use database specific tools.

```
System Copy Method

Use database specific tools: [Select option]
```

Choose Next

13 Fill in the location where you want to store your export file.
(e.g. /usr/sap/trans/systemcopy)
15

In the phase Archive Adobe Document Service data, the export stopped.

16

The error was an permission denied error, while unarchiving a file. The solution for
this problem was as follow:

```
/usr/sap/trans/systemcopy/SAPCAR -c -v -g -i -C
/usr/sap/<SID>/SYS/global/AdobeDocumentServices/TrustManagerService -f
/usr/sap/trans/systemcopy/JAVA/APPS/ADS/Fonts.ADS.SAR
chown -R <sid> adm:sapsys /usr/sap/trans/systemcopy/JAVA/APPS/ADS
```

**Note:** Again, I’m not sure if this is a general issue or just an issue on our site.

---

17 After fixing the issue and closing the log file you can proceed.

Choose Retry

---

18 Task Progress

The Task has been completed successfully.

All phases completed

Execution of Service SAP SRM 5.0 Support Release 2 > Additional Software Life-Cycle Tasks > System Copy > Oracle > Source System > Distributed System > Based on AS ABAP and AS Java > Central Instance Export has been completed successfully

Choose OK
The export has finished successfully and now you can start with the target system.
Target System
This section describes the actions which have to be taken on the Target System. How to import the MIGRATION EXPORT CD image. As I already mentioned I focus on the JAVA part. The document describes the Installation of a new target system. If you want to refresh the target system, just make a copy of your profiles, environment settings, ORA sqlnet files etc.

Preperations

1. If necessary, make a copy of your profiles in the SAP profile directory, a copy of the environment settings of your sidadm and oracle user and your ORA sqlnet files.
   **Note:** Maybe you want to save some other files as well.

2. Clean your target system. Delete your oracle datafiles as you would normally do with a homogeneous system copy.

Central Service Instance

1. Create an installation directory, extract the SAP installation and start the installation.

2. Install the Central Service Instance.
   Choose the following path:
   Additional Software Life-Cycle Tasks
   System Copy
   Oracle
   Target System
   Distributed system
   Based on AS ABAP and AS JAVA
   Central Service Instance (SCS)

   ![Central Service Instance](image)

   Choose next and follow the instructions on the screens.
# How to System Copy for ABAP+Java Database Instance

1. Create an installation directory, extract the SAP installation and start the installation.

2. Install the Database Instance.
   Choose the following path:
   Additional Software Life-Cycle Tasks
   System Copy
   Oracle
   Target System
   Distributed system
   Based on AS ABAP and AS JAVA
   Database Instance
   
   ![Welcome to SAP Installation Master](image)
   
   Choose Next and follow the instructions on the screen.

3. On the database installation method selection screen choose Homogeneous System Copy (Backup/Restore)
4. The installation stops with the following error message:

Follow Note 970518 - Hom./Het.System Copy SAP NetWeaver 7.0 (2004s) SR2
------------------------------------------<D023322, 23/JAN/07>------------------------------------------
Error during system copy with Oracle-specific procedure
vi control.xml
find "update ORACHECK_PAR" and delete row "row.createDb = false;"
Restart the installation

5. On the database schema parameters select screen, fill in the schema of your source system!
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Choose Next

6 Now you have to restore your backup. Pay attention to the file permissions!

Copy the control file which is created on the source system to the database installation directory.

Choose OK

Central Instance

1 Create an installation directory, extract the SAP installation and start the installation.

2 Install the Central Instance.
Choose the following path:
Additional Software Life-Cycle Tasks
System Copy
Oracle
Target System
Distributed system
………..Based on AS ABAP and AS JAVA
………..Central Instance
Choose Next and follow the instructions on the screen.

3. On the Software Package Request select screen, fill in the path of the export of the source system.

   e.g. /usr/sap/trans/systemcopy,

   Choose OK
Follow-Up Activities

**ABAP**

1. Perform follow-up activities in the target system as you normally would do after a Homogeneous System Copy.

**JAVA**

The Java engine is not started automatically. After the target system has been installed and the follow-up activities have been performed, you have to start the Java engine manually.

1. Follow Note 831812 - Config Tool shows incorrect parameters after System Copy

   `/usr/sap/<SID>/DVEBMGSxx/j2ee/configtool

   `/ offlinecfgeditor.sh

   Choose Yes

2. Restart the system JAVA will be started now.

You have to perform the following activities for specific usage types (EP, XI etc) or software units of the copied SAP system as mentioned in the system copy guide.
Related Content

Creating a Homogeneous System Copy
System Copy for SAP Systems Based on SAP NetWeaver 2004s SR2 ABAP+Java
System Copy and Migration
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