

# Overview of System refresh



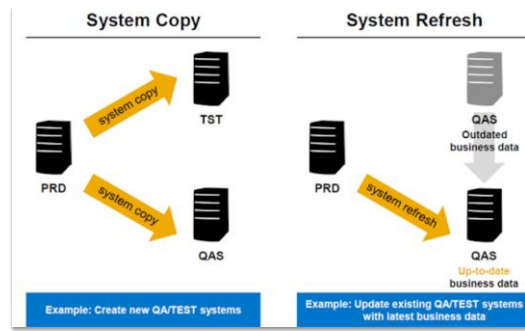


## What is system refresh/copy?

- System refresh is nothing but moving the source system data to target system. Generally system refresh performed on quality/sandbox system using the data to refresh from the production system for testing purpose.

- If the SAP System already exists it is known as System Refresh.

- if the System doesn't exist and you are building a new system using the source system it is known as a system copy.





## Need for System Refresh

- Since the production system is live system hence it consist live and up-to-date data of the business
- When anything new need to be tested that should be performed in quality system and to test the scenario's with the latest data quality system should be in sync with production system. As per SAP standards system refresh need to be done after 3 months



## Types of System Refresh

- **Homogeneous system refresh**

Operating system and Database system are same on the both source and target systems

- **Heterogeneous System Refresh**

Operating system or Database system of the target system is different from the source system. This is also called as OS/DB migration. To perform this activity we need to have **migration key** that is provided by SAP.



## Methods of System Refresh

- Backup and Restore Method

First we have to take the backup of the source DB and then we can restore the same backup file over the source system using control files.

- Export / Import Method

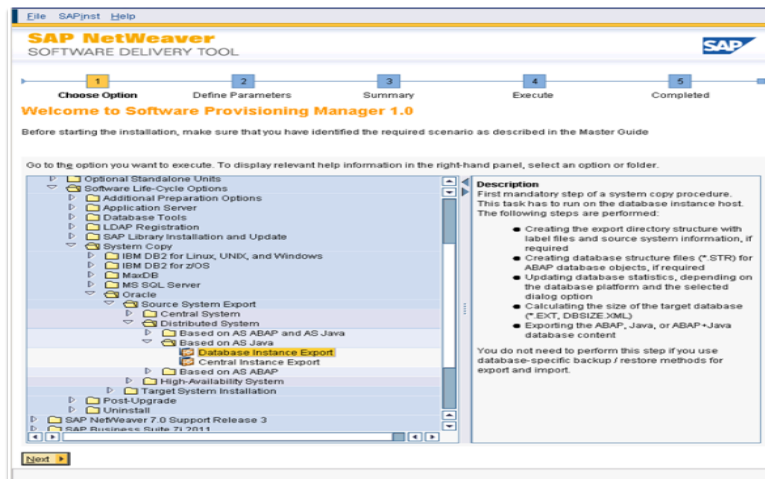
In this method using SWPM first we have to take Export of source database system. Once export is completed then using same export we have to import the database over target system.



## Backup and Restore Method

- Take a backup of Source system (PRD)
- Then Restore it on target system (QAS).
- `oraqas>brrestore -m full -b <backup>.aft -c`
- If backup is online (.ant)--> then restore & recover it.
- If Backup is offline (.aft)-->only Restore it. (here we are using offline backup)
- Once the restore is complete, After that create a trace file at source system (PRD). `SQL>alter database backup controlfile to trace;`
- Copy that trace file to target system QAS & edit it in target system.
- In trace file:Locate "STARTUP NOMOUNT" From current line till end delete everything.
- Then change SID PRD to QAS (:1,\$S/PRD/QAS/g)
- Change Reuse to set
- Change Noresetlogs to resetlogs
- Change ArchiveLog to Noarchivelog
- Now save this file as <tracefilename>.sql at location /oracle/QAS/saptrace/usertrace
- Once you complete the above step, create controlfile using trace file in target system QAS.
- `SQL>@<tracefilename>.sql`
- `SQL> alter database open resetlogs;`

# Export / Import Method



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File SAPInst Help

## SAP NetWeaver

SOFTWARE DELIVERY TOOL

1 Choose Option 2 Define Parameters 3 Summary 4 **Execute** 5 Completed

### Task Progress

Running phase: Prepare to export Java

Phase 2 of 4

- ✓ Database and System Export
- Prepare to export Java
- ◇ Generate Java DBSIZE file
- ◇ Export from Java database

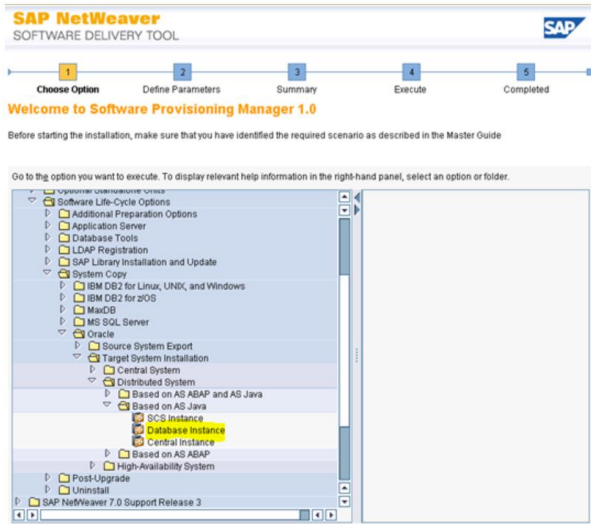
ryadav@gszajnb632: Message Box

! Your SAP system may be running.  
SOLUTION: Stop all SAP application servers and continue. Make sure your database is still running if you export the database instance.

OK Cancel

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For Export and Import method follow the below links:

- <https://blogs.sap.com/2013/12/18/enterprise-portal-system-refresh-document-part-1/>
- <https://blogs.sap.com/2013/12/16/enterprise-portal-system-refresh-document-part-2/>



## Phases of Refresh

- Below are the phases for the system refresh:
  1. Pre-checks for the source and target system
  2. Pre refresh activity
  3. Database Restore and Recovery
  4. Post refresh activity



## Prerequisite for System Refresh

1. Study on the Current Utilization of resources on Target system and Source System.
2. Check the available CPU's & memory on the Target hardware and Source System.
3. Compare the database sizes of Target hardware and Source System.
4. Compare the existing FS & current utilization of the same on Target system and Source System.
5. Study the systems integrated to target system in **SM59**( Configuration of RFC connection).  
There are three ways to do it:
  - 1.Take Screenshots of the Configurations.
  - 2.By doing Table Export(using **R3Trans** Utility)
  - 3.By saving tables in TOC (transport of copies using **SE01**)
6. Some interfaces are connected to TARGET or other (mainly to PI) on a special requirement. Make a note of it.
7. Compare the software versions of SAP application on both the systems.
8. Make a note of any additional add-ons on the systems if any from the above step.
9. Compare the Oracle Database & client versions.(Note: It need to be done carefully if version doesn't match we can't proceed forward with it)



11. Check the existing SLD settings.(SLDAPICUST)
12. Check all the existing developments, open transports.
13. In this we need to check for 2 things:
  1. Open Transport: Contact the Owner of TR and ask to take appropriate action or else administrator needs to delete it.
  2. Transport in release state(Make a backup of in-flight transport list).
14. Number of Open Transports; Local Transports - Quick analysis on the transports.
15. Consolidate all the list and send it across to the related projects (optional).
16. Prepare a list if anything has to be retained.
17. Check for a FS on the DB host OS level to store the backup of Production .
18. Check if the schema name is same on Source as well as Target.



# Pre Refresh Activity

## 1) Export of User Master

**Schedule Job**

Source Client: 000

Profile name: SAP\_USER

Background Server (Optional):

☒ Immediately  
☒ No Printer Dialog

**Dr verification**

Client Export

You Have Chosen the Following Parameters:

Profile Name: SAP\_USER

Source Client: 000

System Name: CSS

☐ Customizing Data  
☒ Authorization Profile & Roles  
☐ Application Data  
☒ User Data  
☐ Cross-Client Customizing

☐ Flavors  
☐ Change Documents

Continue?

Continue

**Dr BPO Client Export**

New since Release 4.5: Import by TMS (see below)

Client export:

Up to 3 requests are created, depending on the data selected and available:

1. "CKSMD00069" for transporting cross-client data, if you have selected this
2. "CKSMT00069" for transporting client-specific data
3. "CKSKK00069" for transporting client-specific texts, provided texts are available in this client

When the transport requests have been created successfully, the data is exported asynchronously by starting the transport program up at operating system level, and can take several hours, depending on the data volume. The status of the export can be found using either Transaction SCC3 or Transaction SE01 and specifying the transport request.

Client Export from Client 000 : 5

Date	Time	Source Status Text	Profile	Mode	Test mode
06.03.2018	14:24:03	Exported Successfully	SAP_USER	Export	

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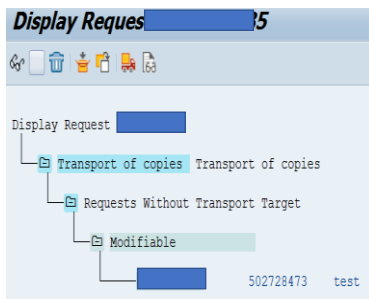


### 3) Export RFCs/Partner Profiles/Logical Systems by creating TR



Below are the tables to export:

RFCDES, RFCDOC, RFCHECK, EDIPORT, EDP12, EDP13, EDP21, EDPP1, TBD00, TBDLS, etc.



The screenshot shows the 'Change request/task' screen in SAP. It displays a table with the following columns: 'Short Description', 'Pri...', 'Ob...', 'Object Name', 'Fu...', 'Lock/Import Status', and 'L...IMG Activity'. The table is currently empty, and the 'Object Name' column is highlighted in yellow.

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## 4) Clean up Job Log Directory

**Job Overview**

Refresh

Release

Spool

Job log

Step

Application servers

Help

User

Group

Printer

Job overview from: 00.00.0000 at: : :  
to: 00.00.0000 at: : :  
Selected job names: \*SAP\_REORG\*  
Selected user names: \*

☒ Scheduled ☒ Released ☐ Ready ☐ Active ☐ Finished ☐ Canceled  
☐ Event controlled Event ID:  
☐ ABAP program Program name :

JobName	Spool list	Job documentation	Job CreatedBy	Status	Start date	Start Time	Duration(sec.)	Delay (sec.)
<input checked="" type="checkbox"/> SAP_REORG_ABAPDUMPS			YVEDAGIR	Scheduled			0	0
<input type="checkbox"/> SAP_REORG_JOBS 2			GANDER90	Scheduled			0	0
<input type="checkbox"/> SAP_REORG_JOBSTATISTICS			IN93791	Scheduled			0	0
<input type="checkbox"/> SAP_REORG_MONE_R3_STAT_DB			IN93791	Scheduled			0	0
<input type="checkbox"/> SAP_REORG_ORPHANED_JOBLOGS			AASRAHA2	Scheduled			0	0
<input type="checkbox"/> SAP_REORG_ORPHANED_TEMP_FILES			AASRAHA2	Scheduled			0	0
<input type="checkbox"/> SAP_REORG_PRIPARAMS			AASRAHA2	Scheduled			0	0
<input type="checkbox"/> SAP_REORG_SPOOL			MAXELS15	Scheduled			0	0
<input type="checkbox"/> SAP_REORG_SPOOL_EVENING			GANDER90	Scheduled			0	0
<input type="checkbox"/> SAP_REORG_XMILOG			AASRAHA2	Scheduled			0	0
*Summary							0	0

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## 5) Export SCOT Configuration



SAPconnect: General node data of node SMTP

General information

Node SMTP

Description Mail Server

Maximum waiting time for repeat send attempt procedure:

Hours/minutes 0 / 1

☐ Node in use

SMTP Connection

Mail Host #####e2ksmt01.e2k.ad.ge.com

Mail Port 25

Supported address types

☒ Fax Set

☒ Internet Set

☐ Pager (SMS) Set

Last changed by ADMIN on 29.11.2018

SAPconnect: Address type for node

General information

Node SMTP

Description Mail Server

AddrType Internet

Address areas

Address area

\*ge.com

\*mailhost.ad.ge.com

Output Formats for SAP Documents

SAPscript/Smart Forms PDF

ABAP List HTM

Business Object/Link TXT

RAW Text TXT

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## 6) Export SLDAPICUST configuration

Maintain SLD Access Data				
Test				
Alias Name	Prim.	Host Name	Port No.	User
SAP_CONFIG	<input checked="" type="checkbox"/>	emsapx13.cloud.ge.com	51300	SLD_CL_X13

## 7) Logon Group Details

CCMS: RFC Server Group Maintenance		
Delete Assignment Delete Group Remove instance		
Logon Group	Instance	Status
329	sap3esbx1_SE3_62	

CCMS: Maintain Logon Groups		
Delete Assignment Delete Group Remove instance		
Logon Group	Instance	Status
SPACE	sap3esbx1_SE3_62	

## 8) Export Profile



Go to profile path `/usr/sap/<SID>/SYS` and take copy of profile directory.

```
ustlslpwr530:clgadm 9> ls -ltr
total 0
drwxr-xr-x  3 clgadm  sapsys      96 Jul  1  2008 exe
drwxr-xr-x  4 clgadm  sapsys      96 Jul  1  2008 gen
drwxr-xr-x  2 clgadm  sapsys      96 Jul  1  2008 src
lrwxr-xr-x  1 clgadm  sapsys      18 Jul 18  2016 global -> /sapmnt/CLG/global
lrwxr-xr-x  1 clgadm  sapsys      19 Jul 18  2016 profile -> /sapmnt/CLG/profile
ustlslpwr530:clgadm 10> pwd
/usr/sap/CLG/SYS
ustlslpwr530:clgadm 11>
```

- 9) Take snaps of STMS configuration
- 10) Take snap of tRFC and Outbound qRFC Configuration from SMQS and SMQR
- 11) Take DB13 snap for backup strategy details
- 12) Take snap of batch job server configuration using SM61
- 13) Take snap of SMICM



- 14) Take STRUST snap
- 15) Take operation modes snap using SM63 and RZ03
- 16) Take snap of partner profiles(LS) using WE20
- 17) Take snap of IDOC ports using WE21
- 18) Secure the required passwords of OS users ; <sidadm>
- 19) Secure the required passwords of Application Users ; DDIC/000
- 20) Secure the required passwords of DB users; SYSTEM; SCHEMA users
- 21) Download required license for Target and have it stored on OS Level
- 22) Send out a communication to all required stakeholders about the downtime
- 23) Set a system message SM02 with the timelines & unavailability



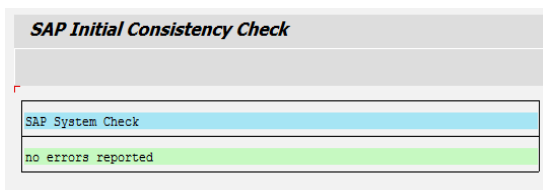
## Database Restore and Recovery

1. Stop SAP Application, Database and Listener.  
Stop the SAP application from OS level using Command **“stopsap R3”**
2. Delete the existing datafiles from Target database and rename current control files on target system
3. Restore backup
4. Recover the database
5. Create Control file.
6. Start SAP application
7. Lock all the production users
8. Set SAP background process to 0 and Suspend all the jobs.
9. Restart SAP application



## Post Refresh Activity

- 1) Change parameters before start SAP SYSEM - rdisp/btctime = 0 and rdisp/wp\_no\_btc=0
- 2) Start the Sap application server
- 3) Apply SAP LICENSE
- 4) Execute the report BTCTRNS1 in SE38 to suspend the jobs in target system
- 5) Disable Fax and Email in SCOT and SM59 by disabling the node
- 6) Perform initial consistency check



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- 7) Make the STMS configuration using SE06 and STMS(using the snaps taken in pre-refresh activity)
- 8) RDDNEWPP -- to schedule the job RDDIMPDP in system for transport. **Run report in client 000**
- 9) Using Tcode SPAD to Import printers in target system which we exported during pre-refresh
- 10) Import the TR of RFCs/Partner Profiles/Logical Systems which was created during the pre-refresh activity
- 11) Excute report BTCTRS2 in se38 to release the suspended jobs
- 12) Revert the profile directory with the backup of it taken during the pre-refresh activity. (Path= usr/sap/<sid>/sys)
- 13) RZ10 – import profiles from active servers
- 14) Delete the operation mode of source system from RZ03 and make similar as snap taken of RZ03 during pre-refresh.





15) Delete the instance of source system from the SMLG tcode.

## 16) Logical System Conversion – BDLS

**Tool: Conversion of Logical System Names**

Converting logical system names

Old Logical System Name


New Logical System Name

☒ Conversion of Client-Dependent and Client-Independent Tables  
(e.g. Renaming Original System or Following Database Copy)

☐ Conversion of Client-Dependent Tables  
(e.g. Following a Client Copy)

☐ Test run ☐ Check Existence of New Names in Tables

Number of Entries per Commit:

Tables to be Converted  to  

**Options**

☐ Determine Relevant Tables Again

☒ Start Conversion of Tables with Special Handling

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- 17) Run the report RSBCS\_REORG to clear the send request from the SOST
- 18) Run the report RSTRFCQD to clear the outbound queues
- 19) Run the report RSPO0041 to clear the spool entries.
- 20) Run the tcode SGEN to the Generate load
- 21) Import the User master TR created during pre-refresh and once import successful perform action on tcode SCC7.

The screenshot shows the 'Client Import Post-Processing' dialog box in SAP. The 'Request' field is set to 'CKSKT0009'. The 'Profile name' is 'SAP\_USER', 'Export time' is '06.03.2018', and 'Export system' is 'CKS'. The 'Verification' section shows 'Target Client' as '000', 'Profile Name' as 'SAP\_USER', 'Source Client' as '000', and 'System Name' as 'CKS'. There are checkboxes for 'Customizing Data', 'Flavors', 'Application Data', 'Change Documents', 'User Data', and 'Cross-Client Customizing'. The 'Copy Mode' is set to 'Import'. The 'Continue?' button is highlighted.

The screenshot shows the 'Client Copy/Transport Log Analysis' table. The table has columns for Date, Time, Source, Status, Text, Profile, Mode, and Test mode. The data row shows a successful import for SAP\_USER on 09.03.2018 at 15:30:33.

Date	Time	Source	Status	Text	Profile	Mode	Test mode
09.03.2018	15:30:33	000	Import successful	SAP_USER	Import		



## 22) Spool consistency check

Spool Data Consistency Check in Background	
Release locks after ... minutes	10080
<input checked="" type="checkbox"/> Delete old write locks	
<input checked="" type="checkbox"/> Only list inconsistencies	
Delete After ..... Runs	00

Consistency check of table TSP01 / spool requests	
System	CX5 2018-03-09 16:22:12
Input value for RSP01043 20180309 152212	
Release write locks after ... minutes	10080
Delete old write locks	X (yes)
Only list inconsistencies	X (yes)
Delete Inconsistencies After ... Runs	00
No. spool requests	1,928
No. print requests	1,437

## 23) TemSe consistency check

TemSe Data Storage	
Memory allocation	
List all objects	
Consistency check	
Exit	Shift+F3

Illustration of Temporary Sequential Data

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24) Run the report RSBTCDEL to delete the finished and cancelled jobs

25) Schedule the SAP standard jobs from SM36

**Define Background Job**

Start condition Step Job selection Own Jobs Job wizard **Standard jobs**

General data

Job name

Job class

Status

Exec. Target

Spool list recipient

Job start

Job frequency

Job steps

26) Import any add-ons (if any)



- 27) Import any TR's (provided by Projects i.e. in-flight transports)
- 28) Configure Database Backup
- 29) Update SAP system logon screen message
- 29) Release system to users



Q & A



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