



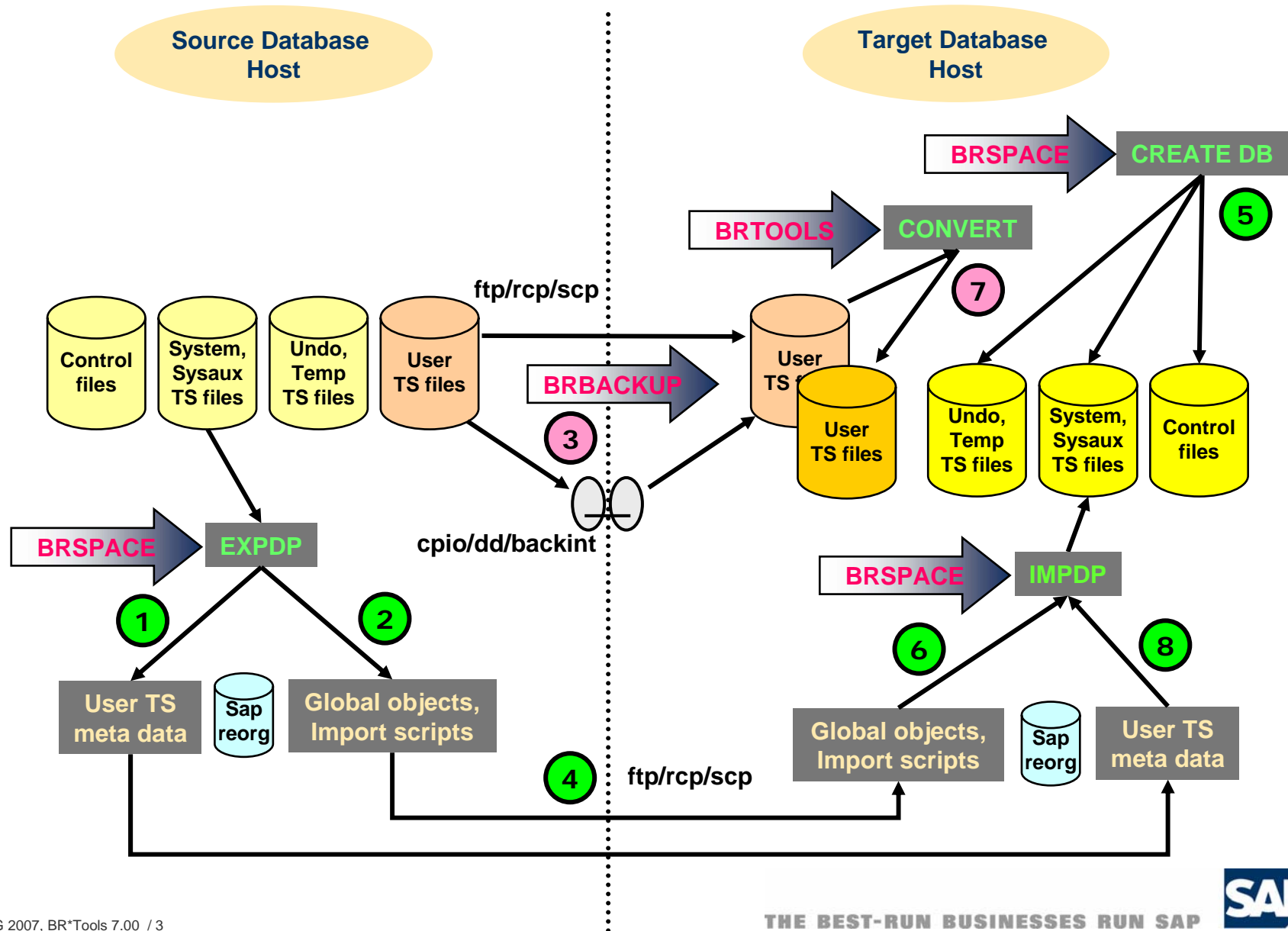
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BR*Tools Support for Heterogeneous System Copy

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- **Oracle-based cross-platform transportable tablespaces feature and on BRSPACE recreate database function (brspace -f dbcreate)**
- **Parallel Endian conversion of data files with BRTOOLS (if required)**
- **For large databases, faster than the standard procedure based on Oracle export / import or SAP R3load utilities**
- **Time advantage reduced if Endian conversion required**
- **Oracle SID / Home and the database name can be changed**

Procedure Overview



■ **Step 1: Export user tablespace:**

`brspace -f dbcreate -PDC`

- ◆ **Specify new database options**
- ◆ **Check if user tablespaces are self-contained**
- ◆ **Set user tablespaces to read-only**
- ◆ **Export the meta data of user tablespaces**

■ **Step 2: Export global objects:**

Continue with BRSPACE call

- ◆ **Export database global objects (e.g. SAP users/views)**
- ◆ **Generate create database scripts: `dbcrt.sql`, `ddbld.sql`**
- ◆ **Generate import scripts: `glbimp.par`, `tspimp.par` and `postdbcr.sql`**

■ Step 3: Copy user files to target host:

```
brbackup -u / -d stage_copy -t offline -m only_ro -e 4 -SDL -SRW
```

- ◆ **stage_root_dir = /oracle/SID/sapbackup**
- ◆ **stage_db_home = /oracle/SID**
- ◆ **stage_copy_cmd = rcp | ftp | scp**
- ◆ **remote_host = <target_host>**
- ◆ **remote_user = <target_os_user>**

■ Step 4: Manually copy scripts and dump files to sapreorg directory/subdirectory on target host:

You can use rcp/ftp/scp for this

- ◆ **BRSPACE detailed log file**
- ◆ **Create database scripts: dbcrt.sql, ddbld.sql**
- ◆ **Export dump files: tspexp.dmp, glbexp.dmp**
- ◆ **Import scripts: glbimp.par, tspimp.par**
- ◆ **Post database create script: postdbcr.sql**

■ **Step 5: Recreate database on target host:**

```
brspace -f dbcreate -RDC <brspace_log>
```

- ◆ **If Oracle home / SID has been changed then the scripts dbcrt.sql and ddbld.sql must be adapted accordingly**
- ◆ **SYSTEM, SYSAUX, TEMP and UNDO tablespaces, online redolog and control files will be created (dbcrt.sql)**
- ◆ **Oracle dictionary will be created (ddbld.sql)**

■ **Step 6: Import global objects:**

Continue with BRSPACE call

- ◆ **Import database global objects (e.g. SAP users/views)**

■ **Step 7: Convert Endian type if required:**

```
brtools convert -f tspimp.par -o "<platform>" -p 4 -i -c -l convert.log
```

- ◆ **Done using RMAN CONVERT command**
- ◆ **<platform> defines the source (old) platform**
- ◆ **Platform names can be found in v\$transportable_platform**

■ **Step 8: Import user tablespaces:**

Continue with BRSPACE call

- ◆ **Import the meta data of user tablespaces and plug them in**
- ◆ **Set user tablespaces to read-write**
- ◆ **Apply the post database create script: postdbcr.sql**
- ◆ **Set database ARCHIVELOG mode**

Sample Procedure Times

Oracle 10.2.0.2 with size of 100 GB, SAP ECC 6.0 with 67500 tables,
BR*Tools 7.10 with EXPDP / IMPDP, Linux x64_64, HP-UX 11.11

Step	Linux -> HP-UX	HP-UX -> Linux
1. Export user tablespaces	1 h	1 h
2. Export global objects	1 h	1 h
3. Copy user files	2.5 h	2.5 h
4. Copy scripts, dump files	2 min	2 min
5. Recreate database	20 min	20 min
6. Import global objects	10 min	10 min
7. Convert Endian type	2 h	2 h
8. Import user tablespaces	4 h	5 h
Totals:	11 h	12 h

- **See SAP note 1003028 for more information about extended BR*Tools support for database copy**
- **Read the full documentation for BR*Tools 7.00 at:**
 - ◆ **<http://www.sdn.sap.com/irj/sdn/ora> -> Oracle DBA Overview -> SAP Database Guide: Oracle (see links near top of page)**
 - ◆ **<http://help.sap.com> -> SAP NetWeaver -> SAP NetWeaver 7.0 (2004s) -> English -> SAP NetWeaver Library -> SAP NetWeaver by Key Capability -> Application Platform by Key Capability -> Platform-Wide Services -> Database Support -> Oracle -> SAP Database Guide: Oracle**
- **See SAP note 849483 for the current list of fixes and enhancements in BR*Tools 7.00**
- **Download BR*Tools 7.00 from SAP Service Marketplace at: <http://service.sap.com/swdc>**
 - ◆ **Current patch set is 26 (recommended)**
 - ◆ **Valid for all SAP releases supporting Oracle 10g**
- **BR*Tools 7.10 will be available in Q3 or Q4 of 2007**

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