# Steps for performing tablespace point-in-time recovery (TSPITR)

## Prepare the Primary Database

**Confirm TSPITR Can Be Performed**

Perform the following query by replacing USERS and TOOLS with the tablespace(s) that you need to recover:

SELECT TS1\_NAME, TS2\_NAME, REASON FROM SYS.TS\_PITR\_CHECK

WHERE (

TS1\_NAME IN ('USERS','TOOLS')

AND TS2\_NAME NOT IN ('USERS','TOOLS')

)

OR (

TS1\_NAME NOT IN ('USERS','TOOLS')

AND TS2\_NAME IN ('USERS','TOOLS')

);

If any rows are returned, the TS1\_NAME and TS2\_NAME have dependencies on one another and must be recovered together.

**Take the Tablespace(s) Offline**

**SQL> ALTER TABLESPACE users OFFLINE;**

**Verify Point-in-Time for Recovery**

**RMAN> list backup summary;**

**RMAN> list backup of controlfile;**

* **Tag specifies time when backup was taken**
* **A controlfile backup must exist BEFORE the point of recovery**

## Preparing Your Own Auxiliary Instance

**Create a New Directory for the Auxiliary Database Files**

**Create an Oracle Password File for the Auxiliary Instance**

OS> orapwd FILE= D:\ORACLE\_HOME\database\pwd*sid*.ora entries=5

* Must reside in same Oracle Home as primary database
* Replace *sid* with the SID for the auxiliary database

**Create an Initialization Parameter File for the Auxiliary Instance**

SQL> CREATE pfile=' D:\ORACLE\_HOME\database\init*sid*.ora' FROM spfile;

* Must reside in same Oracle Home as primary database
* Replace *sid* with the SID for the auxiliary database
* Edit the file as follows:
  + Change db\_unique\_name
  + Set remote\_login\_passwordfile='EXCLUSIVE'
  + Set db\_file\_name\_convert=(’*primary location’,’auxiliary location*’) [This can NOT contain wildcard characters]
  + Set log\_file\_name\_convert=(’*primary location’,’auxiliary location*’) [This can NOT contain wildcard characters]
  + Edit any other parameters that reference the location of the primary database files

**Set the SID and Create the Windows Service**

OS> SET ORACLE\_SID=*sid*

OS> D:\ORACLE\_HOME\bin\oradim -new -sid *AUXSID*

* Set *sid* and *AUXSID* to match that of the auxiliary database
* If using two command-line windows, set the SID in both
* Ensure you are using the same ORACLE\_HOME as the primary database

## Executing TSPITR with Your Own Auxiliary Instance

**Start the Auxiliary Instance in NOMOUNT Mode**

OS> sqlplus “sys as sysdba”

SQL> STARTUP NOMOUNT PFILE=’D:\ORACLE\_HOME\database\init*sid*.ora’;

* Use the pfile created earlier

**Connect the RMAN Client to Target and Auxiliary Instances**

OS> RMAN TARGET sys/*password*@*primary\_alias* AUXILIARY sys/*password*

**Execute the RECOVER TABLESPACE Command**

**run**

**{**

**ALLOCATE AUXILIARY CHANNEL c1 DEVICE TYPE DISK;**

**RECOVER tablespace 'USERS' until time "to\_date('2011-02-07 16:07:00', 'YYYY-MM-DD HH24:MI:SS')";**

**RELEASE CHANNEL c1;**

**}**

* **This should be run from a script**
* **Can be found in TSPITR.rman**
* **Replace the time with a point since the last controlfile backup**

## **Backup and Open the Recovered Tablespace**

**Backup the Tablespace**

**Exit RMAN and reconnect to the primary database only**

**RMAN> BACKUP TABLESPACE ‘USERS’;**

**Bring the Tablespace Back Online**

**Exit SQL\*Plus and reconnect to the primary database**

**SQL> ALTER TABLESPACE users ONLINE;**

## **Clean Up the Environment**

**Reset the SID and Delete the Windows Service**

OS> SET ORACLE\_SID=*sid*

OS> D:\ORACLE\_HOME\bin\oradim -delete -sid *AUXSID*

**Remove Auxiliary Directory, PFILE, and Password File**

**If no longer needed**

## **Errors**

**If an error occurs, the primary database must be reset with the following function:**

**SQL> exec dbms\_backup\_restore.manageauxinstance ('TSPITR',1);**