



Backup & Restore ORACLE-User Manual

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1. Introduction

This user manual will cover the techniques used by the awanbee[™] Pro client to backup Oracle database. The Oracle Database supported so far are:

- Oracle 8i
- Oracle 9i
- Oracle 10g
- Oracle 11g

Please ensure that the awanbeeTM Pro client is running on the machine in which the Oracle Server is installed and running. As the backup process involves creating a temporary file on the machine, please make sure that there is sufficient free space.

2. Requirments

Database must be in archived log mode

To switch database to archived log mode, please do the following:-

I. Set the parameters below in the PFILE to enable automatic archiving

LOG_ARCHIVE_DEST = [directory where archive redo logs will be stored]

LOG_ARCHIVE_FORMAT = 'log%t_%s_%r.arc'

LOG_ARCHIVE_START = TRUE

II. Set ORACLE_SID to your database's System Identifier (SID)

export ORACLE_SID=GDB1 (assuming your database's SID is GDB1)

III. Run SQL Plus and connect to database as SYSDBA

For Oracle 9i/10g/11g

sqlplus "/ as sysdba"

For Oracle 8i

connect internal;

IV. Shutdown database

shutdown immediate

V. Start and mount database

startup mount

VI. Switch database to archived log mode

alter database archivelog;





VII. Open database

alter database open;

Oracle 10g Example:			
<pre>\$ export ORACLE_SID=GDB1</pre>			
\$ sqlplus "/ as sysdba"			
SQL*Plus: Release 10.2.0.1.0 - Production on Thu Nov 8 15:08:57 2007			
Copyright (c) 1982, 2005, Oracle. All rights reserved.			
Connected to: Oracle Database 10g Enterprise Edition Release 10.2.0.1.0 - Production With the Partitioning, OLAP and Data Mining options			
SQL> shutdown immediate Database closed. Database dismounted.			
ORACLE instance shut down.			
SQL> startup mount ORACLE instance started.			
Total System Global Area 285212672 bytes Fixed Size 1218992 bytes Variable Size 96470608 bytes Database Buffers 184549376 bytes Redo Buffers 2973696 bytes Database mounted.			
SQL> alter database archivelog;			
Database altered.			
SQL> alter database open;			
Database altered.			

VIII. JAVASYSPRIV role is granted to system account

You can grant this role to system account by executing:

Grant permission to system account

For Oracle 9i/10g/11g

SQL> grant javasyspriv to system;

For Oracle 8i

SVRMGRL> connect internal

SVRMGRL> @?/javavm/install/initjvm.sql;

SVRMGRL> @?/rdbms/admin/catalog.sql;

SVRMGRL> @?/rdbms/admin/catproc.sql;

SVRMGRL> @?/javavm/install/initdbj.sql;

SQL> grant javasyspriv to system;





Oracle 9i/10g/11g Example:

SQL> grant javasyspriv to system;

Grant succeeded.

3. Overview

awanbee[™] Pro Client will backup your Oracle database by taking the following steps.

i. Connect to the Oracle database using SQL*NET over TCP/IP

ii. Run all Pre-Commands of this backup set

iii. If the backup type to run is [Database Backup type],

> all data files in each of the tablespace(s) selected are copied to the temporary directory specified by this backup set.

if there are temporary files in the database, the script to re-create the temporary files are generated to a file located in the temporary directory specified by this backup set.

all non-default initialization parameters will be spooled to an initializing file located in the temporary directory specified by this backup set.

all control files will be copied to the temporary directory specified by this backup set.

> all archived log files will be copied to the temporary directory specified by this backup set.

iv. If the backup type to run is [Archived Log Backup type],

all archived log files will be copied to the temporary directory specified by this backup set

v. Run all Post-Commands of this backup set

vi.Upload all files copied to the temporary directory to awanbee Data Protection Server

Remove temporary files from the temporary directory.

Note: If your Oracle database is running on Windows, please install awanbee[™] Pro Client onto the company running the Oracle database if awanbee[™] Pro Client database. This would shorten the time required to backup the Oracle database.





4. Step by step instructions to create a Oracle Server backup set for

Windows Machine.

- a) Start awanbee[™] Pro
- b) Create a new backup set by clicking on the Backup Setting button,

, and then clicking on

the 💼 icon on the left panel.

c) Enter an appropriate name for this backup set and then select 'Oracle Server Backup' in the Type drop-down menu

🍢 Bac	kup Set	
Name :	New Backup Set	
Гуре :	File Backup	
	File Backup	
	Lotus Domino Server Backup	
	Lotus Notes Client Backup	
	MS Exchange Server Backup	
	MS Exchange Mail Level Backup	
	MS SQL Server Backup	
	MySQL Backup	
	Oracle Database Server Backup	10

d) You will then be asked to enter the name of the system password, the Oracle Database Server Host Name, TNS Port and SID.





🖄 Ba	ackup Set
Name	New Backup Set
Type :	Oracle Database Server Backup
	CLE
Login I	ID : system
Passw	vord :
last	
HOSE .	
Port :	1521
SID :	

- e) Click the Next button
- f) You will then be asked to select the database(s) or table space that you want to backup:

New Backup Set Wizard			×
Oracle Database Server SYSTEM UNDOTBS1 SYSAUX TEMP USERS			
	Previous	Next +	Cancel 🛛

g) Once the database(s) has/have been selected, you will be asked to select the backup source: the database itself or the Archived Log. You also need to select the backup schedule. (See Section 4.6.4. of the awanbee Pro manual for details on setting up the backup schedule.)





Run :	Name : Backup Schedule
	📩 Backup
	Database (Tablespaces, Control & Init File, Archived Logs)
	Archived Log
	Type
	Daily •
	Backup everyday
	Time
	At 🔹
	Start: 23 🕶 : 00 💌
	Stop : on completion (Full Backup)

- h) Once the schedule has been set, click on the OK button and you are done.
- i) The backup of the Oracle database(s) will run based on the set schedule. If required, you can

manually initiate the backup process by pressing the \checkmark button on the awanbeeTM Pro client window.

5. Step by step instructions to create a Oracle Server backup set for Linux/Solaris and Unix Machine's.

- a) Install awanbee[™] onto your Oracle Server.
- b) Create a new backup Set from awanbee Data Protection Server DPS.
- c) Select "Oracle Database Servers" as the backup set type, then press [Update]. (You may also

change the backup set's Name at this stage).

Profile	Backup Set File Explorer Report Statistics
Backup	Set : New Backup Set 🗧 🖨 Add Remove
[Help]	Name
	New Backup Set
[Help]	Туре
	📀 🕒 File 🔘 💑 Microsoft SQL Server 🔘 🏝 Microsoft Exchange Server (
	💿 🖻 Oracle Database Server 🔘 🕺 MySQL Database Server
	🔘 💯 Lotus Domino 🔘 🎟 Lotus Notes 🔘 💻 System State
	🔘 🗟 Microsoft Exchange Mail Level Backup 🔘 讆 ShadowProtect System
	🔘 🃴 Microsoft Windows System Backup
[Help]	Backup Source
	Backup the following files/directories :
	1. /Users/punithansupramanima/Documents [Remove]
	2. [Add]
	Exclude the following files/directories :
	1. [<u>Add</u>]





d) Input the Database Backup Setting and the Backup Source.



- e) Set the Backup Source as "Oracle Database Server" to backup all the table space.
- f) You can also include or exclude a specific table space in your backup source. (e.g. Set the Backup Source as "Oracle Database Server/SYSTEM" to only backup the SYSTEM table space. You may also set up the backup schedule in this stage.

Backup Source				
Backup the following files/directories :				
1. Or	acle Database Server	[Remove]		
2 . Or	acle Database Server/SYSTEM	[Remove]		
3.		[<u>Add</u>]		
Exclude the following files/directories :				
1. Or	acle Database Server/TEMP	[Remove]		
2.		[Add]		

g) Logon to the Oracle Server machine and run \$awanbee™ pro _HOME\bin\Configurator.sh to input theencryption key for the new backup set. You can also configure the backup set to run schedulebackup on this computer at this stage.





- h) The backup will run on schedule or you may perform a manual backup.
- i) To perform manual backup, you will need to edit the script file\$awanbee™ pro_HOME\bin\RunBackupSet.sh. Change the script from BACKUP_TYPE="FILE" to BACKUP_TYPE="DATABASE". Then save and exit the file.

g ^R root ⊕ :/usr/local/obm/bin	
<pre>#BACKUP_SET # The name of the backup set that you want to run # If backup set name is not in English, please use BackupSetID # e.g. SET BACKUP_SET="1119083740107" # or SET BACKUP_SET="FileBackupSet=1" #</pre>	
BACKUP_SET-"\$1"	
<pre>#BACKUP_TYPE # Set backup type. You don't need to change this if you are backing # file backup set.</pre>	ip s N
# Options available: FILE/DATABASE/DIFFERENTIAL/LOG	
# or SET BACKUP TYPE="DATABASE" for Full database backup	
<pre># or SET BACKUP_TYPE="DIFFERENTIAL" for Differential database back # or SET BACKUP_TYPE="LOG" for Log database backup #</pre>	tup #
BACKUP_TYPE-"DATABASE"	
"RunBackupSet.sh" 132L, 5588C written 25,22	3* 🔻

j) Run the script file with the backup set name or ID as the parameter to perform a manual backup. (e.g., sh RunBackupSet.sh BackupSet-Oracle).

6. How to Restore an oracle Database server

Please follow the instruction below to restore your Oracle Database:-

- a) First of all, you will need to download the backed up file from awanbee[™] Data Protection
 Server. Please note down the location where the file was downloaded to.
- b) For Restore an existing database

Shutdown the database

To Shutdown the database, please do the following:-

Set ORACLE_SID to your database's System Identifier (SID)

\$ export ORACLE_SID=GDB1 (assuming your database's SID is GDB1)

Run SQL Plus and connect to database as SYSDBA

\$ sqlplus "/ axs sysdba"





Shutdown Database

SQL> shutdown immediate

 Oracle 9i/10g/11g Example:

 \$ export ORACLE_SID=GDB1

 \$ sqlplus "/ as sysdba"

 SQL*Plus: Release 10.2.0.1.0 - Production on Thu Nov 8 17:04:57 2007

 Copyright (c) 1982, 2005, Oracle. All rights reserved.

 Connected to:

 Oracle Database l0g Enterprise Edition Release 10.2.0.1.0 - Production

 With the Partitioning, OLAP and Data Mining options

 SQL> shutdown immediate

 Database closed.

 Database dismounted.

 ORACLE instance shut down.

For recover a database that currently does not exist
 Create a password file
 \$ orapwd file=\$ORACLE_HOME/dbs/orapwGDB1 password=pwd123

(assuming your database's SID is GDB1, and password is pwd123)

Oracle 9i/10g/11g Example:

orapwd file=/orable/OraHome1/dbs/orapwGDB1 password=pwd123

- c) Restoreall backup files in place
- d) Control files, data files and archived logs are stored on awnabee[™] Pro Client along with their full pathvInformation. You just need to put all these files back to their original locations when performing adatabase restore.

Fox example:-

/obm_restore/Oracle Database Server/oracle/product/10.2.0/db_1/admin/GDB1/ /obm_restore/Oracle Database Server/oracle/product/10.2.0/db_1/dbs/initGDB1.ora /obm_restore/Oracle Database Server/oracle/product/10.2.0/db_1/dbs/spfileGDB1.ora /obm_restore/Oracle DatabaseServer/oracle/product/10.2.0/db_1/flash_recovery_area/GDB1/ /obm_restore/Oracle Database Server/oracle/product/10.2.0/db_1/oradata/GDB1/

Move to

/oracle/product/10.2.0/db_1/admin/GDB1/ /oracle/product/10.2.0/db_1/dbs/initGDB1.ora /oracle/product/10.2.0/db_1/dbs/spfileGDB1.ora /oracle/product/10.2.0/db_1/flash_recovery_area/GDB1/ /oracle/product/10.2.0/db_1/oradata/GDB1/

e) Rename database files (Only for Restoring Database to an New Location)

Rename your Database files by doing the following.

i) Modify the PFILE to update file path

Open the PFILE (\$ORACLE_HOME/dbs/initGDB1.ora), change every file path to the new location, and then save it





For example:

Change to

 ii) You may need to quote the values of dispatchers as a single argument Add double quotation marks
 dispatchers = "(PROTOCOL=TCP) (SERVICE=GDB1XDB)

iii) Delete the SPFILE

Delete the SPFILE (\$ORACLE_HOME/dbs/spfileGDB1.ora)

iv) Set ORACLE_SID to your database's System Identifier (SID) \$ export ORACLE_SID=GDB1 (assuming your database's SID is GDB1)

V. Run SQL Plus and connect to database as SYSDBA

\$ sqlplus "/ as sysdba"

VI. Start and mount database

SQL> startup mount

VII. Create a backup of the control file to trace file

SQL> alter database backup controlfile to trace as '/New_DB_Location/control.trc' reuse; (assuming you create a trace file to /New_DB_Location/)

VIII. Rename each of data file, log file and tempfile

Open the trace file that just created, and then check for the filename of each datafile, log file and tempfile.

Please do the following to rename each of the files:

SQL> ALTER DATABASE RENAME FILE 'xxx' TO 'yyy';





where xxx is the old filename found in the trace file, and yyy is the new filename with updated path

For example:

SQL> ALTER DATABASE RENAME FILE '/oracle/product/10.2.0/db_1/oradata/GDB1/system01.dbf' TO

'/new_db_location/oradata/GDB1/system01.dbf';

SQL> ALTER DATABASE RENAME FILE '/oracle/product/10.2.0/db_1/oradata/GDB1/undotbs01.dbf' TO

'/new_db_location/oradata/GDB1/undotbs01.dbf';

SQL> ALTER DATABASE RENAME FILE '/oracle/product/10.2.0/db_1/oradata/GDB1/sysaux01.dbf' TO

'/new_db_location/oradata/GDB1/sysaux01.dbf';

SQL> ALTER DATABASE RENAME FILE '/oracle/product/10.2.0/db_1/oradata/GDB1/users01.dbf' TO

'/new_db_location/oradata/GDB1/users01.dbf';

SQL> ALTER DATABASE RENAME FILE '/oracle/product/10.2.0/db_1/oradata/GDB1/TS1' TO

'/new_db_location/oradata/GDB1/TS1';

SQL> ALTER DATABASE RENAME FILE '/oracle/product/10.2.0/db_1/oradata/GDB1/redo01.log' TO

'/new_db_location/oradata/GDB1/redo01.log';

SQL> ALTER DATABASE RENAME FILE '/oracle/product/10.2.0/db_1/oradata/GDB1/redo02.log' TO

'/new_db_location/oradata/GDB1/redo02.log';

SQL> ALTER DATABASE RENAME FILE '/oracle/product/10.2.0/db_1/oradata/GDB1/redo03.log' TO

'/new_db_location/oradata/GDB1/redo03.log';

SQL> ALTER DATABASE RENAME FILE '/oracle/product/10.2.0/db_1/oradata/GDB1/temp01.dbf' TO '/new_db_location/oradata/GDB1/temp01.dbf';

Restore Database



Use Recovery Manager to restore your database by doing the following:

For Oracle 9i/10g/11g

- a. Set ORACLE_SID to your database's System Identifier (SID)
- \$ export ORACLE_SID=GDB1 (assuming your database's SID is GDB1)
- b. Run Oracle Recovery Manager (rman) and connect to the target database
- \$ rman target /
- c. Start and mount database

RMAN> startup mount

- d. Reapply all transactions from the archived log files to the last sequence
- RMAN> recover database until sequence=4 thread=1; (assuming the sequence number of your last

archived redo log is 3)

Sequence number are named on the filename of archived redo log

e.g. /oracle/OraHome1/dbs/o1_mf_1_2_3m5h1svs_.arc

/oracle/OraHome1/dbs/o1_mf_1_3_3m5h1yby_.arc

in this case, the sequence number of archived redo log is **4**.

e. Open database

RMAN> alter database open resetlogs;





Oracle 9i/10g/11g Example:

```
$ export ORACLE SID=GDB1
$ rman target /
Recovery Manager: Release 10.2.0.1.0 - Production on Thu Nov 8 17:46:27 2007
Copyright (c) 1982, 2005, Oracle. All rights reserved.
connected to target database (not started)
RMAN> startup mount
Oracle instance started
database mounted
Total System Global Area
                           285212672 bytes
Fixed Size
                            1218992 bytes
Variable Sise
                           113247824 bytes
Database Buffers
                          167772160 bytes
                            2973696 bytes
Redo Buffers
RMAN> recover database until sequence=4 thread=1;
Starting recover at 08-NOV-07
Starting implicit crosscheck backup at 08-NOV-07
using target database control file instead of recovery catalog
allocated channel: ORA DISK 1
channel ORA_DISK_1: sid=157 devtype=DISK
Finished implicit crosscheck backup at 08-NOV-07
Starting implicit crosscheck copy at 08-NOV-07
using channel ORA_DISK_1
Finished implicit crosscheck copy at 08-NOV-07
searching for all files in the recovery area
cataloging files...
cataloging done
List of Cataloged Files
File Name:
/oracle/product/10.2.0/db 1/flash recovery area/GDB1/archivelog/2007 11 08/o1 mf 1 3 3m5hly
by .arc
using channel ORA DISK 1
starting media recovery
archive log thread 1 sequence 2 is already on disk as file
/oracle/product/10.2.0/db 1/flash recovery area/GDB1/archivelog/2007 11 08/o1 mf 1 2 3m5hls
vs .arc
archive log thread 1 sequence 3 is already on disk as file
/oracle/product/10.2.0/db_1/flash_recovery_area/GDB1/archivelog/2007_11_08/o1_mf_1_3_3m5hly
by_.arc
archive log
filename=/oracle/product/10.2.0/db_1/flash_recovery_area/GDB1/archivelog/2007_11_08/o1_mf_1
_2_3m5hlsvs_.arc thread=1 sequence=2
archive log
filename=/oracle/product/10.2.0/db_1/flash_recovery_area/GDB1/archivelog/2007_11_08/o1_mf_1
<u>3</u> 3m5hlyby_.arc thread=1 sequence=3
media recovery complete, elapsed time: 00:00:01
Finished recover at 08-NOV-07
RMAN> alter database open resetlogs;
database opened
```





For Oracle 8i

a. Set ORACLE_SID to your database's System Identifier (SID)

\$ export ORACLE_SID=GDB1 (assuming your database's SID is GDB1)

b. Run Oracle Server Manager (svrmgrl)

\$ svrmgrl

c. Connect to the target database

SVRMGRL> connect internal

d. Start and mount database

SVRMGRL> start mount;

e. Reapply all transactions from the archived log files

RMAN> recover database using backup controlfile

f. Open database

RMAN> ALTER DATABASE OPEN RESETLOGS;

Oracle 8i Example:				
\$ svrmgrl				
SVRMGRL> connect internal				
SVRMGR> startup mount;				
ORACLE instance started.				
Total System Global Area	95874448 bytes			
Fixed Size	64912 bytes			
Variable Size	52744192 bytes			
Database Buffers	40960000 bytes			
Redo Buffers	2105344 bytes			
Database mounted.				
SVRMGRL> recover database using backup controlfile				
ORA-00279: change 419671 generated at 06/14/03 02:51:49 needed for thread 1				
ORA-00289: suggestion : /data/ora815/vin/archive/ARCH0000000225.LOG				
ORA-00280: change 419671 for thread 1 is in sequence #225				
ORA-00278: log file '/data/ora815/vin/a	archive/ARCH000000224.LOG' no longer needed for this			
recovery				
Specify log: { <ret>=suggested filename AUTO CANCEL}</ret>				
AUTO				
Log applied.				





```
ORA-00279: change 547222 generated at 06/18/03 19:58:26 needed for thread 1
ORA-00289: suggestion : /data/ora815/vin/archive/ARCH0000000384.LOG
ORA-00280: change 547222 for thread 1 is in sequence #384
ORA-00278: log file '/data/ora815/vin/archive/ARCH0000000383.LOG' no longer needed for this
recoverv
ORA-00308: cannot open archived log '/data/ora815/vin/archive/ARCH000000384.LOG'
ORA-27037: unable to obtain file status
Linux Error: 2: No such file or directory
Additional information: 3
SVRMGR> recover database using backup controlfile until cancel
ORA-00279: change 547222 generated at 06/18/03 19:58:26 needed for thread 1
ORA-00289: suggestion : /data/ora815/vin/archive/ARCH0000000384.LOG
ORA-00280: change 547222 for thread 1 is in sequence #384
Specify log: {<RET>=suggested | filename | AUTO | CANCEL}
CANCEL
Media recovery cancelled.
SVRMGR> alter database open resetlogs;
Statement processed.
```

7. How to restore a single tablespace

Restoring a tablespace required a backup of datafiles consistent with the existing archived logs and control files, as

redo will be applied during the restore operation.

Please follow the instructions below to restore a tablespace from AhsayOBS.

i. Download the backup files from AhsayOBS.

Please refer to the [Quick Start - Backup File] section for information on how to download backup

files from awanbee[™] DPS server.

ii. Set ORACLE_SID to your database's System Identifier (SID)

\$ export ORACLE_SID=GDB1 (assuming your database's SID is GDB1)

iii. Run SQL Plus and connect to database as SYSDBA

\$ sqlplus "/ as sysdba"

iv. Shutdown database

SQL> shutdown immediate

v. Put the downloaded tablespace datafiles in place

Datafile names and paths can be found by using the REPORT SCHEMA command.

a. Set ORACLE_SID to your database's System Identifier (SID)





\$ export ORACLE_SID=GDB1 (assuming your database's SID is GDB1)

b. Run Oracle Recovery Manager (rman) and connect to the target database

\$ rman target /

c. Start and mount database

RMAN> startup mount

d. List the names of all datafiles and tablespaces

RMAN> report schema;

For example:

Report of database schema

File K-bytes Tablespace RB segs Datafile Name

---- ------

1 419840 SYSTEM *** /oracle/OraHome1/oradata/GDB1/system01.dbf

2 204800 UNDOTBS1 *** /oracle/OraHome1/oradata/GDB1/undotbs01.dbf

3 20480 CWMLITE *** /oracle/OraHome1/oradata/GDB1/cwmlite01.dbf

4 20480 DRSYS *** /oracle/OraHome1/oradata/GDB1/drsys01.dbf

5 141440 EXAMPLE *** /oracle/OraHome1/oradata/GDB1/example01.dbf

6 25600 INDX *** /oracle/OraHome1/oradata/GDB1/indx01.dbf

7 20480 ODM *** /oracle/OraHome1/oradata/GDB1/odm01.dbf

8 10240 TOOLS *** /oracle/OraHome1/oradata/GDB1/tools01.dbf

9 25600 USERS *** /oracle/OraHome1/oradata/GDB1/users01.dbf

10 39040 XDB *** /oracle/OraHome1/oradata/GDB1/xdb01.dbf

11 0 TS1 *** /oracle/OraHome1/oradata/GDB1/TS1_datafile1.dbf

12 0 TS1 *** /oracle/OraHome1/oradata/GDB1/TS1_datafile2.dbf

13 0 TS1 *** /oracle/OraHome1/oradata/GDB1/TS1_datafile3.dbf





e. Put all the downloaded backup of datafile/s that constitute the tablespace to the listed location

For example:

/obm_restore/Oracle Database Server/oracle/OraHome1/oradata/GDB1/TS1_datafile1.dbf

/obm_restore/Oracle Database Server/oracle/OraHome1/oradata/GDB1/TS1_datafile2.dbf

/obm_restore/Oracle Database Server/oracle/OraHome1/oradata/GDB1/TS1_datafile3.dbf

Move to

/oracle/OraHome1/oradata/GDB1/TS1_datafile1.dbf

/oracle/OraHome1/oradata/GDB1/TS1_datafile2.dbf

/oracle/OraHome1/oradata/GDB1/TS1_datafile3.dbf

vi. Restore tablespace

RMAN> recover tablespace TS1; (assuming your tablespace is TS1)

If your datafiles consistent with the database, you should see:

 Oracle 9i/10g Example:

 RMAN> recover tablespace TS1;

 Starting recover at 19-JUL-07

 allocated channel: ORA_DISK_1

 channel ORA_DISK_1: sid=156 devtype=DISK

 starting media recovery

 archive log thread 1 sequence 1 is already on disk as file D:\ORACLE\PRODUCT\10.

 2.0\FLASH_RECOVERY_AREA\GDB1\ARCHIVELOG\2007_07_19\01_MF_1_2_39Y9870H_ARC

 archive log thread 1 sequence 2 is already on disk as file D:\ORACLE\PRODUCT\10.

 2.0\FLASH_RECOVERY_AREA\GDB1\ARCHIVELOG\2007_07_19\01_MF_1_2_39Y98JSD_ARC

 archive log thread 1 sequence 3 is already on disk as file D:\ORACLE\PRODUCT\10.

 2.0\FLASH_RECOVERY_AREA\GDB1\ARCHIVELOG\2007_07_19\01_MF_1_2_39Y98JSD_ARC

 archive log thread 1 sequence 3 is already on disk as file D:\ORACLE\PRODUCT\10.

 2.0\FLASH_RECOVERY_AREA\GDB1\ARCHIVELOG\2007_07_19\01_MF_1_3_39Y98W4D_ARC

 archive log filename=D:\ORACLE\PRODUCT\10.2.0\FLASH_RECOVERY_AREA\GDB1\ARCHIVELO

 GORT_COVERY_AREA\GDB1\ARCHIVELOG\2007_07_19\01_MF_1_3_39Y98W4D_ARC

 archive log filename=D:\ORACLE\PRODUCT\10.2.0\FLASH_RECOVERY_AREA\GDB1\ARCHIVELO

 GORT_COVERY_AREA\GDB1\ARCHIVELO

 GORT_COVERY_AREA\GDB1\ARCHIVELO

 GORT_COVERY_AREA\GDB1\ARCHIVELO

If your datafiles does not consistent with the database, you should see:





Oracle 9i/10g Example:

In this case, you need to find the consistent datafiles in order to restore the tablespace.

If there are archive log missing, you should see:

Oracle 9i/10g Example:			
RMAN> recover tablespace TS1;			
Starting recover at 20-JUL-07 using channel ORA_DISK_1			
starting media recovery			
archive log thread 1 sequence 12 is already on disk as file D:\ORACLE\PRODUCT\10 .2.0\FLASH_RECOVERY_AREA\GDB1\ARCHIVELOG\2007_07_18\01_MF_1_12_39VF4JNJARC			
RMAN-00571: ====================================			
RMAN-00571:			
RMAN-06053: unable to perform media recovery because of missing log RMAN-06053: no backup of log thread 1 seq 13 lowscn 660617 found to restore			

In this case, you need to find the missing archive log files in order to restore the tablespace.

f. Open database

RMAN> alter database open;





Oracle 9i/10g Example:

```
$ export ORACLE_SID=GDB1
$ rman target /
Recovery Manager: Release 9.2.0.1.0 - Production
Copyright (c) 1995, 2002, Oracle Corporation. All rights reserved.
connected to target database (not started)
RMAN> startup mount
Oracle instance started
database mounted
Total System Global Area 235999352 bytes
Fixed Size
                                       450680 bytes
Variable Size
Database Buffers
                                   201326592 bytes
33554432 bytes
                                        667648 bytes
Redo Buffers
RMAN> report schema;
using target database control file instead of recovery catalog
Report of database schema
using target database controlfile instead of recovery catalog
Report of database schema
File K-bytes Tablespace
                                              RB segs Datafile Name
                                ***
  ----
                                                      /oracle/OraHomel/oradata/GDB1/system01.dbf
           419840 SYSTEM
                                           /oracle/OraHomel/oradata/GDB1/system01.dbf
/oracle/OraHomel/oradata/GDB1/undotbs01.dbf
/oracle/OraHomel/oradata/GDB1/drsyS01.dbf
/oracle/OraHomel/oradata/GDB1/drsyS01.dbf
/oracle/OraHomel/oradata/GDB1/indx01.dbf
/oracle/OraHomel/oradata/GDB1/indx01.dbf
/oracle/OraHomel/oradata/GDB1/tools01.dbf
/oracle/OraHomel/oradata/GDB1/tools01.dbf
/oracle/OraHomel/oradata/GDB1/users01.dbf
/oracle/OraHomel/oradata/GDB1/xsl_datafile1.dbf
/oracle/OraHomel/oradata/GDB1/TS1_datafile2.dbf
/oracle/OraHomel/oradata/GDB1/TS1_datafile3.dbf
1
          204800 UNDOTBS1
2
          20480 CWMLITE
20480 DRSYS
3
4
          141440 EXAMPLE
25600 INDX
5678
          20480 ODM
10240 TOOLS
           25600 USERS
39040 XDB
9
10
            0 TS1
11
12
13
                0 TS1
0 TS1
List of Temporary Files
File Size(MB) Tablespace
                                           Maxsize(MB) Tempfile Name
    20
               TEMP
                                         32767 D:\ORACLE\PRODUCT\10.2.0\ORADATA\
GDB1\TEMP01.DBF
RMAN> recover tablespace TS1;
Starting recover at 30-AUG-07
allocated channel: ORA DISK 1
channel ORA_DISK_1: sid=11 devtype=DISK
starting media recovery
media recovery complete
Finished recover at 30-AUG-07
RMAN> alter database open;
database opened
```





Export and Import a Database (Logical Backup)

While physical backup of database files permit the full reconstruction of database, logical backup is a useful supplement to physical backup for some purposes. For instance, logical backup using the export and import utilities are the only method that Oracle supports for moving an existing database from one platform to another.

Please follow the instructions below to backup a database:

i. Export the full database to a dump file

\$ exp system/pwd123 FULL=y FILE='/oracle/data.dmp' LOG='/oracle/export.log'

(assuming your system password is pwd123, the name of dump file is /oracle/data.dmp and the

name of log file is /oracle/export.log)

Oracle 9i/10g Example:				
<pre>\$ exp system/pwd123 FULL=y FILE='/oracle/data.dmp' LOG='/oracle/export.log'</pre>				
Connected to: Oracle Database 10g Enterprise Edition Release 10.2.0.1.0 - Production With the Partitioning, OLAP and Data Mining options Export done in WE8MSWIN1252 character set and AL16UTF16 NCHAR character set				
About to export the entire database . exporting tablespace definitions . exporting profiles . exporting user definitions . exporting roles . exporting resource costs ///////////////////////////////////				
 exporting dimensions exporting post-schema procedural objects and actions exporting user history table exporting default and system auditing options exporting statistics Export terminated successfully without warnings. 				

ii. Backup the exported dump file to AhsayOBS.

Please refer to the [Section 6.2 Backup files directly to the backup server] for information on how

to upload backup files to AhsayOBS.

Please follow the instructions below to restore a database:

iii. Download the backup files from AhsayOBS.

Please refer to the [Section 7.1 Restore backup files directly from backup server] for information

on how to download backup files from AhsayOBS.





iv. Import the full database from the downloaded backup of dump file

\$ imp system/pwd123 FULL=y FILE='/oracle/data.dmp' LOG='/oracle/import.log'

(assuming your system password is pwd123, the name of dump file is /oracle/data.dmp and the

name of log file is /oracle/import.log)

Oracle 9i/10g Example:
<pre>\$ imp system/pwd123 FULL=y FILE='/oracle/data.dmp' LOG='/oracle/import.log'</pre>
Connected to: Oracle Database 10g Enterprise Edition Release 10.2.0.1.0 - Production With the Partitioning, OLAP and Data Mining options
Export file created by EXPORT:V10.02.01 via conventional path import done in WEBMSWIN1252 character set and AL16UTF16 NCHAR character set . importing SYSTEM's objects into SYSTEM . importing OLAPSYS's objects into SYSMAN . importing SYSTEM's objects into SYSTEM . importing OLAPSYS's objects into OLAPSYS . ////////////////////////////////////
. importing SYSTEM's objects into SYSTEM
. importing OLAPSYS's objects into OLAPSYS
. importing SCOTT's objects into SCOTT
Import terminated successfully without warnings.

8. Additional information

For additional information, check out our FAQ and blog at <u>www.awanbee.com</u>. If you have any questions, suggestions or feedback, please feel free to contact us at <u>support@awanbee.com</u>.

