

RMAN, Backup and Recovery

When do you use "using backup control file"?

- If you don't have a valid current control file.
- Anytime the controlfile is older than the datafiles (use a backup controlfile).

When do you use "open resetlogs"?

- Anytime "using backup control file" was used.
- An incomplete recovery was performed.
- The resetlogs option must be chosen to resynchronize the controlfile.

Don't use it for complete recoveries!

What is a backup control file?

A backup control file is an image of the database control file.

How do you ensure disaster recovery?

- Managed Standby Database (loss of online redo log files)
- Cluster failover with mirrored disks / SRDF
- Advanced Replication / streams

When a big table (10GB) get dropped by accident, how do you get it back?

- Export/import
 - > this may take a long time.
- Restore only the tablespace for this table.
 - `alter tablespace <ts> offline immediate;`
 - `restore tablespace`
- Use "flashback table" to restore a old version of a table
 - Use "flashback drop" to restore a dropped table
 - > works if the undo information is still available

Archive log area is full. You are using RMAN for backups. What do you do?

- Run an RMAN archivelog backup.
 - `backup archivelog all delete input;`
- Move/delete the archive log files
 - delete files
 - crosscheck the archivelog files

How do you recover from the loss of a datafile?

Restore the datafile.

Recover the datafile.

```
    recover datafile          -- for standard datafile
    recover database          -- for system datafile
```

Open the database

How do you recover from the loss of a datafile with no backup for it?

Take the tablespace offline.

Re-create the datafile.

Restore all required archive log files.

Recover the datafile.

Take the tablespace online.

How do you recover from corrupted redo logs?

- Add new redo log group.
- Drop the corrupted redo log group.

How do you recover from the loss of the undo tablespace?

Create a new undo tablespace (e.g. undo2)

Set undo_tablespace=undo2

Drop the original undo tablespace

Recover from loss of all control files?

Restore the backed up control file or use a create control file script.

1. Restore binary backup of control file.
OR
Recreate the control file using a ccf script.
2. Recover database using backup control file.
3. Open database with resetlogs option.

Recover from a fractured block?

Similar recover from loss of datafile with no backup for it.

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What is a fractured block?

A fractured block is a block whose head != tail.

This can happen because the OS block size is smaller than the database block size, e.g.:

- While we are backing up a file we might read the HEAD of the block (say the first 4k of 8k) and get interrupted.
- The database DBWR rewrites the block
- We get runnable again and finish reading the last 4k of another block.

In what state is a database after recovery?

mount

How do you check for datafile corruption?

- Use the dbverify utility against all datafiles
\$ dbv file='/oradata/mala/users01.dbf' blocksize=4096
- Do a full export of the database

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