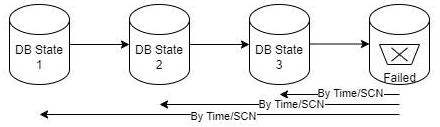
**21 Oracle Database Flashback**

**Oracle Database Flashback** is a data recovery solutions that reverse human and logical errors by selectively and efficiently undoing the effects of a mistake. Before Flashback.



* If error occurred at 6 AM present time is 7AM.
* Now database can be flashback to 5:59 to avoid the error.
* But the transactions happened between 5:59 AM to 7 AM will be gone.
* By-default database flashback is disable.
* Flashback must be done at mount state.

**To check Flashback enable/disable:**

* select flashback\_on from v$database;

**To Enable flashback:**

* **FRA** should be enable to enable **FLASHBACK.**
* show parameter recover
* db\_recovery\_file\_dest
* db\_recovery\_file\_dest\_size

**Enable / Disable flashback:**

* alter database flashback on;
* alter database flashback off;

**To check restore points:**

* select \* from v$restore\_point;

**To check FRA size:**

* select name, ROUND(SPACE\_LIMIT/1024/1024/1024,2) "Allocated Space(GB)",

round(SPACE\_USED/1024/1024/1024,2) "Used Space(GB)",

round(SPACE\_RECLAIMABLE/1024/1024/1024,2) "SPACE\_RECLAIMABLE (GB)",

(select round(ESTIMATED\_FLASHBACK\_SIZE/1024/1024/1024,2)

from V$FLASHBACK\_DATABASE\_LOG) "Estimated Space (GB)"

from V$RECOVERY\_FILE\_DEST;

**Flashback Restore Points:**

1. **Normal Restore Point:**
2. **Guarantee Restore Point:**

**Normal Restore Point:**

* create restore point mouli1;

**Purpose**: Acts as a reference to a specific SCN or timestamp.

**Requirements**:

* No specific configuration is required for normal restore points, but the undo data or flashback logs must still exist to perform a restore.

**Retention**:

* Normal restore points are automatically cleaned up when no longer needed, especially if undo data or Flashback logs are purged.

**Use Cases**:

* Useful for short-term scenarios, like testing a minor change or rolling back a transaction during a session.

**Guarantee Restore Point**

* create restore point r2 guarantee flashback database;

**Purpose**:

* Ensures the database can be restored to a specific SCN or timestamp, regardless of whether undo data or Flashback logs have been purged.

**Requirements**:

* Flashback Database must be enabled (**DB\_RECOVERY\_FILE\_DEST and DB\_RECOVERY\_FILE\_DEST\_SIZE**).

**Retention**:

* Guaranteed restore points remain until they are explicitly dropped, even if other Flashback logs are purged.

**Use Cases**:

* Ideal for critical operations, such as major system upgrades or deployments where recovery is absolutely required.
* Ensures data is recoverable without relying on other mechanisms like backups.

**Flashback Database Using restore points:**

* Create NORMAL or GUARANTEE restore point.
* Do the required testing or changes.
* Startup mount.
* flashback database to restore point mouli2;
* alter database open resetlogs;

**OPEN RESETLOGS:**

* By resetting the redo logs, Oracle generates a fresh log sequence, ensuring that future backups and recovery processes align with the new timeline without referencing old log sequences.
* **RESETLOGS** formalizes this new incarnation, resetting the redo log sequence and assigning a new unique identifier for the database's history.
* Resetting the logs ensures that outdated redo logs cannot accidentally be used, which might lead to data corruption or recovery errors.
* Redo logs from the old incarnation are no longer valid after a flashback operation, as they pertain to the previous timeline.
* Flashback operations can leave the control file, data files, and log files in an inconsistent state relative to the timeline.
* **RESETLOGS** reinitializes the redo logs and aligns the database structures to ensure consistency and integrity for future transactions.

**Flashback database:**

* **Check the SCN or**
* **Startup mount**
* **FLASHBACK DATABASE TO SCN 78667000000;**
* **FLASHBACK TABLE your\_table TO TIMESTAMP TO\_TIMESTAMP('2025-04-01 15:00:00', 'YYYY-MM-DD HH24:MI:SS');**
* **alter database open resetlogs;**

**Pluggable Database Flashback:**

* Create restore point from pluggable database.
* Alter pluggable database eis close immediate;
* flashback pluggable database eis to restore point r1;
* alter pluggable database eis open resetlogs;