

Monitoring Primary, Physical Standby, and Snapshot Standby Databases

Table-1: Sources of Information About Common Primary Database Management Actions

| Primary Database Action | Primary Site Information | Standby Site Information |
|--|--|--|
| Enable or disable a redo thread | <ul style="list-style-type: none"> Alert log V\$THREAD | Alert log |
| Display database role, protection mode, protection level, switchover status, fast-start failover information, and so forth | V\$DATABASE | V\$DATABASE |
| Add or drop a redo log file group | <ul style="list-style-type: none"> Alert log V\$LOG STATUS column of V\$LOGFILE | Alert log |
| CREATE CONTROLFILE | Alert log | Alert log |
| Monitor Redo Apply | <ul style="list-style-type: none"> Alert log V\$ARCHIVE_DEST_STATUS | <ul style="list-style-type: none"> Alert log V\$ARCHIVED_LOG V\$LOG_HISTORY V\$MANAGED_STANDBY |
| Change tablespace status | <ul style="list-style-type: none"> V\$RECOVER_FILE DBA_TABLESPACES Alert log | <ul style="list-style-type: none"> V\$RECOVER_FILE DBA_TABLESPACES |
| Add or drop a data file or tablespace | <ul style="list-style-type: none"> DBA_DATA_FILES Alert log | <ul style="list-style-type: none"> V\$DATAFILE Alert log |
| Rename a data file | <ul style="list-style-type: none"> V\$DATAFILE Alert log | <ul style="list-style-type: none"> V\$DATAFILE Alert log |
| Unlogged or unrecoverable operations | <ul style="list-style-type: none"> V\$DATAFILE V\$DATABASE | Alert log |
| Monitor redo transport | <ul style="list-style-type: none"> V\$ARCHIVE_DEST_STATUS V\$ARCHIVED_LOG V\$ARCHIVE_DEST | <ul style="list-style-type: none"> V\$ARCHIVED_LOG Alert log |

| Primary Database Action | Primary Site Information | Standby Site Information |
|---|---|--------------------------|
| | <ul style="list-style-type: none"> Alert log | |
| Issue OPEN RESETLOGS or CLEAR UNARCHIVED LOGFILES statements | Alert log | Alert log |
| Change initialization parameter | Alert log | Alert log |

Using Views to Monitor Primary, Physical, and Snapshot Standby Databases

You can use dynamic performance views to monitor primary, physical standby, and snapshot standby databases.

The following dynamic performance views are discussed:

- V\$DATABASE
- V\$MANAGED_STANDBY
- V\$ARCHIVED_LOG
- V\$DATAGUARD_STATUS
- V\$ARCHIVE_DEST

You can use the V\$DATABASE view to display information about data protection, switchover status, and fast-start failover status.

The following query displays the data protection mode, data protection level, database role, and switchover status for a primary, physical standby or snapshot standby database:

```
SQL> SELECT PROTECTION_MODE, PROTECTION_LEVEL, DATABASE_ROLE ROLE,
SWITCHOVER_STATUS FROM V$DATABASE;
```

The following query displays fast-start failover status:

```
SQL> SELECT FS_FAILOVER_STATUS "FSFO STATUS",
FS_FAILOVER_CURRENT_TARGET TARGET, FS_FAILOVER_THRESHOLD
THRESHOLD, FS_FAILOVER_OBSERVER_PRESENT "OBSERVER PRESENT" FROM
V$DATABASE;
```

V\$DATAGUARD_PROCESS

The V\$DATAGUARD_PROCESS view displays one row for each Oracle Data Guard process that is currently running.

The V\$DATAGUARD_PROCESS view replaces the V\$MANAGED_STANDBY view which is deprecated as of Oracle Database 12c Release 2 (12.2.0.1) and may be desupported in a future release.

The following is an example query of this view:

```
SQL> SELECT ROLE, THREAD#, SEQUENCE#, ACTION FROM
V$DATAGUARD_PROCESS;
```

| ROLE | THREAD# | SEQUENCE# | ACTION |
|----------------------|---------|-----------|--------------|
| RFS ping | 1 | 9 | IDLE |
| recovery apply slave | 0 | 0 | IDLE |
| recovery apply slave | 0 | 0 | IDLE |
| managed recovery | 0 | 0 | IDLE |
| recovery logmerger | 1 | 9 | APPLYING_LOG |
| RFS archive | 0 | 0 | IDLE |
| RFS async | 1 | 9 | IDLE |

V\$MANAGED_STANDBY

You can use the V\$MANAGED_STANDBY view to query Redo Apply and redo transport status on a physical standby database.

```
SQL> SELECT PROCESS, STATUS, THREAD#, SEQUENCE#,BLOCK#, BLOCKS FROM
V$MANAGED_STANDBY;
```

| PROCESS | STATUS | THREAD# | SEQUENCE# | BLOCK# | BLOCKS |
|---------|--------------|---------|-----------|--------|--------|
| RFS | ATTACHED | 1 | 947 | 72 | 72 |
| MRP0 | APPLYING_LOG | 1 | 946 | 10 | 72 |

The sample output shows that a remote file server (RFS) process completed archiving a redo log file with a sequence number of 947 and that Redo Apply is actively applying an archived redo log file with a sequence number of 946. Redo Apply is currently recovering block number 10 of the 72-block archived redo log file.

V\$ARCHIVED_LOG

You can use the V\$ARCHIVED_LOG view to query information about archived redo log files that have been received by a physical or snapshot standby database from a primary database.

For example, issue the following query:

```
SQL> SELECT THREAD#, SEQUENCE#, FIRST_CHANGE#,NEXT_CHANGE# FROM
V$ARCHIVED_LOG;
```

| THREAD# | SEQUENCE# | FIRST_CHANGE# | NEXT_CHANGE# |
|---------|-----------|---------------|--------------|
| 1 | 945 | 74651 | 74739 |
| 1 | 946 | 74739 | 74772 |
| 1 | 947 | 74772 | 74795 |

V\$DATAGUARD_STATUS

You can use the V\$DATAGUARD_STATUS view to display messages generated by Oracle Data Guard events that caused a message to be written to the alert log or to a server process trace file.

For example, issue the following query :

```
SQL> SELECT MESSAGE FROM V$DATAGUARD_STATUS;
```

V\$ARCHIVE_DEST

You can query the V\$ARCHIVE_DEST view to show the status of each redo transport destination, and for redo transport destinations that are standby databases, the SCN of the last primary database redo applied at that standby database.

For example, issue the following query:

```
SQL> SELECT DEST_ID, STATUS, APPLIED_SCN FROM V$ARCHIVE_DEST WHERE
TARGET='STANDBY';
```

| DEST_ID | STATUS | APPLIED_SCN |
|---------|--------|-------------|
| 2 | VALID | 439054 |
| 3 | VALID | 439054 |