

## Using ASMCMD Commands for Oracle ASM Management

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### Commands and Scripts with Examples

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## A. Introduction:

This Standard Operating Procedure (SOP) outlines the usage of `asmcmd`, a command-line interface for managing Oracle Automatic Storage Management (ASM). It covers common commands, their purpose, prerequisites, and best practices.

## B. Purpose:

- Manage ASM instances, disks, and disk groups.
- Perform routine maintenance tasks like adding/removing disks, resizing disk groups, and monitoring performance.
- Troubleshoot ASM-related issues and identify potential problems.

## C. Prerequisites:

- Access to an Oracle ASM instance with `asmcmd` installed.
- Basic understanding of ASM concepts and terminology.
- Privileged user account with appropriate permissions.

## D. Best Practices:

- Always backup your ASM configuration before making significant changes.
- Test commands in a non-production environment before applying them to a production system.
- Use `asmcmd` help for detailed information and syntax of specific commands.
- Consult the Oracle documentation for advanced usage and troubleshooting.

## E. Common ASMCMD Commands:

- **`asmcmd start/stop instance`:** Starts or stops the ASM instance.
- **`asmcmd list diskgroups`:** Lists all ASM disk groups.
- **`asmcmd list disks`:** Shows information about all ASM disks.

- **asmcmd add/remove disk:** Adds or removes a disk from an ASM instance.
- **asmcmd resize diskgroup:** Resizes the size of a disk group.
- **asmcmd show alert history:** Displays historical ASM alerts.
- **asmcmd monitor statistics:** Monitors performance metrics for ASM components.

Now, to the list of useful asmcmd commands which will come handy in your day to day operations.

## 1. List all diskgroups:

ASMCMD> **lsdg**

-- Include dismounted diskgroups:

ASMCMD> **lsdg --discovery**

-- List diskgroups across all nodes of cluster:

ASMCMD> **lsdg -g --discovery**

## 2. List asm disks:

-- List all asm disks

ASMCMD> **lsdisk -k**

-- List disks of a diskgroup(CDATA) with free and total MB

ASMCMD> **lsdisk -k -G CDATA**

-- List disks of a diskgroup(CDATA) with group and disk number

ASMCMD> **lsdisk -p -G CDATA**

-- List disks with disk creation date

ASMCMD> **lsdisk -t -G CDATA**

-- List candidate disks only

ASMCMD> **lsdisk --candidate -k**

-- List member disks only  
ASMCMD> **lsdisk --candidate -p**

### 3. Get attributes of ASM diskgroups:

-- List attribute of all diskgroups:

ASMCMD> **lsattr -lm**

-- List attribute of specific diskgroup(DMARCH)

ASMCMD> **lsattr -lm -G DMARCH**

| Group_Name | Name                    | Value   | RO | Sys |
|------------|-------------------------|---------|----|-----|
| DMARCH     | access_control.enabled  | FALSE   | N  | Y   |
| DMARCH     | access_control.umask    | 066     | N  | Y   |
| DMARCH     | au_size                 | 1048576 | Y  | Y   |
| DMARCH     | cell.smart_scan_capable | FALSE   | N  | N   |

-- List attributes with specific pattern

ASMCMD> **lsattr -lm %au\_size%**

| Group_Name | Name    | Value   | RO | Sys |
|------------|---------|---------|----|-----|
| CDATA      | au_size | 1048576 | Y  | Y   |
| BDM        | au_size | 1048576 | Y  | Y   |
| CRMG       | au_size | 1048576 | Y  | Y   |
| PMARCH     | au_size | 1048576 | Y  | Y   |
| BCMS       | au_size | 1048576 | Y  | Y   |

### 4. unmount diskgroup:

unmount command works only on the local node. So if you want to unmount the diskgroup from all nodes of cluster, then run this command from all the nodes

-- unmount all diskgroups

ASMCMD> **umount -a**

--- unmount specific diskgroup(ARCH)

ASMCMD> **umount ARCH**

#### 4. Mount diskgroup:

Mount command works only on the local node. So if you want to Mount the diskgroup from all nodes of cluster, then run this command from all the nodes.

-- mount all diskgroups on local node

```
ASMCMD> mount -a
```

--- mount a specific diskgroup on local node

```
ASMCMD> mount ARCH
```

#### 5. Rebalance a diskgroup:

-- here asm\_power\_limit is 8 and diskgroup is ARCH

```
ASMCMD> rebal --power 8 ARCH
```

Rebal on progress.

-- Monitor progress

```
ASMCMD> lsop
```

| Group_Name | Pass      | State | Power | EST_WORK | EST_RATE | EST_TIME |
|------------|-----------|-------|-------|----------|----------|----------|
| ARCH       | COMPACT   | RUN   | 8     | 0        | 16831    | 0        |
| ARCH       | REBALANCE | DONE  | 8     | 0        | 0        | 0        |

#### 6. Get password file of database

```
ASMCMD> pwget --dbuniquefilename DBAClass
```

```
+CDATA/DBAClass/PASSWORD/pwddbaclass.256.899912377
```

#### 8 .Get password file of asm :

```
ASMCMD> pwget --asm
```

```
+MGMT/orapwASM
```

#### 9. Get asm template info of a diskgroup:

ASMCMD> **lstmpl -l -G ARCH**

| Group_Name | Group_Num | Name                | Stripe | Sys | Redund | PriReg | MirrReg |
|------------|-----------|---------------------|--------|-----|--------|--------|---------|
| ARCH       | 1         | ARCHIVELOG          | COARSE | Y   | UNPROT | COLD   | COLD    |
| ARCH       | 1         | ASMPARAMETERFILE    | COARSE | Y   | UNPROT | COLD   | COLD    |
| ARCH       | 1         | AUDIT_SPILLFILES    | COARSE | Y   | UNPROT | COLD   | COLD    |
| ARCH       | 1         | AUTOBACKUP          | COARSE | Y   | UNPROT | COLD   | COLD    |
| ARCH       | 1         | AUTOLOGIN_KEY_STORE | COARSE | Y   | UNPROT | COLD   |         |
| COLD       |           |                     |        |     |        |        |         |
| ARCH       | 1         | BACKUPSET           | COARSE | Y   | UNPROT | COLD   | COLD    |

#### 10. Check whether flex asm is enabled or not

ASMCMD> **showclustermode**

ASM cluster : Flex mode disabled

#### 11. Check cluster state:

ASMCMD> **showclusterstate**

Normal

#### 12. View asm version:

ASMCMD> **showversion**

ASM version : 12.1.0.2.0

#### 13. Get asm spfile location:

ASMCMD> **spget**

+MGMT/DBAClass-cluster/ASMPARAMETERFILE/registry.253.899644763

#### 14. Take backup of asm spfile:

-- copy backup of spfile to a specific location

ASMCMD> **spbackup +MGMT/DBAClass-**

**cluster/ASMPARAMETERFILE/registry.253.899644763 /home/oracle/asmspfile.ora**

### 15. Find clients connected to a diskgroup:

ASMCMD> **lsct DMARCH**

| DB_Name  | Status    | Software_Version | Compatible_version | Instance_Name | Disk_Group |
|----------|-----------|------------------|--------------------|---------------|------------|
| DBAClass | CONNECTED | 12.1.0.2.0       | 12.1.0.2.0         | DBAClass1     | DMARCH     |

### 16. Get asm diskstring

ASMCMD> **dsget**

parameter:ORCL:\*

profile:ORCL:\*

### 17. List asm users with password:

ASMCMD> **lspwusr**

Username sysdba sysoper sysasm

SYS TRUE TRUE TRUE

ASMSNMP TRUE FALSE FALSE

### 18. List open files of a diskgroup:

— Open files of a diskgroup ( ARCH)

ASMCMD>**lsdf -G ARCH**

### 19 . List open files related to a database

-- Open files of a database( DBAClass)

ASMCMD>**lsdf --dbname DBAClass**

### 20. Check filter driver is enabled or not:

ASMCMD> **afd\_state**

ASMCMD-9526: The AFD state is 'NOT INSTALLED' and filtering is 'DEFAULT' on host 'b20e4bay01'

filter driver disks:

### 21. List filter driver disks(if enabled)

ASMCMD> **afd\_lsdk**

## 22. Get filter driver asm diskstring

ASMCMD> **afd\_dsget**

AFD discovery string:

## F. Conclusion:

By utilizing asmcmd effectively, you can efficiently manage your Oracle ASM environment, ensuring optimal performance and data integrity. Remember to approach changes cautiously, leverage available resources, and prioritize data protection. **Additional Notes:**

- This SOP provides a basic overview. For comprehensive information, refer to the official Oracle ASM documentation.
- Consider including specific examples and use cases relevant to your environment for a more practical guide.
- Regularly update the SOP to reflect changes in asmcmd functionality and best practices.