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Database CLI(DBCLI) OCI

Database Command Line Utility– L200

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Objectives

After completing this lesson, you should be able to:

- Understand What is DBCLI
- Applicability of DBCLI for OCI Data Management
- Various options supported through DBCLI
- Summary

Database CLI

The database CLI (dbcli) is a command line interface available on bare metal and virtual machine DB systems. After you connect to the DB system, you can use the database CLI to perform tasks such as creating Oracle database homes and databases.

Note: The database CLI is not for use on Exadata DB systems.

The database CLI commands must be run as the root user.

- dbcli is in the /opt/oracle/dcs/bin/ directory. This directory is included in the path for the root user's environment.
- Oracle Database maintains logs of the dbcli command output in the dcscli.log and dcs-agent.log files in the /opt/oracle/dcs/log/ directory.
- The database CLI commands and most parameters are case sensitive and should be typed correctly. A few parameters are not case sensitive, you should look at parameter descriptions.

Database CLI Syntax & Update Commands

The database CLI commands syntax:

dbcli command [parameters]

Where ,command is a verb-object combination such as create-database.

parameters include additional options for the command. Most parameter names are preceded with two dashes, for example, --help. Abbreviated parameter names are preceded with one dash, for example, -h.

User-specified parameter values are shown within angle brackets, for example, <db_home_id>. Omit the angle brackets when specifying these values.

The help parameter is available with every command.

CLI Update Command

cliadm update-dbcli

Note: The cliadm update-dbcli command is not available on 2-node RAC DB systems.

Database CLI Syntax & Update Commands

Synatx

cliadm update-dbcli [-h] [-j]

where:

H stands for help and –j stands for JSON output, both are optional parameters.

Update the CLI to ensure you have the latest patching commands (older DB systems might not include them).

SSH to the DB System as opc user.

ssh -i <private_key_path> opc@<db_system_ip_address>

sudo to the root user. Use sudo su - with a hyphen to invoke the root user's profile, which will set the PATH to the dbcli directory (/opt/oracle/dcs/bin).

[opc@dbsys ~]$ sudo su -

Update the CLI by using the cliadm update-dbcli command.

[root@dbsys ~]# cliadm update-dbcli

```
Job details
----------------------------------------------------------------
                     ID:  fc5a184f-15fa-48ab-90a3-c4afbb966ede
            Description:  DcsCli patching
                 Status:  Created
                Created:  September 3, 2019 6:48:48 PM UTC
                Message:  Dcs cli will be updated
```

Database CLI Database Commands

dbcli clone-database

dbcli create-database

dbcli delete-database

dbcli describe-database

dbcli list-databases

dbcli modify-database

dbcli recover-database

dbcli register-database

dbcli update-database

Note: Use the dbcli create-database command to create a new database. You can create a database with a new or existing Oracle Database home, however each database home can have only one database.

It takes a few minutes to create the database. After you run the dbcli create-database command, you can use the dbcli list-jobs command to check the status of the database creation job.

The dbcli create-database command is available on bare metal DB systems only.

You must create and activate a master encryption key for any PDBs that you create. After creating or plugging in a new PDB on a 1- or 2-node RAC DB System, use the dbcli update-tdekey command to create and activate a master encryption key for the PDB. Otherwise, you might encounter the error ORA-28374: typed master key not found in wallet when attempting to create tablespaces in the PDB. In a multitenant environment, each PDB has its own master encryption key which is stored in a single keystore used by all containers.

https://docs.cloud.oracle.com/iaas/Content/Database/References/dbacli.htm#DatabaseCommands

Database CLI Commands Continued..

Dbhome Commands : The following commands are available to manage database homes:

dbcli create-dbhome
dbcli describe-dbhome
dbcli delete-dbhome
dbcli list-dbhomes
dbcli update-dbhome

Dbstorage Commands
The following commands are available to manage database storage:

- dbcli list-dbstorages
- dbcli describe-dbstorage
- dbcli create-dbstorage
- dbcli delete-dbstorage

Backup Commands
The following commands are available to back up databases:

- dbcli create-backup
- dbcli getstatus-backup
- dbcli schedule-backup

https://docs.cloud.oracle.com/iaas/Content/Database/References/dbacli.htm#DbhomeCommands

Database CLI Commands Continued..

Objectstoreswift Commands

You can back up a database to an existing bucket in the Oracle Cloud Infrastructure Object Storage service by using the dbcli create-backup command,

- 1. Create an object store on the DB system, by using the dbcli create-objectstoreswift command.

- Create a backup configuration that refers to the object store ID and the bucket name by using the dbcli create-backupconfig command.

- Associate the backup configuration with the database by using the dbcli update-database command.

- The following commands are available to manage object stores.
  - dbcli create-objectstoreswift
  - dbcli describe-objectstoreswift
  - dbcli list-objectstoreswifts

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Database CLI– Demo

Database CLI– How to Use database operation using DBCLI

1. Create database with "dbcli create-database" command

dbcli create-database --dbname dbtest --dbhomeid 8601c041-5bf5-4810-b736-0ab24509a0c9 --adminpassword

```
[root@bmstdby ~]# /opt/oracle/dcs/bin/dbcli create-database --dbstorage ACFS --dbshape odb2 --dbclass OLTP  --version 11.2.0.4 --dbtype SI --dbname demodb --databaseUniqueName demodb
 -hm N0tAll0w##d
--hiddenadminpassword/-hm option is deprecated. Use --adminpassword/-m instead

Job details
----------------------------------------------------------------
                     ID:  c966b134-8f90-485f-a82d-5d567f6d361e
            Description:  Database service creation with db name: demodb
                 Status:  Created
                Created:  September 4, 2019 2:33:40 PM UTC
                Message:

Task Name                                Start Time                          End Time                            Status
---------------------------------------- ----------------------------------- ----------------------------------- ----------
```

2. Check status with "dbcli list-dbhomes" command

```
[root@bmstdby ~]# dbcli list-dbhomes

ID                                       Name                 DB Version                                Home Location                                 Status
---------------------------------------- -------------------- ----------------------------------------- --------------------------------------------- ----------
af4280fb-6b21-4182-a2f5-79da4af5d24b     OraDB18000_home1     18.5.0.0.190115                           /u01/app/oracle/product/18.0.0.0/dbhome_1     Configured
8601c041-5bf5-4810-b736-0ab24509a0c9     OraDB18000_home2     18.5.0.0.190115                           /u01/app/oracle/product/18.0.0.0/dbhome_2     Configured
cbdcd4af-93df-4427-815e-76cd710b920d     OraDB11204_home1     11.2.0.4.190115                           /u01/app/oracle/product/11.2.0.4/dbhome_1     Configured
b8870f9e-f3ac-4ba1-8cf3-cd24423df471     OraDB11204_home2     11.2.0.4.190115                           /u01/app/oracle/product/11.2.0.4/dbhome_2     Configured

[root@bmstdby ~]#
```

3. List Databases using dbcli command

```
[root@bmstdby ~]# dbcli list-databases

ID                                       DB Name    DB Type  DB Version           CDB        Class    Shape    Storage    Status        DbHomeID
---------------------------------------- ---------- -------- -------------------- ---------- -------- -------- ---------- ------------ ----------------------------------------
a2c2f584-445d-4a16-8cef-6720e9209836     bmsprod    Si       18.5.0.0.190115      true       Oltp     Odb1     ASM        Configured   af4280fb-6b21-4182-a2f5-79da4af5d24b
0e30fc3c-939c-40d6-966e-2871f5bf8ff6     bmdbprod   Si       18.5.0.0.190115      true       Oltp     Odb1     ASM        Configured   8601c041-5bf5-4810-b736-0ab24509a0c9
49c97a43-6198-4e93-af5c-2d978bb1941f     db11g      Si       11.2.0.4.190115      false      Oltp     Odb1     ACFS       Configured   cbdcd4af-93df-4427-815e-76cd710b920d
7e3d431c-e657-4e1f-a023-1baee13a1bbd     demodb     Si       11.2.0.4.190115      false      Oltp     Odb2     ACFS       Creating     b8870f9e-f3ac-4ba1-8cf3-cd24423df471
[root@bmstdby ~]#
```

4. List Databases storage configured using dbcli command

```
[root@bmstdby ~]# dbcli list-dbstorages

ID                                       Type   DBUnique Name        Status
---------------------------------------- ------ -------------------- ----------
ba64b33d-4acb-4aa1-9a53-3b2659fdd0d8     Asm    bmsprod_iad3fg       Configured
30bdf457-9ad0-49bc-b719-39d1408412e5     Asm    bmdbprod_iad2zn      Configured
94801528-c9aa-47ba-9fd6-26a9d2391366     Acfs   db11g_iad2pv         Configured
e60192bc-20cd-4eb2-b67c-4e6c184f2a93     Acfs   demodb               Configured
[root@bmstdby ~]#
```

5. Delete Databases using “dbcli delete-database” command

```
[root@bmstdby ~]# dbcli delete-database -i 0e30fc3c-939c-40d6-966e-2871f5bf8ff6
DCS-10001:Internal error encountered: Database with id : 0e30fc3c-939c-40d6-966e-2871f5bf8ff6 cannot be deleted as it is configured with dataguard.
[root@bmstdby ~]# dbcli delete-database -i 49c97a43-6198-4e93-af5c-2d978bb1941f
{
  "jobId" : "0f7428e0-5a3b-4d94-bec8-987800c030b8",
  "status" : "Running",
  "message" : null,
  "reports" : [ {
    "taskId" : "TaskZJsonRpcExt_9770",
    "taskName" : "Validate db 49c97a43-6198-4e93-af5c-2d978bb1941f for deletion",
    "taskResult" : "",
    "startTime" : "September 04, 2019 14:48:37 PM UTC",
    "endTime" : "September 04, 2019 14:48:37 PM UTC",
    "status" : "Success",
    "taskDescription" : null,
    "parentTaskId" : "TaskSequential_9768",
    "jobId" : "0f7428e0-5a3b-4d94-bec8-987800c030b8",
    "tags" : [ ],
    "reportLevel" : "Info",
    "updatedTime" : "September 04, 2019 14:48:37 PM UTC"
  }, {
    "taskId" : "TaskZJsonRpcExt_9781",
    "taskName" : "Database Deletion",
    "taskResult" : "",
    "startTime" : "September 04, 2019 14:48:37 PM UTC",
    "endTime" : "September 04, 2019 14:48:37 PM UTC",
    "status" : "Running",
    "taskDescription" : null,
    "parentTaskId" : "TaskSequential_9768",
    "jobId" : "0f7428e0-5a3b-4d94-bec8-987800c030b8",
    "tags" : [ ],
    "reportLevel" : "Info",
    "updatedTime" : "September 04, 2019 14:48:37 PM UTC"
  } ],
  "createTimestamp" : "September 04, 2019 14:48:37 PM UTC",
  "resourceList" : [ ],
  "description" : "Database service deletion with db name: db11g with id : 49c97a43-6198-4e93-af5c-2d978bb1941f",
  "updatedTime" : "September 04, 2019 14:48:37 PM UTC"
}
[root@bmstdby ~]#
```

6. dbcli create-dbhome -v 12.1.0.2

Database CLI– Summary

You should now be able to

- Describe the features supported using Database CLI
- Understand the applicability of database CLI based on use case.

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