



ORACLE

# Database CLI(DBCLI) OCI

## Database Command Line Utility- L200

Bal Sharma

Oracle Cloud Infrastructure

October 2019

## **Safe harbor statement**

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions.

The development, release, timing, and pricing of any features or functionality described for Oracle's products may change and remains at the sole discretion of Oracle Corporation.



# 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

## Syntax

```
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.



# Database CLI Commands Continued..

**Dbhomes Commands :** The following commands are available to manage database homes:

[dbcli create-dbhomes](#)  
[dbcli describe-dbhomes](#)  
[dbcli delete-dbhomes](#)  
[dbcli list-dbhomes](#)  
[dbcli update-dbhomes](#)

## 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/dbcli.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](#)





# 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  
cbcd4af-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 cbcd4af-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 DB Unique Name Status  
-----  
ba64b33d-4acb-4aa1-9a53-3b2659fd0d8 Asm bmsprod_iad3fg Configured  
30fdf457-9ad0-49bc-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-bee8-987800c030b8",  
    "status": "Running",  
    "message": null,  
    "reports": [{}],  
    "taskList": [{"taskName": "Task2JoinRpExt-9787",  
        "taskDesc": "Nullify 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-bee8-987800c030b8",  
    "tags": [{}],  
    "reportLevel": "Info",  
    "updatedTime": "September 04, 2019 14:48:37 PM UTC"  
},  
    {"taskID": "Task2JoinRpExt-9781",  
    "taskName": "Database Deletion",  
    "taskDesc": "",  
    "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-bee8-987800c030b8",  
    "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.



**Oracle Cloud always free tier:**

[oracle.com/cloud/free/](https://oracle.com/cloud/free/)

**OCI training and certification:**

[oracle.com/cloud/iaas/training](https://oracle.com/cloud/iaas/training)

[oracle.com/cloud/iaas/training/certification](https://oracle.com/cloud/iaas/training/certification)

[education.oracle.com/oracle-certification-path](https://education.oracle.com/oracle-certification-path)

**OCI hands-on labs:**

[ocitraining.qloudable.com/provider/oracle](https://ocitraining.qloudable.com/provider/oracle)

**Oracle learning library videos on YouTube:**

[youtube.com/user/OracleLearning](https://youtube.com/user/OracleLearning)