Practices for Lesson 13

Oracle RAC One Node

Practices for Lesson 13: Overview

Practices Overview

In these practices, you will create a RAC One Node Database

Practice 11-1: RAC One Node

Overview

In this practice, you will create a RAC One Node database. You will perform an online database relocation. Finally, you will convert the RAC One Database to an Oracle RAC database.

1. From a terminal session on your classroom PC, execute `ssh oracle@ol7-122-rac1` to open a terminal session on `ol7-122-rac1` as the `oracle` user. Set the environment and check the statusof the database.

```
[vncuser@classroom_pc ~]$ ssh oracle@ol7-122-rac1
oracle@ol7-122-rac1's password:

[oracle@ol7-122-rac1 ~]$ . oraenv
ORACLE_SID = [oracle] ? cdbrac
The Oracle base has been set to /u01/app/oracle

[oracle@ol7-122-rac1 ~]$ srvctl status database –d

cdbrac


[oracle@ol7-122-rac1 ~]$
```

2. Stop the instance on `host02`. Verify the database status.

```
[oracle@ol7-122-rac1 ~]$ srvctl stop instance -f -d cdbrac -n
ol7-122-rac2

[oracle@ol7-122-rac1 ~]$ srvctl status database -
d cdbrac

[oracle@ol7-122-rac1 ~]$
```

3. An active service is needed to convert the RAC database to RACONENODE. Create a service called SERV1.

```
[oracle@ol7-122-rac1 ~]$ srvctl add service -d cdbrac -s SERV1 -
serverpool cdbracdb

[oracle@ol7-122-rac1 ~]$
```

4. Use the `srvctl` utility to convert the RAC database to RACONENODE.

```
[oracle@ol7-122-rac1 ~]$ srvctl convert database -d cdbrac -c
RACONENODE

[oracle@ol7-122-rac1 ~]$
```

5. From the `oracle` terminal session, check your database configuration using the `srvctl` utility.

```
[oracle@ol7-122-rac1 ~]$ srvctl config database -db cdbrac
Database unique name: orcl
Database name: orcl
Oracle home: /u01/app/oracle/product/12.1.0/dbhome_1
Oracle user: oracle
Spfile: +DATA/ORCL/PARAMETERFILE/spfile.279.868817789
Password file: +DATA/ORCL/PASSWORD/pwdorcl.276.868816925
Domain:
Start options: open
Stop options: immediate
Database role: PRIMARY
Management policy: AUTOMATIC
Server pools: orcldb
Database instances:
Disk Groups: DATA,FRA
Mount point paths:
Services:  serv1
Type: RACOneNode
Online relocation timeout: 30
Instance name prefix: orcl
Candidate servers:
OSDBA group: dba
OSOPER group: oper
Database instances:
Database is policy managed

[oracle@ol7-122-rac1 ~]$
```

6. Use the `srvctl` utility to check the status of the `orcl` database.

```
[oracle@ol7-122-rac1 ~]$ srvctl status database -db cdbrac
Instance orcl_3 is running on node ol7-
122-rac1Online relocation: INACTIVE
[oracle@ol7-122-rac1 ~]$
```

7. Execute `srvctl relocate database –help` to view command usage.

```
[oracle@ol7-122-rac1 ~]$ srvctl relocate database -help

Initiate online relocation of the RAC One Node database.
```

```
Usage: srvctl relocate database -db <db_unique_name> {[-node
<target>] [-timeout <timeout>] [-stopoption <stop_option>] | -
abort [-revert]} [-verbose]
    -db <db_unique_name>           Unique name of database to
relocate
    -node <target>                 Target node to which to
relocate database
    -timeout <timeout>             Online relocation timeout in
minutes
    -abort                         Abort failed online
relocation
    -revert                        Remove target node of failed
online relocation request from the candidate server list of
administrator-managed RAC One Node database
    -stopoption <stop_option>      Override default shutdown
option for running instance (only NORMAL allowed)
    -verbose                       Verbose output
    -help                          Print usage
[oracle@ol7-122-rac1 ~]$
```

8. In this example, the `orcl_3` instance was running initially on `ol7-122-rac1`. Use `srvctl` toperform an online database relocation from `ol7-122-rac1` to `host02`. **Immediately after issuing the command, proceed to the next step!**

```
[oracle@ol7-122-rac1 ~]$ srvctl relocate database -db
cdbrac –node ol7-122-rac2 -w 15 -v

<<< Immediately go to the next step>>>

Configuration updated to two instances
Instance orcl_1 started
Services relocated
Waiting for up to 15 minutes for instance orcl_3 to stop ...
Instance orcl_3 stopped
Configuration updated to one instance

[oracle@ol7-122-rac1 ~]$
```

9. Open another terminal window as `oracle`, set the environment and issue the `srvctl status database -db orcl` command several times to monitor the migration process until the relocation command finishes in the first terminal.

```
[vncuser@classroom_pc ~]$ ssh oracle@ol7-122-rac1
oracle@ol7-122-rac1's password:

[oracle@ol7-122-rac1 ~]$ . oraenv
```

```
ORACLE_SID = [oracle] ? orcl
The Oracle base has been set to /u01/app/oracle

[oracle@ol7-122-rac1 ~]$ srvctl status database -db cdbrac

# wait for minutes

[oracle@ol7-122-rac1 ~]$ srvctl status database -db cdbrac

# wait for minutes

[oracle@ol7-122-rac1 ~]$ srvctl status database -db cdbrac
```

10. Let's convert the RAC One Node database to a RAC database. First, shut down the RAC One Node database.

```
[oracle@ol7-122-rac1 ~]$ srvctl stop database -db cdbrac
[oracle@ol7-122-rac1 ~]$
```

11. Use `srvctl` to convert the database to RAC and restart the database. Check the database status to make sure that both the instances are up.

```
[oracle@ol7-122-rac1 ~]$ srvctl convert database -db cdbrac -
dbtype RAC

[oracle@ol7-122-rac1]$ srvctl start database -db cdbrac

[oracle@ol7-122-rac1]$ srvctl status database -
d cdbracInstance orcl_1 is running on node
host02 Instance orcl_2 is running on node ol7-
122-rac1

[oracle@ol7-122-rac1]$
```

12. Execute the `srvctl status service` command to view the services configuration. Note that the `serv1` service is running on all nodes. Stop the service and remove it.

```
[oracle@ol7-122-rac1 ~]$ srvctl status service -d cdbrac
Service serv1 is running on nodes: ol7-122-rac1,host02
```

```
[oracle@ol7-122-rac1 ~]$ srvctl stop service -db cdbrac -service
serv1

[oracle@ol7-122-rac1 ~]$ srvctl remove service -db cdbrac -
service serv1
[oracle@ol7-122-rac1 ~]$
```

13. Execute the `srvctl config database` command to view the database configuration.

```
[oracle@ol7-122-rac1 ~]$ srvctl config database -d cdbrac
Database unique name: orcl
Database name: orcl
Oracle home: /u01/app/oracle/product/12.1.0/dbhome_1
Oracle user: oracle
Spfile: +DATA/ORCL/PARAMETERFILE/spfile.279.868817789
Password file: +DATA/ORCL/PASSWORD/pwdorcl.276.868816925
Domain:
Start options: open
Stop options: immediate
Database role: PRIMARY
Management policy: AUTOMATIC
Server pools: orcldb
Disk Groups: DATA,FRA
Mount point paths:
Services:
Type: RAC
Start concurrency:
Stop concurrency:
OSDBA group: dba
OSOPER group: oper
Database instances:
Configured nodes:
Database is policy managed

[oracle@ol7-122-rac1 ~]$
```

14. Exit all terminal windows opened for this practice.