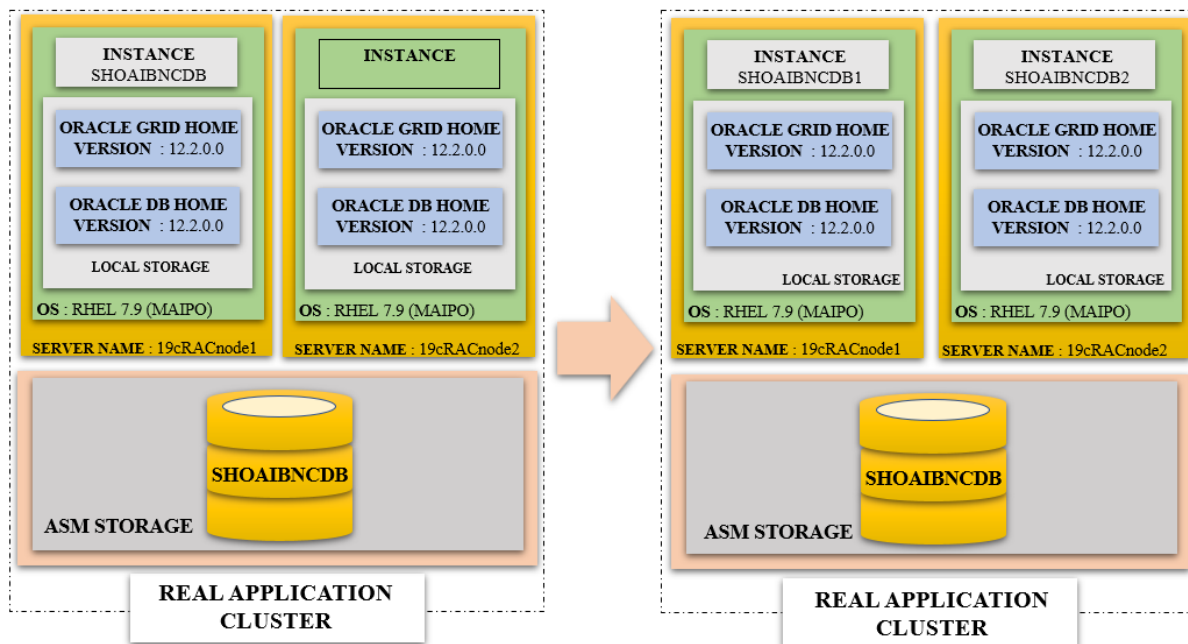


CONVERT ORACLE 12c SINGLE NODE RAC DATABASE

TO

ORACLE 12c 2-NODE RAC DATABASE

In PHASE 2 we will see how to convert Oracle 12c Single Node RAC Database running on SERVER [19cRACNODE1] into 12c RAC Database with 2 nodes running on SERVER [19cRACNODE1] and SERVER [19cRACNODE2] respectively by adding one more instance.

In the PHASE 1 we have seen how to convert the 12c single standalone database to RAC database by migrating the database (SHOAIBNCDB) from standalone server (SHOMAC1) to RAC database server (19cRACnode1/19cRACnode2). During that phase RMAN Backup was restored to one of the RAC server nodes (19cRACnode1).

<< LINK TO THE PAGE >>

PHASE 2:

Convert single-node RAC DB to 2 node RAC DB

Below are the high-level steps:

- + Add redo log group for thread #2 and enable them.
- + Add undo tablespace for Instance #2
- + Create Listener and Tnsnames files
- + Add Cluster related parameters in PFILE
- + Create password file
- + Add SPFILE in ASM Storage
- + Run catclust.sql
- + Register the database and instance in cluster

1. CHECK STATUS OF SINGLE INSTANCE RAC DATABASE

```
SET 12C DATABASE ENVIRONMENT
SQLPLUS "/ AS SYSDBA"
SELECT NAME, OPEN_MODE, DATABASE_ROLE, CDB FROM V$DATABASE;
```

```
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ . oraenv
ORACLE_SID = [shoaibncdb] ? shoaibncdb
The Oracle base remains unchanged with value /u01/app/oracle
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ sqlplus "/ as sysdba"

SQL*Plus: Release 12.2.0.1.0 Production on Sat Jul 23 09:07:38 2022
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Connected to:
Oracle Database 12c Enterprise Edition Release 12.2.0.1.0 - 64bit Production

SQL> select name,open_mode,database_role,cdb,instance_name from gv$database,gv$instance;

NAME          OPEN_MODE          DATABASE_ROLE      CDB INSTANCE_NAME
-----
SHOAIBNC      READ WRITE         PRIMARY            NO  shoaibncdb

SQL>
```

2. CHECK REDOLOGS AT SINGLE INSTANCE RAC DATABASE

```
SET 12C DATABASE ENVIRONMENT
SQLPLUS "/ AS SYSDBA"
SELECT * FROM V$LOG;
```

```
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ . oraenv
ORACLE_SID = [shoaibncdb] ? shoaibncdb
The Oracle base remains unchanged with value /u01/app/oracle
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ sqlplus "/ as sysdba"

SQL*Plus: Release 12.2.0.1.0 Production on Sat Jul 23 09:51:13 2022
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Connected to:
Oracle Database 12c Enterprise Edition Release 12.2.0.1.0 - 64bit Production

SQL> set lines 300
SQL> select * from v$log;

GROUP#    THREAD#    SEQUENCE#    BYTES    BLOCKSIZE    MEMBERS ARC STATUS          FIRST_CHANGE# FIRST_TIM NEXT_CHANGE# NEXT_TIME    CON_ID
-----
1         1         3    209715200      512         1 YES INACTIVE          1741561 21-JUL-22      1798469 22-JUL-22         0
2         1         5    209715200      512         1 NO  CURRENT          1854154 23-JUL-22      1.8447E+19         0
3         1         4    209715200      512         1 YES INACTIVE          1798469 22-JUL-22      1854154 23-JUL-22         0

SQL>
```

In single instance there will be only one redo thread.
Add another redo thread (or more if RAC has more nodes) and enable it.

3. ADD REDO LOG GROUP FOR THREAD#2 AT SINGLE INSTANCE RAC DATABASE

```
ALTER DATABASE ADD LOGFILE THREAD 2 GROUP 4 ('+DATA') SIZE 200M;
ALTER DATABASE ADD LOGFILE THREAD 2 GROUP 5 ('+DATA') SIZE 200M;
ALTER DATABASE ADD LOGFILE THREAD 2 GROUP 6 ('+DATA') SIZE 200M;
SELECT * FROM V$LOG;
```

```
SQL> alter database add logfile thread 2 group 4 ('+DATA') size 200m ;
Database altered.

SQL> alter database add logfile thread 2 group 5 ('+DATA') size 200m ;
Database altered.

SQL> alter database add logfile thread 2 group 6 ('+DATA') size 200m ;
Database altered.

SQL> select * from v$log;
```

GROUP#	THREAD#	SEQUENCE#	BYTES	BLOCKSIZE	MEMBERS	ARC	STATUS	FIRST_CHANGE#	FIRST_TIM	NEXT_CHANGE#	NEXT_TIME	CON_ID
1	1	3	209715200	512	1	YES	INACTIVE	1741561	21-JUL-22	1798469	22-JUL-22	0
2	1	5	209715200	512	1	NO	CURRENT	1854154	23-JUL-22	1.8447E+19		0
3	1	4	209715200	512	1	YES	INACTIVE	1798469	22-JUL-22	1854154	23-JUL-22	0
4	2	0	209715200	512	1	YES	UNUSED	0		0		0
5	2	0	209715200	512	1	YES	UNUSED	0		0		0
6	2	0	209715200	512	1	YES	UNUSED	0		0		0

6 rows selected.

```
SQL>
```

4. ENABLE REDO LOG GROUP THREAD#2

```
ALTER DATABASE ENABLE PUBLIC THREAD 2;
SELECT * FROM V$LOG;
```

```
SQL> alter database enable public thread 2;
Database altered.

SQL> select * from v$log;
```

GROUP#	THREAD#	SEQUENCE#	BYTES	BLOCKSIZE	MEMBERS	ARC	STATUS	FIRST_CHANGE#	FIRST_TIM	NEXT_CHANGE#	NEXT_TIME	CON_ID
1	1	6	209715200	512	1	NO	CURRENT	1895720	23-JUL-22	1.8447E+19		0
2	1	5	209715200	512	1	YES	ACTIVE	1854154	23-JUL-22	1895720	23-JUL-22	0
3	1	4	209715200	512	1	YES	INACTIVE	1798469	22-JUL-22	1854154	23-JUL-22	0
4	2	1	209715200	512	1	NO	CURRENT	1895774	23-JUL-22	1.8447E+19	23-JUL-22	0
5	2	0	209715200	512	1	YES	UNUSED	0		0		0
6	2	0	209715200	512	1	YES	UNUSED	0		0		0

6 rows selected.

```
SQL>
```

5. GATHER TABLESPACE AND DATAFILE INFO

```
SELECT NAME FROM GV$TABLESPACE;
SELECT INST_ID,TS#,NAME FROM GV$DATAFILE;
```

```
SQL> select name from gv$tablespace;
```

NAME
SYSAUX
SYSTEM
UNDOTBS1
USERS
TEMP

```
SQL> select INST_ID,TS#,NAME,BYTES/1024/1024 from gv$datafile;
```

INST_ID	TS#	NAME	BYTES/1024/1024
1	0	+DATA/SHOAIBNCDB/DATAFILE/system.299.1110530725	820
1	1	+DATA/SHOAIBNCDB/DATAFILE/sysaux.303.1110530725	730
1	2	+DATA/SHOAIBNCDB/DATAFILE/undotbs1.305.1110530739	70
1	4	+DATA/SHOAIBNCDB/DATAFILE/users.353.1110530739	5

```
SQL> █
```

6. GATHER CONTROLFILE INFO

```
SELECT NAME FROM GV$CONTROLFILE;
```

```
SQL>
SQL> select name from gv$controlfile;
```

```
NAME
-----
+DATA/SHOAIBNCDB/CONTROLFILE/current.294.1110530615
```

```
SQL> █
```

7. CREATE UNDO TABLESPACE FOR SECOND INSTANCE

```
CREATE UNDO TABLESPACE UNDOTBS2 DATAFILE '+DATA' SIZE 500M;
```

```
SQL> create undo tablespace UNDOTBS2 datafile '+DATA' size 100M;
```

```
Tablespace created.
```

```
SQL> select name from gv$tablespace;
```

```
NAME
-----
SYSaux
SYSTEM
UNDOTBS1
USERS
TEMP
UNDOTBS2
```

```
6 rows selected.
```

```
SQL> select INST_ID,TS#,NAME,BYTES/1024/1024 from gv$datafile;
```

INST_ID	TS#	NAME	BYTES/1024/1024
1	0	+DATA/SHOAIBNCDB/DATAFILE/system.299.1110530725	820
1	1	+DATA/SHOAIBNCDB/DATAFILE/sysaux.303.1110530725	730
1	2	+DATA/SHOAIBNCDB/DATAFILE/undotbs1.305.1110530739	70
1	5	+DATA/SHOAIBNCDB/DATAFILE/undotbs2.304.1110798879	100
1	4	+DATA/SHOAIBNCDB/DATAFILE/users.353.1110530739	5

```
SQL> █
```

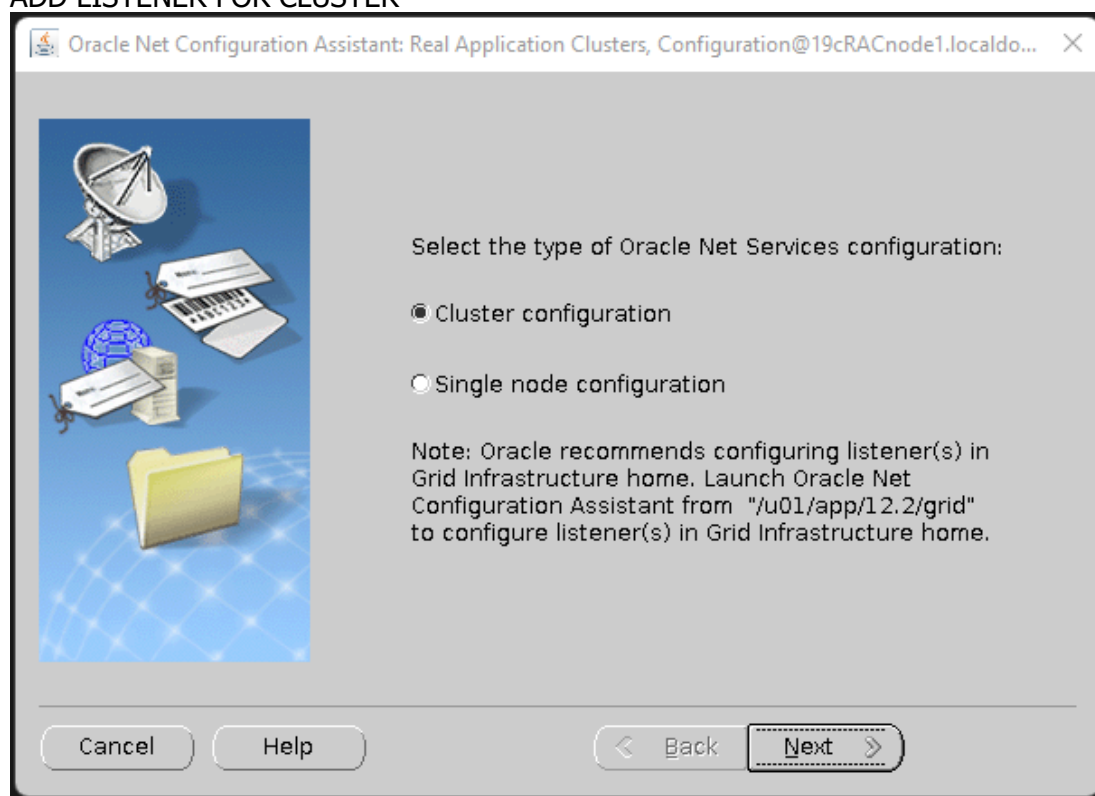
8. CREATE LISTENER USING NETCA

```
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ netca
```

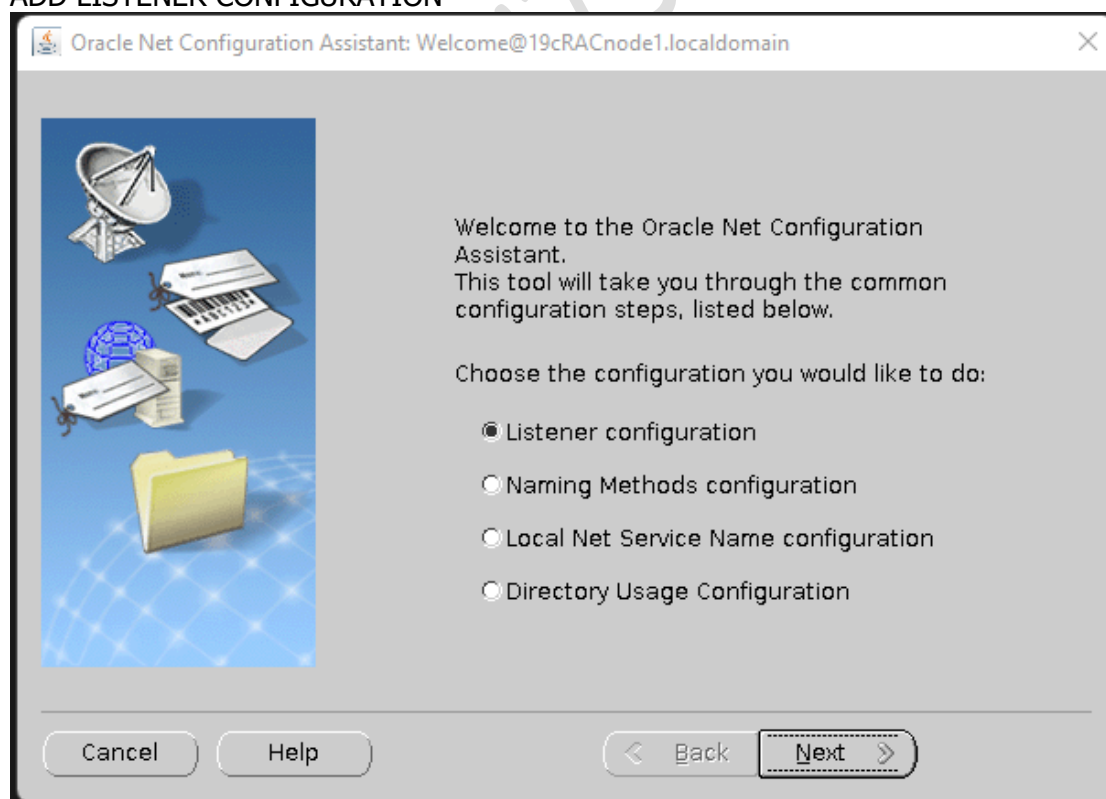
```
Oracle Net Services Configuration:
```

```
█
```

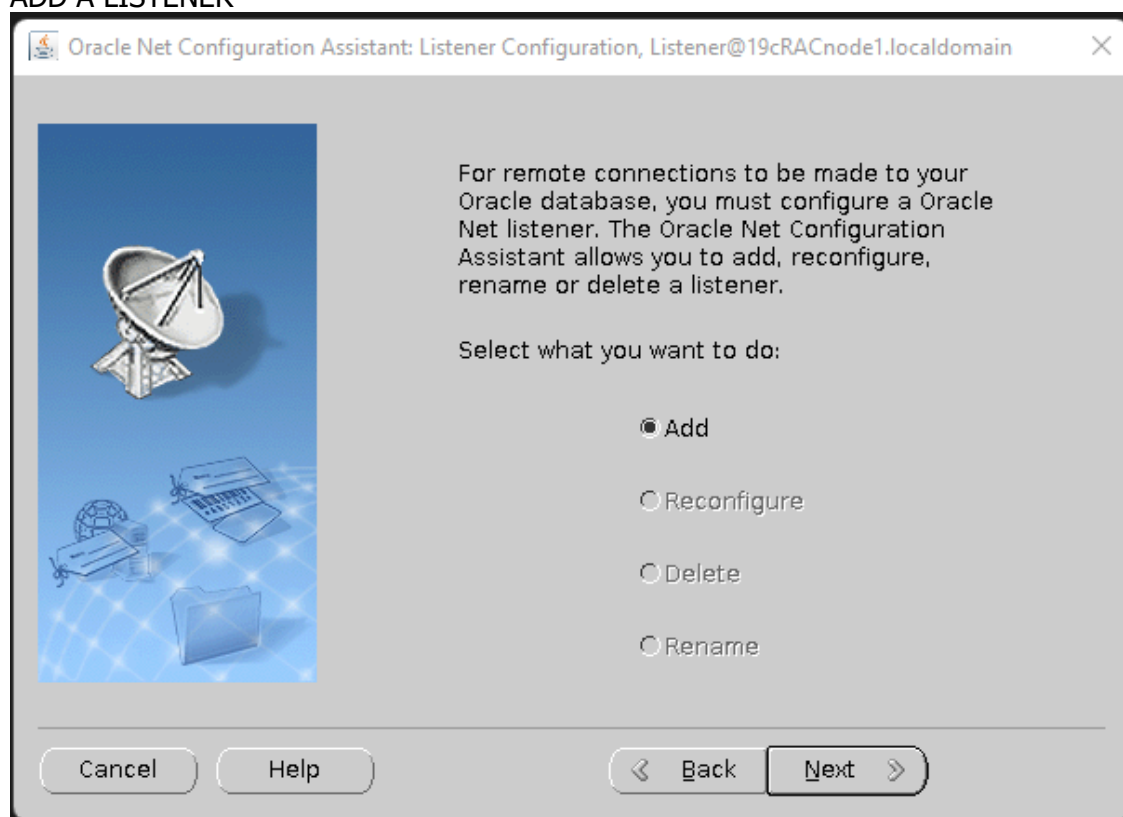
ADD LISTENER FOR CLUSTER



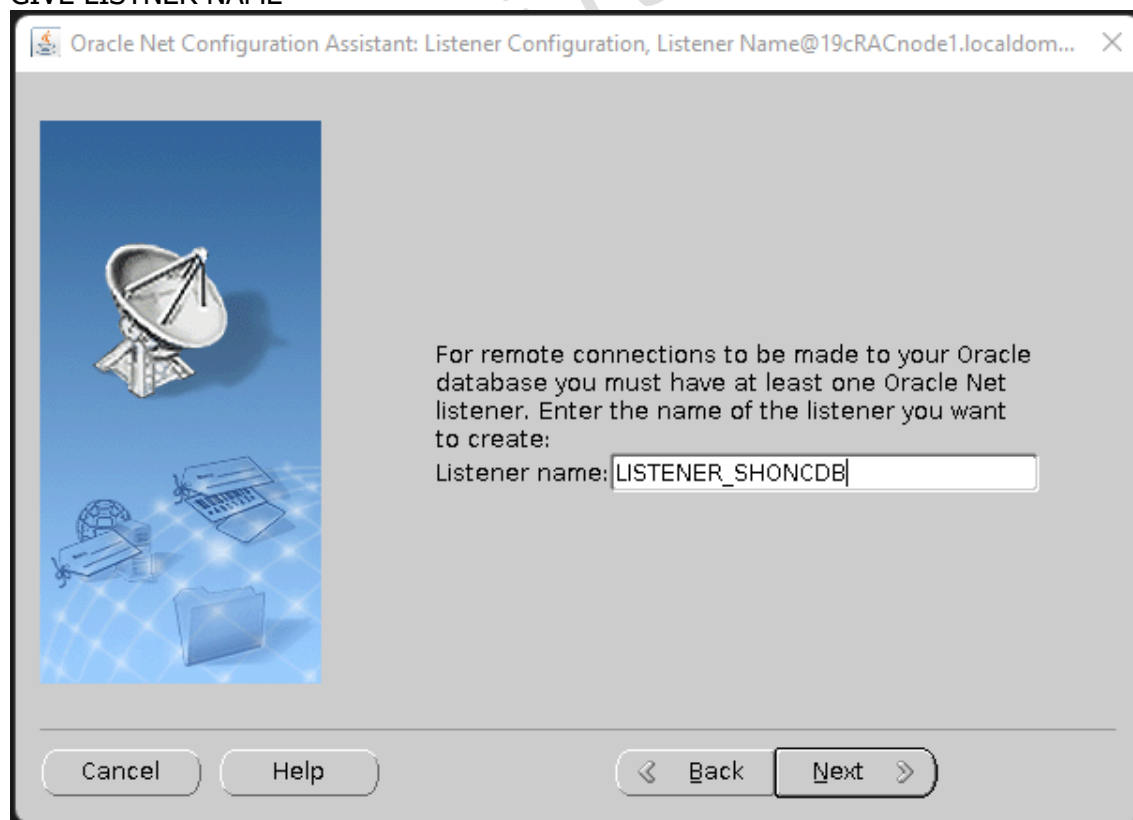
ADD LISTENER CONFIGURATION



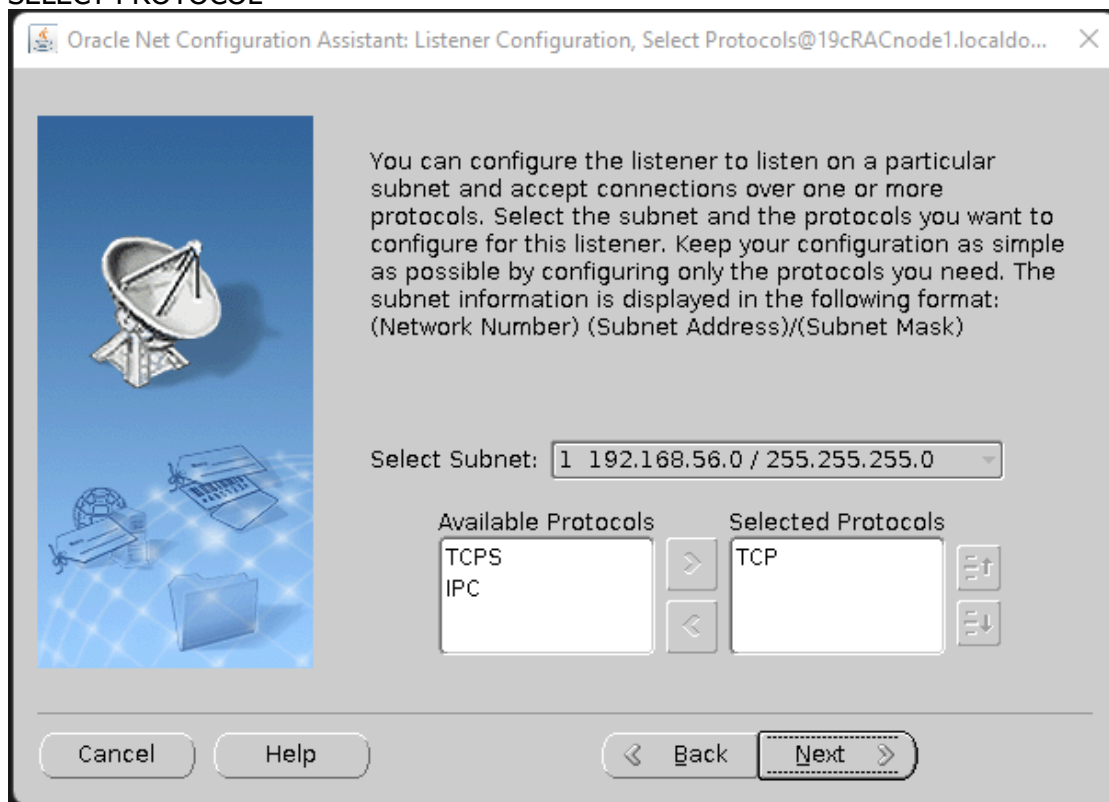
ADD A LISTENER



GIVE LISTNER NAME



SELECT PROTOCOL



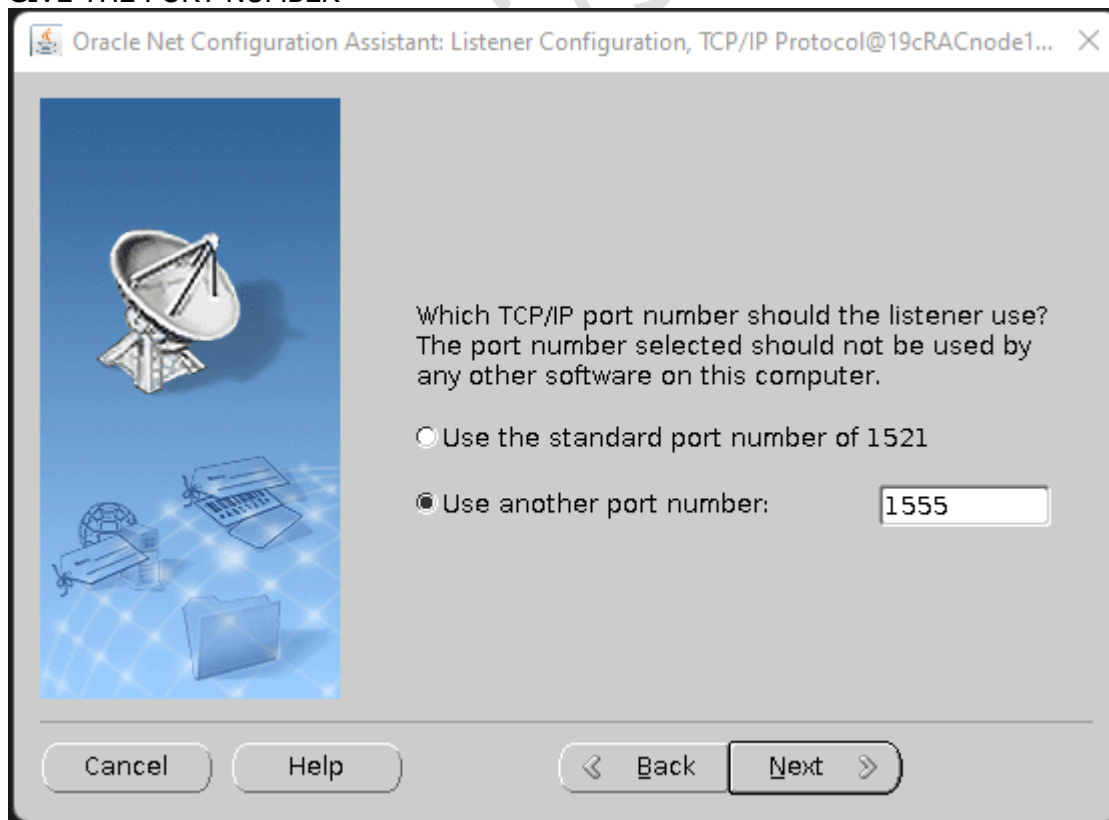
You can configure the listener to listen on a particular subnet and accept connections over one or more protocols. Select the subnet and the protocols you want to configure for this listener. Keep your configuration as simple as possible by configuring only the protocols you need. The subnet information is displayed in the following format: (Network Number) (Subnet Address)/(Subnet Mask)

Select Subnet: 1 192.168.56.0 / 255.255.255.0

Available Protocols		Selected Protocols
TCP	>	TCP
IPC	<	

Cancel Help Back Next

GIVE THE PORT NUMBER



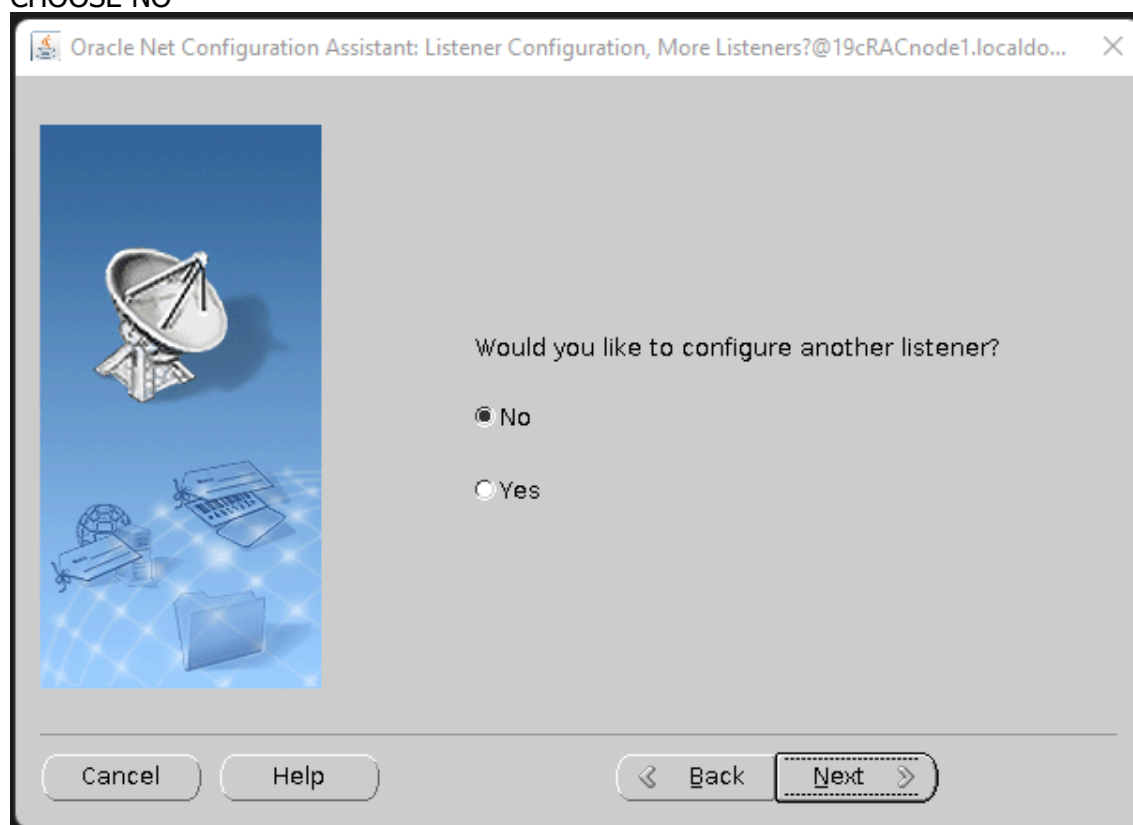
Which TCP/IP port number should the listener use?
The port number selected should not be used by any other software on this computer.

☐ Use the standard port number of 1521

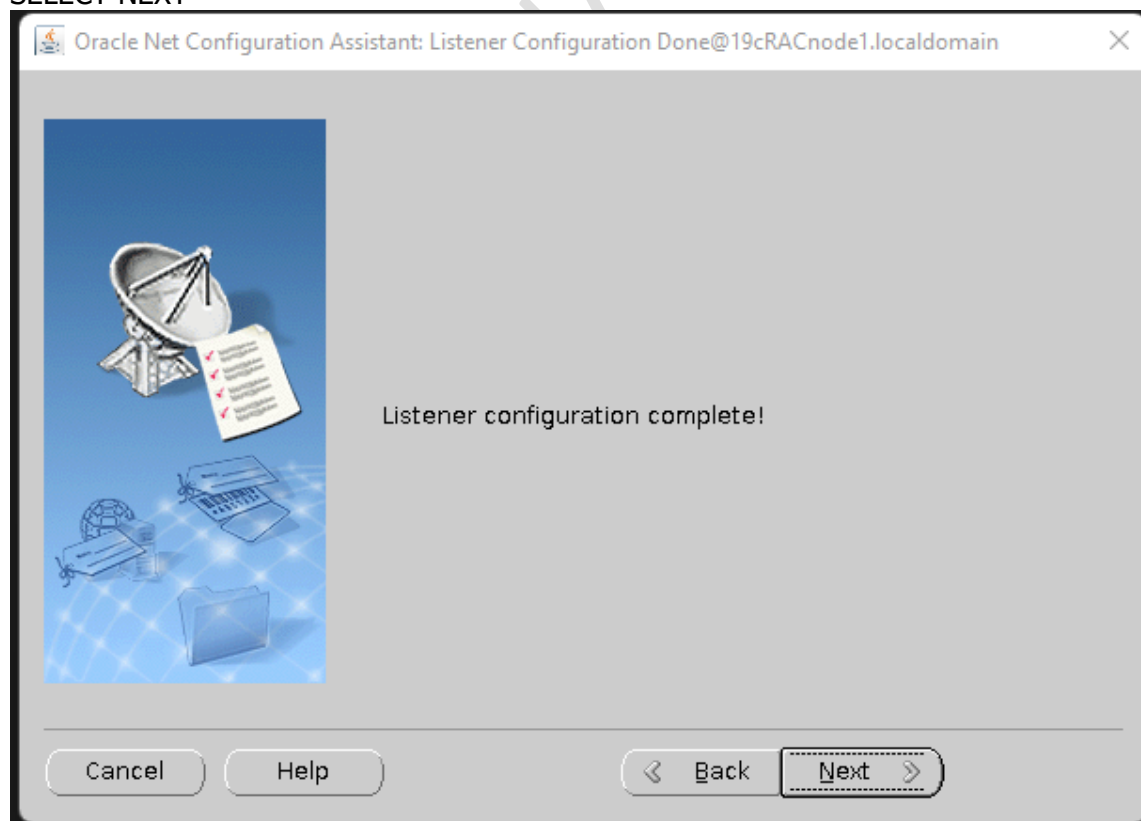
☒ Use another port number: 1555

Cancel Help Back Next

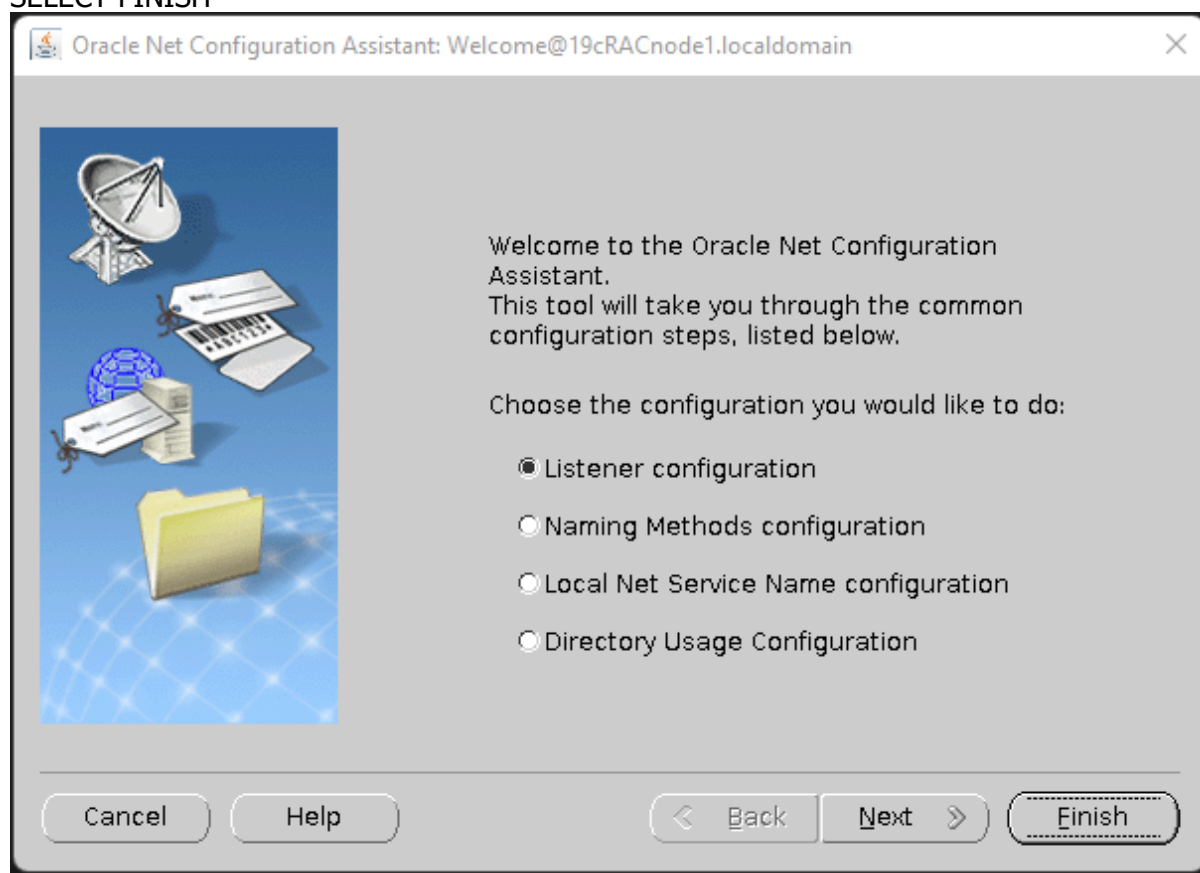
CHOOSE NO



SELECT NEXT



SELECT FINISH



```
[oracle@19cRACnode1 ~]$  
[oracle@19cRACnode1 ~]$ netca  
  
Oracle Net Services Configuration:  
Configuring Listener:LISTENER_SHONCDB  
19cracnode1...  
19cracnode2...  
Listener configuration complete.  
Oracle Net Listener Startup:  
  Listener started successfully.  
Oracle Net Services configuration successful. The exit code is 0  
[oracle@19cRACnode1 ~]$
```

```
PS -EF|GREP -I TNS|GREP -V GREP |GREP -I LISTENER_SHONCDB
```

```
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ ps -ef|grep -i tns|grep -v grep |grep -i LISTENER_SHONCDB
oracle      13483      1   0 21:05 ?        00:00:00 /u01/app/oracle/product/12.2/db_1/bin/tnslsnr LISTENER_SHONCDB -no_crs_notify -inherit
[oracle@19cRACnode1 ~]$
```

```
LSNRCTL STATUS LISTENER_SHONCDB
```

```
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ lsnrctl status LISTENER_SHONCDB

LSNRCTL for Linux: Version 12.2.0.1.0 - Production on 23-JUL-2022 21:12:34

Copyright (c) 1991, 2016, Oracle. All rights reserved.

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=IPC)(KEY=LISTENER_SHONCDB)))
STATUS of the LISTENER
-----
Alias                     LISTENER_SHONCDB
Version                   TNSLSNR for Linux: Version 12.2.0.1.0 - Production
Start Date                23-JUL-2022 21:05:53
Uptime                    0 days 0 hr. 6 min. 40 sec
Trace Level               off
Security                  ON: Local OS Authentication
SNMP                      OFF
Listener Parameter File   /u01/app/oracle/product/12.2/db_1/network/admin/listener.ora
Listener Log File         /u01/app/oracle/diag/tnslsnr/19cRACnode1/listener_shoncdb/alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(KEY=LISTENER_SHONCDB)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=192.168.56.101)(PORT=1555)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=192.168.56.103)(PORT=1555)))
The listener supports no services
The command completed successfully
[oracle@19cRACnode1 ~]$
```

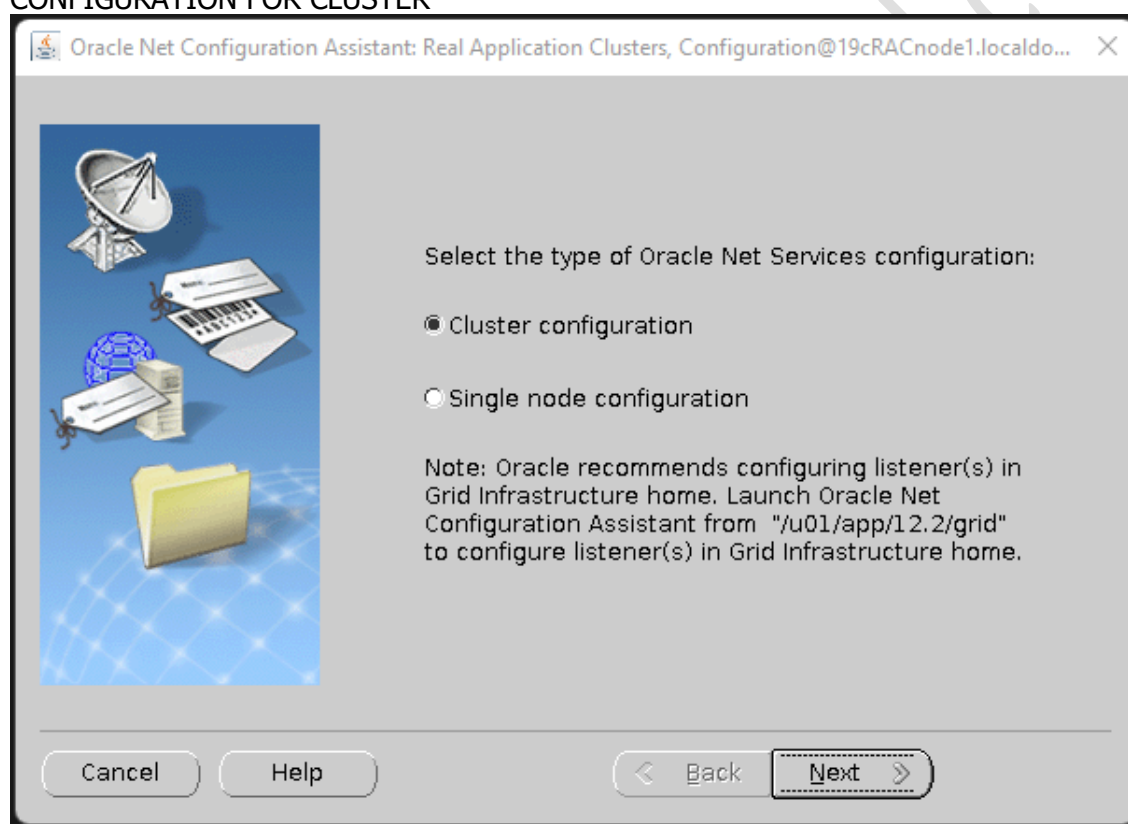
```
CAT /U01/APP/ORACLE/PRODUCT/12.2/DB_1/NETWORK/ADMIN/LISTENER.ORA
```

```
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ cat /u01/app/oracle/product/12.2/db_1/network/admin/listener.ora
LISTENER_SHONCDB=(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=IPC)(KEY=LISTENER_SHONCDB)))) # line added by Agent
ENABLE_GLOBAL_DYNAMIC_ENDPOINT LISTENER_SHONCDB=ON # line added by Agent
VALID_NODE_CHECKING_REGISTRATION_LISTENER_SHONCDB=SUBNET # line added by Agent
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$
```

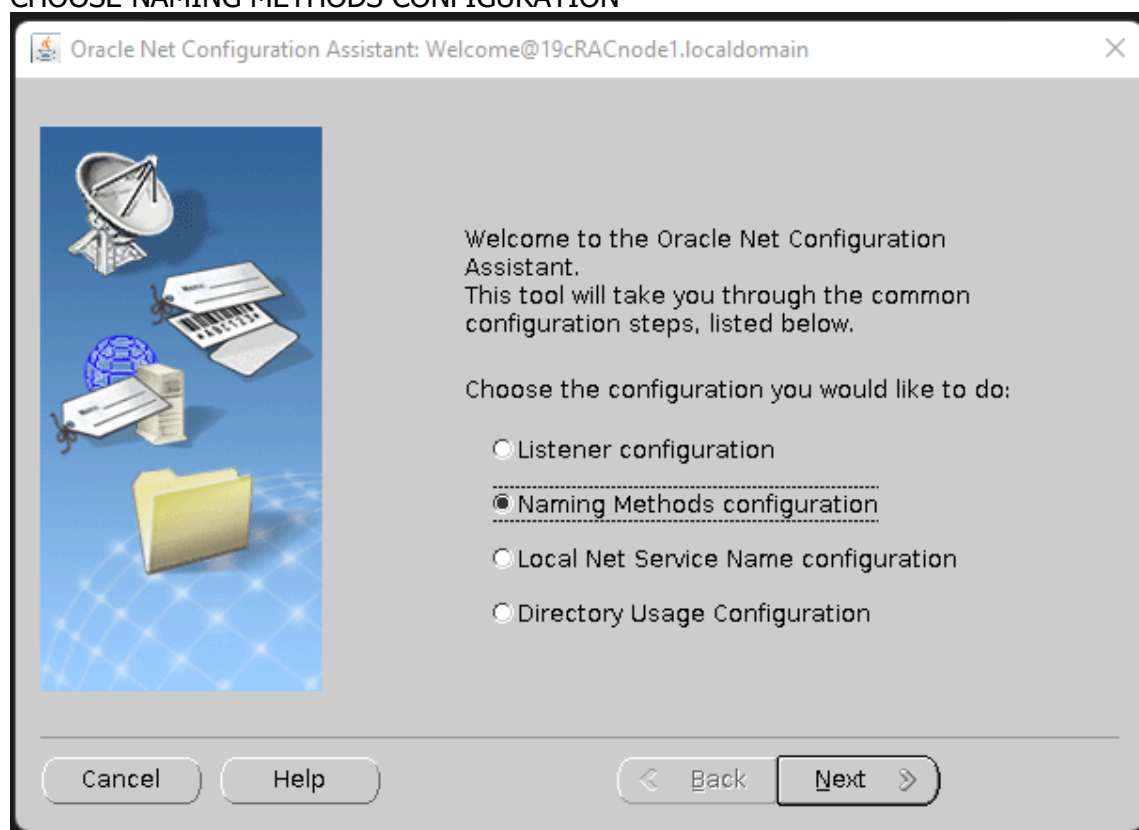
9. CREATE TNSNAMES USING NETCA

```
[oracle@19cRACnode1 ~]$  
[oracle@19cRACnode1 ~]$ netca  
Oracle Net Services Configuration:  
█
```

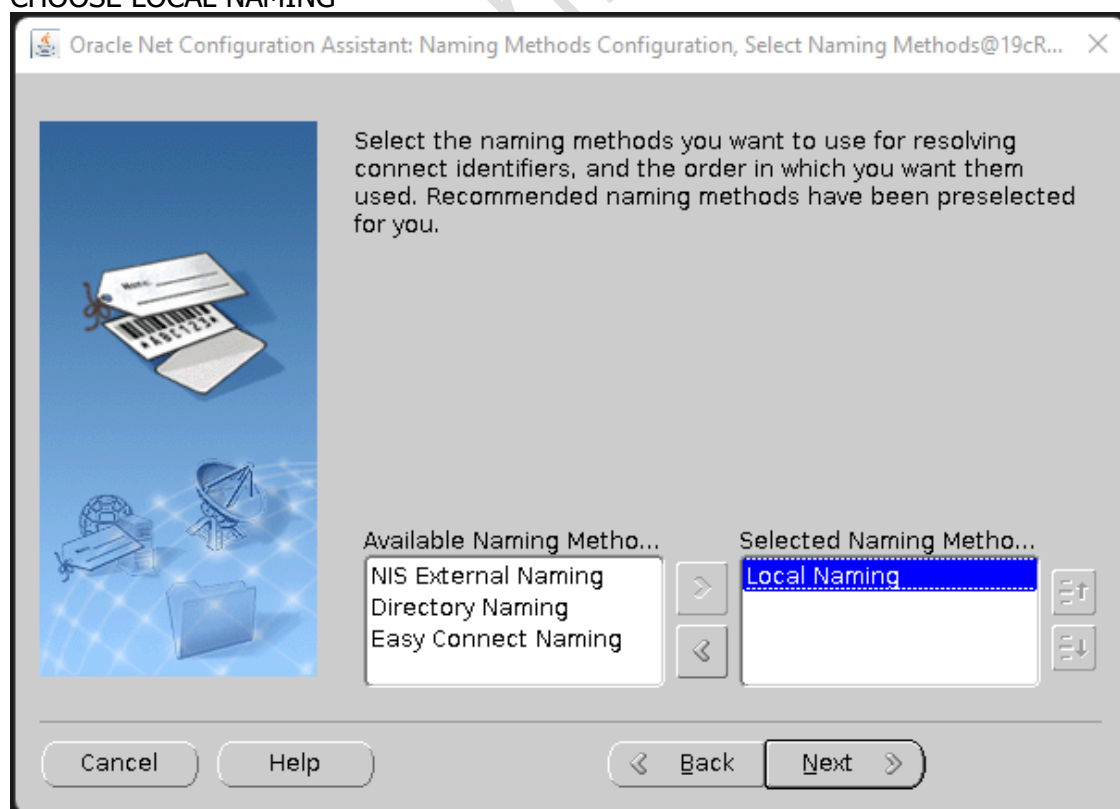
CONFIGURATION FOR CLUSTER



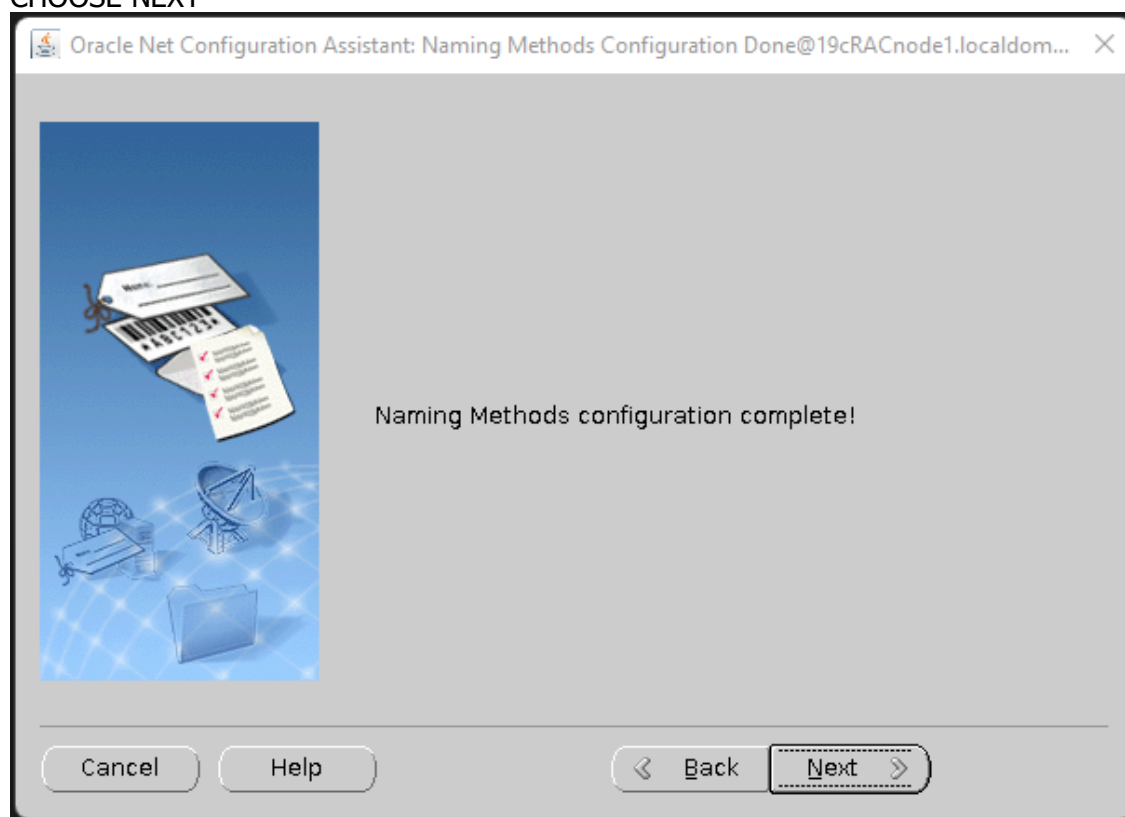
CHOOSE NAMING METHODS CONFIGURATION



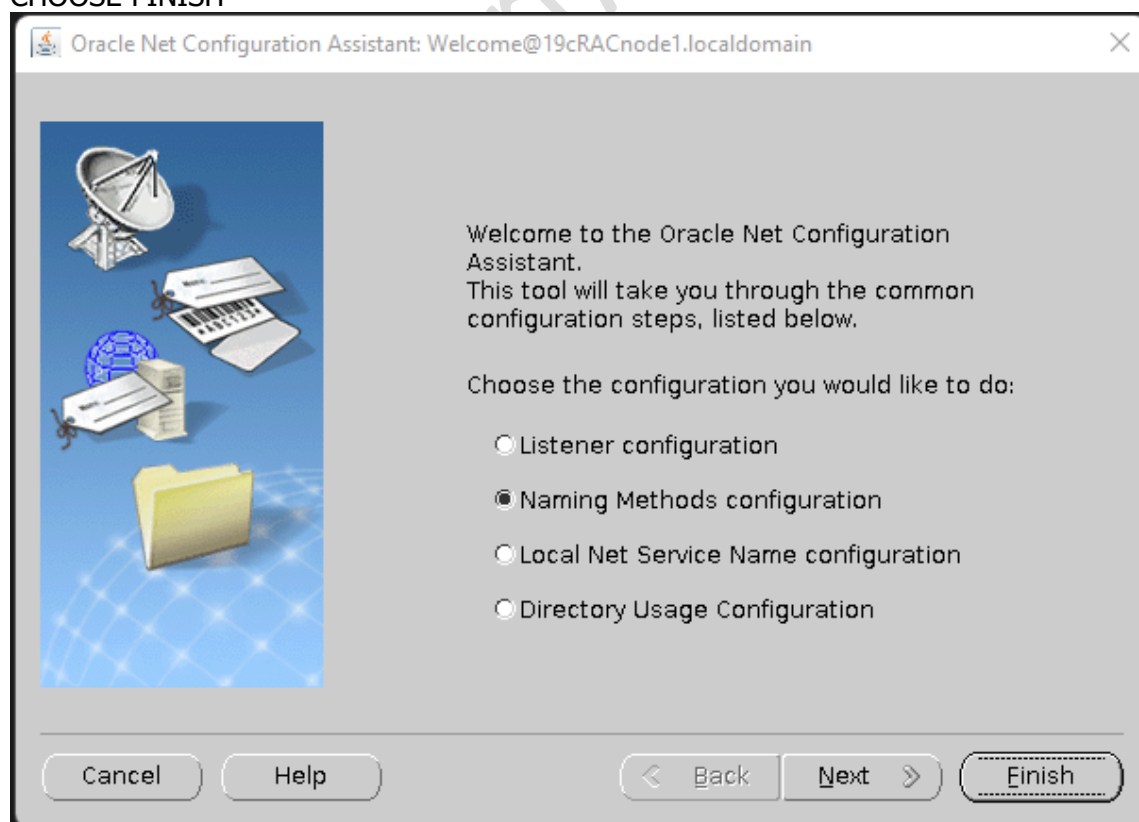
CHOOSE LOCAL NAMING



CHOOSE NEXT



CHOOSE FINISH



```
[oracle@19cRACnode1 ~]$ netca

Oracle Net Services Configuration:
Profile configuration complete.
Profile configuration complete.
Oracle Net Services configuration successful. The exit code is 0
[oracle@19cRACnode1 ~]$
```

TNSNAMES.ORA FILE CREATED

```
[oracle@19cRACnode1 ~]$ cd $ORACLE_HOME/network/admin
[oracle@19cRACnode1 admin]$
[oracle@19cRACnode1 admin]$ ls -l
total 36
-rw-r--r--. 1 oracle oinstall 329 Jul 23 21:06 endpoints_listener.ora
-rw-r--r--. 1 oracle oinstall 270 Jul 23 23:20 listener22072311PM2024.bak
-rw-r--r--. 1 oracle oinstall 270 Jul 23 21:05 listener.ora
drwxr-xr-x. 2 oracle oinstall 64 Jun 28 23:21 samples
-rw-r--r--. 1 oracle oinstall 1441 Aug 28 2015 shrept.lst
-rw-r--r--. 1 oracle oinstall 202 Jul 23 23:25 sqlnet.ora
-rw-r--r--. 1 oracle oinstall 781 Jul 23 23:20 tnsnames22072311PM2024.bak
-rw-r--r--. 1 oracle oinstall 781 Jul 23 20:57 tnsnames2207238PM5709.bak
-rw-r--r--. 1 oracle oinstall 781 Jul 23 21:04 tnsnames2207239PM0449.bak
-rw-r-----. 1 oracle oinstall 781 Jul 19 17:53 tnsnames.ora
[oracle@19cRACnode1 admin]$
[oracle@19cRACnode1 admin]$
```

10. CREATE PFILE FROM SPFILE

```
SHOW PARAMETER SPFILE
CREATE PFILE='/TMP/SHOAIBNCDB_RAC_PFILE.TXT' FROM SPFILE;
```

```
SQL> show parameter spfile

NAME                                TYPE                                VALUE
-----                                -                                -
spfile                              string                             /u01/app/oracle/product/12.2/d
b_1/dbs/spfileshoaibncdb.ora
SQL>
SQL> create pfile='/tmp/shoaibncdb_rac_pfile.txt' from spfile;

File created.
SQL>
```

11. VIEW CONTENT OF PFILE

```
CAT /TMP/SOAIBNCDB_RAC_PFILE.TXT
```

```
[oracle@19cRACnode1 ~]$ cat /tmp/shoaincldb_rac_pfile.txt
shoaincldb.__data_transfer_cache_size=0
shoaincldb.__db_cache_size=2684354560
shoaincldb.__inmemory_ext_roarea=0
shoaincldb.__inmemory_ext_rwarea=0
shoaincldb.__java_pool_size=16777216
shoaincldb.__large_pool_size=33554432
shoaincldb.__oracle_base='/u01/app/oracle'#ORACLE_BASE set from environment
shoaincldb.__pga_aggregate_target=1224736768
shoaincldb.__sga_target=3674210304
shoaincldb.__shared_io_pool_size=184549376
shoaincldb.__shared_pool_size=738197504
shoaincldb.__streams_pool_size=0
*.audit_file_dest='/u01/app/oracle/admin/shoaincldb/adump'
*.audit_trail='db'
*.compatible='12.2.0'
*.control_files='+DATA/SOAIBNCDB/CONTROLFILE/current.294.1110530615'#Restore Controlfile
*.db_block_size=8192
*.db_create_file_dest='+DATA'
*.db_create_online_log_dest_1='+DATA'
*.db_name='shoainc'
*.db_recovery_file_dest='+DATA'
*.db_recovery_file_dest_size=8016m
*.db_unique_name='shoaincldb'
*.diagnostic_dest='/u01/app/oracle'
*.dispatchers='(PROTOCOL=TCP) (SERVICE=shoaincldbXDB)'
*.log_archive_format='arch_%r_%s_%t.arc'
*.nls_language='AMERICAN'
*.nls_territory='AMERICA'
*.open_cursors=300
*.pga_aggregate_target=1168m
*.processes=320
*.remote_login_passwordfile='EXCLUSIVE'
*.sga_target=3504m
*.undo_tablespace='UNDOTBS1'
[oracle@19cRACnode1 ~]$
```


12. ADD CLUSTER RELATED PARAMETER TO PFILE

```
*.CLUSTER_DATABASE=TRUE

*.CLUSTER_DATABASE_INSTANCES=2

SHOAIBNCDB1.INSTANCE_NUMBER=1
SHOAIBNCDB2.INSTANCE_NUMBER=2

SHOAIBNCDB1.THREAD=1
SHOAIBNCDB2.THREAD=2

SHOAIBNCDB1.UNDO_TABLESPACE='UNDOTBS1'
SHOAIBNCDB2.UNDO_TABLESPACE='UNDOTBS2'

#UPDATE THE CONTROLFILE PATH FROM STEP #6
*.CONTROL_FILES='+DATA/SHOAIBNCDB/CONTROLFILE/CURRENT.294.1110530615'
```

```
[oracle@19cRACnode1 ~]$ cat /tmp/shoaibncdb_rac_pfile.txt
*.cluster_database=true
*.cluster_database_instances=2
shoaibncdb1.instance_number=1
shoaibncdb2.instance_number=2
shoaibncdb1.thread=1
shoaibncdb2.thread=2
shoaibncdb1.undo_tablespace='UNDOTBS1'
shoaibncdb2.undo_tablespace='UNDOTBS2'
#update the controlfile path from step #6
*.control_files='+DATA/SHOAIBNCDB/CONTROLFILE/current.294.1110530615'
*.log_archive_format='arch_%r_%s_%t.arc'
```

13. EDIT & VIEW CONTENT OF PFILE

```
VI /TMP/SHOAIBNCDB_RAC_PFILE.TXT

CAT /TMP/SHOAIBNCDB_RAC_PFILE.TXT
```

removing the *. undo_tablespace='UNDOTBS1'
log archive format parameter must have thread number
*.log_archive_format='arch_%r_%s_%t.arc'

```
[oracle@19cRACnode1 ~]$ cat /tmp/shoaibncdb_rac_pfile.txt
*.cluster_database=true

*.cluster_database_instances=2

shoaibncdb1.instance_number=1
shoaibncdb2.instance_number=2

shoaibncdb1.thread=1
shoaibncdb2.thread=2

shoaibncdb1.undo_tablespace='UNDOTBS1'
shoaibncdb2.undo_tablespace='UNDOTBS2'

#update the controlfile path from step #6
*.control_files='+DATA/SHOAIBNCDB/CONTROLFILE/current.294.1110530615'

*.log_archive_format='arch_%r_%s_%t.arc'

*.audit_file_dest='/u01/app/oracle/admin/shoaibncdb/adump'
*.audit_trail='db'
*.compatible='12.2.0'
#*.control_files='+DATA/SHOAIBNCDB/CONTROLFILE/current.294.1110530615'#Restore Controlfile
#*.undo_tablespace='UNDOTBS1'
*.db_block_size=8192
*.db_create_file_dest='+DATA'
*.db_create_online_log_dest_1='+DATA'
*.db_name='shoaibnc'
*.db_recovery_file_dest='+DATA'
*.db_recovery_file_dest_size=8016m
*.db_unique_name='shoaibncdb'
*.diagnostic_dest='/u01/app/oracle'
*.dispatchers='(PROTOCOL=TCP) (SERVICE=shoaibncdbXDB)'
*.log_archive_format='arch_%r_%s_%t.arc'
*.nls_language='AMERICAN'
*.nls_territory='AMERICA'
*.open_cursors=300
*.pga_aggregate_target=1168m
*.processes=320
*.remote_login_passwordfile='EXCLUSIVE'
*.sga_target=3504m
[oracle@19cRACnode1 ~]$
```

14. MOVE PFILE TO \$ORACLE_HOME/dbs DIRECTORY (BOTH NODES)

```
SET DB ENVIRONMENT
CP /TMP/SHOAIBNCDB_RAC_PFILE.TXT $ORACLE_HOME/DBS/INITSHOAIBNCDB1.ORA

ECHO $ORACLE_HOME

CD $ORACLE_HOME/DBS
LS -LRTH INIT*

SCP /TMP/SHOAIBNCDB_RAC_PFILE.TXT
ORACLE@19CRACNODE2:/U01/APP/ORACLE/PRODUCT/12.2/DB_1/DBS/INITSHOAIBNCDB2.ORA
```

```
[oracle@19cRACnode1 ~]$ . oraenv
ORACLE_SID = [shoaibncdb] ? shoaibncdb
The Oracle base remains unchanged with value /u01/app/oracle
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ cp /tmp/shoaibncdb_rac_pfile.txt $ORACLE_HOME/dbs/initshoaibncdb1.ora
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ echo $ORACLE_HOME
/u01/app/oracle/product/12.2/db_1
[oracle@19cRACnode1 ~]$
```

```
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ . oraenv
ORACLE_SID = [shoaibncdb1] ? shoaibncdb
The Oracle base remains unchanged with value /u01/app/oracle
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ cd $ORACLE_HOME/dbs
[oracle@19cRACnode1 dbs]$ ls -lrth init*
-rw-r--r--. 1 oracle oinstall 3.1K May 15 2015 init.ora
-rw-r--r--. 1 oracle oinstall 1.2K Jul 23 22:37 initshoaibncdb1.ora
[oracle@19cRACnode1 dbs]$
```

```
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ scp /tmp/shoaibncdb_rac_pfile.txt oracle@19cRACnode2:/u01/app/oracle/product/12.2/db_1/dbs/initshoaibncdb2.ora
shoaibncdb_rac_pfile.txt
[oracle@19cRACnode1 ~]$ 100% 1188 739.1KB/s 00:00
```

15. CREATE PASSWORD FILE (BOTH NODES)

SET DB ENVIRONMENT

ECHO \$ORACLE_HOME

ORAPWD FILE=\$ORACLE_HOME/DBS/ORAPWSHOAIBNCDB1 PASSWORD=WELCOME#123

SCP \$ORACLE_HOME/DBS/ORAPWSHOAIBNCDB1

[ORACLE@19CRACNODE2:/U01/APP/ORACLE/PRODUCT/12.2/DB_1/DBS/ORAPWSHOAIBNCDB2](#)

```
[oracle@19cRACnode1 ~]$ . oraenv
ORACLE_SID = [shoaibncdb] ? shoaibncdb
The Oracle base remains unchanged with value /u01/app/oracle
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ echo $ORACLE_HOME
/u01/app/oracle/product/12.2/db_1
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ orapwd file=$ORACLE_HOME/dbs/orapwshoaibncdb1 password=WELCOME#123
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$
```

```
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ scp $ORACLE_HOME/dbs/orapwshoaibncdb1 oracle@19cRACnode2:/u01/app/oracle/product/12.2/db_1/dbs/orapwshoaibncdb2
orapwshoaibncdb1
[oracle@19cRACnode1 ~]$ 100% 6144 4.9MB/s 00:00
```

16. EDIT ORATAB (BOTH NODES)

```
CAT /ETC/ORATAB |GREP -V GREP |GREP -V ^# |GREP -I SHOAIBNCDB
```

```
VI /ETC/ORATAB
```

```
CAT /ETC/ORATAB |GREP -V GREP |GREP -V ^# |GREP -I SHOAIBNCDB
```

```
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ cat /etc/oratab |grep -v grep |grep -v ^# |grep -i shoaibncdb
shoaibncdb1:/u01/app/oracle/product/12.2/db_1:N
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ vi /etc/oratab
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ cat /etc/oratab |grep -v grep |grep -v ^# |grep -i shoaibncdb
shoaibncdb:/u01/app/oracle/product/12.2/db_1:N
shoaibncdb1:/u01/app/oracle/product/12.2/db_1:N
[oracle@19cRACnode1 ~]$
```

```
[oracle@19cRACnode2 ~]$ cat /etc/oratab |grep -v grep |grep -v ^# |grep -i shoaibncdb
shoaibncdb2:/u01/app/oracle/product/12.2/db_1:N
[oracle@19cRACnode2 ~]$
[oracle@19cRACnode2 ~]$ vi /etc/oratab
[oracle@19cRACnode2 ~]$
[oracle@19cRACnode2 ~]$ cat /etc/oratab |grep -v grep |grep -v ^# |grep -i shoaibncdb
shoaibncdb2:/u01/app/oracle/product/12.2/db_1:N
[oracle@19cRACnode2 ~]$
```

17. SHUTDOWN DATABASE

```
SET DB ENVIRONMENT
SQLPLUS "/ AS SYSDBA"
SHUTDOWN IMMEDIATE;
```

```
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ . oraenv
ORACLE_SID = [shoaibncdb] ? shoaibncdb
The Oracle base remains unchanged with value /u01/app/oracle
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ sqlplus "/ as sysdba"

SQL*Plus: Release 12.2.0.1.0 Production on Sat Jul 23 22:27:34 2022
Copyright (c) 1982, 2016, Oracle. All rights reserved.

Connected to:
Oracle Database 12c Enterprise Edition Release 12.2.0.1.0 - 64bit Production

SQL> shutdown immediate
Database closed.
Database dismounted.
ORACLE instance shut down.
SQL>
```

18.START DATABASE AT NODE 1

```
SET DB ENVIRONMENT
SQLPLUS "/ AS SYSDBA"

STARTUP
SHOW PARAMETER SPFILE
```

```
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ . oraenv
ORACLE_SID = [shoaibncdb1] ? shoaibncdb1
The Oracle base remains unchanged with value /u01/app/oracle
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ sqlplus / as sysdba

SQL*Plus: Release 12.2.0.1.0 Production on Sat Jul 23 23:33:58 2022
Copyright (c) 1982, 2016, Oracle. All rights reserved.

Connected to an idle instance.

SQL> startup
ORACLE instance started.

Total System Global Area 3674210304 bytes
Fixed Size 8627152 bytes
Variable Size 905972784 bytes
Database Buffers 2751463424 bytes
Redo Buffers 8146944 bytes
Database mounted.
Database opened.
SQL>
SQL> show parameter spfile

NAME                                TYPE        VALUE
-----
spfile                              string
```

```
SET LINES 300
SELECT INSTANCE_NAME FROM V$INSTANCE;

COL HOST_NAME FOR A30
SELECT HOST_NAME,INSTANCE_NUMBER,INSTANCE_NAME,STATUS,THREAD# FROM
GV$INSTANCE;
```

```
SQL> set lines 300
SQL> select instance_name from v$instance;

INSTANCE_NAME
-----
shoaibncdb1

SQL> col HOST_NAME for a30
SQL> select HOST_NAME,INSTANCE_NUMBER,INSTANCE_NAME,STATUS,THREAD# from gv$instance;

HOST_NAME                                INSTANCE_NUMBER INSTANCE_NAME    STATUS    THREAD#
-----
19cRACnode1.localdomain                  1 shoaibncdb1    OPEN      1

SQL>
```

19. START DATABASE AT NODE 2

SET DB ENVIRONMENT

SQLPLUS "/ AS SYSDBA"

STARTUP

SHOW PARAMETER SPFILE

SELECT INSTANCE_NAME FROM V\$INSTANCE;

SET LINES 300

COL HOST_NAME FOR A30

SELECT HOST_NAME,INSTANCE_NUMBER,INSTANCE_NAME,STATUS,THREAD# FROM
GV\$INSTANCE;

```
[oracle@19cRACnode2 ~]$
[oracle@19cRACnode2 ~]$ . oraenv
ORACLE_SID = [19crac1] ? shoaibncdb2
The Oracle base remains unchanged with value /u01/app/oracle
[oracle@19cRACnode2 ~]$
[oracle@19cRACnode2 ~]$ sqlplus "/ as sysdba"

SQL*Plus: Release 12.2.0.1.0 Production on Sun Jul 24 00:11:50 2022

Copyright (c) 1982, 2016, Oracle. All rights reserved.

Connected to an idle instance.

SQL> startup
ORACLE instance started.

Total System Global Area 3674210304 bytes
Fixed Size 8627152 bytes
Variable Size 905972784 bytes
Database Buffers 2751463424 bytes
Redo Buffers 8146944 bytes
Database mounted.
Database opened.
SQL>
```

```

SQL>
SQL> show parameter spfile

NAME                                TYPE        VALUE
-----
spfile                              string
SQL>
SQL> select instance_name from v$instance;

INSTANCE_NAME
-----
shoaibncdb2

SQL> set lines 300
SQL> col HOST_NAME for a30
SQL> select HOST_NAME,INSTANCE_NUMBER,INSTANCE_NAME,STATUS,THREAD# from gv$instance;

HOST_NAME                                INSTANCE_NUMBER INSTANCE_NAME    STATUS    THREAD#
-----
19cRACnode2.localdomain                  2 shoaibncdb2      OPEN      2
19cRACnode1.localdomain                  1 shoaibncdb1      OPEN      1

SQL>

```

20. CREATE SPFILE IN ASM LOCATION

SET DB ENVIRONMENT

```

CD $ORACLE_HOME/DBS
LS -LRTH INIT*

```

```

CREATE SPFILE='+DATA' FROM PFILE='$ORACLE_HOME/DBS/INITSHOAIBNCDB1.ORA';

```

```

CD +DATA/SHOAIBNCDB/PARAMETERFILE/
LS -L

```

```

[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ cd $ORACLE_HOME/dbs
[oracle@19cRACnode1 dbs]$ ls -lrth init*
-rw-r--r--. 1 oracle oinstall 3.1K May 15 2015 init.ora
-rw-r--r--. 1 oracle oinstall 1.2K Jul 23 23:32 initshoaibncdb1.ora
[oracle@19cRACnode1 dbs]$

```

```

SQL>
SQL> create spfile='+DATA' from pfile='$ORACLE_HOME/dbs/initshoaibncdb1.ora';

File created.

SQL>

```

```

ASMCMD>
ASMCMD> cd +DATA/SHOAIBNCDB/PARAMETERFILE/
ASMCMD> ls -l
Type          Redund  Striped  Time                Sys  Name
PARAMETERFILE UNPROT   COARSE   JUL 31 15:00:00    Y   spfile.390.1111507049
ASMCMD>
ASMCMD> █

```

21. CREATE SPFILE ALIAS IN ASM LOCATION

SET ASM ENVIRONMENT

```

CD +DATA/SHOAIBNCDB/PARAMETERFILE/
LS -L

```

MKALIAS SPFILE.390.1111507049 SPFILESHOAIBNCDB.ORA

```

LS -L

```

```

ASMCMD>
ASMCMD> cd +DATA/SHOAIBNCDB/PARAMETERFILE/
ASMCMD> ls -l
Type          Redund  Striped  Time                Sys  Name
PARAMETERFILE UNPROT   COARSE   JUL 31 15:00:00    Y   spfile.390.1111507049
ASMCMD>
ASMCMD> mkalias spfile.390.1111507049 spfileshoaibncdb.ora
ASMCMD>
ASMCMD> ls -l
Type          Redund  Striped  Time                Sys  Name
PARAMETERFILE UNPROT   COARSE   JUL 31 15:00:00    Y   spfile.390.1111507049
PARAMETERFILE UNPROT   COARSE   JUL 31 15:00:00    N   spfileshoaibncdb.ora => +DATA/SHOAIBNCDB/PARAMETERFILE/spfile.390.1111507049
ASMCMD> █

```

22. CREATE PFILE POINTING TO SPFILE IN EACH INSTANCE

ON NODE 1

SHUTDOWN IMMEDIATE

```

CD $ORACLE_HOME/DBS
LS -LRTH INIT*
CP INITSHOAIBNCDB1.ORA OLDINITSHOAIBNCDB1.ORAOLD
VI INITSHOAIBNCDB1.ORA
CAT INITSHOAIBNCDB1.ORA
LS -LRTH *INIT*

```

ON NODE 2

```

CD $ORACLE_HOME/DBS
LS -LRTH INIT*
CP INITSHOAIBNCDB1.ORA OLDINITSHOAIBNCDB1.ORAOLD

```

ON NODE 1

```

SCP $ORACLE_HOME/DBS/INITSHOAIBNCDB1.ORA
ORACLE@19CRACNODE2:\$ORACLE\_HOME/DBS/INITSHOAIBNCDB2.ORA

```


ON NODE 2

```
LS -LRTH *INIT*
CAT INITSHOAIBNCDB1.ORA
```

Create new pfile, instance specific with entry of the spfile alias.

```
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ cd $ORACLE_HOME/dbs
[oracle@19cRACnode1 dbs]$ ls -lrth init*
-rw-r--r--. 1 oracle oinstall 3.1K May 15 2015 init.ora
-rw-r--r--. 1 oracle oinstall 61 Jul 31 16:10 initshoaibncdb1.ora
[oracle@19cRACnode1 dbs]$
[oracle@19cRACnode1 dbs]$ cp initshoaibncdb1.ora OLDinitshoaibncdb1.oraOLD
[oracle@19cRACnode1 dbs]$
[oracle@19cRACnode1 dbs]$ vi initshoaibncdb1.ora
[oracle@19cRACnode1 dbs]$
[oracle@19cRACnode1 dbs]$ cat initshoaibncdb1.ora
spfile='+DATA/SHOAIBNCDB/PARAMETERFILE/spfileshoaibncdb.ora'
[oracle@19cRACnode1 dbs]$
[oracle@19cRACnode1 dbs]$ ls -lrth *init*
-rw-r--r--. 1 oracle oinstall 3.1K May 15 2015 init.ora
-rw-r--r--. 1 oracle oinstall 61 Jul 31 16:11 OLDinitshoaibncdb1.oraOLD
-rw-r--r--. 1 oracle oinstall 61 Jul 31 16:11 initshoaibncdb1.ora
[oracle@19cRACnode1 dbs]$
```

```
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ scp $ORACLE_HOME/dbs/initshoaibncdb1.ora oracle@19cRACnode2:$ORACLE_HOME/dbs/initshoaibncdb2.ora
initshoaibncdb1.ora
100% 61 52.5KB/s 00:00
[oracle@19cRACnode1 ~]$
```

```
[oracle@19cRACnode2 ~]$
[oracle@19cRACnode2 ~]$ . oraenv
ORACLE_SID = [19crac1] ? shoaibncdb2
The Oracle base remains unchanged with value /u01/app/oracle
[oracle@19cRACnode2 ~]$
[oracle@19cRACnode2 ~]$ cd $ORACLE_HOME/dbs
[oracle@19cRACnode2 dbs]$ ls -lrth *init*
-rw-r--r--. 1 oracle oinstall 3.1K Jun 28 23:29 init.ora
-rw-r--r--. 1 oracle oinstall 1.2K Jul 23 23:32 initshoaibncdb2.ora
[oracle@19cRACnode2 dbs]$
[oracle@19cRACnode2 dbs]$ cp initshoaibncdb2.ora OLDinitshoaibncdb2.oraOLD
[oracle@19cRACnode2 dbs]$
[oracle@19cRACnode2 dbs]$ ls -lrth *init*
-rw-r--r--. 1 oracle oinstall 3.1K Jun 28 23:29 init.ora
-rw-r--r--. 1 oracle oinstall 1.2K Jul 31 16:15 OLDinitshoaibncdb2.oraOLD
-rw-r--r--. 1 oracle oinstall 61 Jul 31 16:15 initshoaibncdb2.ora
[oracle@19cRACnode2 dbs]$
[oracle@19cRACnode2 dbs]$ cat initshoaibncdb2.ora
spfile='+DATA/SHOAIBNCDB/PARAMETERFILE/spfileshoaibncdb.ora'
[oracle@19cRACnode2 dbs]$
[oracle@19cRACnode2 dbs]$
```

23. START THE DATABASE USING SPFILE IN ASM

```
SET DB ENVIRONMENT

SQLPLUS "/ AS SYSDBA"

SHUTDOWN IMMEDIATE

SQLPLUS "/ AS SYSDBA"

STARTUP

SHOW PARAMETER SPFILE
```

```
SQL> shut immediate
Database closed.
Database dismounted.
ORACLE instance shut down.
SQL>
SQL> startup
ORACLE instance started.

Total System Global Area 3674210304 bytes
Fixed Size                  8627152 bytes
Variable Size              905972784 bytes
Database Buffers          2751463424 bytes
Redo Buffers                8146944 bytes
Database mounted.
Database opened.
SQL>
SQL> show parameter spfile

NAME                           TYPE        VALUE
-----
spfile                         string      +DATA/SHOAIBNCDB/PARAMETERFILE
                                   /spfileshoaibncdb.ora
SQL>
```

24. REGISTRY FOR RAC - STATUS IS OPTION OFF

```
SET PAGES 20
COL COMP_NAME FORMAT A35
COL VERSION FORMAT A12
COL SCHEMA FORMAT A10
COL STATUS FORMAT A10
SELECT COMP_NAME, VERSION, SCHEMA, STATUS
FROM DBA_REGISTRY
ORDER BY 1;
```

```

SQL>
SQL> set pages 20
SQL> col comp_name format a35
SQL> col version format a12
SQL> col schema format a10
SQL> col status format a10
SQL>
SQL> SELECT comp_name, version, schema, status
      2 FROM dba_registry
      3 ORDER BY 1;

```

COMP_NAME	VERSION	SCHEMA	STATUS
JServer JAVA Virtual Machine	12.2.0.1.0	SYS	VALID
OLAP Analytic Workspace	12.2.0.1.0	SYS	VALID
Oracle Database Catalog Views	12.2.0.1.0	SYS	VALID
Oracle Database Java Packages	12.2.0.1.0	SYS	VALID
Oracle Database Packages and Types	12.2.0.1.0	SYS	VALID
Oracle Database Vault	12.2.0.1.0	DVSYS	VALID
Oracle Label Security	12.2.0.1.0	LBACSYS	VALID
Oracle Multimedia	12.2.0.1.0	ORDSYS	VALID
Oracle OLAP API	12.2.0.1.0	OLAPSYS	VALID
Oracle Real Application Clusters	12.2.0.1.0	SYS	OPTION OFF
Oracle Text	12.2.0.1.0	CTXSYS	VALID
Oracle Workspace Manager	12.2.0.1.0	WMSYS	VALID
Oracle XDK	12.2.0.1.0	SYS	VALID
Oracle XML Database	12.2.0.1.0	XDB	VALID
Spatial	12.2.0.1.0	MDSYS	VALID

15 rows selected.

```

SQL> █

```

```
@?/RDBMS/ADMIN/CATCLUST.SQL
```

```

SQL> @?/rdbms/admin/catclust.sql
Session altered.

Session altered.

Package created.

Package body created.

PL/SQL procedure successfully completed.

View created.

```

```
Synonym created.
```

```
Grant succeeded.
```

```
View created.
```

```
Grant succeeded.
```

```
View created.
```

```
Synonym created.
```

```
Synonym created.
```

```
Synonym created.
```

```
Synonym created.
```

```
Synonym created.
```

```
Synonym created.
```

```
PL/SQL procedure successfully completed.
```

```
Session altered.
```

```
SQL> █
```

25. NOW REGISTRY FOR RAC - STATUS IS VALID

```

SET PAGES 20

COL COMP_NAME FORMAT A35

COL VERSION FORMAT A12

COL SCHEMA FORMAT A10
COL STATUS FORMAT A10

SELECT COMP_NAME, VERSION, SCHEMA, STATUS
FROM DBA_REGISTRY
ORDER BY 1;

```

```

SQL> set pages 20
col comp_name format a35
col version format a12
col schema format a10
col status format a10
SELECT comp_name, version, schema, status
FROM dba_registry
ORDER BY 1;
SQL> SQL> SQL> SQL> SQL> 2 3
COMP_NAME                                VERSION          SCHEMA          STATUS
-----
JServer JAVA Virtual Machine             12.2.0.1.0      SYS             VALID
OLAP Analytic Workspace                   12.2.0.1.0      SYS             VALID
Oracle Database Catalog Views             12.2.0.1.0      SYS             VALID
Oracle Database Java Packages             12.2.0.1.0      SYS             VALID
Oracle Database Packages and Types        12.2.0.1.0      SYS             VALID
Oracle Database Vault                     12.2.0.1.0      DVSYS           VALID
Oracle Label Security                     12.2.0.1.0      LBACSYS         VALID
Oracle Multimedia                         12.2.0.1.0      ORDSYS          VALID
Oracle OLAP API                           12.2.0.1.0      OLAPSYS         VALID
Oracle Real Application Clusters           12.2.0.1.0      SYS             VALID
Oracle Text                               12.2.0.1.0      CTXSYS          VALID
Oracle Workspace Manager                   12.2.0.1.0      WMSYS           VALID
Oracle XDK                                 12.2.0.1.0      SYS             VALID
Oracle XML Database                       12.2.0.1.0      XDB             VALID
Spatial                                   12.2.0.1.0      MDSYS           VALID

15 rows selected.

SQL> █

```

26. CRS RESOURCE STATUS BEFORE RAC REGISTER IN CRS

```
[oracle@19cRACnode1 ~]$ crsctl stat res -t
```

Name	Target	State	Server	State details	

Local Resources					

ora.ASMNET1LSNR_ASM.lsnr	ONLINE	ONLINE	19cracnode1	STABLE	
	ONLINE	ONLINE	19cracnode2	STABLE	
ora.DATA.dg	ONLINE	ONLINE	19cracnode1	STABLE	
	ONLINE	ONLINE	19cracnode2	STABLE	
ora.LISTENER.lsnr	ONLINE	ONLINE	19cracnode1	STABLE	
	ONLINE	ONLINE	19cracnode2	STABLE	
ora.LISTENER_SHONCDB.lsnr	ONLINE	ONLINE	19cracnode1	STABLE	
	ONLINE	ONLINE	19cracnode2	STABLE	
ora.chad	ONLINE	ONLINE	19cracnode1	STABLE	
	ONLINE	ONLINE	19cracnode2	STABLE	
ora.net1.network	ONLINE	ONLINE	19cracnode1	STABLE	
	ONLINE	ONLINE	19cracnode2	STABLE	
ora.ons	ONLINE	ONLINE	19cracnode1	STABLE	
	ONLINE	ONLINE	19cracnode2	STABLE	

Cluster Resources					

ora.19cracnode1.vip	1	ONLINE	ONLINE	19cracnode1	STABLE
ora.19cracnode2.vip	1	ONLINE	ONLINE	19cracnode2	STABLE
ora.LISTENER_SCAN1.lsnr	1	ONLINE	ONLINE	19cracnode2	STABLE
ora.LISTENER_SCAN2.lsnr	1	ONLINE	ONLINE	19cracnode1	STABLE
ora.LISTENER_SCAN3.lsnr	1	ONLINE	ONLINE	19cracnode1	STABLE
ora.MGMTLSNR	1	ONLINE	ONLINE	19cracnode1	169.254.192.182 192.168.1.101,STABLE
ora.asm	1	ONLINE	ONLINE	19cracnode1	Started,STABLE
	2	ONLINE	ONLINE	19cracnode2	Started,STABLE
	3	OFFLINE	OFFLINE		STABLE
ora.cvu	1	ONLINE	ONLINE	19cracnode1	STABLE
ora.mgmtdb	1	ONLINE	ONLINE	19cracnode1	Open,STABLE
ora.qosmserver	1	ONLINE	ONLINE	19cracnode1	STABLE
ora.scan1.vip	1	ONLINE	ONLINE	19cracnode2	STABLE
ora.scan2.vip	1	ONLINE	ONLINE	19cracnode1	STABLE
ora.scan3.vip	1	ONLINE	ONLINE	19cracnode1	STABLE

[oracle@19cRACnode1 ~]\$					

27. REGISTER RAC INSTANCE IN CLUSTER (CRS)

SET ASM ENVIRONMENT

SRVCTL ADD DATABASE -D SHOAIBNCDB -O /U01/APP/ORACLE/PRODUCT/12.2/DB_1 -P
+DATA/SHOAIBNCDB/PARAMETERFILE/SPFILESHOAIBNCDB.ORA

SRVCTL ADD INSTANCE -D SHOAIBNCDB -I SHOAIBNCDB1 -N 19CRACNODE1
SRVCTL ADD INSTANCE -D SHOAIBNCDB -I SHOAIBNCDB2 -N 19CRACNODE2

```
[oracle@19cRACnode1 ~]$ . oraenv
ORACLE_SID = [+ASM1] ? +ASM1
The Oracle base remains unchanged with value /u01/app/oracle
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ srvctl add database -d shoaibncdb -o /u01/app/oracle/product/12.2/db_1 -p +DATA/SHOAIBNCDB/PARAMETERFILE/spfilesheaibncdb.ora
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ srvctl add instance -d shoaibncdb -i shoaibncdb1 -n 19cRACnode1
[oracle@19cRACnode1 ~]$ srvctl add instance -d shoaibncdb -i shoaibncdb2 -n 19cRACnode2
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$
```

SRVCTL CONFIG DATABASE -D SHOAIBNCDB -A

```
[oracle@19cRACnode1 ~]$
[oracle@19cRACnode1 ~]$ srvctl config database -d shoaibncdb -a
Database unique name: shoaibncdb
Database name:
Oracle home: /u01/app/oracle/product/12.2/db_1
Oracle user: oracle
Spfile: +DATA/SHOAIBNCDB/PARAMETERFILE/spfilesheaibncdb.ora
Password file:
Domain:
Start options: open
Stop options: immediate
Database role: PRIMARY
Management policy: AUTOMATIC
Server pools:
Disk Groups:
Mount point paths:
Services:
Type: RAC
Start concurrency:
Stop concurrency:
Database is enabled
Database is individually enabled on nodes:
Database is individually disabled on nodes:
OSDBA group: dba
OSOPER group: dba
Database instances: shoaibncdb1,shoaibncdb2
Configured nodes: 19cracnode1,19cracnode2
CSS critical: no
CPU count: 0
Memory target: 0
Maximum memory: 0
Default network number for database services:
Database is administrator managed
[oracle@19cRACnode1 ~]$
```


28. CRS RESOURCE STATUS AFTER RAC DATABASE IS REGISTERED IN CRS

```
[oracle@19cracnode1 ~]$ crsctl stat res -t
```

Name	Target	State	Server	State details
Local Resources				
ora.ASMNET1LSNR_ASM.lsnr	ONLINE	ONLINE	19cracnode1	STABLE
	ONLINE	ONLINE	19cracnode2	STABLE
ora.DATA.dg	ONLINE	ONLINE	19cracnode1	STABLE
	ONLINE	ONLINE	19cracnode2	STABLE
ora.LISTENER.lsnr	ONLINE	ONLINE	19cracnode1	STABLE
	ONLINE	ONLINE	19cracnode2	STABLE
ora.LISTENER_SHONCDB.lsnr	ONLINE	ONLINE	19cracnode1	STABLE
	ONLINE	ONLINE	19cracnode2	STABLE
ora.chad	ONLINE	ONLINE	19cracnode1	STABLE
	ONLINE	ONLINE	19cracnode2	STABLE
ora.net1.network	ONLINE	ONLINE	19cracnode1	STABLE
	ONLINE	ONLINE	19cracnode2	STABLE
ora.ons	ONLINE	ONLINE	19cracnode1	STABLE
	ONLINE	ONLINE	19cracnode2	STABLE
Cluster Resources				
ora.19cracnode1.vip	1	ONLINE	19cracnode1	STABLE
ora.19cracnode2.vip	1	ONLINE	19cracnode2	STABLE
ora.LISTENER_SCAN1.lsnr	1	ONLINE	19cracnode2	STABLE
ora.LISTENER_SCAN2.lsnr	1	ONLINE	19cracnode1	STABLE
ora.LISTENER_SCAN3.lsnr	1	ONLINE	19cracnode1	STABLE
ora.MGMTLSNR	1	ONLINE	19cracnode1	169.254.192.182 192.168.1.101, STABLE
ora.asm	1	ONLINE	19cracnode1	Started, STABLE
	2	ONLINE	19cracnode2	Started, STABLE
	3	OFFLINE	OFFLINE	STABLE
ora.cvu	1	ONLINE	19cracnode1	STABLE
ora.mgmdb	1	ONLINE	19cracnode1	Open, STABLE
ora.qosmserver	1	ONLINE	19cracnode1	STABLE
ora.scan1.vip	1	ONLINE	19cracnode2	STABLE
ora.scan2.vip	1	ONLINE	19cracnode1	STABLE
ora.scan3.vip	1	ONLINE	19cracnode1	STABLE
ora.shoaibncdb.db	1	OFFLINE	OFFLINE	STABLE
	2	OFFLINE	OFFLINE	STABLE

```
[oracle@19cracnode1 ~]$
```


29. SHUTDOWN DATABASE AND START USING SRVCTL

```
SET DB ENVIRONMENT  
  
SQLPLUS "/ AS SYSDBA"  
  
SHUTDOWN IMMEDIATE
```

```
[oracle@19cRACnode1 ~]$  
[oracle@19cRACnode1 ~]$ . oraenv  
ORACLE_SID = [shoaibncdb1] ?  
The Oracle base remains unchanged with value /u01/app/oracle  
[oracle@19cRACnode1 ~]$  
[oracle@19cRACnode1 ~]$ sqlplus "/ as sysdba"  
  
SQL*Plus: Release 12.2.0.1.0 Production on Sun Jul 31 16:57:27 2022  
Copyright (c) 1982, 2016, Oracle. All rights reserved.  
  
Connected to:  
Oracle Database 12c Enterprise Edition Release 12.2.0.1.0 - 64bit Production  
  
SQL> shutdown immediate  
Database closed.  
Database dismounted.  
ORACLE instance shut down.  
SQL> █
```

```
SRVCTL START DATABASE -D SHOAIBNCDB  
  
SRVCTL STATUS DATABASE -D SHOAIBNCDB
```

```
[oracle@19cRACnode1 ~]$  
[oracle@19cRACnode1 ~]$ srvctl start database -d shoaibncdb  
[oracle@19cRACnode1 ~]$  
[oracle@19cRACnode1 ~]$ srvctl status database -d shoaibncdb  
Instance shoaibncdb1 is running on node 19cracnode1  
Instance shoaibncdb2 is running on node 19cracnode2  
[oracle@19cRACnode1 ~]$ █
```

```
CRSCTL STAT RES -T
```

```
[oracle@19cRACnode1 ~]$ crsctl stat res -t
```

Name	Target	State	Server	State details	
Local Resources					
ora.ASMNET1LSNR_ASM.lsnr	ONLINE	ONLINE	19cracnode1	STABLE	
	ONLINE	ONLINE	19cracnode2	STABLE	
ora.DATA.dg	ONLINE	ONLINE	19cracnode1	STABLE	
	ONLINE	ONLINE	19cracnode2	STABLE	
ora.LISTENER.lsnr	ONLINE	ONLINE	19cracnode1	STABLE	
	ONLINE	ONLINE	19cracnode2	STABLE	
ora.LISTENER_SHONCDB.lsnr	ONLINE	ONLINE	19cracnode1	STABLE	
	ONLINE	ONLINE	19cracnode2	STABLE	
ora.chad	ONLINE	ONLINE	19cracnode1	STABLE	
	ONLINE	ONLINE	19cracnode2	STABLE	
ora.net1.network	ONLINE	ONLINE	19cracnode1	STABLE	
	ONLINE	ONLINE	19cracnode2	STABLE	
ora.ons	ONLINE	ONLINE	19cracnode1	STABLE	
	ONLINE	ONLINE	19cracnode2	STABLE	
Cluster Resources					
ora.19cracnode1.vip	1	ONLINE	ONLINE	19cracnode1	STABLE
ora.19cracnode2.vip	1	ONLINE	ONLINE	19cracnode2	STABLE
ora.LISTENER_SCAN1.lsnr	1	ONLINE	ONLINE	19cracnode2	STABLE
ora.LISTENER_SCAN2.lsnr	1	ONLINE	ONLINE	19cracnode1	STABLE
ora.LISTENER_SCAN3.lsnr	1	ONLINE	ONLINE	19cracnode1	STABLE
ora.MGMTLSNR	1	ONLINE	ONLINE	19cracnode1	169.254.192.182 192.168.1.101,STABLE
ora.asm	1	ONLINE	ONLINE	19cracnode1	Started,STABLE
	2	ONLINE	ONLINE	19cracnode2	Started,STABLE
	3	OFFLINE	OFFLINE		STABLE
ora.cvu	1	ONLINE	ONLINE	19cracnode1	STABLE
ora.mgmdtdb	1	ONLINE	ONLINE	19cracnode1	Open,STABLE
ora.qosmserver	1	ONLINE	ONLINE	19cracnode1	STABLE
ora.scan1.vip	1	ONLINE	ONLINE	19cracnode2	STABLE
ora.scan2.vip	1	ONLINE	ONLINE	19cracnode1	STABLE
ora.scan3.vip	1	ONLINE	ONLINE	19cracnode1	STABLE
ora.shoaibncdb.db	1	ONLINE	ONLINE	19cracnode1	Open,HOME=/u01/app/oracle/product/12.2/db_1,STABLE
	2	ONLINE	ONLINE	19cracnode2	Open,HOME=/u01/app/oracle/product/12.2/db_1,STABLE

```
[oracle@19cRACnode1 ~]$
```

```
SRVCTL CONFIG DATABASE -D SHOAIBNCDB -A
```

```
[oracle@19cRACnode1 ~]$  
[oracle@19cRACnode1 ~]$ srvctl config database -d shoaibncdb -a  
Database unique name: shoaibncdb  
Database name:  
Oracle home: /u01/app/oracle/product/12.2/db_1  
Oracle user: oracle  
Spfile: +DATA/SHOAIBNCDB/PARAMETERFILE/spfileshoaibncdb.ora  
Password file:  
Domain:  
Start options: open  
Stop options: immediate  
Database role: PRIMARY  
Management policy: AUTOMATIC  
Server pools:  
Disk Groups: DATA  
Mount point paths:  
Services:  
Type: RAC  
Start concurrency:  
Stop concurrency:  
Database is enabled  
Database is individually enabled on nodes:  
Database is individually disabled on nodes:  
OSDBA group: dba  
OSOPER group: dba  
Database instances: shoaibncdb1,shoaibncdb2  
Configured nodes: 19cracnode1,19cracnode2  
CSS critical: no  
CPU count: 0  
Memory target: 0  
Maximum memory: 0  
Default network number for database services:  
Database is administrator managed  
[oracle@19cRACnode1 ~]$
```

```
CRSCTL STAT RES ORA.SHOAIBNCDB.DB
```

```
[oracle@19cRACnode1 ~]$  
[oracle@19cRACnode1 ~]$ crsctl stat res ora.shoaibncdb.db  
NAME=ora.shoaibncdb.db  
TYPE=ora.database.type  
TARGET=ONLINE, ONLINE  
STATE=ONLINE on 19cracnode1, ONLINE on 19cracnode2  
[oracle@19cRACnode1 ~]$
```