If you've already set up Oracle Data Guard Standby from your single instance database and now want to convert it to a two-node RAC ONE configuration, you'll need to follow these steps:

**1. Ensure Prerequisites:**

* Ensure that both nodes where you want to set up RAC ONE meet the hardware and software requirements for Oracle RAC.
* Confirm that the Oracle Grid Infrastructure (Clusterware and ASM) is installed and properly configured on both nodes.

. oraenv

+ASM

srvctl status asm

$GRID\_HOME/bin/crsctl stat resources -t

* Verify that the network configuration between the nodes is correctly set up and accessible.

**2. Install Oracle RAC:**

* Install Oracle Database software on both nodes if it's not already installed.
* Use Oracle Universal Installer (OUI) to install Oracle RAC on both nodes.
* During installation, select the option to create a RAC database and specify both nodes as cluster nodes.
* Follow the prompts to configure the RAC database.
* **Check if Oracle Binary is RAC Enabled**

* ar -t $ORACLE\_HOME/rdbms/lib/libknlopt.a|grep kcsm.o
* **If nothing returns mean RAC not Enabled**
* Bring database down
* shutdown immediate
* Backup Oracle Home
* cd /oraexport/u01
* sudo tar -czvf 19\_22\_0.tar.gz /orahome/u01/app/oracle/product/19.22.0/db\_1
* Relink Oracle Binary with the RAC Option
* cd $ORACLE\_HOME/rdbms/lib/
* To verify that the relinking process was successful run below. Should return --> kcsm.o
* ar -t $ORACLE\_HOME/rdbms/lib/libknlopt.a|grep kcsm.o
* Update /etc/hosts file with Node info, public network and private network interconnect info

**3. Convert Data Guard Standby to RAC ONE Node:**

**# Add redo log groups**

ALTER DATABASE ADD LOGFILE thread 1 GROUP 7 ('+REDOA\_01','+REDOB\_01') SIZE 6144M;

ALTER DATABASE ADD LOGFILE thread 1 GROUP 8 ('+REDOA\_01','+REDOB\_01') SIZE 6144M;

ALTER DATABASE ADD LOGFILE thread 2 GROUP 7 ('+REDOA\_01','+REDOB\_01') SIZE 6144M;

ALTER DATABASE ADD LOGFILE thread 2 GROUP 8 ('+REDOA\_01','+REDOB\_01') SIZE 6144M;

**#Create UNDOTBS2**

create undo tablespace UNDOTBS2 datafile '+DATA\_01' size 100G;

Resize to match UNDOTBS1 ?

**#modify init parameters for both instances**

**init parameters, in Oracle RAC, with SAME VALUE across all instances**

active\_instance\_count

archive\_lag\_target

compatible

cluster\_database

cluster\_database\_instances

cluster\_interconnects

control\_files

db\_block\_size

db\_domain

db\_files

db\_name

db\_recovery\_file\_dest

db\_recovery\_file\_dest\_size

db\_unique\_name

dml\_locks                     -- when 0

instance\_type                -- rdbms or asm

max\_commit\_propagation\_delay

parallel\_max\_servers

remote\_login\_password\_file

trace\_enabled

undo\_management

For example,

\*.cluster\_database=true

\*.cluster\_database\_instances=2

\*.compatible='19.0.0'

\*.undo\_management='AUTO'

**init parameters, in Oracle RAC, with Unique Values across all instances**

instance\_number

instance\_name

thread

undo\_tablespace/rollback\_segments

For example,

HEPYSTS\_1.instance\_number=1

HEPYSTS\_1.instance\_name= HEPYSTS\_1

HEPYSTS\_1.thread=1

HEPYSTS\_1.undo\_tablespace='UNDOTBS1'

HEPYSTS\_2.instance\_number=2

HEPYSTS\_2.instance\_name= HEPYSTS\_2

HEPYSTS\_2.thread=2

HEPYSTS\_2.undo\_tablespace='UNDOTBS2'

**This script creates the dictionary views needed for Oracle RAC databases**

**start ?/rdbms/admin/catclust.sql**

**Stop Data Guard Apply:**

* + Stop the redo apply on the standby database to halt data recovery.

1. Suspend log shipping from **Primary**
2. cd $SCRIPTS
3. ./DISable\_log\_shipping.sh HEPYxxx
4. Turn off log applied on **Standby**
5. dgmgrl /
6. edit database 'HEPYxxx\_servername' set state=apply-off;
7. Bring **Standby** down
8. srvctl stop database -d HEPYxx\_servername

**#To add the configuration of an Oracle RAC database**

srvctl add database -dbname db\_name -oraclehome Oracle\_home -spfile spfile\_path\_name

srvctl add instance -dbname db\_name -instance inst1\_name -node node1\_name

srvctl add instance -dbname db\_name -instance inst2\_name -node node2\_name

srvctl add database -d HEDWSTS -o $ORACLE\_HOME

srvctl add instance -d HEDWSTS -i HEDWSTS\_1 -n serverNameA

srvctl add instance -d HEDWSTS -i HEDWSTS\_2 -n serverNameB

1. **Convert to RAC ONE Node:**
   * Use the srvctl utility to convert the standby database to RAC ONE Node on both nodes.
   * srvctl modify database -db <database\_name> -serverpool <server\_pool\_name> -converttoracone
   * srvctl add database -dbname db\_name -dbtype RACONENODE -oraclehome Oracle\_home -spfile spfile\_path\_name
   * This command will modify the standby database configuration to RAC ONE Node.
2. **Start Data Guard Apply:**
   * Restart the redo apply on the standby database to resume data recovery.
3. dgmgrl /
4. edit database 'HEPYxxx\_servername' set state=apply-on;
5. srvctl start database -d HEPYxx\_servername
   * SELECT \* FROM v$active\_instances;

**4. Verify Configuration:**

* Verify that the RAC ONE Node configuration is set up correctly on both nodes using the srvctl command.

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srvctl config database -db <database\_name>

srvctl config database -db <database\_name>

**5.**

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