Written by Pooja Gupta
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.What is OCR?

OCR calls Oracle Cluster Registry. It stores cluster configuration information. It is also shared disk component. It must be accessed by all nodes in cluster environment. It also keeps information of which database instance run on which nodes and which service runs on which database. The process daemon OCSSd manages the configuration info in OCR and maintains the changes to cluster in the registry.

Automatic Backup OCR:

Automatic backup of OCR is done by CRSD process and every 3 hours. Default location is CRS_home/cdata/cluster_name. But we can change default location of this backup of OCR. We can check default location using following command.

$ocrconfig -showbackup

We can change this default location of physical OCR copies using following command.
$ocrconfig -backuploc

How to take PHYSICAL Backup OCR?

First check exact location of automatic OCR backup location using "ocrconfig -showbackup" command. Because this automatic backup of OCR is physical copies of Oracle Cluster Registry. There is no need to bring down Cluster to take this physical backup of OCR. Use simple operating system's copy command to copy this physical OCR copy to backup destination as give below.

$cp -p -R /u01/app/crs/cdata /u02/crs_backup/ocrbackup/RACNODE1

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How to take MANUAL EXPORT Backup of OCR?

We can take export backup of OCR (Oracle Cluster Registry) also in online. There is no need to bring down Cluster to take export backup of OCR. Manual backup can be taken using "ocrconfig -export" command as follows.

$ocrconfig -export /u04/crs_backup/ocrbackup/exports/OCRFile_expBackup.dmp $ocrconfig -export /u04/crs_backup/ocrbackup/exports/OCRFile_expBackup.dmp

How to Recover OCR from PHYSICAL Backup?

For recovering OCR from physical automated backup needs all cluster, RAC instances and RAC database bring down before performing recovery of OCR. Here you can find out command reference for Recovery of OCR from physical backup copy.

$ocrconfig -showbackup $srvctl -stop database -d RACDB (Shutdown all RAC instances and RAC database)

$crsctl stop crs (Shutdown Cluster) #rm -f /u01/oradata/racdb/OCRFile

#cp /dev/null /u01/oradata/racdb/OCRFile #chown root /u01/oradata/racdb/OCRFile #chgrp oinstall /u02/oradata/racdb/OCRFile #chmod 640 /u01/oradata/racdb/OCRFile

#ocrconfig -restore /u02/apps/crs/cdata/crs/backup00.ocr

$crsctl start crs (After issuing start cluster check status of cluster using 'crs_stat -t') $srvctl start

database -d RACDB (Start Oracle RAC database and RAC instances)

How to Recover OCR from EXPORT Backup?

We can import metadata of OCR from export dump. Before importing Stop Oracle RAC database, RAC instances and Cluster. Reboot Cluster and remove OCR partition as well as OCR mirror partition. Recreate using 'dd' command both partitions. Import metadata of OCR from export dump file of backup. Example commands as following...

$srvctl -stop database -d RACDB (Shutdown all RAC instances and RAC database) $crsctl stop crs (Shutdown Cluster)

#rm -f /u01/oradata/racdb/OCRFile

#dd if=/dev/zero of=/u01/oradata/racdb/OCRFile bs=4096 count=65587 #chown root /u01/oradata/racdb/OCRFile

#chgrp oinstall /u01/oradata/racdb/OCRFile #chmod 640 /u01/oradata/racdb/OCRFile

SAME process should need to repeat for OCR mirror also.

ocrconfig -import /u04/crs_backup/ocrbackup/exports/OCRFile_exp_Backup.dmp (Import metadata of OCR using command)

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$crsctl start crs (After issuing start cluster check status of cluster using 'crs_stat -t') $srvctl start database -d RACDB (Start Oracle RAC database and RAC instances

Remember following important things:

- Oracle takes physical backup of OCR automatically.

- No Cluster downtime or RAC database down time requires for PHYSICAL backup of OCR.

- No Cluster downtime or RAC database down time requires for MANUAL export backup of OCR.

- For recovery of OCR from any of above backup it should need to down ALL.

- All procedure requires ROOT login.