

Table of Contents

1. System Requirements	2
a. Hardware Requirements	2
b. IP Address Requirements	2
c. Installation Method	2
2. Prepare the cluster nodes for Oracle RAC	3
d. User Accounts.....	3
e. Check and Grant Privileges.....	3
f. Setup SSH user equivalency	3
g. Configure Grid Profile.....	3
h. Configure Oracle Profile	3
i. NTP Change	4
j. Run rootpre.sh.....	4
k. Network Preparation.....	4
l. Shared storage for Oracle RAC.....	5
3. Grid Infrastructure Install.....	6
m. Check Grid Pre-requisites	6
n. Basic Grid Infrastructure Install (without GNS and IPMI).....	15
o. Run ASMCA to create diskgroups.....	24
4. RDBMS Software Installation & Configuration	24
p. Install Database & configure	24
q. Run DBCA to create database	44
5. Verify Services	57
r. Verify Cluster Services	57

System Requirements

Hardware Requirements

Node Name	Resource Type	Resource Name	Minimum Value	Actual Value	Remarks / Considerations
dpr09r04, dpr10r05	physical	RAM	1.5 GB	10 GB	
dpr09r04, dpr10r05	logical	swap space	1.5 GB	16 GB	should be equal to the amount of RAM Issue below command to find swap space on AIX: lsps -a
dpr09r04, dpr10r05	logical	tmp space	1 GB	5 GB	
dpr09r04, dpr10r05	physical	CPU			certified with the version of the Oracle software being installed
dpr09r04, dpr10r05	physical	disk space	9.5 GB	20 GB	4 GB for DB and 4.5 GB for Grid Home installation

IP Address Requirements

Node Name	Resource Type	Resource Name	Minimum Value	Value	Remarks / Considerations
dpr09r04, dpr10r05	physical	network adapter for each node	2	2	Each node has at least two network interface cards (NIC), or network adapters
dpr09r04, dpr10r05	physical	public ip address for each node	1	1	192.168.121.147 dpr09r04.neotel.co.za dpr09r04 192.168.121.148 dpr10r05.neotel.co.za dpr10r05
dpr09r04, dpr10r05	physical	private ip address for each node	1	1	10.10.10.213 dpr09r04-priv 10.10.10.214 dpr10r05-priv
dpr09r04, dpr10r05	logical	vip ip address and hostname for each node	1	1	dpr09r04-vip -> 192.168.121.213 dpr10r05-vip -> 192.168.121.214
dpr09r04, dpr10r05	logical	scan ips for RAC	3	3	Note: It should be in the same network segment as public / vip ip addresses 192.168.121.161 192.168.121.162 192.168.121.163

Points to be considered:

1. You should configure the same private interface names for all nodes as well. If 'PrivateLAN' is the private interface name for the first node, then 'PrivateLAN' should be the private interface name for your second node.
2. For the private network, the end points of all designated interconnect interfaces must be completely reachable on the network. Every node in the cluster should be able to connect to every private network interface in the cluster.
3. The host name of each node must conform to the RFC 952 standard, which permits alphanumeric characters. Host names using underscores (" _ ") are not allowed.

Installation Method

This document details the steps for installing a 2-node Oracle 11gR2 RAC cluster on AIX:

- The Oracle Grid Infrastructure Home binaries are installed on the local disk of each of the RAC nodes.
- The files required by Oracle Clusterware (OCR and Voting disks) are stored in ASM

Prepare the cluster nodes for Oracle RAC

User Accounts

Different users for GRID and DB installation are recommended. We have used grid and oracle user for same respectively. Below are the commands for creation:

```
#mkgroup -'A' id='1000' adms='root' oinstall
#mkgroup -'A' id='1100' adms='root' asmadmin
#mkgroup -'A' id='1200' adms='root' dba
#mkgroup -'A' id='1300' adms='root' asmdba
#mkgroup -'A' id='1301' adms='root' asmoper
#mkuser id='1100' pgrp='oinstall' groups='asmadmin,asmdba,asmoper' home='/home/grid' grid
#mkuser id='1101' pgrp='oinstall' groups='dba,asmdba' home='/home/oracle' oracle
#mkdir -p /u01/app/11.2.0/grid
#chown -R grid:oinstall /u01
#mkdir -p /u01/app/oracle
#chown oracle:oinstall /u01/app/oracle
#chmod -R 775 /u01
```

```
grid:!:1100:1000:Grid_User:/home/grid:/usr/bin/ksh
oracle:!:1101:1000:Oracle_User:/home/oracle:/usr/bin/ksh
```

Check and Grant Privileges

```
#lsuser -a capabilities grid
#chuser capabilities=CAP_NUMA_ATTACH,CAP_BYPASS_RAC_VMM,CAP_PROPAGATE grid
#lsuser -a capabilities grid
capabilities=CAP_NUMA_ATTACH,CAP_BYPASS_RAC_VMM,CAP_PROPAGATE
```

Setup SSH user equivalency

```
export GI_OUI= /ORACLE_SOFTWARE/clusterware/11g/grid/sshsetup
export DB_OUI= /ORACLE_SOFTWARE/11.2.0.4_AIX/database/sshsetup
```

Use grid user on all nodes `rm -rf $HOME/.ssh`

On node1:

```
$GI_OUI/sshsetup/sshUserSetup.sh -user grid -hosts " dpr09r04 dpr10r05 " --advanced -noPromptPassphrase
```

Use oracle user:

```
$DB_OUI/sshsetup/sshUserSetup.sh -user oracle -hosts " dpr09r04 dpr10r05 " --advanced -noPromptPassphrase
```

Please test that ssh is successful to and on both nodes without password prompting.

Configure Grid Profile

Configure Oracle Profile

NTP Change

NTP is not required for 11gR2 since we have the Cluster Time Synchronization Service (CTSD), but if you are using NTP you need to use it with -x. option:

Checking: `ps -ef |grep ntpd`

If it has no -x option do below steps:

1. Open the `/etc/rc.tcpip` file, and locate the following line: `start /usr/sbin/xntpd "$src_running"`
2. Change the line to the following: `start /usr/sbin/xntpd "$src_running" "-x"`
3. Save the file.

Run rootpre.sh

`#!/rootpre.sh`

`./rootpre.sh` output will be logged in `/tmp/rootpre.out_10-05-30.05:58:36`

Saving the original files in `/etc/ora_save_10-05-30.05:58:36....`

Copying new kernel extension to `/etc....`

Loading the kernel extension from `/etc`

Network Preparation

`/etc/hosts` file for both nodes:

dpr09r04:

```
127.0.0.1          loopback localhost      # loopback (lo0) name/address
::1               loopback localhost      # IPv6 loopback (lo0) name/address
192.168.121.147    dpr09r04

## NIM Server
192.168.120.23     dut01r01

## Netbackup Servers
192.168.121.238    bpr01r09
192.168.121.239    bpr02r02

192.168.121.147    dpr09r04.neotel.co.za dpr09r04
192.168.121.148    dpr10r05.neotel.co.za dpr10r05

10.10.10.214       dpr10r05-priv

192.168.121.213    dpr09r04-vip
192.168.121.214    dpr10r05-vip

#####Portal Scan IP#####
#192.168.121.161    portalpr-scan.neotel.co.za
#192.168.121.162    portalpr-scan.neotel.co.za
#192.168.121.163    portalpr-scan.neotel.co.za

10.10.10.213       dpr09r04-priv dpr09r04
```

dpr10r05:

```

127.0.0.1          loopback localhost      # loopback (lo0) name/address
::1               loopback localhost      # IPv6 loopback (lo0) name/address
192.168.121.148   dpr10r05

## NIM Server
192.168.120.23    dut01r01

## Netbackup Servers
192.168.121.238   bpr01r09
192.168.121.239   bpr02r02

192.168.121.147   dpr09r04.neotel.co.za dpr09r04
192.168.121.148   dpr10r05.neotel.co.za dpr10r05

10.10.10.213      dpr09r04-priv

192.168.121.213   dpr09r04-vip
192.168.121.214   dpr10r05-vip

#####Portal Scan IP#####
#192.168.121.161 portalpr-scan.neotel.co.za
#192.168.121.162 portalpr-scan.neotel.co.za
#192.168.121.163 portalpr-scan.neotel.co.za
10.10.10.214      dpr10r05-priv dpr10r05

```

NOTE: At this moment (before we start installation but after configuring the /etc/hosts and DNS for SCAN)

- We should be able to ping dpr09r04, dpr10r05, dpr10r05-priv, dpr09r04-priv
- We should NOT be able to ping dpr09r04-vip, dpr10r05-vip, portalpr-scan.neotel.co.za
- We should be able to resolve the IPs (using DNS or hosts file) for: dpr09r04-vip, dpr10r05-vip, portalpr-scan.neotel.co.za

The cluster SCAN address should be configured through DNS to resolve to 3 IP addresses. Follow My Oracle Support ExtNote:1107295.1 : 'How to Configure the DNS Server for SCAN VIP on Linux for 11gR2 GI installation' to setup the SCAN IPs in DNS.

Shared storage for Oracle RAC

Use the following guidelines when identifying appropriate disk devices:

- All of the devices in an Automatic Storage Management disk group should be the same size and have the same performance characteristics.
- A disk group should not contain more than one partition on a single physical disk device.
- Using logical volumes as a device in an Automatic Storage Management disk group is not supported with Oracle RAC.
- The user account with which you perform the installation (oracle) must have write permissions to create the files in the path that you specify.

Node Name	Resource Type	Resource Name	Minimum Value	Value	Remarks / Considerations
dpr09r04, dpr10r05	physical	OCR-Voting disks for GRID	3	5	Configured OCR Voting disks with 1 GB size Normal redundancy

```
bash-4.3# ls -l /dev/ | grep VOT
crw-rw---- 1 grid oinstall 20, 3 Jun 22 13:50 VOT_01
crw-rw---- 1 grid oinstall 20, 12 Jun 22 13:50 VOT_02
crw-rw---- 1 grid oinstall 20, 14 Jun 22 13:50 VOT_03
crw-rw---- 1 grid oinstall 20, 4 Jun 16 14:37 VOT_04
crw-rw---- 1 grid oinstall 20, 6 Jun 16 14:37 VOT_05
bash-4.3#
```

In order to find the hdisk from rhdisk, grep using the major and minor number of rhdisk,

```
bash-4.3# ls -l /dev/ | grep "20, 3"
crw-rw---- 1 grid oinstall 20, 3 Jun 22 13:51 VOT_01
brw----- 1 root system 20, 3 Jun 14 12:37 hdisk4
crw----- 1 root system 20, 3 Jun 14 12:37 rhdisk4
bash-4.3#
```

In our example, we already have the /dev/rhdisk4 available on both nodes as a raw device.

Issue the following command on all nodes:

```
#chown grid:asmadmin /dev/rhdisk4
```

```
#chmod 660 /dev/rhdisk4
```

```
# lsattr -E -l hdisk4 | grep reserve_
```

```
reserve_policy no_reserve
```

```
#chdev -l hdisk4 -a [ reserve_lock=no | reserve_policy=no_reserve ]
```

reserve_policy is for AIX storage, rreserve_lock is for EMC and other storage.

```
bash-4.3# lsattr -E -l hdisk4 | grep reserve_
reserve_policy no_reserve          Reserve Policy          True
bash-4.3#
```

You need to change the reserve option on every storage device you will be using in ASM

```
# /usr/sbin/chdev -l hdisk4 -a pv=clear
```

You must do this BEFORE you put any disk into an ASM diskgroup. After you put this hdiskX in a diskgroup, running this command at any node will cause an ASM corruption. Reference My Oracle Support ExtNote:750016.1 : 'Corrective Action for Diskgroup with Disks Having PVIDs' for more details.

At this point we can use /dev/rhdisk4 for our ASM diskgroup that will contain the OCR and Voting Disk or datafiles.

Grid Infrastructure Install

Check Grid Pre-requisites

The Oracle 11gR2 Grid installer includes a useful verify utility called *runcluvfy.sh*. This script is found in the grid directory, the same directory where you find *runInstaller*

Run the below command with `-verbose` & `-fixup` option:

```
Prod:grid@dpr09r04:/ORACLE_SOFTWARE/clusterware/11g/grid]/runcluvfy.sh stage -pre crsinst -n dpr09r04,dpr10r05 -fixup -verbose
```

Performing pre-checks for cluster services setup

Checking node reachability...

Check: Node reachability from node "dpr09r04"

Destination Node	Reachable?
-----	-----
dpr10r05	yes
dpr09r04	yes

Result: Node reachability check passed from node "dpr09r04"

Checking user equivalence...

Check: User equivalence for user "grid"

Node Name	Status
-----	-----
dpr10r05	passed
dpr09r04	passed

Result: User equivalence check passed for user "grid"

Checking node connectivity...

Checking hosts config file...

Node Name	Status
-----	-----
dpr10r05	passed
dpr09r04	passed

Verification of the hosts config file successful

Interface information for node "dpr10r05"

Name	IP Address	Subnet	Gateway	Def. Gateway	HW Address	MTU
-----	-----	-----	-----	-----	-----	-----
en2	192.168.121.148	192.168.121.0	192.168.121.148	192.168.121.1	00:14:5E:75:F3:34	1500
en1	10.10.10.214	10.10.10.0	10.10.10.214	192.168.121.1	00:14:5E:75:F3:57	1500

Interface information for node "dpr09r04"

Name	IP Address	Subnet	Gateway	Def. Gateway	HW Address	MTU
-----	-----	-----	-----	-----	-----	-----
en2	192.168.121.147	192.168.121.0	192.168.121.147	192.168.121.1	00:14:5E:75:ED:04	1500
en1	10.10.10.213	10.10.10.0	10.10.10.213	192.168.121.1	00:21:5E:35:BC:41	1500

Check: Node connectivity of subnet "192.168.121.0"

Source	Destination	Connected?
-----	-----	-----
dpr10r05[192.168.121.148]	dpr09r04[192.168.121.147]	yes

Result: Node connectivity passed for subnet "192.168.121.0" with node(s) dpr10r05,dpr09r04

Check: TCP connectivity of subnet "192.168.121.0"

Source	Destination	Connected?
--------	-------------	------------

dpr09r04:192.168.121.147 dpr10r05:192.168.121.148 passed
Result: TCP connectivity check passed for subnet "192.168.121.0"

Check: Node connectivity of subnet "10.10.10.0"

WARNING:

Make sure IP address "en1 : 10.10.10.213 [10.10.10.0] " is up and is a valid IP address on node "dpr09r04"

Source	Destination	Connected?
dpr10r05[10.10.10.214]	dpr09r04[10.10.10.213]	no

ERROR:

PRVF-7616 : Node connectivity failed for subnet "10.10.10.0" between "dpr10r05 - en1 : 10.10.10.214" and "dpr09r04 - en1 : 10.10.10.213"

Result: Node connectivity failed for subnet "10.10.10.0"

Check: TCP connectivity of subnet "10.10.10.0"

Source	Destination	Connected?
dpr09r04:10.10.10.213	dpr10r05:10.10.10.214	failed

ERROR:

PRVF-7617 : Node connectivity between "dpr09r04 : 10.10.10.213" and "dpr10r05 : 10.10.10.214" failed

Result: TCP connectivity check failed for subnet "10.10.10.0"

Interfaces found on subnet "192.168.121.0" that are likely candidates for VIP are:

dpr10r05 en2:192.168.121.148

dpr09r04 en2:192.168.121.147

WARNING:

Could not find a suitable set of interfaces for the private interconnect

Checking subnet mask consistency...

Subnet mask consistency check passed for subnet "192.168.121.0".

Subnet mask consistency check passed for subnet "10.10.10.0".

Subnet mask consistency check passed.

Result: Node connectivity check failed

Checking multicast communication...

Checking subnet "192.168.121.0" for multicast communication with multicast group "230.0.1.0"...

Check of subnet "192.168.121.0" for multicast communication with multicast group "230.0.1.0" passed.

Checking subnet "10.10.10.0" for multicast communication with multicast group "230.0.1.0"...

PRVG-11134 : Interface "10.10.10.214" on node "dpr10r05" is not able to communicate with interface "10.10.10.213" on node "dpr09r04"

PRVG-11134 : Interface "10.10.10.213" on node "dpr09r04" is not able to communicate with interface "10.10.10.214" on node "dpr10r05"

Checking subnet "10.10.10.0" for multicast communication with multicast group "224.0.0.251"...

PRVG-11134 : Interface "10.10.10.214" on node "dpr10r05" is not able to communicate with interface "10.10.10.213" on node "dpr09r04"

PRVG-11134 : Interface "10.10.10.213" on node "dpr09r04" is not able to communicate with interface "10.10.10.214" on node "dpr10r05"

Check: Total memory

Node Name	Available	Required	Status
dpr10r05	15GB (1.572864E7KB)	2GB (2097152.0KB)	passed
dpr09r04	15GB (1.572864E7KB)	2GB (2097152.0KB)	passed

Result: Total memory check passed

Check: Available memory

Node Name	Available	Required	Status
dpr10r05	12.8828GB (1.3508596E7KB)	50MB (51200.0KB)	passed
dpr09r04	12.8171GB (1.343974E7KB)	50MB (51200.0KB)	passed

Result: Available memory check passed

Check: Swap space

Node Name	Available	Required	Status
dpr10r05	512MB (524288.0KB)	15GB (1.572864E7KB)	failed
dpr09r04	512MB (524288.0KB)	15GB (1.572864E7KB)	failed

Result: Swap space check failed

Check: Free disk space for "dpr10r05:/tmp/"

Path	Node Name	Mount point	Available	Required	Status
/tmp/	dpr10r05	/tmp	4.9932GB	1GB	passed

Result: Free disk space check passed for "dpr10r05:/tmp/"

Check: Free disk space for "dpr09r04:/tmp/"

Path	Node Name	Mount point	Available	Required	Status
/tmp/	dpr09r04	/tmp	4.6597GB	1GB	passed

Result: Free disk space check passed for "dpr09r04:/tmp/"

Check: User existence for "grid"

Node Name	Status	Comment
dpr10r05	passed	exists(1100)
dpr09r04	passed	exists(1100)

Checking for multiple users with UID value 1100

Result: Check for multiple users with UID value 1100 passed

Result: User existence check passed for "grid"

Check: Group existence for "oinstall"

Node Name	Status	Comment
dpr10r05	passed	exists
dpr09r04	passed	exists

Result: Group existence check passed for "oinstall"

Check: Group existence for "dba"

Node Name	Status	Comment
dpr10r05	passed	exists
dpr09r04	passed	exists

Result: Group existence check passed for "dba"

Check: Membership of user "grid" in group "oinstall" [as Primary]

Node Name	User Exists	Group Exists	User in Group	Primary	Status
dpr10r05	yes	yes	yes	yes	passed
dpr09r04	yes	yes	yes	yes	passed

Result: Membership check for user "grid" in group "oinstall" [as Primary] passed

Check: Membership of user "grid" in group "dba"

Node Name	User Exists	Group Exists	User in Group	Status
dpr10r05	yes	yes	yes	passed
dpr09r04	yes	yes	yes	passed

Result: Membership check for user "grid" in group "dba" passed

Check: Run level

Node Name	run level	Required	Status
dpr10r05	2	2	passed
dpr09r04	2	2	passed

Result: Run level check passed

Check: Hard limits for "maximum open file descriptors"

Node Name	Type	Available	Required	Status
dpr10r05	hard	9223372036854776000	65536	passed
dpr09r04	hard	9223372036854776000	65536	passed

Result: Hard limits check passed for "maximum open file descriptors"

Check: Soft limits for "maximum open file descriptors"

Node Name	Type	Available	Required	Status
dpr10r05	soft	2000	1024	passed
dpr09r04	soft	2000	1024	passed

Result: Soft limits check passed for "maximum open file descriptors"

Check: Hard limits for "maximum user processes"

Node Name	Type	Available	Required	Status
dpr10r05	hard	128	16384	failed
dpr09r04	hard	128	16384	failed

Result: Hard limits check failed for "maximum user processes"

Check: Soft limits for "maximum user processes"

Node Name	Type	Available	Required	Status
-----------	------	-----------	----------	--------

dpr10r05	soft	128	2047	failed
dpr09r04	soft	128	2047	failed

Result: Soft limits check failed for "maximum user processes"

Check: System architecture

Node Name	Available	Required	Status
dpr10r05	powerpc	powerpc	passed
dpr09r04	powerpc	powerpc	passed

Result: System architecture check passed

Check: Kernel version

Node Name	Available	Required	Status
dpr10r05	7.1-7100.03.05.1524	7.1-7100.00.01.1037	passed
dpr09r04	7.1-7100.03.05.1524	7.1-7100.00.01.1037	passed

Result: Kernel version check passed

Check: Kernel parameter for "ncargs"

Node Name	Current	Required	Status
dpr10r05	256	128	passed
dpr09r04	256	128	passed

Result: Kernel parameter check passed for "ncargs"

Check: Kernel parameter for "maxuproc"

Node Name	Current	Required	Status
dpr10r05	128	16384	failed
dpr09r04	128	16384	failed

Result: Kernel parameter check failed for "maxuproc"

Check: Kernel parameter for "tcp_ephemeral_low"

Node Name	Current	Required	Status
dpr10r05	9000	9000	passed
dpr09r04	9000	9000	passed

Result: Kernel parameter check passed for "tcp_ephemeral_low"

Check: Kernel parameter for "tcp_ephemeral_high"

Node Name	Current	Required	Status
dpr10r05	65500	65500	passed
dpr09r04	65500	65500	passed

Result: Kernel parameter check passed for "tcp_ephemeral_high"

Check: Kernel parameter for "udp_ephemeral_low"

Node Name	Current	Required	Status
dpr10r05	9000	9000	passed
dpr09r04	9000	9000	passed

Result: Kernel parameter check passed for "udp_ephemeral_low"

Check: Kernel parameter for "udp_ephemeral_high"

Node Name	Current	Required	Status
dpr10r05	65500	65500	passed
dpr09r04	65500	65500	passed

Result: Kernel parameter check passed for "udp_ephemeral_high"

Check: Package existence for "bos.adt.base"

Node Name	Available	Required	Status
dpr10r05	bos.adt.base-7.1.3.45-0	bos.adt.base-...	passed
dpr09r04	bos.adt.base-7.1.3.45-0	bos.adt.base-...	passed

Result: Package existence check passed for "bos.adt.base"

Check: Package existence for "bos.adt.lib"

Node Name	Available	Required	Status
dpr10r05	bos.adt.lib-7.1.2.15-0	bos.adt.lib-...	passed
dpr09r04	bos.adt.lib-7.1.2.15-0	bos.adt.lib-...	passed

Result: Package existence check passed for "bos.adt.lib"

Check: Package existence for "bos.adt.libm"

Node Name	Available	Required	Status
dpr10r05	bos.adt.libm-7.1.3.45-0	bos.adt.libm-...	passed
dpr09r04	bos.adt.libm-7.1.3.45-0	bos.adt.libm-...	passed

Result: Package existence check passed for "bos.adt.libm"

Check: Package existence for "bos.perf.libperfstat"

Node Name	Available	Required	Status
dpr10r05	bos.perf.libperfstat-7.1.3.45-0	bos.perf.libperfstat-...	passed
dpr09r04	bos.perf.libperfstat-7.1.3.45-0	bos.perf.libperfstat-...	passed

Result: Package existence check passed for "bos.perf.libperfstat"

Check: Package existence for "bos.perf.perfstat"

Node Name	Available	Required	Status
dpr10r05	bos.perf.perfstat-7.1.3.45-0	bos.perf.perfstat-...	passed
dpr09r04	bos.perf.perfstat-7.1.3.45-0	bos.perf.perfstat-...	passed

Result: Package existence check passed for "bos.perf.perfstat"

Check: Package existence for "bos.perf.proctools"

Node Name	Available	Required	Status
dpr10r05	bos.perf.proctools-7.1.3.45-0	bos.perf.proctools-...	passed
dpr09r04	bos.perf.proctools-7.1.3.45-0	bos.perf.proctools-...	passed

Result: Package existence check passed for "bos.perf.proctools"

Check: Package existence for "xlc.aix61.rte"

Node Name	Available	Required	Status

dpr10r05 xLC.aix61.rte-12.1.0.1-0 xLC.aix61.rte-10.1.0.0 passed
dpr09r04 xLC.aix61.rte-12.1.0.1-0 xLC.aix61.rte-10.1.0.0 passed
Result: Package existence check passed for "xLC.aix61.rte"

Check: Package existence for "xLC.rte"

Node Name	Available	Required	Status
dpr10r05	xLC.rte-12.1.0.1-0	xLC.rte-10.1.0.0	passed
dpr09r04	xLC.rte-12.1.0.1-0	xLC.rte-10.1.0.0	passed

Result: Package existence check passed for "xLC.rte"

Check: Operating system patch for "Patch IZ87216"

Node Name	Applied	Required	Comment
dpr10r05	Patch IZ87216:devices.common.IBM.mpio.rte	Patch IZ87216	passed
dpr09r04	Patch IZ87216:devices.common.IBM.mpio.rte	Patch IZ87216	passed

Result: Operating system patch check passed for "Patch IZ87216"

Check: Operating system patch for "Patch IZ87564"

Node Name	Applied	Required	Comment
dpr10r05	Patch IZ87564:bos.adt.libm	Patch IZ87564	passed
dpr09r04	Patch IZ87564:bos.adt.libm	Patch IZ87564	passed

Result: Operating system patch check passed for "Patch IZ87564"

Check: Operating system patch for "Patch IZ89165"

Node Name	Applied	Required	Comment
dpr10r05	Patch IZ89165:bos.rte.bind_cmds	Patch IZ89165	passed
dpr09r04	Patch IZ89165:bos.rte.bind_cmds	Patch IZ89165	passed

Result: Operating system patch check passed for "Patch IZ89165"

Check: Operating system patch for "Patch IZ97035"

Node Name	Applied	Required	Comment
dpr10r05	Patch IZ97035:devices.vdevice.IBM.l-lan.rte	Patch IZ97035	passed
dpr09r04	Patch IZ97035:devices.vdevice.IBM.l-lan.rte	Patch IZ97035	passed

Result: Operating system patch check passed for "Patch IZ97035"

Checking for multiple users with UID value 0

Result: Check for multiple users with UID value 0 passed

Check: Current group ID

Result: Current group ID check passed

Starting check for consistency of primary group of root user

Node Name	Status
dpr10r05	passed
dpr09r04	passed

Check for consistency of root user's primary group passed

Starting Clock synchronization checks using Network Time Protocol(NTP)...

NTP Configuration file check started...

The NTP configuration file "/etc/ntp.conf" is available on all nodes

NTP Configuration file check passed

Checking daemon liveness...

Check: Liveness for "xntpd"

Node Name	Running?
dpr10r05	yes
dpr09r04	yes

Result: Liveness check passed for "xntpd"

Check for NTP daemon or service alive passed on all nodes

Checking NTP daemon command line for slewing option "-x"

Check: NTP daemon command line

Node Name	Slewing Option Set?
dpr10r05	no
dpr09r04	no

Result:

NTP daemon slewing option check failed on some nodes

PRVF-5436 : The NTP daemon running on one or more nodes lacks the slewing option "-x"

Result: Clock synchronization check using Network Time Protocol(NTP) failed

Checking Core file name pattern consistency...

Core file name pattern consistency check passed.

Checking to make sure user "grid" is not in "system" group

Node Name	Status	Comment
dpr10r05	passed	does not exist
dpr09r04	passed	does not exist

Result: User "grid" is not part of "system" group. Check passed

Check default user file creation mask

Node Name	Available	Required	Comment
dpr10r05	022	0022	passed
dpr09r04	022	0022	passed

Result: Default user file creation mask check passed

Checking consistency of file "/etc/resolv.conf" across nodes

Checking the file "/etc/resolv.conf" to make sure only one of domain and search entries is defined

WARNING:

PRVF-5640 : Both search and domain entries are present in file "/etc/resolv.conf" on the following nodes:

dpr10r05,dpr09r04

Checking if domain entry in file "/etc/resolv.conf" is consistent across the nodes...

domain entry in file "/etc/resolv.conf" is consistent across nodes

Checking file "/etc/resolv.conf" to make sure that only one domain entry is defined

All nodes have one domain entry defined in file "/etc/resolv.conf"

Checking all nodes to make sure that domain is "neotel.co.za" as found on node "dpr10r05"

All nodes of the cluster have same value for 'domain'

Checking if search entry in file "/etc/resolv.conf" is consistent across the nodes...

search entry in file "/etc/resolv.conf" is consistent across nodes

Checking file "/etc/resolv.conf" to make sure that only one search entry is defined

All nodes have one search entry defined in file "/etc/resolv.conf"

Checking all nodes to make sure that search entry is "neotel.co.za" as found on node "dpr10r05"

All nodes of the cluster have same value for 'search'

Checking DNS response time for an unreachable node

Node Name	Status
-----	-----
dpr10r05	failed
dpr09r04	passed

PRVF-5636 : The DNS response time for an unreachable node exceeded "15000" ms on following nodes: dpr10r05

File "/etc/resolv.conf" is not consistent across nodes

Check: Time zone consistency

Result: Time zone consistency check passed

Result: User ID < 65535 check passed

Result: Kernel 64-bit mode check passed

Fixup information has been generated for following node(s):

dpr09r04,dpr10r05

Please run the following script on each node as "root" user to execute the fixups:

'/tmp/CVU_11.2.0.4.0_grid/runfixup.sh'

Pre-check for cluster services setup was unsuccessful.

Checks did not pass for the following node(s):

dpr10r05,dpr09r04

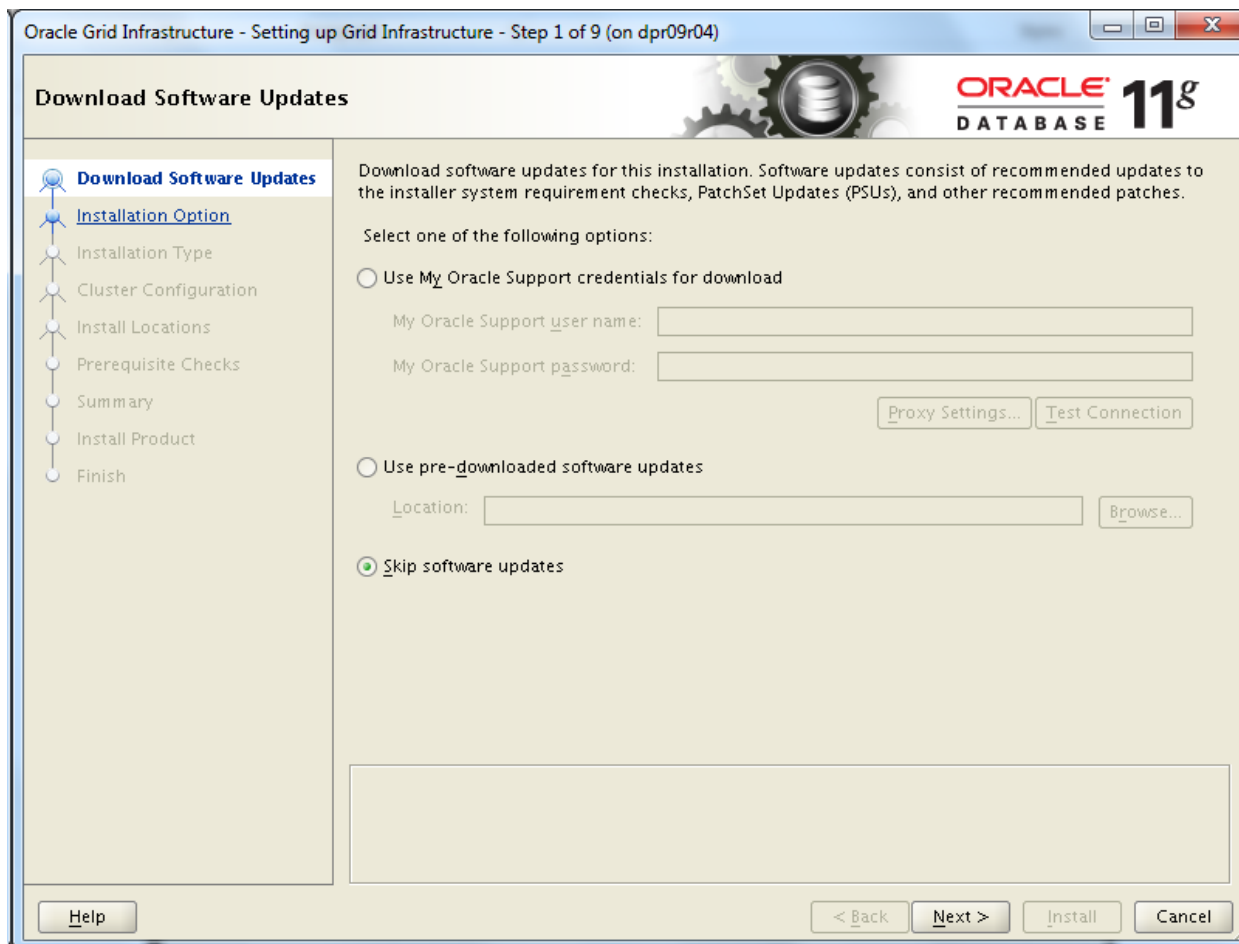
Prod:grid@dpr09r04:/ORACLE_SOFTWARE/clusterware/11g/grid]

Points to be considered:

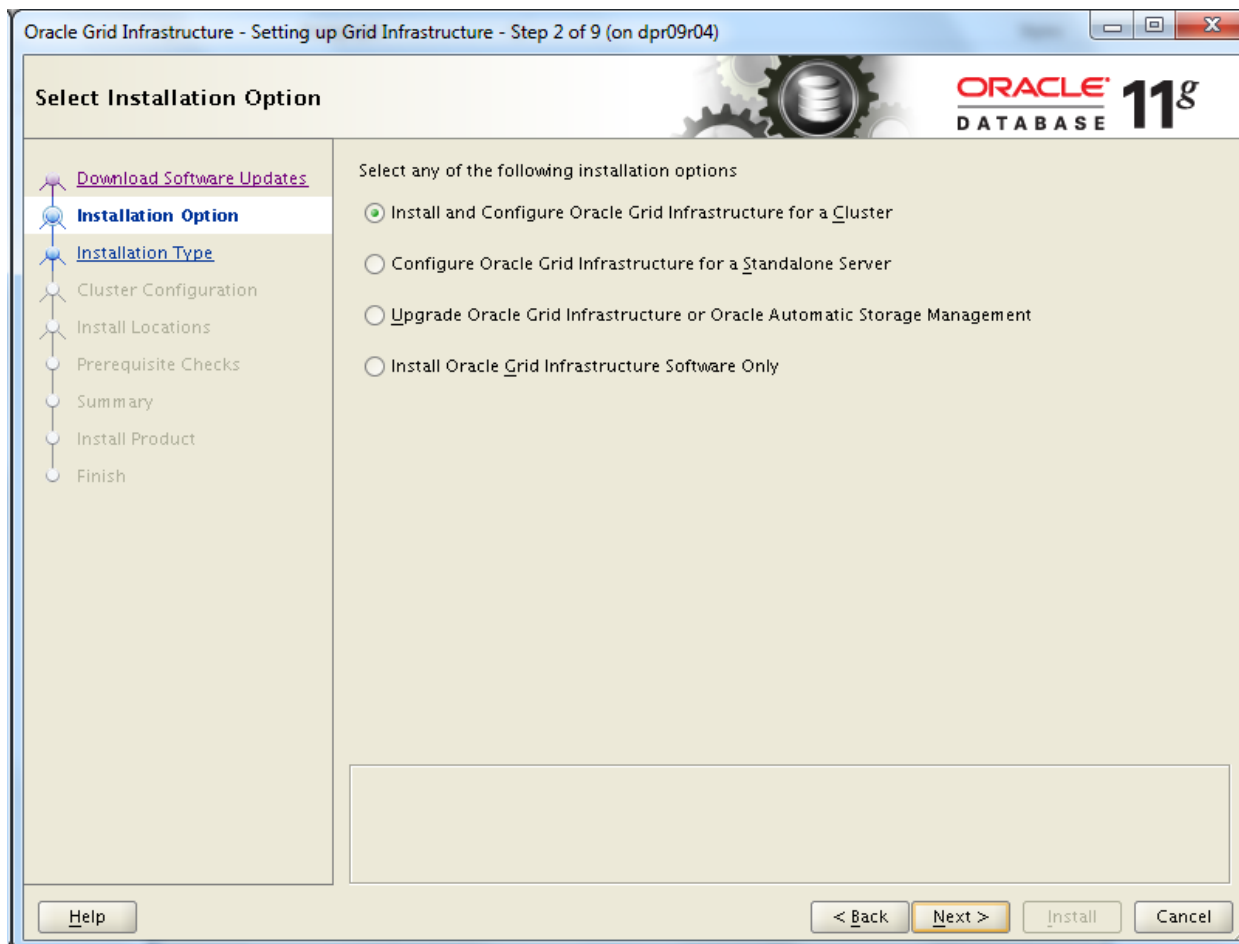
1. Above cluvfy logs were the one when the command was executed first time. It failed for few components / packages which are necessary for grid to get installed smoothly.
2. Never skip any points from cluvfy logs unless suggested by Oracle representative as it may cause the Grid environment to work in unstable manner.
3. If scan is configured using host name and not usnig DNS, the last step will always fail.
4. *PRVF-5636 : The DNS response time for an unreachable node exceeded "15000" error will affect the applications which will connect the database remotely using hostname.*

Basic Grid Infrastructure Install (without GNS and IPMI)

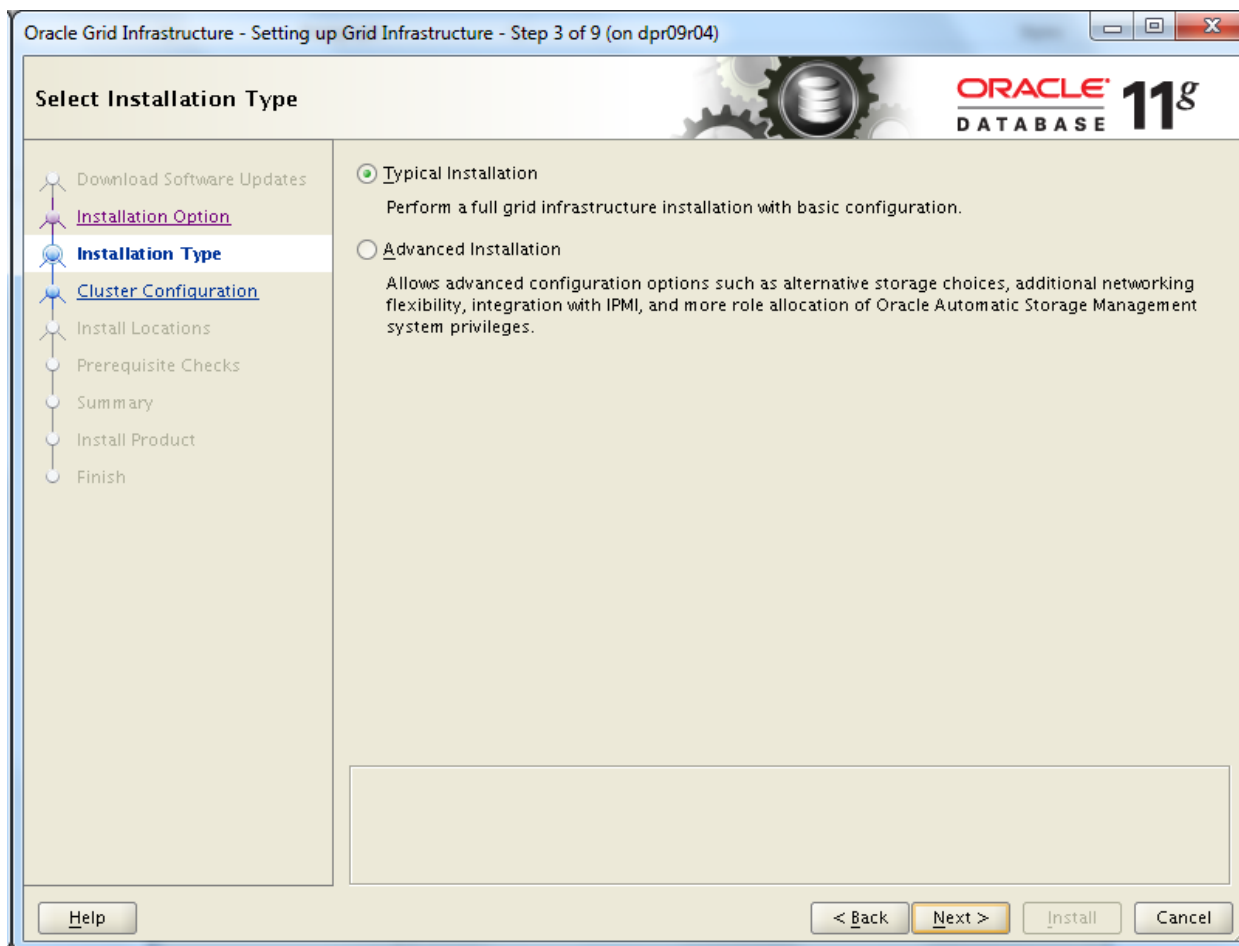
Step 1:



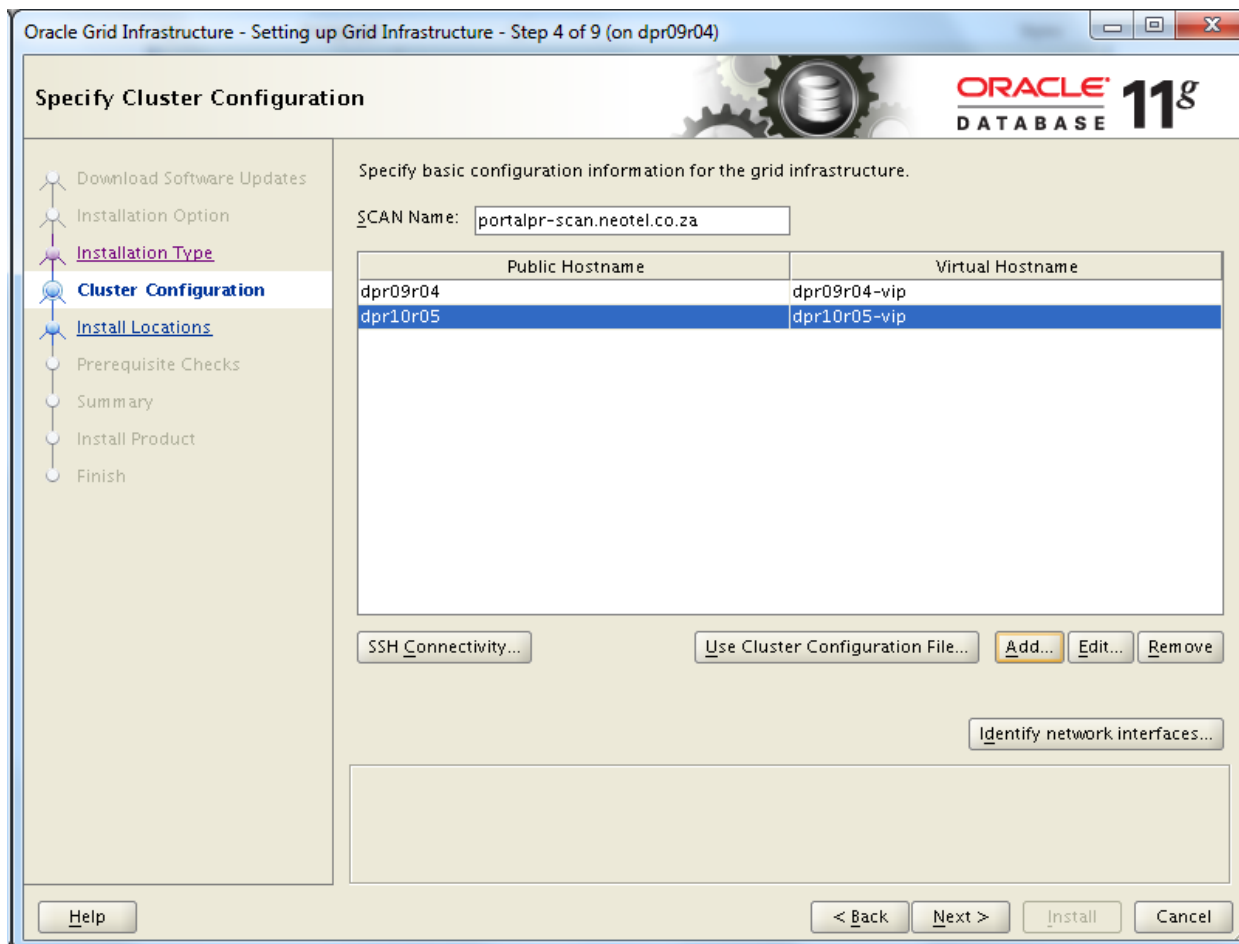
Step 2:



Step 3:



Step 4:



Step 5:

Oracle Grid Infrastructure - Setting up Grid Infrastructure - Step 5 of 9 (on dpr09r04)

Specify Install Locations

Specify locations for Oracle base, where to install the software, where to place the Oracle Cluster Registry (OCR), and which operating system group should be given the administrative privileges (SYSASM) for Oracle Automatic Storage Management.

Download Software Updates
Installation Option
Installation Type
Cluster Configuration
Install Locations
Prerequisite Checks
Summary
Install Product
Finish

Oracle Base:

Software Location:

Cluster Registry Storage Type:


Cluster Registry Location:

SYSASM Password:

Confirm Password:

OSASM group:

Messages:

 SYSASM Password:[INS-30011] The SYS password entered does not conform to the Oracle recommended standards.

Step 6:

Oracle Grid Infrastructure - Setting up Grid Infrastructure - Step 6 of 11 (on dpr09r04)

Create ASM Disk Group

- Download Software Updates
- Installation Option
- Installation Type
- Cluster Configuration
- Install Locations**
- Create ASM Disk Group**
- Create Inventory
- Prerequisite Checks
- Summary
- Install Product
- Finish

Select Disk Group Characteristics and select disks

Disk Group Name:


Redundancy: ☐ High ☒ Normal ☐ External

AU Size: MB

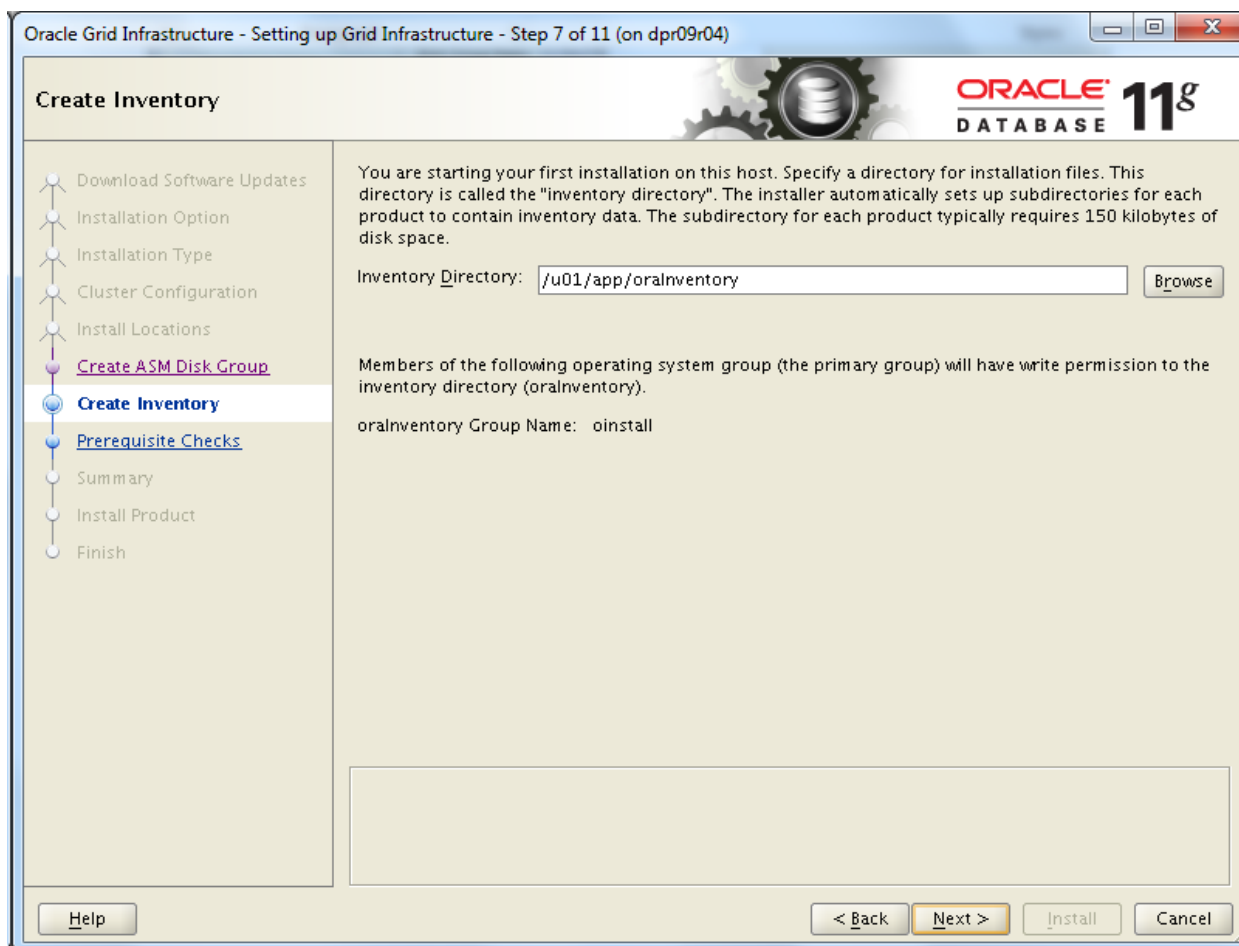
Add Disks

☐ Candidate Disks ☒ All Disks

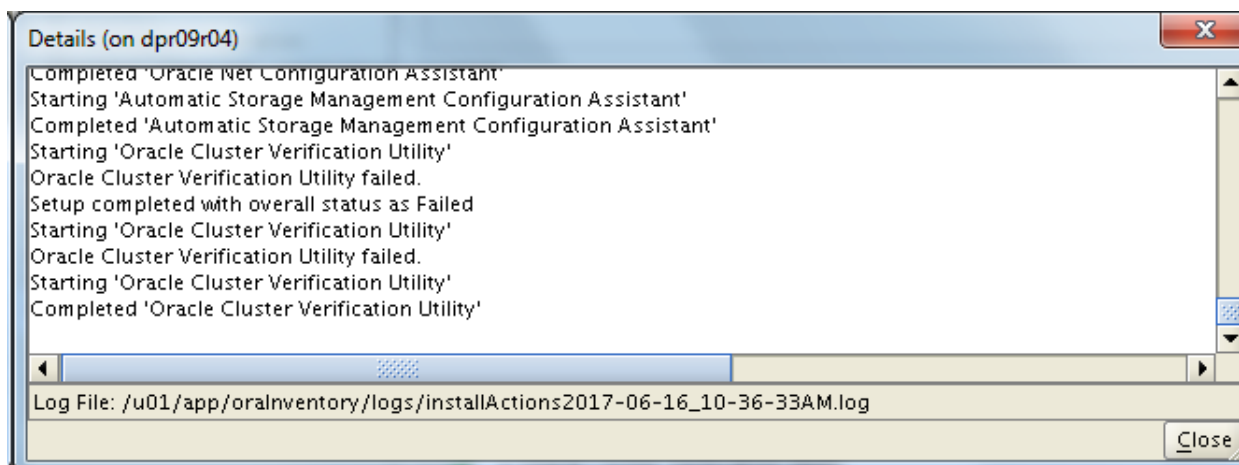
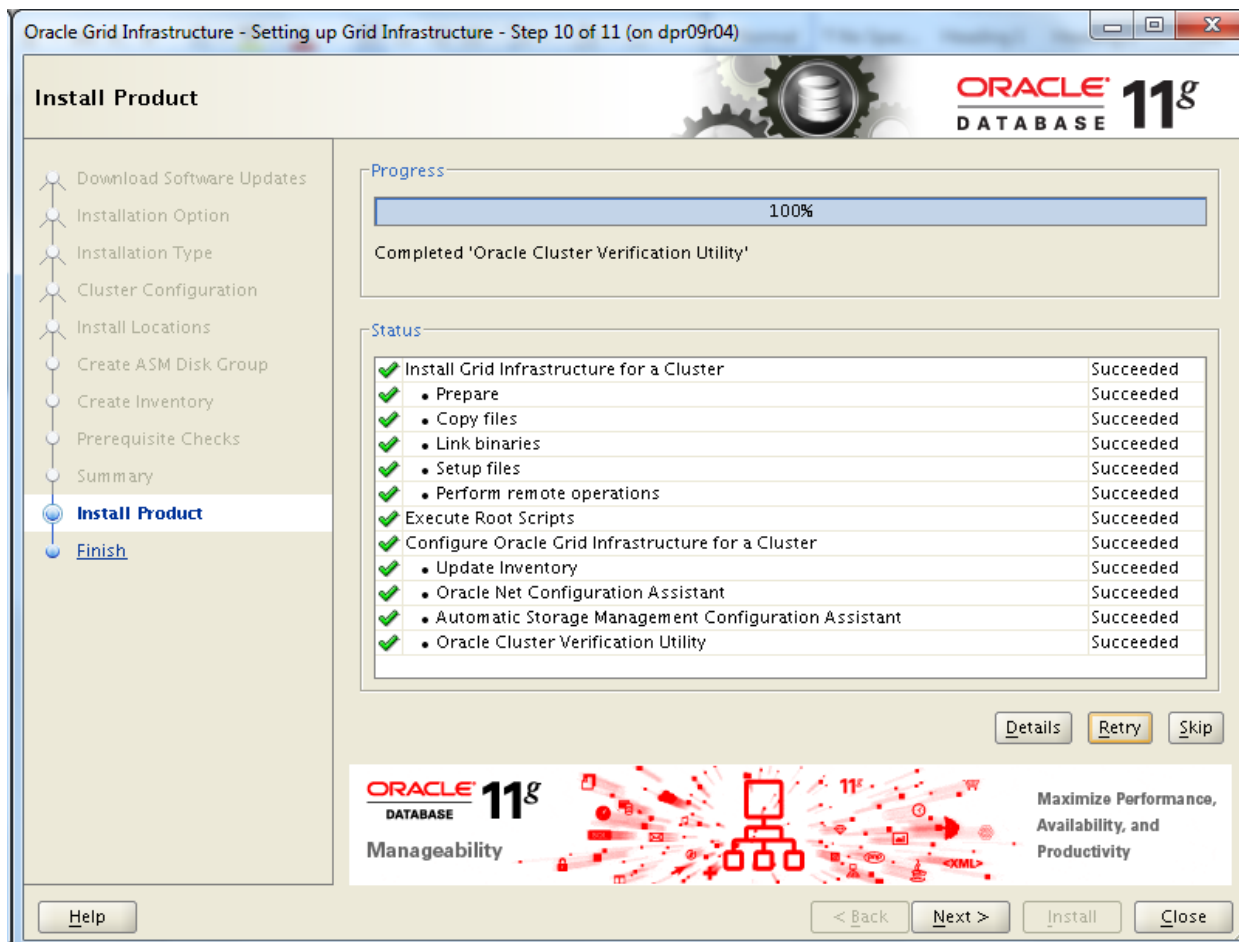
<input checked="" type="checkbox"/>	Disk Path	Size (in MB)	Status
<input checked="" type="checkbox"/>	/dev/VOT_01	1024	Candidate
<input checked="" type="checkbox"/>	/dev/VOT_02	1024	Candidate
<input checked="" type="checkbox"/>	/dev/VOT_03	1024	Candidate
<input checked="" type="checkbox"/>	/dev/VOT_04	1024	Candidate
<input checked="" type="checkbox"/>	/dev/VOT_05	1024	Candidate

 [Change Discovery Path](#)

Step 7:



Step 8:



Run ASMCA to create diskgroups

One can use ASMCA or Sqlplus from any of the two nodes to create diskgroups required for database creation.
Commands used:

- Create diskgroup
- Drop diskgroup
- Alter diskgroup

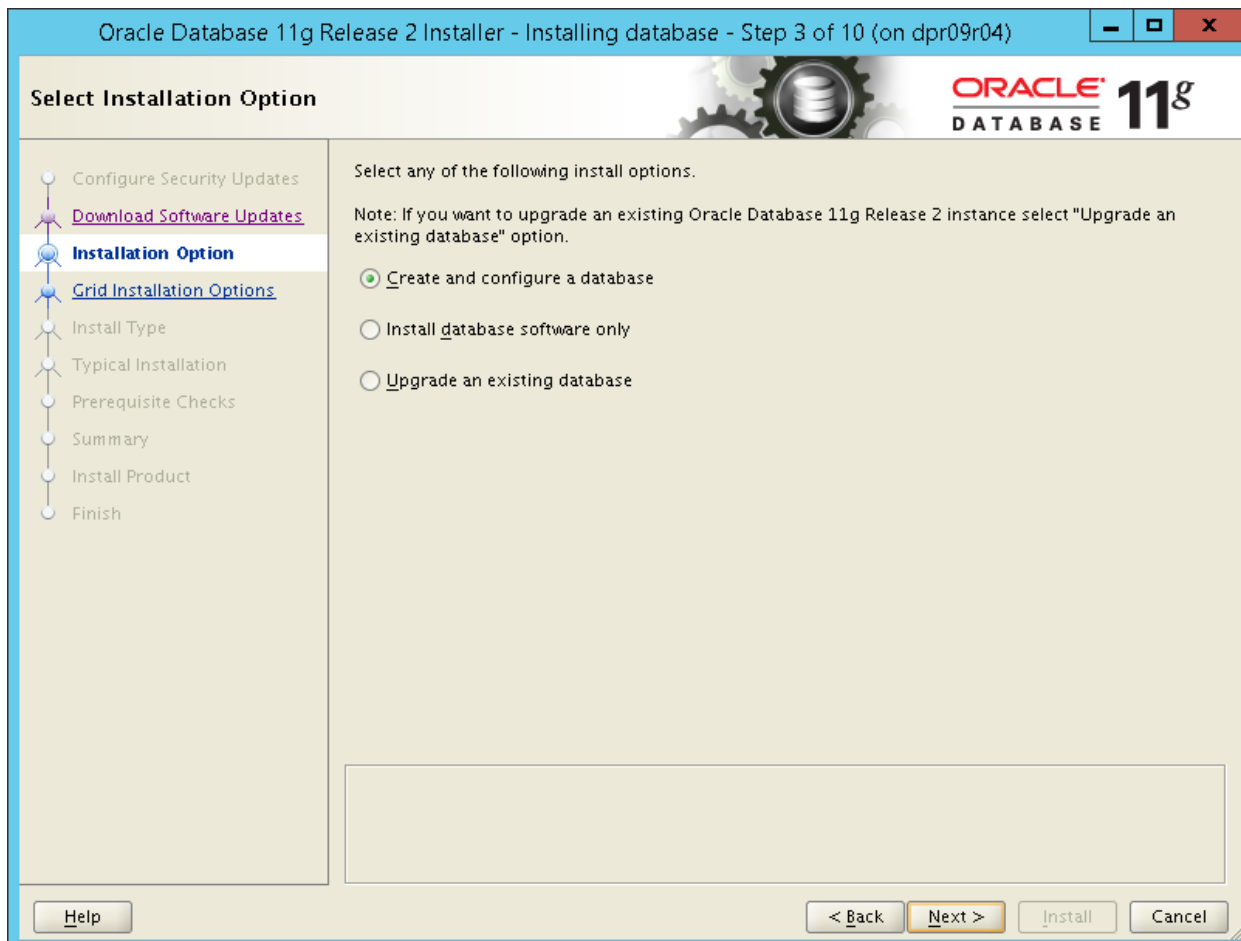
```
bash-4.3$ asmcmd -p lsdg
```

State	Type	Rebal	Sector	Block	AU	Total_MB	Free_MB	Req_mir_free_MB	Usable_file_MB	Offline_disks	Voting_files	Name
MOUNTED	EXTERN	N	512	4096	1048576	102400	89459	0	89459	0	N	ARCH01/
MOUNTED	EXTERN	N	512	4096	1048576	204800	129636	0	129636	0	N	DATA01/
MOUNTED	NORMAL	N	512	4096	1048576	5120	4190	1024	1583	0	Y	OCR/VOTE/
MOUNTED	EXTERN	N	512	4096	1048576	5120	2946	0	2946	0	N	RECN01/
MOUNTED	EXTERN	N	512	4096	1048576	5120	2946	0	2946	0	N	RECN02/
MOUNTED	EXTERN	N	512	4096	1048576	5120	2946	0	2946	0	N	RECN03/

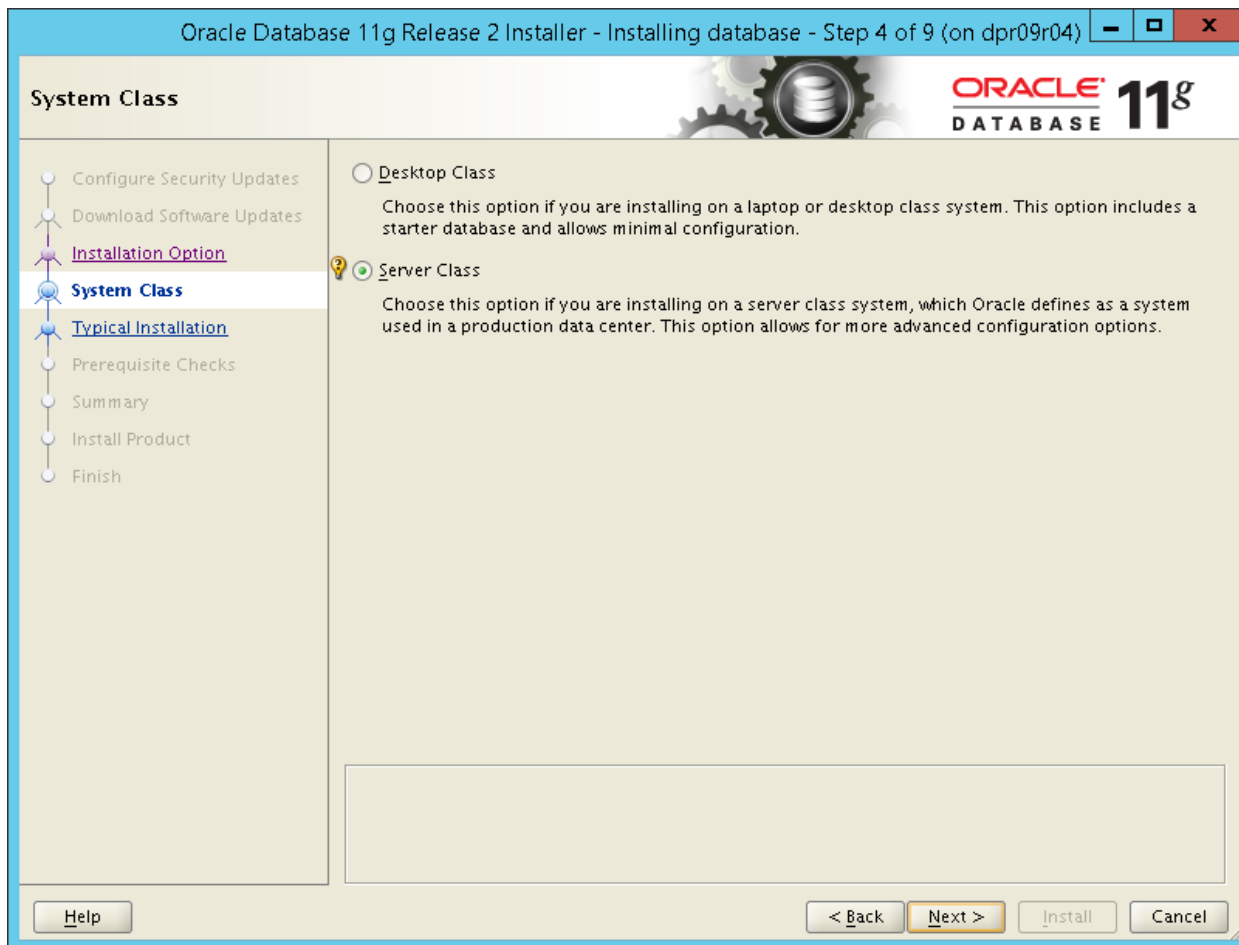
RDBMS Software Installation & Configuration

Install Database & configure

Step 1:




Step 2:



Step 3:

Oracle Database 11g Release 2 Installer - Installing database - Step 5 of 11 (on dpr09r04)

Grid Installation Options



- Configure Security Updates
- Download Software Updates
- Installation Option
- System Class
- Grid Installation Options**
- Install Type
- Typical Installation
- Prerequisite Checks
- Summary
- Install Product
- Finish

Select the type of database installation you want to perform.

☐ Single instance database installation

☒ Oracle Real Application Clusters database installation

☐ Oracle RAC One Node database installation

Select nodes (in addition to the local node) in the cluster where the installer should install Oracle RAC or Oracle RAC One.

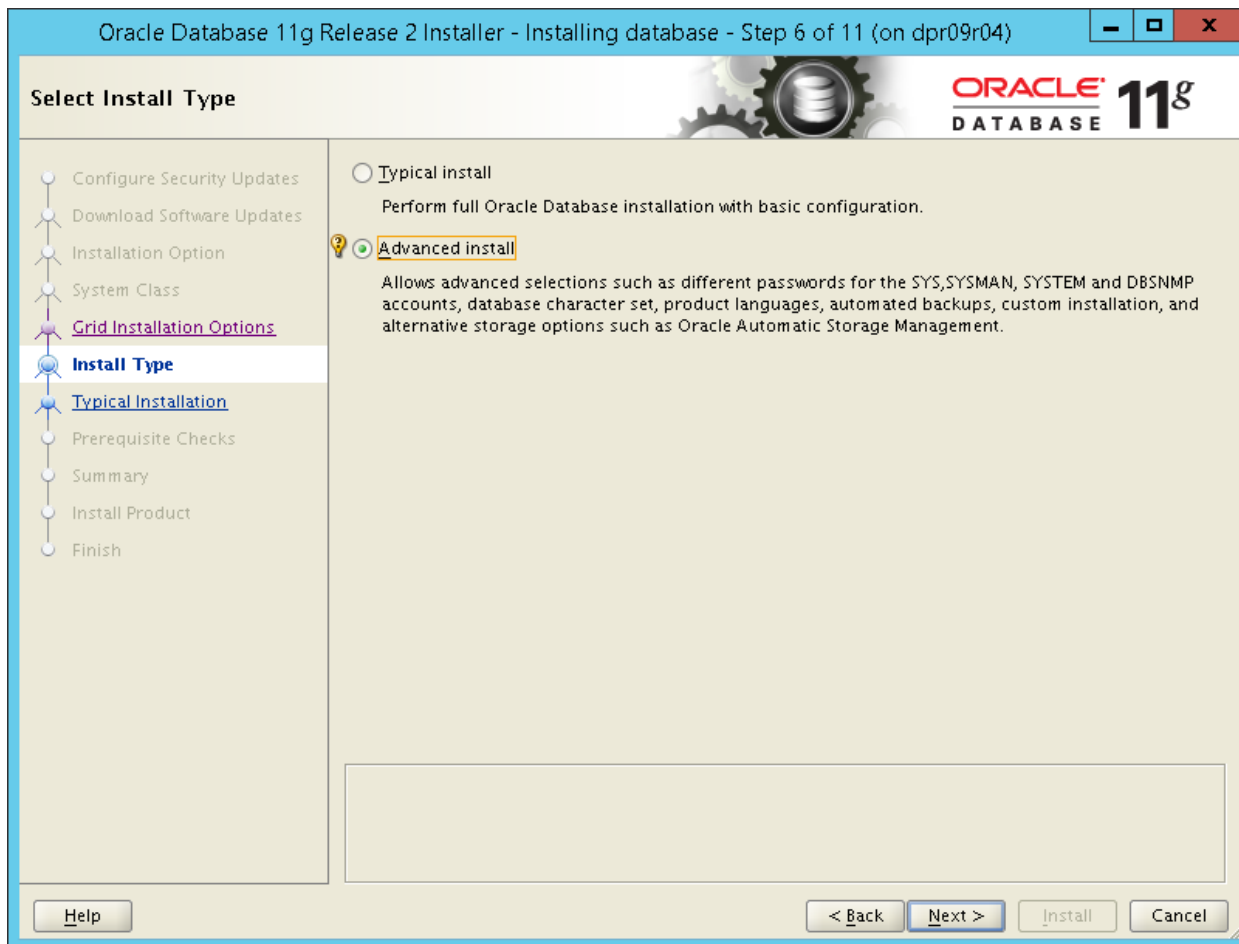
	Node Name
<input checked="" type="checkbox"/> 1	dpr09r04
<input checked="" type="checkbox"/> 2	dpr10r05

SSH Connectivity...

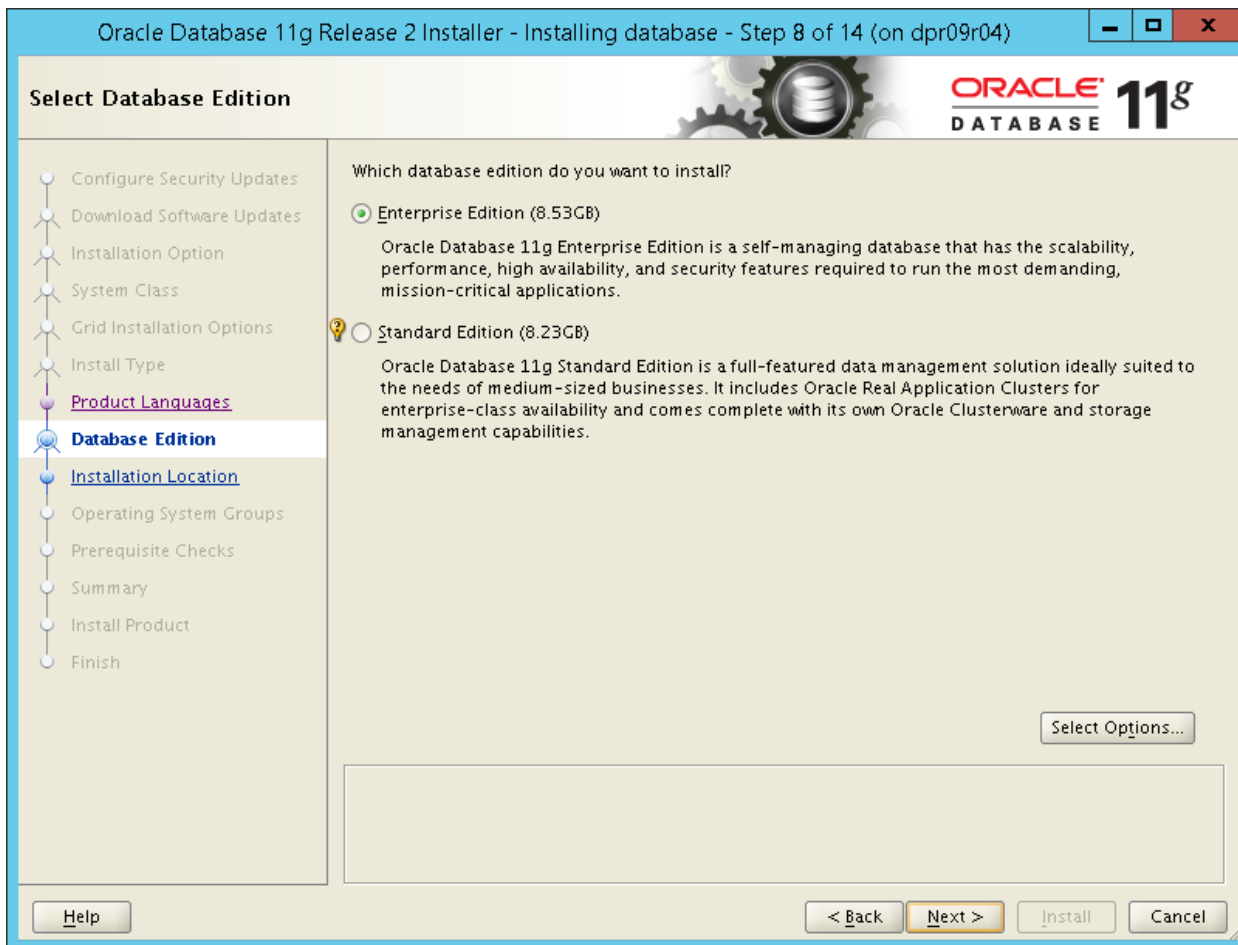
Select All Deselect All

< Back Next > Install Cancel

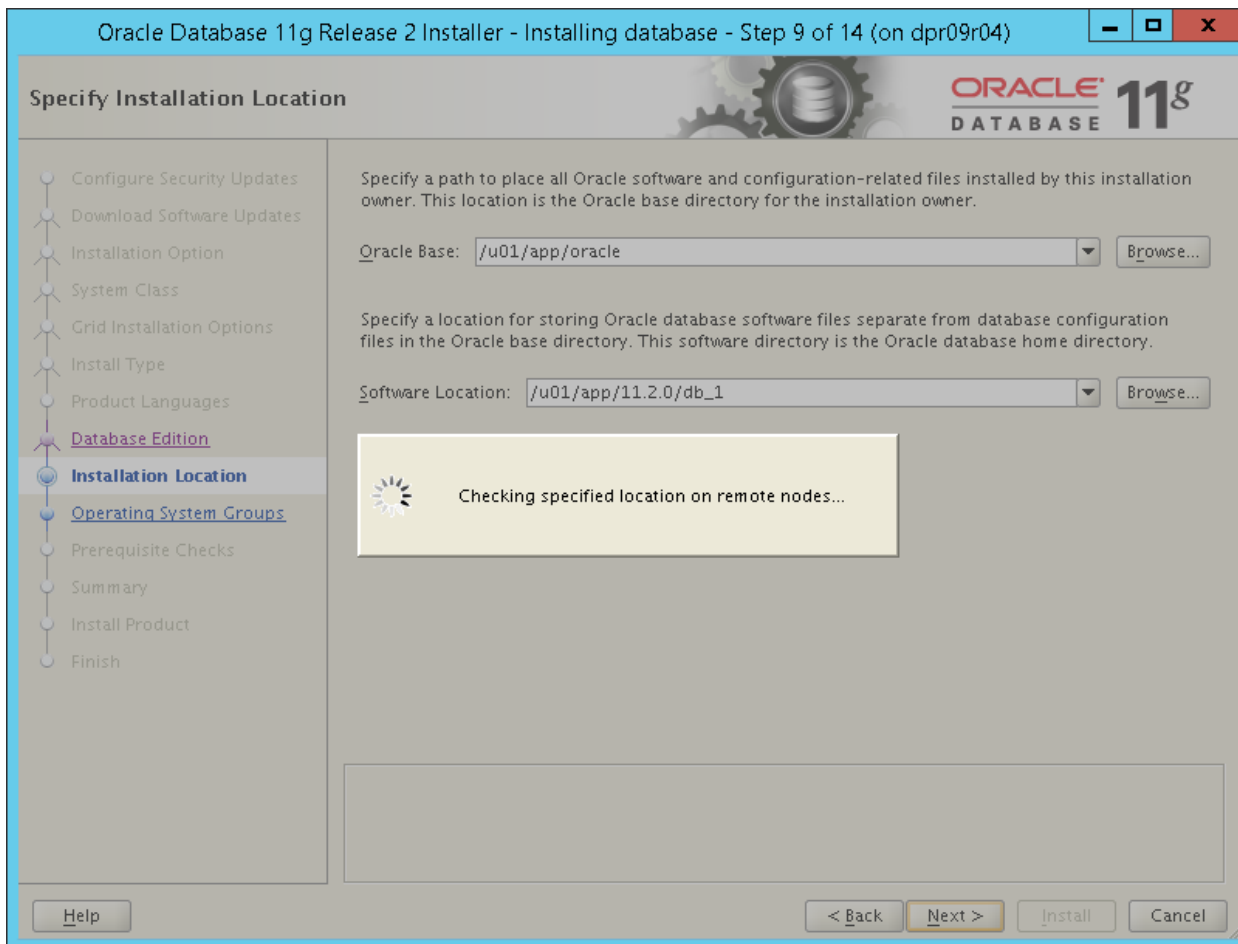
Step 4:



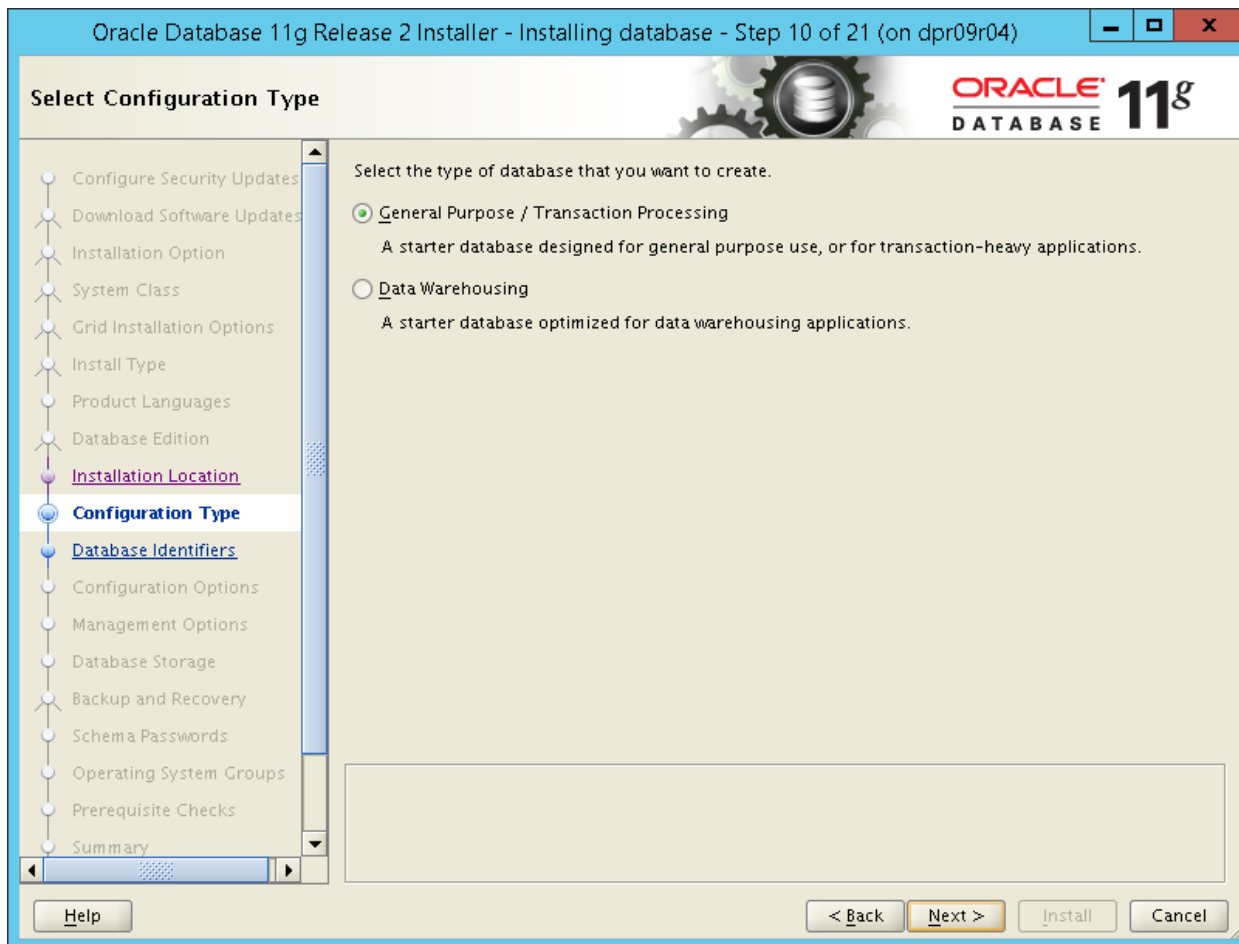
Step 5:



Step 6:



Step 7:



Step 8:

Oracle Database 11g Release 2 Installer - Installing database - Step 11 of 21 (on dpr09r04)

Specify Database Identifiers

An Oracle database is uniquely identified by a Global Database Name, typically of the form "name.domain".

Global database name:

A database is referenced by at least one Oracle instance that is uniquely identified from any other instance on this computer by an Oracle Service Identifier (SID).

Oracle Service Identifier (SID):

Database Service name is used by applications to connect to RAC One Node database.

Service Name:

Step 9:

Oracle Database 11g Release 2 Installer - Installing database - Step 12 of 21 (on dpr09r04)

Specify Configuration Options

Memory | Character sets | Security | Sample Schemas

Enabling Automatic Memory Management allows the database to distribute memory automatically between the system global area (SGA) and the program global area (PGA), based on user-specified overall database memory target size. If automatic memory management is not enabled, then the SGA and PGA must be sized manually.

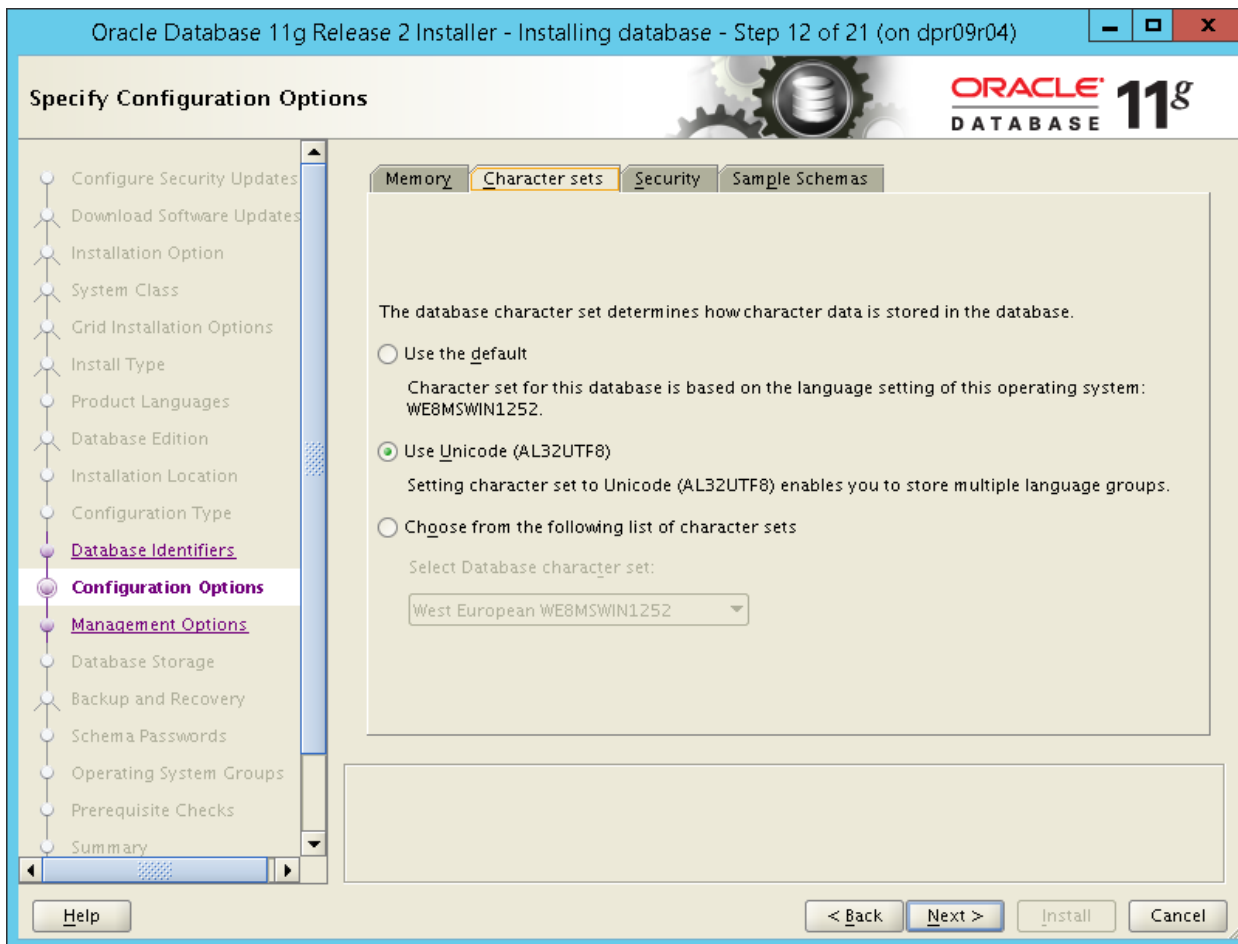
☒ **Enable Automatic Memory Management**

Allocate Memory: 256 6144 15360 6,144 40 %

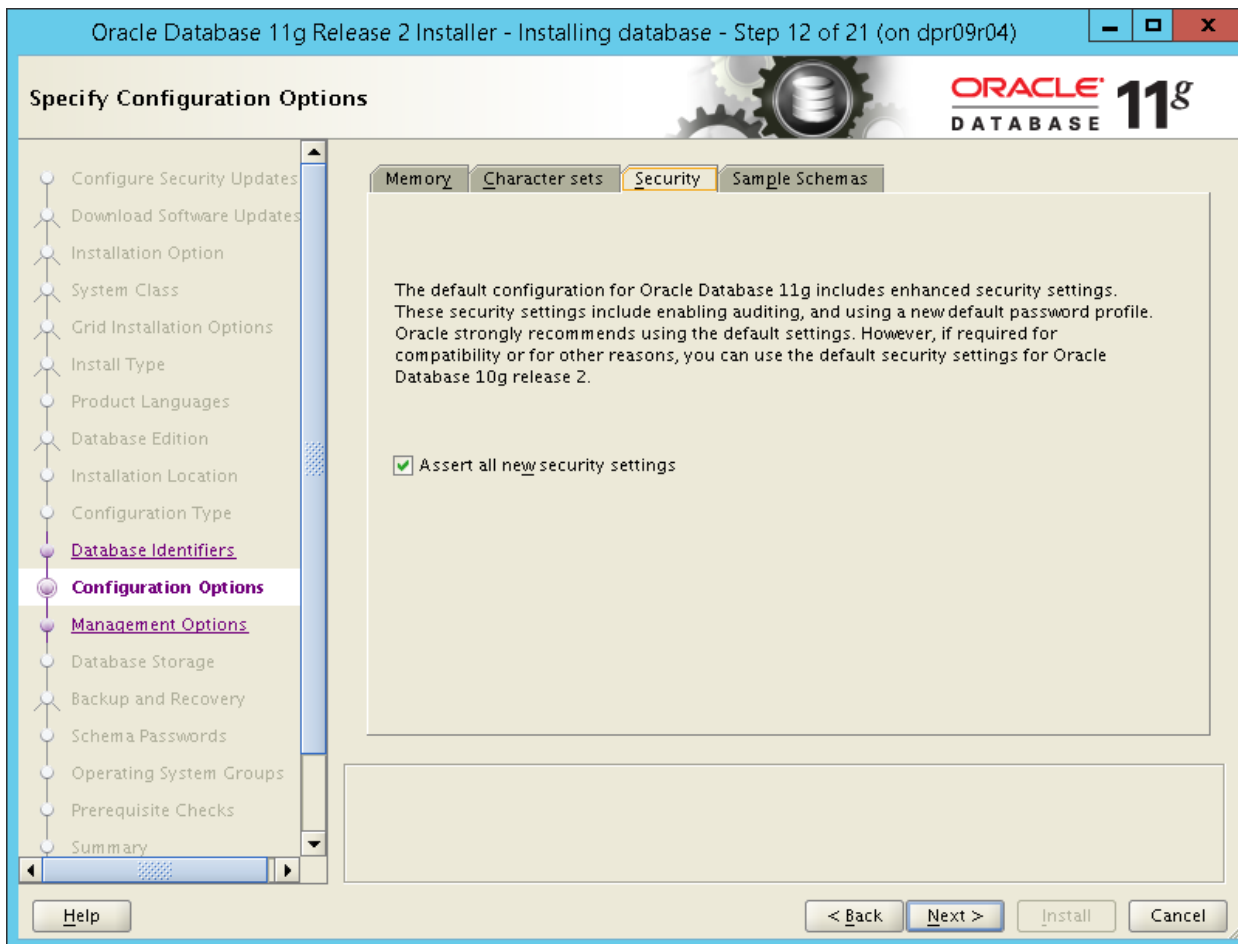
SGA target:	AUTO	MB
PGA aggregate target:	AUTO	MB
Target Database Memory:	6144	MB

Help < Back Next > Install Cancel

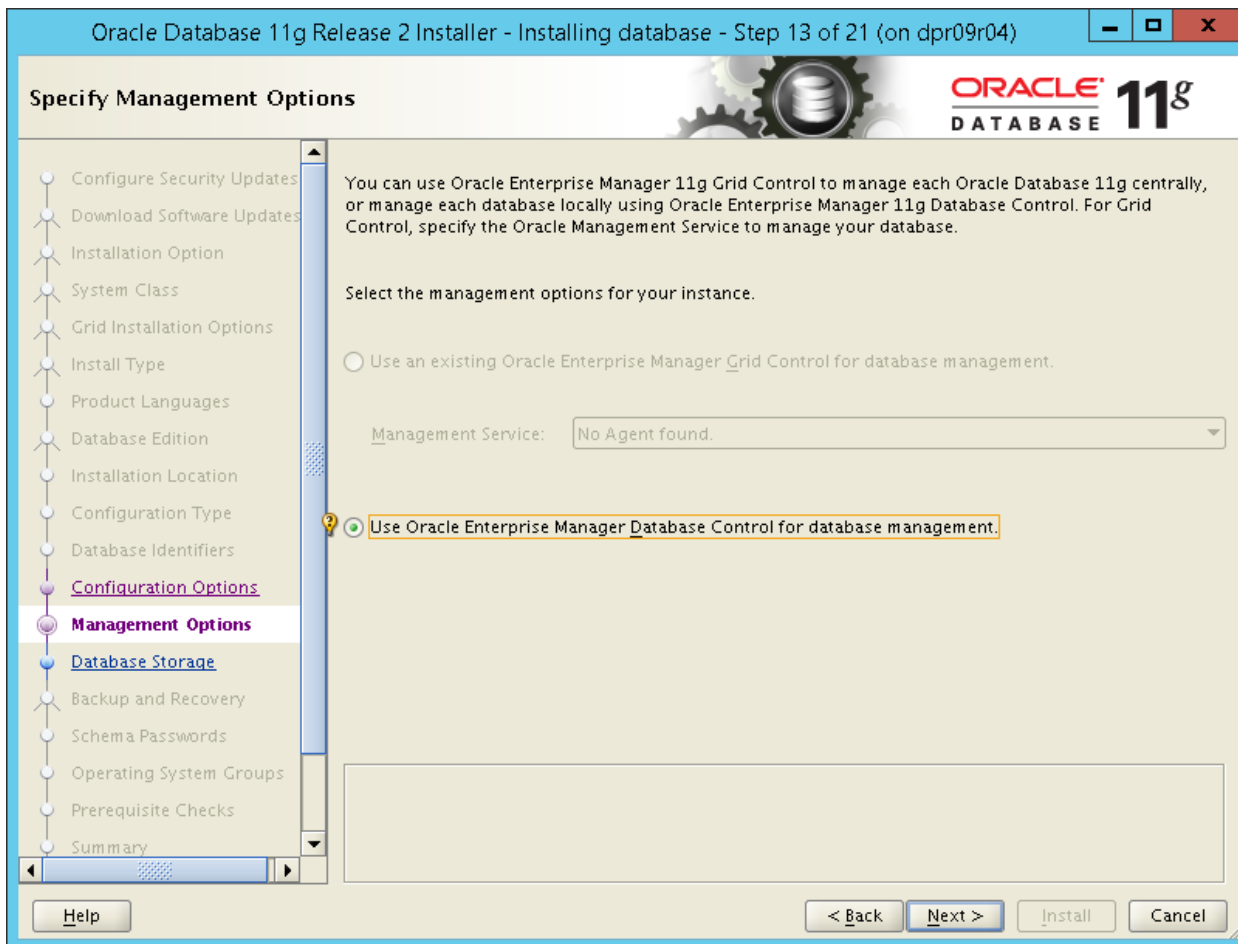
Step 10:



Step 11:




Step 12:



Step 13:

Oracle Database 11g Release 2 Installer - Installing database - Step 14 of 21 (on dpr09r04)

Specify Database Storage Options



- Configure Security Updates
- Download Software Updates
- Installation Option
- System Class
- Grid Installation Options
- Install Type
- Product Languages
- Database Edition
- Installation Location
- Configuration Type
- Database Identifiers
- Configuration Options
- Management Options
- Database Storage**
- Backup and Recovery
- Schema Passwords
- Operating System Groups
- Prerequisite Checks
- Summary

☐ File System

Use a file system for database storage. For optimal database organization and performance, Oracle recommends that you install data files and the Oracle database software on different disks.

Specify database file location:

☒ Oracle Automatic Storage Management

Oracle Automatic Storage Management (Oracle ASM) simplifies database storage administration, and places database files for optimal I/O performance. Select this option if you intend to use either Oracle ASM, or Oracle Automatic Storage Management File System (Oracle ACFS).

Specify password of ASMSNMP user:

Step 14:

Oracle Database 11g Release 2 Installer - Installing database - Step 15 of 21 (on dpr09r04)

Specify Recovery Options

Enable or disable automated backups for your database. If you choose to enable automated backups, then the Backup Job uses the specified recovery area storage.

☒ **Do not enable automated backups**

☐ **Enable automated backups**

Recovery area storage

☐ **File System**

Recovery Area location:

☒ **Oracle Automatic Storage Management**

Backup Job Operating System credentials

Username: Password:

Step 15:

Oracle Database 11g Release 2 Installer - Installing database - Step 16 of 22 (on dpr09r04)

Select ASM Disk Group

Select one of the existing Disk Groups to be used for storage of the database you are creating during this installation session.

	Disk Group Name	Size (in MB)	Available space ...	Redundancy
<input type="radio"/>	REDO	15360	15306	External
<input type="radio"/>	OCRVOTE	5120	4190	Normal
<input checked="" type="radio"/>	DATA	204800	204748	External
<input type="radio"/>	ARCH	102400	102348	External

[Refresh](#)

[Help](#) [< Back](#) [Next >](#) [Install](#) [Cancel](#)

Step 16:

Oracle Database 11g Release 2 Installer - Installing database - Step 17 of 22 (on dpr09r04)

Specify Schema Passwords

The starter database contains pre-loaded schemas, most of which have passwords that are expired and locked at the end of installation. After installation is complete, you must unlock and set new passwords for those accounts you want to use. Schemas used for database management and postinstallation functions are left unlocked, and passwords for these accounts will not expire. Specify the passwords for these accounts.


☐ Use different passwords for these accounts

	Password	Confirm password
<u>S</u> YS	<input type="text"/>	<input type="text"/>
<u>S</u> YSTEM	<input type="text"/>	<input type="text"/>
<u>S</u> YSMA <u>N</u>	<input type="text"/>	<input type="text"/>
<u>D</u> BSNMP	<input type="text"/>	<input type="text"/>

☒ Use the same password for all accounts

Password: Confirm password:

Messages:

 Password:[INS-30011] The ADMIN password entered does not conform to the Oracle recommended standards.

Step 17:

Oracle Database 11g Release 2 Installer - Installing database - Step 18 of 22 (on dpr09r04)

Privileged Operating System Groups

SYSDBA and SYSOPER privileges are required to create a database using operating system (OS) authentication. Membership in OSDBA grants the SYSDBA privilege, and membership in OSOPER grants the SYSOPER privilege, which is a subset of SYSDBA privileges. Select the name of the OSDBA group to grant the SYSDBA privilege. The user account you are using to run this install must be a member of this group.

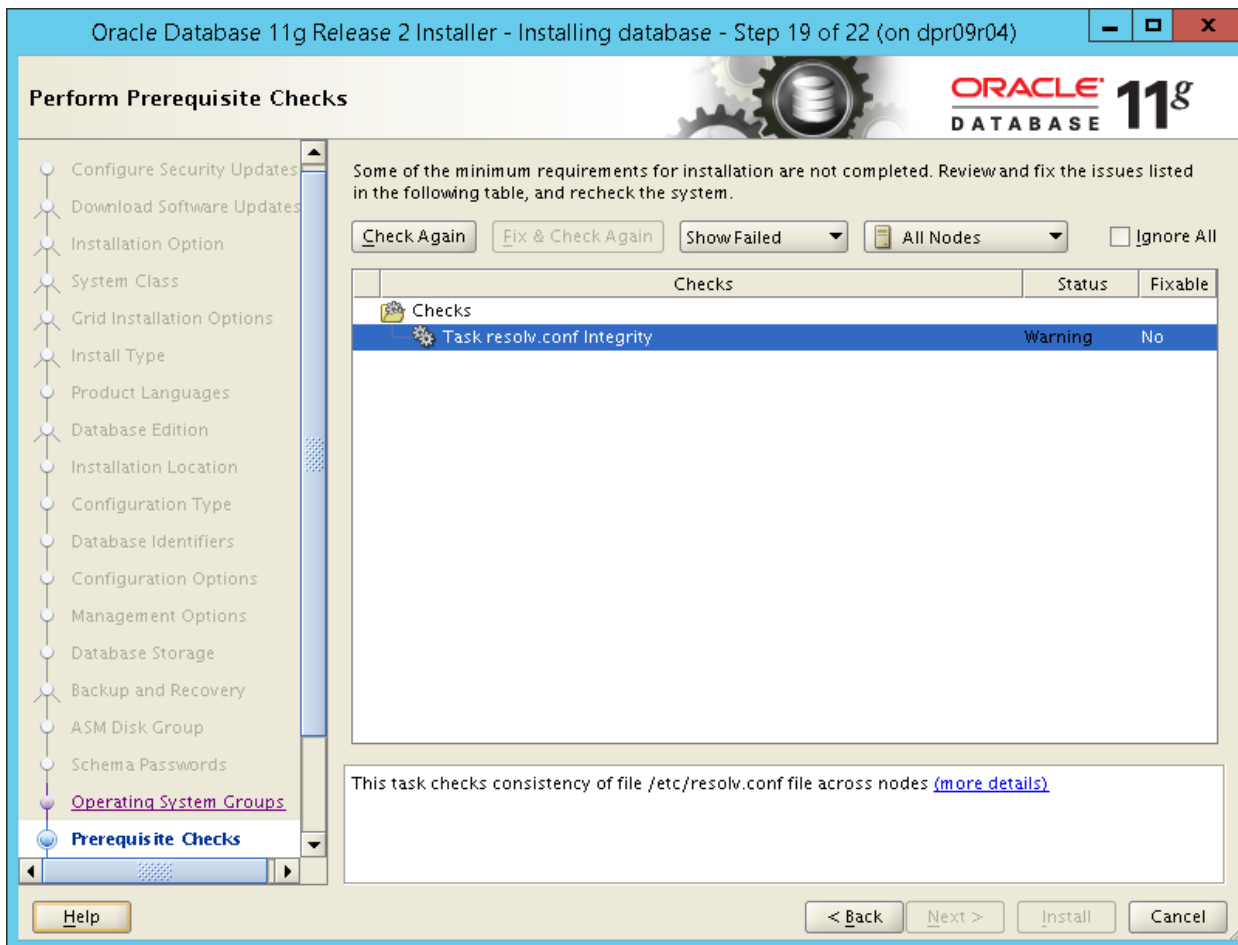
Database Addministrator (OSDBA) Group:

Database Operator (OSOPER) Group (Optional)

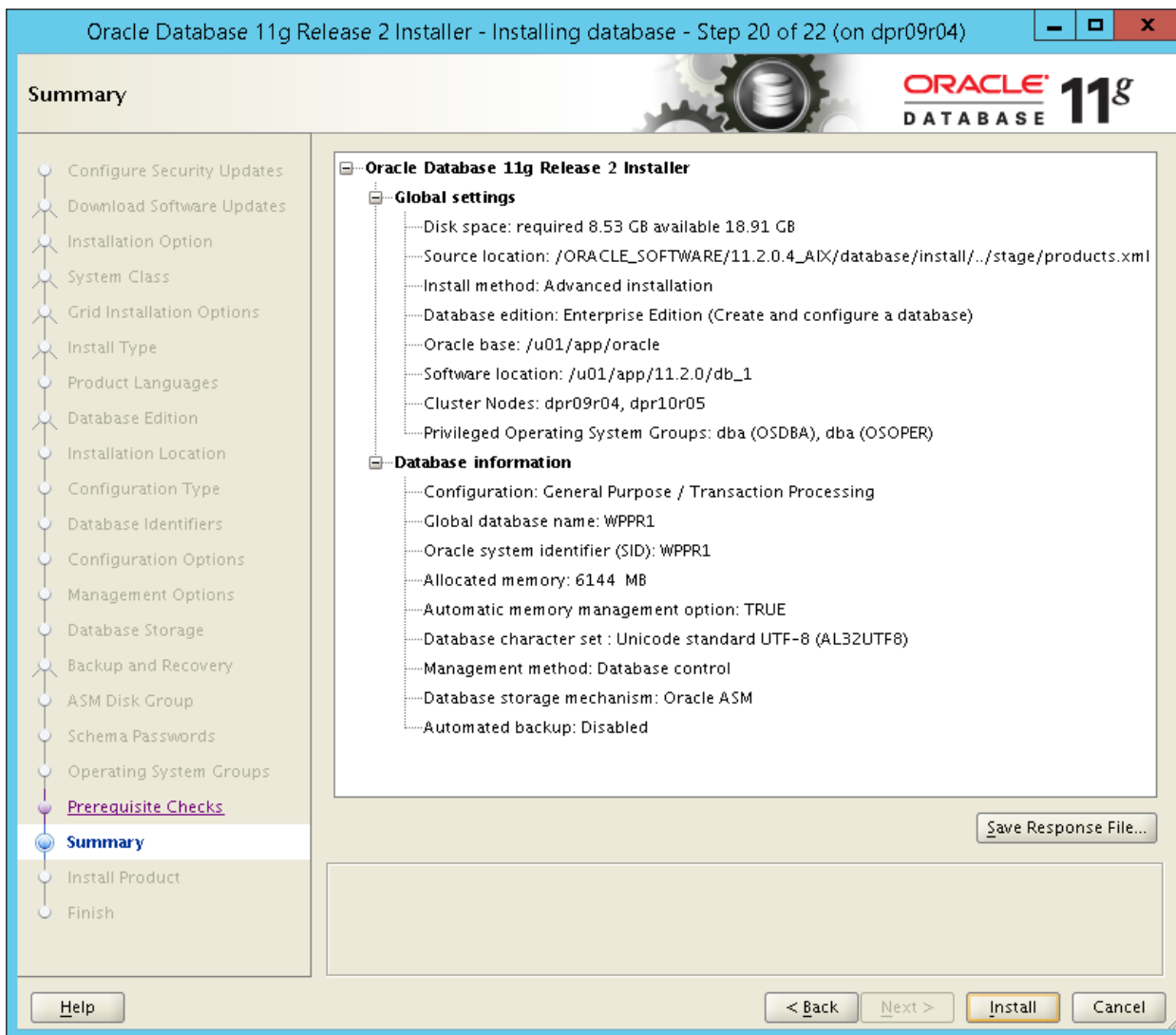
Operating System Groups

< Back Next > Install Cancel

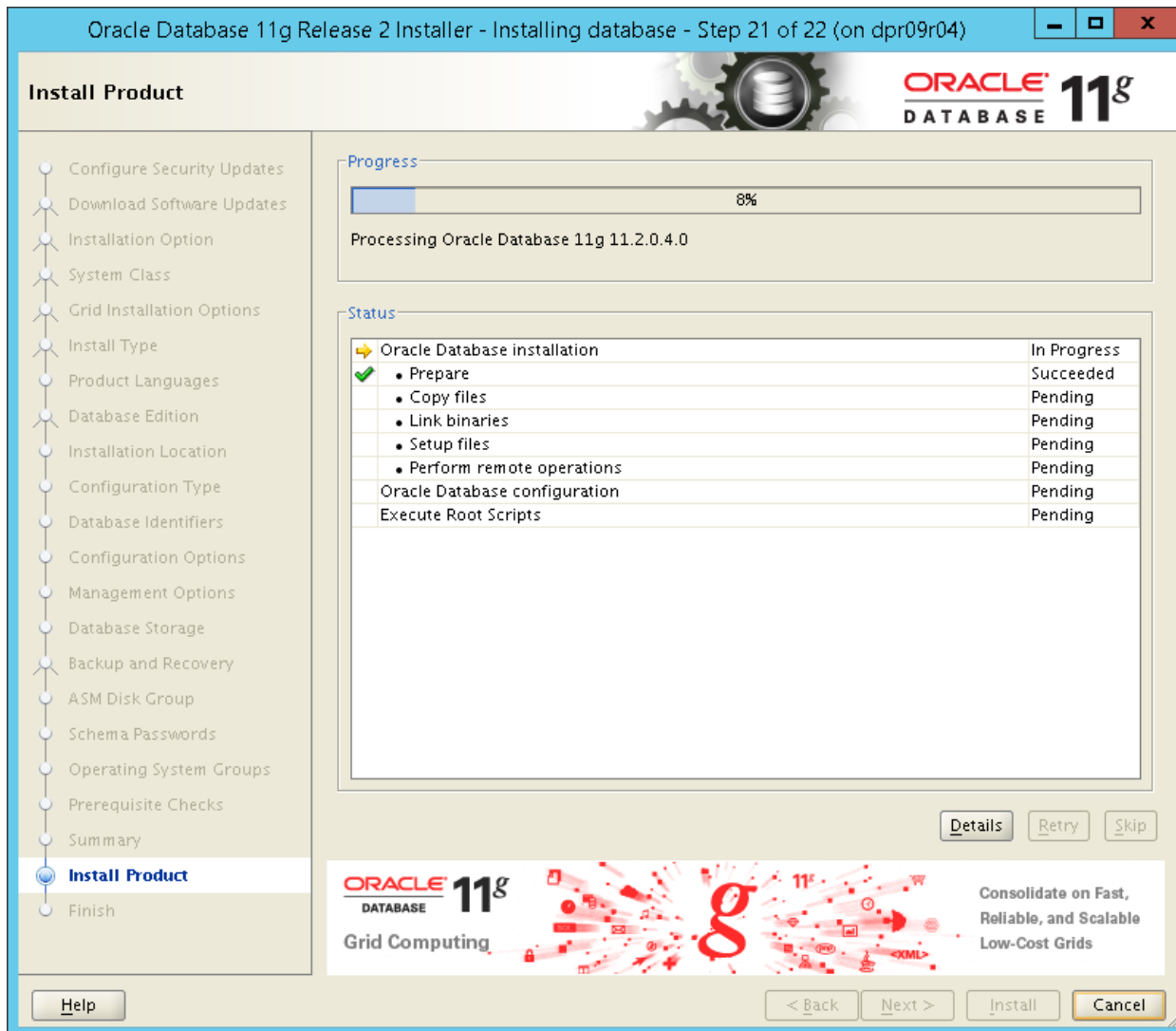
Step 18:



Step 19:

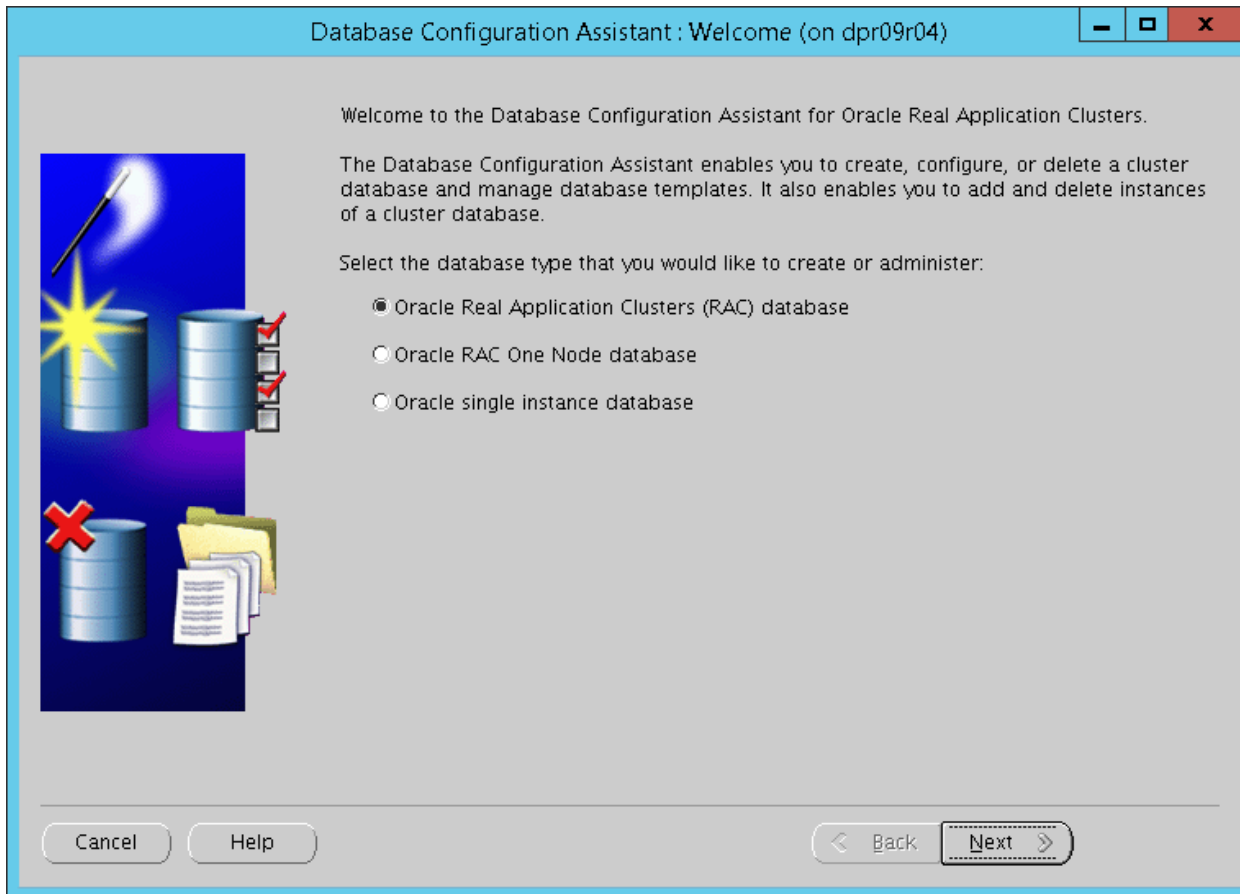


Step 20:



Run DBCA to create database

Note: Need to use dbca if creation of database fails while installing and configuring database software.



Select the operation that you want to perform:

- ☒ Create a Database
- ☐ Configure Database Options
- ☐ Delete a Database
- ☐ Manage Templates
- ☐ Instance Management



ASM configuration operations must be performed using Automatic Storage Management Configuration Assistant (ASMCA) from Oracle Grid Infrastructure home.



Cancel

Help

< Back

Next >

Templates that include datafiles contain pre-created databases. They allow you to create a new database in minutes, as opposed to an hour or more. Use templates without datafiles only when necessary, such as when you need to change attributes like block size, which cannot be altered after database creation.



Select	Template	Includes Datafiles
<input checked="" type="radio"/>	General Purpose or Transaction Processing	Yes
<input type="radio"/>	Custom Database	No
<input type="radio"/>	Data Warehouse	Yes

Show Details...


Cancel

Help

< Back

Next >

Database Configuration Assistant, Step 3 of 11 : Database Identification (on dpr09r04)



Cluster database configuration can be Policy-Managed or Admin-Managed. A Policy-Managed database is dynamic with instances managed automatically based on pools of servers for effective resource utilization. Admin-Managed database results in instances tied to specific servers.

Configuration Type: ☒ Admin-Managed ☐ Policy-Managed

An Oracle database is uniquely identified by a Global Database Name, typically of the form "name.domain".

Global Database Name:

A database is referenced by an Oracle instance on each cluster database node. Specify a prefix to be used to name the cluster database instances.

SID Prefix:

Select the nodes on which you want to create the cluster database. The local node "dpr09r04" will always be used, whether or not it is selected.


dpr09r04
dpr10r05

Select All
Deselect All

CancelHelp

BackNextFinish

Database Configuration Assistant, Step 4 of 12 : Management Options (on dpr09r04)



Enterprise ManagerAutomatic Maintenance Tasks

☒ Configure Enterprise Manager

☐ Register with Grid Control for centralized managementManagement Service:

☒ Configure Database Control for local management

☐ Enable Daily Disk Backup to Recovery Area

Backup Start Time: ☒ AM ☐ PM

OS Username:

OS Password:

CancelHelp

BackNext

Enterprise Manager

Automatic Maintenance Tasks

Oracle Database 11g provides the ability to automatically manage maintenance tasks such as optimizer statistics collection and proactive advisor reports. These tasks are run in a predefined maintenance window and their CPU consumption is throttled to prevent them from interfering with normal user work. The default maintenance windows are 10:00 PM - 2:00 AM on weekdays, and all weekend long. These defaults can be changed using Enterprise Manager at any time.

☒ Enable automatic maintenance tasks



Cancel

Help

< Back

Next >

For security reasons, you must specify passwords for the following user accounts in the new database.

☐ Use Different Administrative Passwords

User Name	Password	Confirm Password
SYS		
SYSTEM		
DBSNMP		
SYSMAN		

☒ Use the Same Administrative Password for All Accounts

Password:

Confirm Password:



Cancel

Help

< Back

Next >

Database Configuration Assistant, Step 6 of 12 : Database File Locations (on dpr09r04)

Specify storage type and locations for database files.

Storage Type: Automatic Storage Management (ASM)

Storage Locations:

☐ Use Database File Locations from Template

☐ Use Common Location for All Database Files

Database Files Location: Browse...

☒ Use Oracle-Managed Files

Database Area: +DATA Browse...

Multiplex Redo Logs and Control Files...

i If you want to specify different locations for any database files, pick any of the above options except Oracle-Managed Files and use the Storage page later to customize each file location. If you use Oracle-Managed Files, Oracle automatically generates the names for database files, which can not be changed on the Storage page.

File Location Variables...

Cancel Help

Back Next

Multiplex Redo Logs and Control Files (on dpr09r...

It is recommended that online redo logs and control files be written to multiple locations spread across different disks to provide greater fault tolerance.

Redo Log and Control File Destinations	
1	+REDO1
2	+REDO2
3	+REDO3
4	
5	

OK Cancel Help

Edit Archive Mode Parameters (on dpr09r04)

☒ Automatic Archiving

Archive Log File Format


If you have specified Fast Recovery Area, archive logs will go there. If you specify any other archive log destinations, they will be used instead of Fast Recovery Area. It is recommended that archive log files be written to multiple locations spread across different disks.

Archive Log Destinations	
1	LOCATION=+ARCH
2	
3	
4	
5	
6	

OK Cancel Help

Database Configuration Assistant, Step 7 of 12 : Recovery Configuration (on dpr09r04)

Choose the recovery options for the database:



☐ Specify Fast Recovery Area

This is used as the default for all disk based backup and recovery operations, and is also required for automatic disk based backup using Enterprise Manager. Oracle recommends that the database files and recovery files be located on physically different disks for data protection and performance.

Fast Recovery Area: Browse...

Fast Recovery Area Size: M Bytes

☒ Enable Archiving Edit Archive Mode Parameters...

File Location Variables...

Cancel Help < Back Next >

File Location Variables (on dpr09r04)


Variables are used to specify parameterized file locations for datafiles, control files, redo logs, and any other files used by database.

For example, a control file may be specified as
{ORACLE_BASE}/oradata/{DB_NAME}/control01.ctl

Variable	Value
ORACLE_BASE	/u01/app/oracle
ORACLE_HOME	/u01/app/11.2.0/db_1
DB_NAME	WPPR1
DB_UNIQUE_NAME	WPPR1
SID	WPPR1

OK Cancel Help

Database Configuration Assistant, Step 9 of 11 : Initialization Parameters (on dpr09r04)



Memory Sizing Character Sets Connection Mode

Typical

Memory Size (SGA and PGA): 6144 MB

Percentage: 40 % 250 MB 15360 MB

☒ Use Automatic Memory Management Show Memory Distribution...

Custom

Memory Management Automatic Shared Memory Management

SGA Size: 4608 M Bytes


PGA Size: 1536 M Bytes

Total Memory for Oracle: 6144 M Bytes

All Initialization Parameters...

Cancel Help < Back Next > Finish

Database Configuration Assistant, Step 9 of 11 : Initialization Parameters (on dpr09r04)



MemorySizingCharacter SetsConnection Mode

Database Character Set

☐ Use the default

The default character set for this database is based on the language setting of this operating system: WE8MSWIN1252.

☒ Use Unicode (AL32UTF8)

Setting character set to Unicode (AL32UTF8) enables you to store multiple language groups.

☐ Choose from the list of character sets

Database Character Set:

☒ Show recommended character sets only

National Character Set:

Default Language:

Default Territory:

All Initialization Parameters...


CancelHelp

< Back

Next >

Finish

Database Configuration Assistant, Step 9 of 11 : Initialization Parameters (on dpr09r04)



MemorySizingCharacter SetsConnection Mode

Select the mode in which you want your database to operate by default:

☒ Dedicated Server Mode

For each client connection the database will allocate a resource dedicated to serving only that client. Use this mode when the number of total client connections is expected to be small or when clients will be making persistent, long-running requests to the database.

☐ Shared Server Mode

Several client connections share a database-allocated pool of resources. Use this mode when a large number of users need to connect to the database simultaneously while efficiently utilizing system resources. The Oracle shared server feature will be enabled.

Shared Servers specifies the number of server processes that you want to create when an instance is started up.

Shared Server:

Edit Shared Server Parameters...

All Initialization Parameters...

CancelHelp

< Back

Next >

Finish



Memory

Sizing

Character Sets

Connection Mode

A block is the smallest unit of storage for allocation and for I/O. It cannot be changed once the database is created.

Block Size: Bytes

Specify the maximum number of operating system user processes that can be simultaneously connected to this database. The value of this parameter includes the user processes and the Oracle background processes.

Processes:

All Initialization Parameters...

Cancel

Help

< Back

Next >

Finish

All Initialization Parameters (on dpr09r04)



Instance	Name	Value	Override D...	Category
	cluster_database	true	✓	Cluster Database
	compatible	11.2.0.4.0	✓	Miscellaneous
	control_files	{ORACLE_BA...		File Configuration
	db_block_size	8192	✓	Cache and I/O
	db_create_file_dest	+DATA	✓	File Configuration
	db_create_online_l...	+REDO1	✓	File Configuration
	db_create_online_l...	+REDO2	✓	File Configuration
	db_domain		✓	Database Identification
	db_name	WPPR1	✓	Database Identification
	db_recovery_file_dest			File Configuration
	db_recovery_file_d...	4385144832		File Configuration
	db_unique_name			Miscellaneous
	instance_number	0		Cluster Database
	log_archive_dest_1	'LOCATION=+...	✓	Archive
	log_archive_dest_2			Archive
	log_archive_dest_st...	enable		Archive
	log_archive_dest_st...	enable		Archive
	nls_language	AMERICAN		NLS
	nls_territory	AMERICA		NLS
	open_cursors	300	✓	Cursors and Library Cache
	pga_aggregate_target	1610612736		Sort, Hash Joins, Bitmap Indexes
	processes	600	✓	Processes and Sessions
	remote_listener	portalpr-scan...	✓	Cluster Database
	remote_login_pass...	exclusive	✓	Security and Auditing
	sessions	665	✓	Processes and Sessions
	sga_target	4831838208		SGA Memory
	shared_servers	0		Shared Server
	star_transformation...	FALSE		Optimizer
WPPR11	instance_number	1	✓	Cluster Database
WPPR11	undo_tablespace	UNDOTBS1	✓	Cluster Database

Show Advanced Parameters

Close

Show Description

Help

Database Configuration Assistant, Step 10 of 11 : Database Storage (on dpr09r04)

Storage

- Controlfile
- Datafiles
- Redo Log Groups
 - 1
 - 2
 - 3
 - 4

General

Group #: 1

Thread #: 1

File Size: 512 M Bytes

Redo Log Members:


Member
OMF_1_REDOLOG_ME...

Create Delete File Location Variables...

Cancel Help Back Next Finish

Database Configuration Assistant, Step 11 of 11 : Creation Options (on dpr09r04)

Select the database creation options:



☒ Create Database

☒ Generate Database Creation Scripts

Destination Directory: /u01/app/oracle/admin/WPPR1/scripts Browse...

Cancel Help Back Next Finish

**Performance
Innovations**

- **SecureFiles**
(next generation
LOB storage)
- **Table compression**
for all applications
- **RAC cache fusion**
optimizations

- ✓ Copying database files
- ✓ Creating and starting Oracle instance
- ✓ Creating cluster database views
- ✓ Completing Database Creation

Clone database creation in progress

100%

Log files for the current operation are located at:
/u01/app/oracle/cfgtoollogs/dbca/WPPR1

Database Configuration Assistant (on dpr0...

Database creation complete. For details check the logfiles at:
/u01/app/oracle/cfgtoollogs/dbca/WPPR1.

Database Information:

Global Database Name: WPPR1
System Identifier(SID) Prefix: WPPR1
Server Parameter File name: +DATA/WPPR1/spfileWPPR1.ora

The Database Control URL is <https://dpr09r04:1158/em>

Note: All database accounts except SYS, SYSTEM and DBSNMP are locked. Select the Password Management button to view a complete list of locked accounts or to manage the database accounts (except DBSNMP). From the Password Management window, unlock only the accounts you will use. Oracle Corporation strongly recommends changing the default passwords immediately after unlocking the account.

Password Management...

Exit

Verify Services

Verify Cluster Services

Command: crsctl check crs

```
bash-4.3$ crsctl check cluster -all
*****
dpr09r04:
CRS-4537: Cluster Ready Services is online
CRS-4529: Cluster Synchronization Services is online
CRS-4533: Event Manager is online
*****
dpr10r05:
CRS-4537: Cluster Ready Services is online
CRS-4529: Cluster Synchronization Services is online
CRS-4533: Event Manager is online
*****
bash-4.3$
```

Command:

crs_stat -t

```
bash-4.3$ crsctl status res |grep -v "^$" |awk -F "=" 'BEGIN {print " " } {printf("%s",NR%4 ? $2"|" : $2"\n")}' |sed -
> awk -F "|" 'BEGIN { printf "%-40s%-35s%-20s%-50s\n","Resource Name","Resource Type","Target ","State" } { split (
35s%-20s%-50s\n",$1,$2,trg[i],st[i])}'
Resource Name      Resource Type      Target             State
ora.ARCH01.dg      ora.diskgroup.type ONLINE            ONLINE on dpr10r05
ora.ARCH01.dg      ora.diskgroup.type ONLINE            ONLINE on dpr09r04
ora.DATA01.dg      ora.diskgroup.type ONLINE            ONLINE on dpr10r05
ora.DATA01.dg      ora.diskgroup.type ONLINE            ONLINE on dpr09r04
ora.LISTENER.lsnr   ora.listener.type  ONLINE            ONLINE on dpr10r05
ora.LISTENER.lsnr   ora.listener.type  ONLINE            ONLINE on dpr09r04
ora.LISTENER_DPR09R04.lsnr ora.listener.type  ONLINE            ONLINE on dpr10r05
ora.LISTENER_DPR09R04.lsnr ora.listener.type  ONLINE            ONLINE on dpr09r04
ora.LISTENER_SCAN1.lsnr ora.scan_listener.type ONLINE            ONLINE on dpr10r05
ora.LISTENER_SCAN2.lsnr ora.scan_listener.type ONLINE            ONLINE on dpr09r04
ora.LISTENER_SCAN3.lsnr ora.scan_listener.type ONLINE            ONLINE on dpr09r04
ora.OCR.VOTE.dg     ora.diskgroup.type ONLINE            ONLINE on dpr10r05
ora.OCR.VOTE.dg     ora.diskgroup.type ONLINE            ONLINE on dpr09r04
ora.RECN01.dg       ora.diskgroup.type ONLINE            ONLINE on dpr10r05
ora.RECN01.dg       ora.diskgroup.type ONLINE            ONLINE on dpr09r04
ora.RECN02.dg       ora.diskgroup.type ONLINE            ONLINE on dpr10r05
ora.RECN02.dg       ora.diskgroup.type ONLINE            ONLINE on dpr09r04
ora.RECN03.dg       ora.diskgroup.type ONLINE            ONLINE on dpr10r05
ora.RECN03.dg       ora.diskgroup.type ONLINE            ONLINE on dpr09r04
ora.asm             ora.asm.type       ONLINE            ONLINE on dpr10r05
ora.asm             ora.asm.type       ONLINE            ONLINE on dpr09r04
ora.cvu             ora.cvu.type       ONLINE            ONLINE on dpr09r04
ora.dpr09r04.vip    ora.cluster_vip_net1.type ONLINE            ONLINE on dpr09r04
ora.dpr10r05.vip    ora.cluster_vip_net1.type ONLINE            ONLINE on dpr10r05
ora.gsd             ora.gsd.type       OFFLINE           OFFLINE
ora.gsd             ora.gsd.type       OFFLINE           OFFLINE
ora.net1.network    ora.network.type   ONLINE            ONLINE on dpr10r05
ora.net1.network    ora.network.type   ONLINE            ONLINE on dpr09r04
ora.oc4j            ora.oc4j.type      ONLINE            ONLINE on dpr09r04
ora.ons             ora.ons.type       ONLINE            ONLINE on dpr10r05
ora.ons             ora.ons.type       ONLINE            ONLINE on dpr09r04
ora.registry.acfs   ora.registry.acfs.type ONLINE            ONLINE on dpr10r05
ora.registry.acfs   ora.registry.acfs.type ONLINE            ONLINE on dpr09r04
ora.scan1.vip       ora.scan_vip.type  ONLINE            ONLINE on dpr10r05
ora.scan2.vip       ora.scan_vip.type  ONLINE            ONLINE on dpr09r04
ora.scan3.vip       ora.scan_vip.type  ONLINE            ONLINE on dpr09r04
ora.wppr1.db        ora.database.type  ONLINE            ONLINE on dpr10r05
ora.wppr1.db        ora.database.type  ONLINE            ONLINE on dpr09r04
```

Command: lsnrctl services

```
bash-4.3$ lsnrctl services

LSNRCTL for IBM/AIX RISC System/6000: Version 11.2.0.4.0 - Production on 22-JUN-2017 15:16:37

Copyright (c) 1991, 2013, Oracle. All rights reserved.

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=IPC) (KEY=LISTENER)))
Services Summary...
Service "+ASM" has 1 instance(s).
  Instance "+ASM1", status READY, has 1 handler(s) for this service...
    Handler(s):
      "DEDICATED" established:2169 refused:0 state:ready
        LOCAL SERVER
Service "WPPR1" has 1 instance(s).
  Instance "WPPR11", status READY, has 1 handler(s) for this service...
    Handler(s):
      "DEDICATED" established:356 refused:0 state:ready
        LOCAL SERVER
Service "WPPR1XDB" has 1 instance(s).
  Instance "WPPR11", status READY, has 1 handler(s) for this service...
    Handler(s):
      "D000" established:0 refused:0 current:0 max:1022 state:ready
        DISPATCHER <machine: dpr09r04, pid: 18939944>
          (ADDRESS=(PROTOCOL=tcp) (HOST=dpr09r04) (PORT=33404))
The command completed successfully
bash-4.3$
```

Command: lsnrctl status

```
bash-4.3$ lsnrctl status

LSNRCTL for IBM/AIX RISC System/6000: Version 11.2.0.4.0 - Production on 22-JUN-2017 15:16:40

Copyright (c) 1991, 2013, Oracle. All rights reserved.

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=IPC) (KEY=LISTENER)))
STATUS of the LISTENER
-----
Alias                     LISTENER
Version                   TNSLSNR for IBM/AIX RISC System/6000: Version 11.2.0.4.0 - Production
Start Date                21-JUN-2017 09:59:36
Uptime                    1 days 5 hr. 17 min. 9 sec
Trace Level               off
Security                  ON: Local OS Authentication
SNMP                      ON
Listener Parameter File   /u01/app/11.2.0/grid/network/admin/listener.ora
Listener Log File         /u01/app/grid/diag/tnslsnr/dpr09r04/listener/alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc) (KEY=LISTENER)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp) (HOST=192.168.121.147) (PORT=1521)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp) (HOST=192.168.121.213) (PORT=1521)))
Services Summary...
Service "+ASM" has 1 instance(s).
  Instance "+ASM1", status READY, has 1 handler(s) for this service...
Service "WPPR1" has 1 instance(s).
  Instance "WPPR11", status READY, has 1 handler(s) for this service...
Service "WPPR1XDB" has 1 instance(s).
  Instance "WPPR11", status READY, has 1 handler(s) for this service...
The command completed successfully
bash-4.3$
```

Command: `srvctl config scan`

```
bash-4.3$ srvctl config scan
SCAN name: portalpr-scan.neotel.co.za, Network: 1/192.168.121.0/255.255.255.0/en2
SCAN VIP name: scan1, IP: /portalpr-scan.neotel.co.za/192.168.121.161
SCAN VIP name: scan2, IP: /portalpr-scan.neotel.co.za/192.168.121.162
SCAN VIP name: scan3, IP: /portalpr-scan.neotel.co.za/192.168.121.163
bash-4.3$
```

Command: `srvctl config scan_listener`

Shows the existence and port numbers for the SCAN listeners

```
bash-4.3$ srvctl config scan_listener
SCAN Listener LISTENER_SCAN1 exists. Port: TCP:1521
SCAN Listener LISTENER_SCAN2 exists. Port: TCP:1521
SCAN Listener LISTENER_SCAN3 exists. Port: TCP:1521
bash-4.3$
```

Command: `crsctl query css votedisk`

```
bash-4.3$ crsctl query css votedisk
##      STATE      File Universal Id                        File Name Disk group
--      -
 1. ONLINE   5e3e605d75044fe8bf83b3f00ee63803 (/dev/VOT_01) [OCRVOTE]
 2. ONLINE   4a739947d8994f4dbfc6084414583cbd (/dev/VOT_02) [OCRVOTE]
 3. ONLINE   7a840b9144fe4f0dbf6d859a43639f97 (/dev/VOT_03) [OCRVOTE]
Located 3 voting disk(s).
bash-4.3$
```