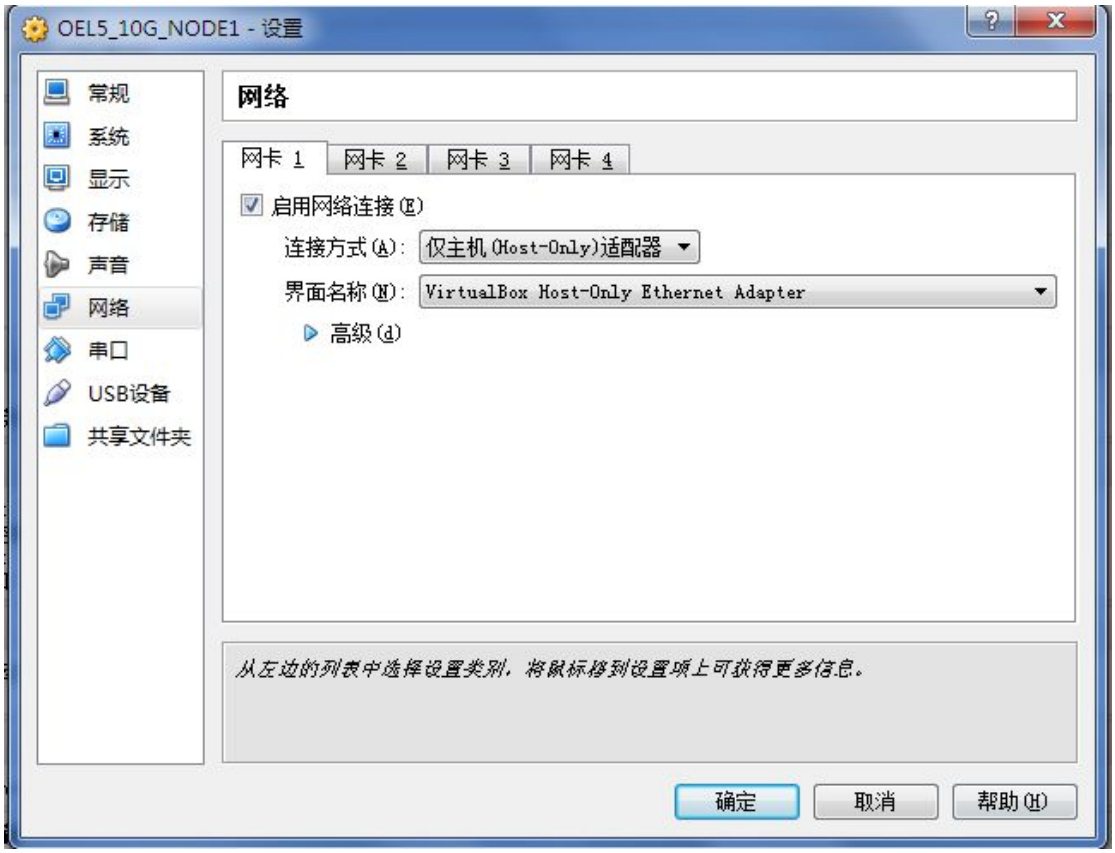
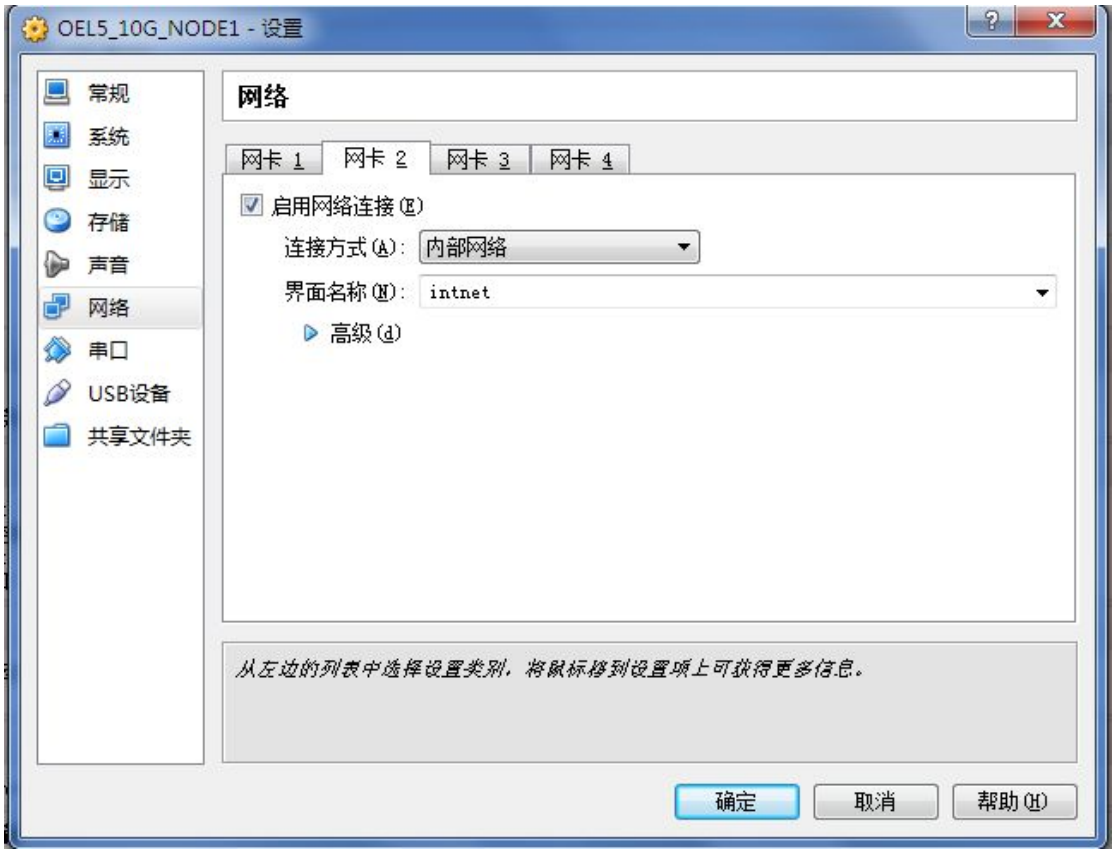
1. 准备虚拟机：

1. 存储规划

类型	大小	是否共享
操作系统	20G	NO
DATA DG	10G	YES
FRA DG	5G	YES
OCR + Voting Disk	1G	YES

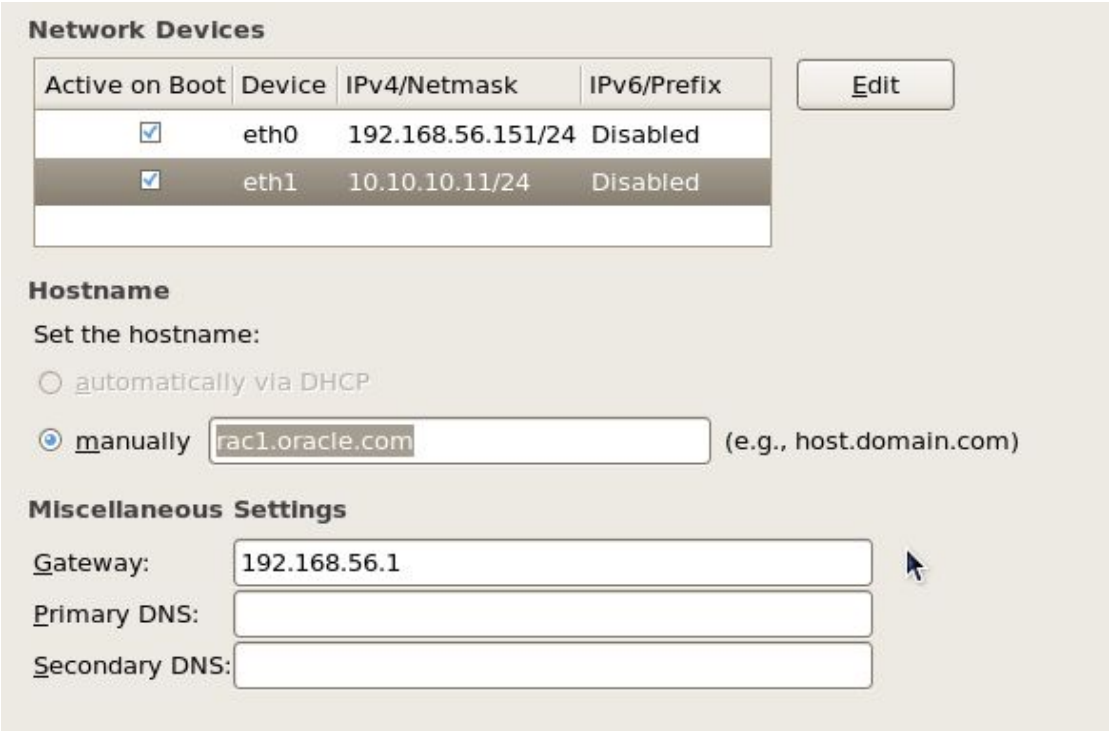
2. 虚拟网卡




OEL5_10G_NODE1 - 设置
常规
系统
显示
存储
声音
网络
串口
USB设备
共享文件夹
网络
网卡 1
网卡 2
网卡 3
网卡 4
启用网络连接(E)
连接方式(A):
内部网络
界面名称(N):
intnet
高级(d)
从左边的列表中选择设置类别，将鼠标移到设置项上可获得更多信息。
确定
取消
帮助(H)

2. 安装 Linux：

1. 规划网卡




```
127.0.0.1 localhost

#node1
192.168.56.151      rac1 rac1.oracle.com
192.168.56.152      rac1-vip

#node2
192.168.56.161      rac2 rac2.oracle.com
192.168.56.162      rac2-vip

192.168.56.170      sky-cluster      sky-cluster-scan

10.10.10.11     rac1-priv
10.10.10.12     rac2-priv
```

2. 关闭不必要的服务

```
chkconfig --level 2345 bluetooth off
chkconfig --level 2345 cups off
chkconfig --level 2345 ip6tables off
chkconfig --level 2345 iptables off
chkconfig --level 2345 irqbalance off
```

```
chkconfig --level 2345 pcscd off
chkconfig --level 2345 anacron off
chkconfig --level 2345 atd off
chkconfig --level 2345 auditd off
chkconfig --level 2345 avahi-daemon off
chkconfig --level 2345 avahi-dnsconfd off
chkconfig --level 2345 cpuspeed off
chkconfig --level 2345 gpm off
chkconfig --level 2345 hidd off
chkconfig --level 2345 mcstrans off
chkconfig --level 2345 microcode_ctl off
chkconfig --level 2345 netfs off
chkconfig --level 2345 nfslock off
chkconfig --level 2345 portmap off
chkconfig --level 2345 readahead_early off
chkconfig --level 2345 readahead_later off
chkconfig --level 2345 restorecond off
chkconfig --level 2345 rpcgssd off
chkconfig --level 2345 rhnsd off
chkconfig --level 2345 rpcidmapd off
chkconfig --level 2345 sendmail off
chkconfig --level 2345 setroubleshoot off
chkconfig --level 2345 smartd off
chkconfig --level 2345 xinetd off
chkconfig --level 2345 ntpd off
```

3. 修改主机名

[root@node1 ~]# vi /etc/hosts

```
127.0.0.1           localhost.localdomain localhost
::1                  localhost6.localdomain6 localhost6

#node1
192.168.56.151   rac1       rac1.oracle.com
192.168.56.152   rac1-vip

#node2
192.168.56.161   rac2       rac2.oracle.com
192.168.56.162   rac2-vip

#scan
192.168.56.170   sky-cluster         sky-cluster-scan
```

```
#priv
10.10.10.11         rac1-priv
10.10.10.12         rac2-priv
```

[root@rac1 ~]# more /etc/hosts | awk '{print $1}' | grep -v ^# | grep -v ^$
more /etc/hosts | grep -v ^# | grep -v ^$ | awk '{print "ping -c 2 " $1}'

ping_host.sh

```
ping -c 2 192.168.56.151
ping -c 2 192.168.56.152
ping -c 2 192.168.56.161
ping -c 2 192.168.56.162
ping -c 2 10.10.10.11
ping -c 2 10.10.10.12
ping -c 2 192.168.56.170
```

[root@rac1 ~]# chmod 744 ping_host.sh
[root@rac1 ~]# ./ping_host.sh

4. 创建用户、组，创建安装目录

create_user.sh

```
groupadd -g 5000 asmadmin
groupadd -g 5001 asmdba
groupadd -g 5002 asmoper
groupadd -g 6000 oinstall
groupadd -g 6001 dba
groupadd -g 6002 oper
useradd -g oinstall -G asmadmin,asmdba,asmoper grid
useradd -g oinstall -G dba,asmdba oracle
```

[root@rac1 ~]# groupadd -g 5000 asmadmin
[root@rac1 ~]# groupadd -g 5001 asmdba
[root@rac1 ~]# groupadd -g 5002 asmoper
[root@rac1 ~]# groupadd -g 6000 oinstall
[root@rac1 ~]# groupadd -g 6001 dba
[root@rac1 ~]# groupadd -g 6002 oper
[root@rac1 ~]# useradd -g oinstall -G asmadmin,asmdba,asmoper grid
[root@rac1 ~]# useradd -g oinstall -G dba,asmdba oracle

口令都设置为：oracle
[root@rac1 ~]# passwd oracle
[root@rac1 ~]# passwd grid

创建目录：
[root@rac1 ~]# mkdir /oracle
[root@rac1 ~]# mkdir /grid

[root@rac1 ~]# chown oracle:oinstall /oracle
[root@rac1 ~]# chown grid:oinstall /grid

5. 检查 ntpd 服务

[root@rac1 ~]# service ntpd status
ntpd is stopped
[root@rac1 ~]# chkconfig ntpd off

6. Yum 安装 oracle-validated

[root@node1 ~]# mkdir /media/disk
[root@node1 ~]# mount /dev/cdrom /media/disk
mount: block device /dev/cdrom is write-protected, mounting read-only

[root@oel5 ~]# cd /etc/yum.repos.d/

[root@oel5 ~]# cp public-yum-el5.repo public-yum-el5.repo.bak

[root@node1 ~]# vi public-yum-el5.repo

```
[oel5]
name = Enterprise Linux 5.8 DVD
baseurl=file:///media/disk/Server/
gpgcheck=0
enabled=1
```

[root@rac1 ~]# yum install oracle-validated

7. 调整 grid 用户内核参数

[root@rac1 ~]# vi /etc/security/limits.conf

```
# Oracle-Validated setting for nofile soft limit is 131072
grid    soft    nofile    131072

# Oracle-Validated setting for nofile hard limit is 131072
```

```
grid    hard    nofile      131072

# Oracle-Validated setting for nproc soft limit is 131072
grid    soft    nproc       131072

# Oracle-Validated setting for nproc hard limit is 131072
grid    hard    nproc       131072

# Oracle-Validated setting for core soft limit is unlimited
grid    soft    core        unlimited

# Oracle-Validated setting for core hard limit is unlimited
grid    hard    core        unlimited

# Oracle-Validated setting for memlock soft limit is 50000000
grid    soft    memlock     50000000

# Oracle-Validated setting for memlock hard limit is 50000000
grid    hard    memlock     50000000
```

检查参数是否生效：

```
[root@rac1 ~]# su - oracle
[oracle@rac1 ~]$ ulimit -a

[root@rac1 ~]# su - grid
[grid@rac1 ~]$ ulimit -a
```

8. 关闭虚拟机

```
[root@node1 ~]# init 0
```

3. 克隆虚拟机：

1. 修改 rac2 主机 ip 地址

```
127.0.0.1 localhost
#node1
192.168.56.151    rac1        rac1.oracle.com
192.168.56.152    rac1-vip
```

```
#node2
192.168.56.161    rac2        rac2.oracle.com
192.168.56.162    rac2-vip

#scan
192.168.56.170    sky-cluster         sky-cluster-scan

#priv
10.10.10.11         rac1-priv
10.10.10.12         rac2-priv
```

2. 修改主机默认界面为字符界面

[root@node2 ~]# vi /etc/inittab
id:3:initdefault:

3. 重启主机验证信息

4. 配置共享存储：

1. 添加磁盘

2. 将磁盘修改为共享属性

3. 将共享磁盘挂载到 node2 主机

4. 使用 udev 绑定 scsi 设备

[root@rac1 ~]# ls -la /dev/sd*

```
brw-r----- 1 root disk 8,    0 Jan 16 21:35 /dev/sda
brw-r----- 1 root disk 8,    1 Jan 16 21:36 /dev/sda1
brw-r----- 1 root disk 8,    2 Jan 16 21:35 /dev/sda2
brw-r----- 1 root disk 8, 16 Jan 16 21:35 /dev/sdb
brw-r----- 1 root disk 8, 32 Jan 16 21:35 /dev/sdc
```

```
for i in b c;
do
    echo "KERNEL==\"sd*\", BUS==\"scsi\", PROGRAM==\"/sbin/scsi_id -g -u -s %p\", RESULT==\"`scsi_id -g -u -s /block/sd$i`\", NAME=\"asm-disk$i\", OWNER=\"grid\", GROUP=\"asmadmin\", MODE=\"0660\""
done
```

```
[root@rac1 ~]# for i in b c;
> do
> echo "KERNEL==\"sd*\", BUS==\"scsi\", PROGRAM==\"/sbin/scsi_id -g -u -s %p\", RESULT==\"`scsi_id -g -u -s /block/sd$i`\", NAME=\"asm-disk$i\", OWNER=\"grid\", GROUP=\"asmadmin\", MODE=\"0660\""
> done
KERNEL=="sd*", BUS=="scsi", PROGRAM=="/sbin/scsi_id -g -u -s %p", RESULT=="SATA_VBOX_HARDDISK_VBc83e048f-32af0e7f_", NAME="asm-diskb", OWNER="grid", GROUP="asmadmin", MODE="0660"
KERNEL=="sd*", BUS=="scsi", PROGRAM=="/sbin/scsi_id -g -u -s %p", RESULT=="SATA_VBOX_HARDDISK_VB53666ace-905881c3_", NAME="asm-diskc", OWNER="grid", GROUP="asmadmin", MODE="0660"
```

```
[root@rac1 ~]# cd /etc/udev/rules.d/
[root@rac1 rules.d]# vi 99-oracle-asmdevices.rules
KERNEL=="sd*", BUS=="scsi", PROGRAM=="/sbin/scsi_id -g -u -s %p", RESULT=="SATA_VBOX_HARDDISK_VBc83e048f-32af0e7f_", NAME="asm-diskb", OWNER="grid", GROUP="asmadmin", MODE="0660"
KERNEL=="sd*", BUS=="scsi", PROGRAM=="/sbin/scsi_id -g -u -s %p", RESULT=="SATA_VBOX_HARDDISK_VB53666ace-905881c3_", NAME="asm-diskc", OWNER="grid", GROUP="asmadmin", MODE="0660"
```

```
[root@rac1 rules.d]# start_udev
Starting udev: [  OK  ]
```

```
[root@rac1 rules.d]# ls -la /dev/asm*
brw-rw---- 1 grid asmadmin 8, 16 Jan 17 02:15 /dev/asm-diskb
brw-rw---- 1 grid asmadmin 8, 32 Jan 17 02:15 /dev/asm-diskc
```

单个磁盘分区进行 udev 绑定

```
[root@rac11g1 rules.d]# vi 99-oracle-asmdevices.rules
KERNEL=="sd?1", BUS=="scsi", PROGRAM=="/sbin/scsi_id -g -u -s /block/$parent", RESULT=="SATA_VBOX_HARDDISK_VBe7efc895-388c9867_", NAME="ASM-OCR", OWNER="grid", GROUP="asmadmin", MODE="0660"
KERNEL=="sd?2", BUS=="scsi", PROGRAM=="/sbin/scsi_id -g -u -s /block/$parent",
```

```
RESULT=="SATA_VBOX_HARDDISK_VBe7efc895-388c9867_", NAME="ASM-DATA", OWNER="grid", GROUP="asmadmin", MODE="0660"
KERNEL=="sd?3", BUS=="scsi", PROGRAM=="/sbin/scsi_id -g -u -s /block/$parent", RESULT=="SATA_VBOX_HARDDISK_VBe7efc895-388c9867_", NAME="ASM-FRA", OWNER="grid", GROUP="asmadmin", MODE="0660"
```

5. 将设备绑定文件复制到 rac2 主机，绑定设备

```
[root@rac1 ~]# cd /etc/udev/rules.d/
[root@rac1 rules.d]# scp 99-oracle-asmdevices.rules rac2:/etc/udev/rules.d/

[root@rac2 ~]# start_udev
Starting udev: [  OK  ]

[root@rac2 ~]# ls -la /dev/asm*
brw-rw---- 1 grid asmadmin 8, 16 Jan 16 21:46 /dev/asm-diskb
brw-rw---- 1 grid asmadmin 8, 32 Jan 16 21:46 /dev/asm-diskc
```

5. Grid Infrastructure 安装(使用 grid 用户)：

1. 上传、解压安装介质

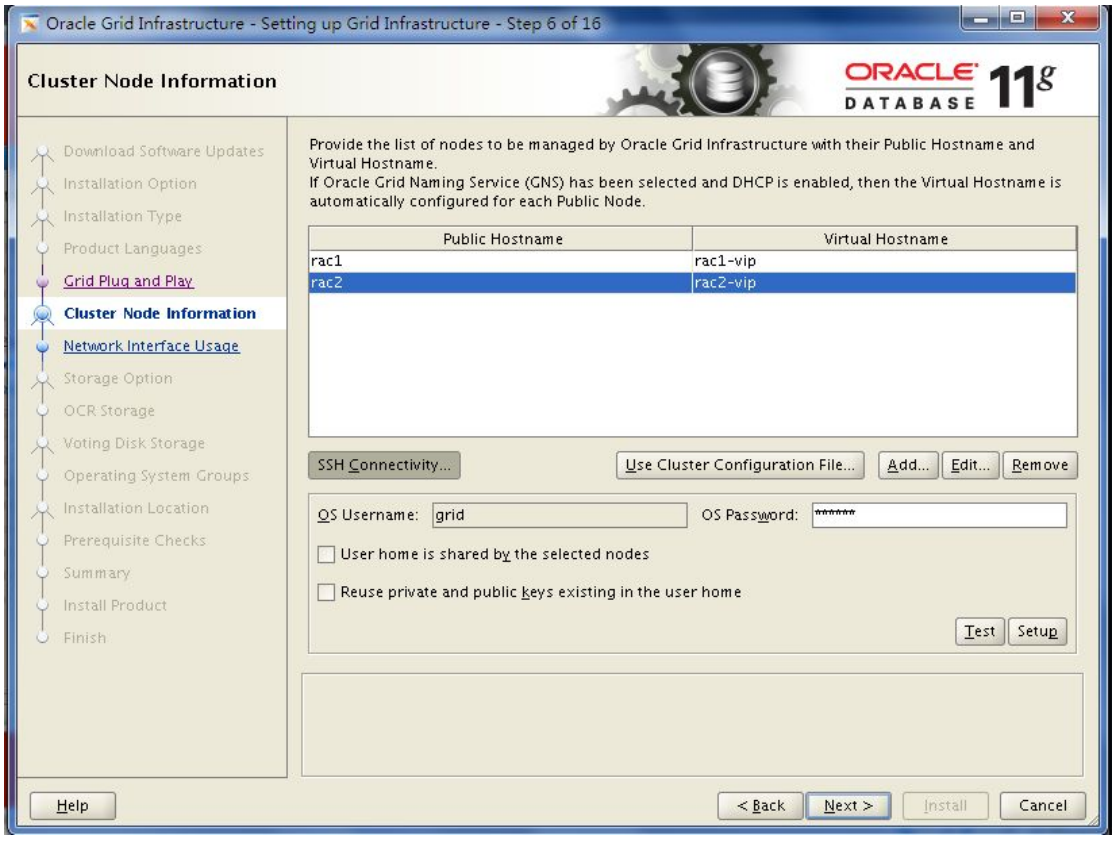
```
sftp> lcd F:\VirtualBox\11.2.0.3
sftp> put *.zip
Uploading p10404530_112030_Linux-x86-64_1of7.zip to /root/p10404530_112030_Linux-x86-64_1of7.zip
  100% 1326615KB  7537KB/s 00:02:56
F:/VirtualBox/11.2.0.3/p10404530_112030_Linux-x86-64_1of7.zip: 1358454646 bytes transferred in 176 seconds (7537 KB/s)
Uploading p10404530_112030_Linux-x86-64_2of7.zip to /root/p10404530_112030_Linux-x86-64_2of7.zip
  100% 1115425KB  6679KB/s 00:02:47
F:/VirtualBox/11.2.0.3/p10404530_112030_Linux-x86-64_2of7.zip: 1142195302 bytes transferred in 167 seconds (6679 KB/s)
Uploading p10404530_112030_Linux-x86-64_3of7.zip to /root/p10404530_112030_Linux-x86-64_3of7.zip
  100% 956245KB  5196KB/s 00:03:04
F:/VirtualBox/11.2.0.3/p10404530_112030_Linux-x86-64_3of7.zip: 979195792 bytes transferred
```

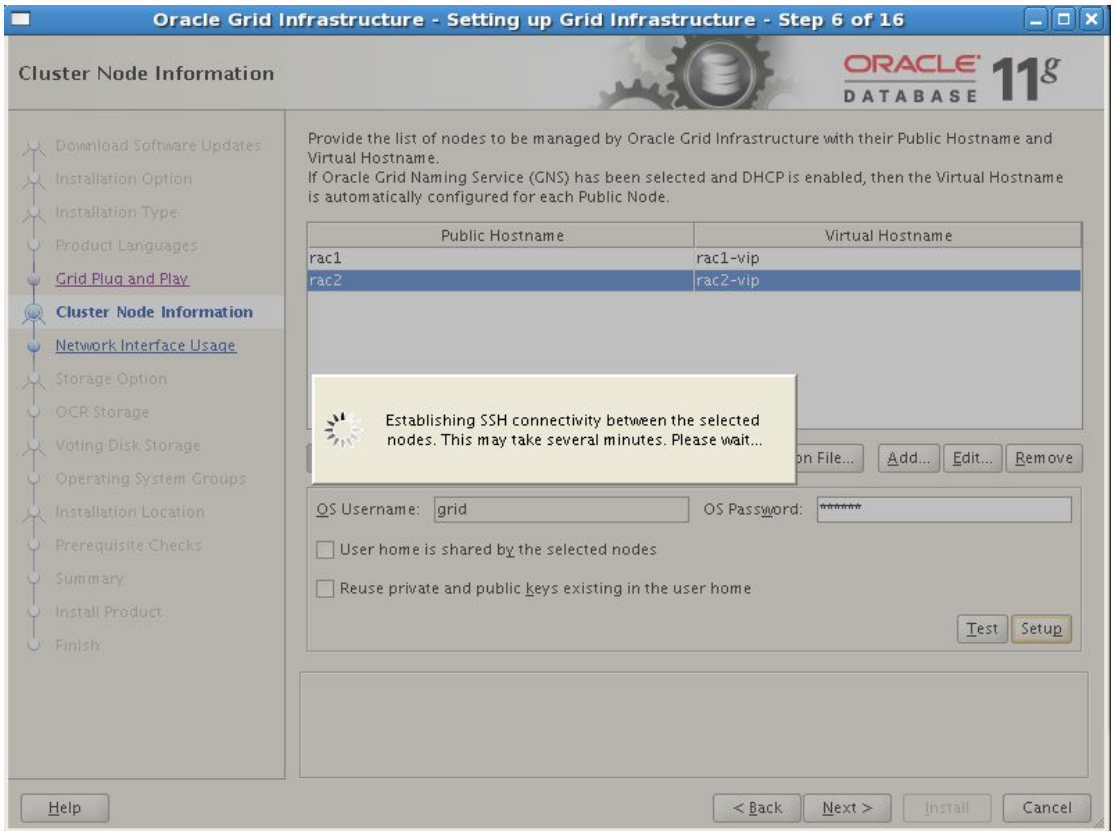
```
in 184 seconds (5196 KB/s)

[root@rac1 ~]# ls -l
total 3324736
-rw-r--r-- 1 root root 1358454646 Jan  2 08:29 p10404530_112030_Linux-x86-64_1of7.zip
-rw-r--r-- 1 root root 1142195302 Jan  2 08:28 p10404530_112030_Linux-x86-64_2of7.zip
-rw-r--r-- 1 root root  900464796 Jan 16 21:57 p10404530_112030_Linux-x86-64_3of7.zip

[root@rac1 ~]# mv p10404530_112030_Linux-x86-64_1of7.zip /home/oracle/
[root@rac1 ~]# mv p10404530_112030_Linux-x86-64_2of7.zip /home/oracle/

[root@rac1 ~]# mv p10404530_112030_Linux-x86-64_3of7.zip /home/grid/


[root@rac1 ~]# cd /home/grid/
[root@rac1 grid]# chown grid:oinstall p10404530_112030_Linux-x86-64_3of7.zip

[root@rac1 grid]# cd /home/oracle/
[root@rac1 oracle]# chown oracle:oinstall *.zip
[root@rac1 oracle]# ll
total 2444440
-rw-r--r-- 1 oracle oinstall 1358454646 Jan  2 08:29 p10404530_112030_Linux-x86-64_1of7.zip
-rw-r--r-- 1 oracle oinstall 1142195302 Jan  2 08:28 p10404530_112030_Linux-x86-64_2of7.zip

[root@rac1 oracle]# su - grid
[grid@rac1 ~]$ mkdir clusterware
[grid@rac1 ~]$ cd clusterware
[grid@rac1 clusterware]$ unzip ../p10404530_112030_Linux-x86-64_3of7.zip
```

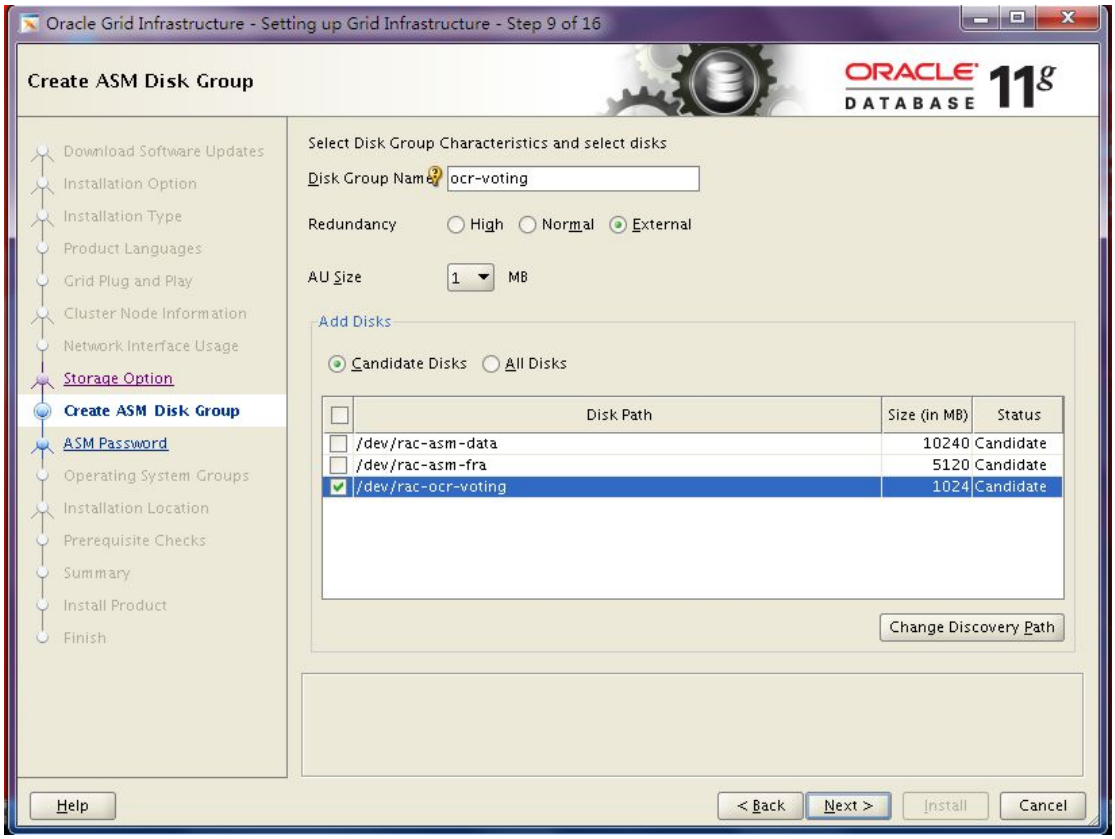
2. 开始安装 Grid Infrastructure(使用 grid 用户)

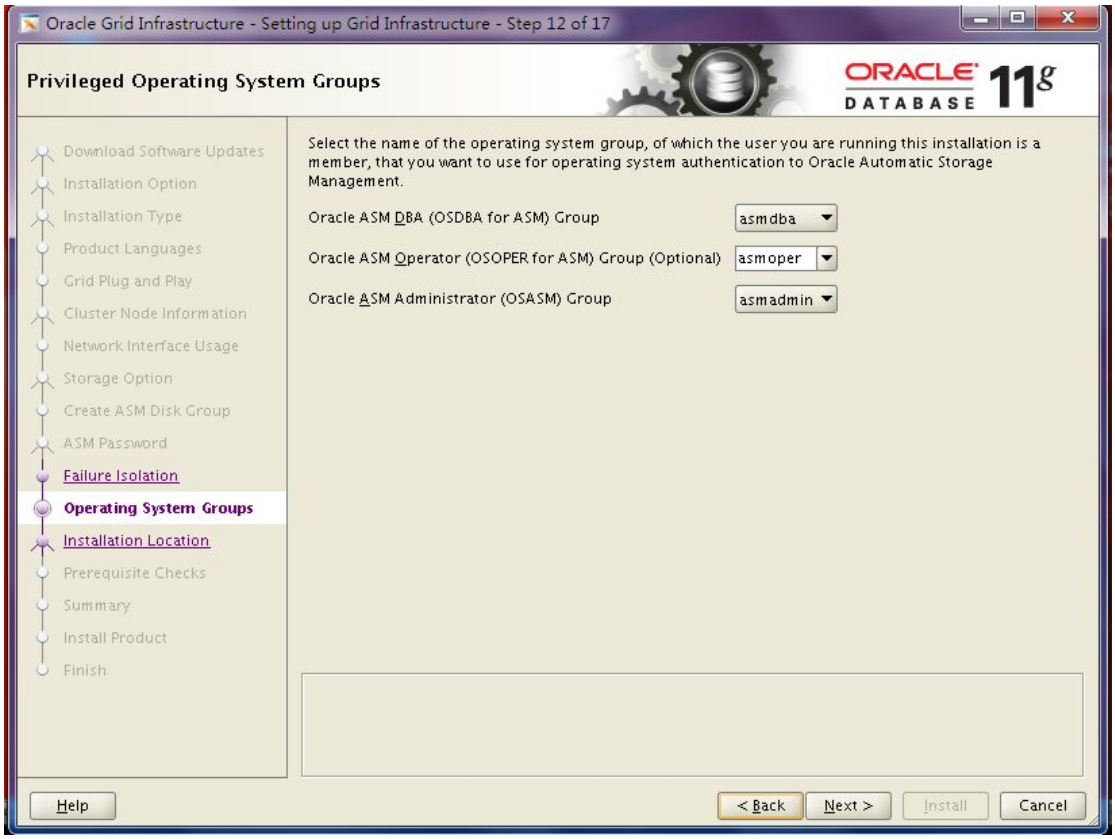
a. 使用 grid 用户执行安装程序

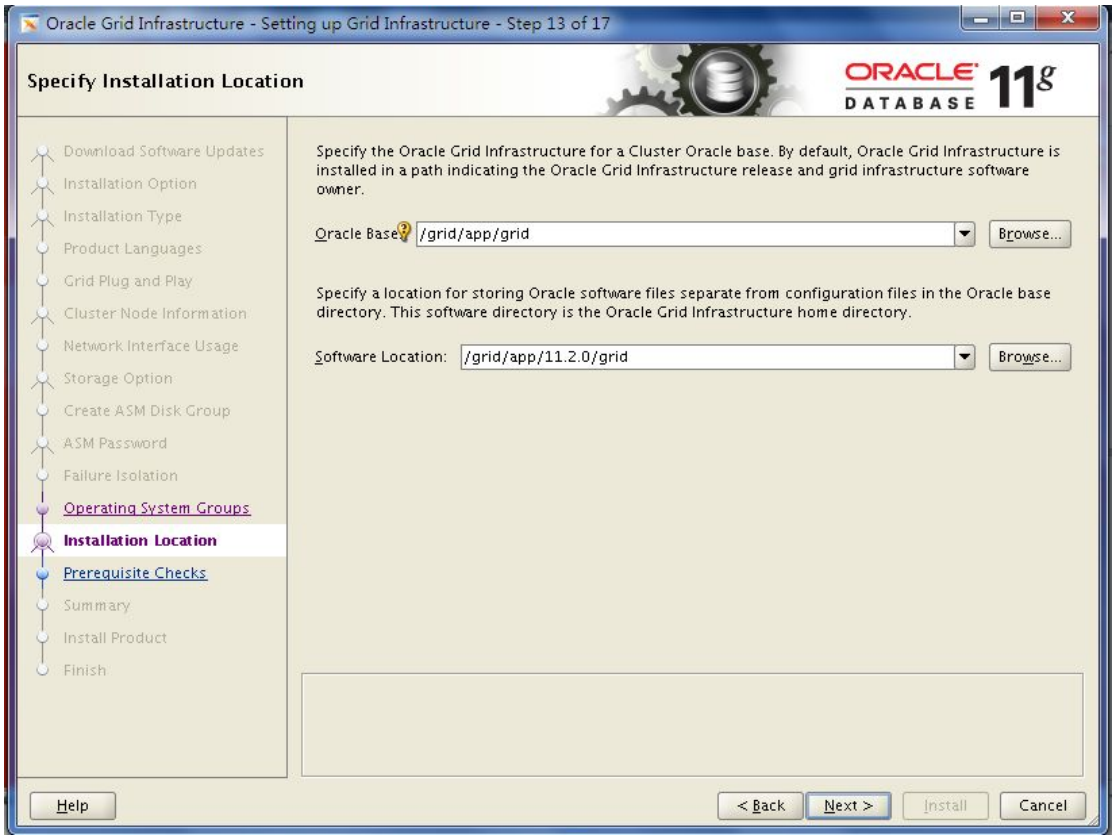
```
[root@rac1 ~]# su - grid
[grid@rac1 ~]$ cd clusterware/
[grid@rac1 clusterware]$ cd grid/
[grid@rac1 grid]$ ./runInstaller
```

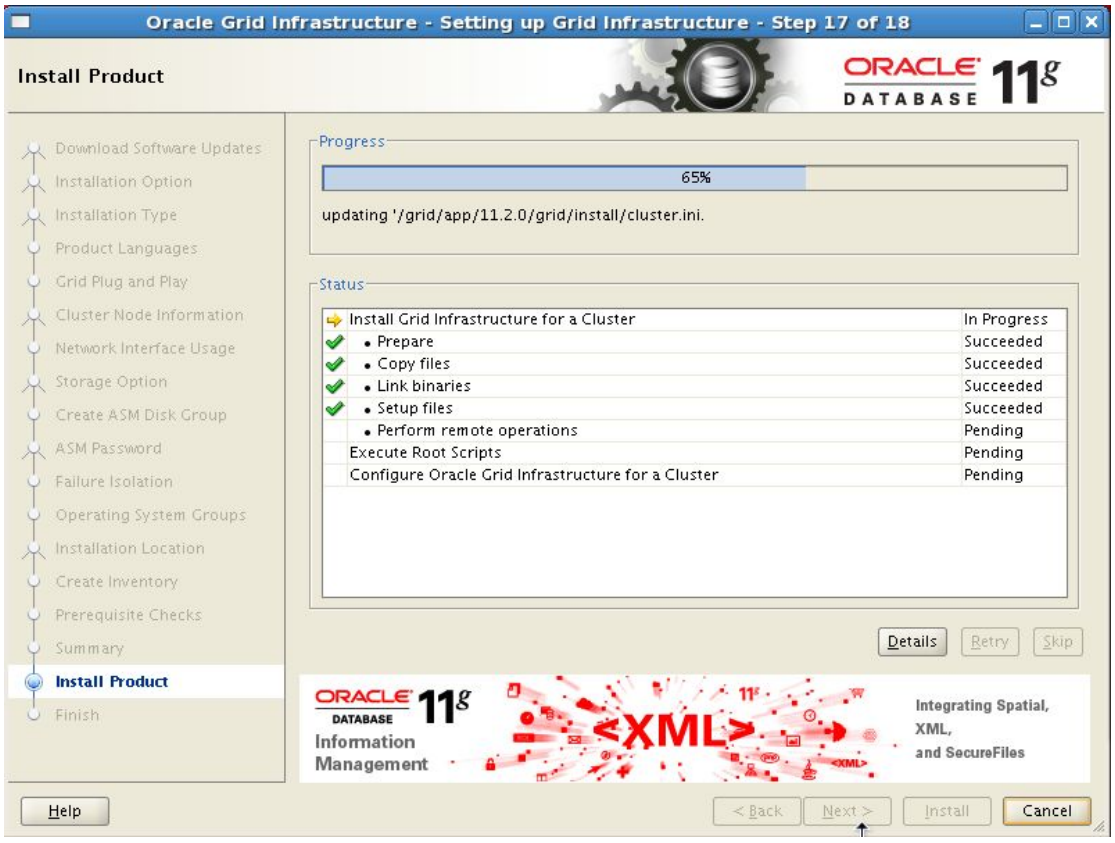

Oracle Grid Infrastructure - Setting up Grid Infrastructure - Step 6 of 16
Cluster Node Information
ORACLE 11g DATABASE
Download Software Updates
Installation Option
Installation Type
Product Languages
Grid Plug and Play
Cluster Node Information
Network Interface Usage
Storage Option
OCR Storage
Voting Disk Storage
Operating System Groups
Installation Location
Prerequisite Checks
Summary
Install Product
Finish
Provide the list of nodes to be managed by Oracle Grid Infrastructure with their Public Hostname and Virtual Hostname.
If Oracle Grid Naming Service (GNS) has been selected and DHCP is enabled, then the Virtual Hostname is automatically configured for each Public Node.
Public Hostname
Virtual Hostname
rac1
rac1-vip
rac2
rac2-vip
SSH Connectivity...
Use Cluster Configuration File...
Add...
Edit...
Remove
OS Username:
grid
OS Password:
User home is shared by the selected nodes
Reuse private and public keys existing in the user home
Test
Setup
Help
< Back
Next >
Install
Cancel


Oracle Grid Infrastructure - Setting up Grid Infrastructure - Step 6 of 16
Cluster Node Information
ORACLE 11g DATABASE
Download Software Updates
Installation Option
Installation Type
Product Languages
Grid Plug and Play
Cluster Node Information
Network Interface Usage
Storage Option
OCR Storage
Voting Disk Storage
Operating System Groups
Installation Location
Prerequisite Checks
Summary
Install Product
Finish
Provide the list of nodes to be managed by Oracle Grid Infrastructure with their Public Hostname and Virtual Hostname.
If Oracle Grid Naming Service (GNS) has been selected and DHCP is enabled, then the Virtual Hostname is automatically configured for each Public Node.
Public Hostname
Virtual Hostname
rac1
rac1-vip
rac2
rac2-vip
Establishing SSH connectivity between the selected nodes. This may take several minutes. Please wait...
Add...
Edit...
Remove
OS Username:
grid
OS Password:
User home is shared by the selected nodes
Reuse private and public keys existing in the user home
Test
Setup
Help
< Back
Next >
Install
Cancel

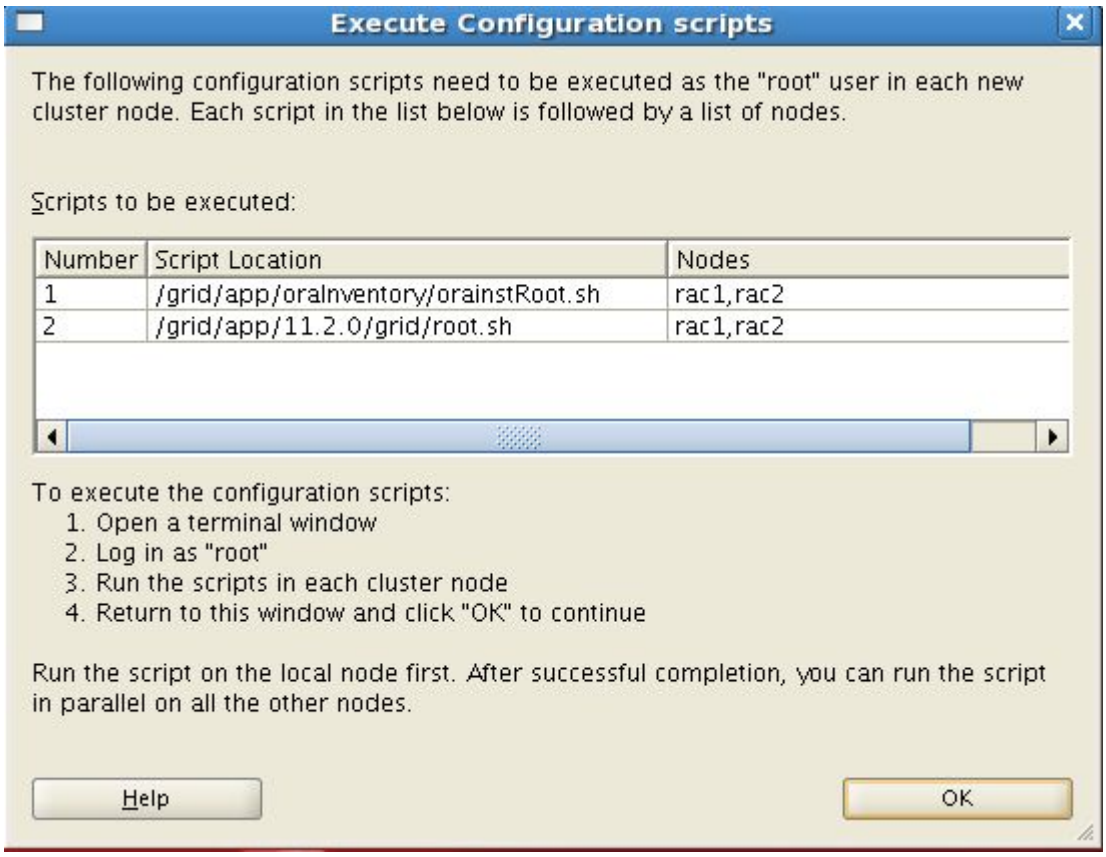

Oracle Grid Infrastructure - Setting up Grid Infrastructure - Step 9 of 16
Create ASM Disk Group
ORACLE 11g DATABASE
Download Software Updates
Installation Option
Installation Type
Product Languages
Grid Plug and Play
Cluster Node Information
Network Interface Usage
Storage Option
Create ASM Disk Group
ASM Password
Operating System Groups
Installation Location
Prerequisite Checks
Summary
Install Product
Finish
Select Disk Group Characteristics and select disks
Disk Group Name ocr-voting
Redundancy High Normal External
AU Size 1 MB
Add Disks
Candidate Disks All Disks
Disk Path
Size (in MB)
Status
/dev/rac-asm-data 10240 Candidate
/dev/rac-asm-fra 5120 Candidate
/dev/rac-ocr-voting 1024 Candidate
Change Discovery Path
Help
< Back
Next >
Install
Cancel


Oracle Grid Infrastructure - Setting up Grid Infrastructure - Step 12 of 17
Privileged Operating System Groups
ORACLE 11g DATABASE
Download Software Updates
Installation Option
Installation Type
Product Languages
Grid Plug and Play
Cluster Node Information
Network Interface Usage
Storage Option
Create ASM Disk Group
ASM Password
Failure Isolation
Operating System Groups
Installation Location
Prerequisite Checks
Summary
Install Product
Finish
Select the name of the operating system group, of which the user you are running this installation is a member, that you want to use for operating system authentication to Oracle Automatic Storage Management.
Oracle ASM DBA (OSDBA for ASM) Group asmdba
Oracle ASM Operator (OSOPER for ASM) Group (Optional) asmoper
Oracle ASM Administrator (OSASM) Group asmadmin
Help
< Back
Next >
Install
Cancel


Oracle Grid Infrastructure - Setting up Grid Infrastructure - Step 13 of 17
Specify Installation Location
ORACLE 11g DATABASE
Download Software Updates
Installation Option
Installation Type
Product Languages
Grid Plug and Play
Cluster Node Information
Network Interface Usage
Storage Option
Create ASM Disk Group
ASM Password
Failure Isolation
Operating System Groups
Installation Location
Prerequisite Checks
Summary
Install Product
Finish
Specify the Oracle Grid Infrastructure for a Cluster Oracle base. By default, Oracle Grid Infrastructure is installed in a path indicating the Oracle Grid Infrastructure release and grid infrastructure software owner.
Oracle Base: /grid/app/grid
Browse...
Specify a location for storing Oracle software files separate from configuration files in the Oracle base directory. This software directory is the Oracle Grid Infrastructure home directory.
Software Location: /grid/app/11.2.0/grid
Browse...
Help
< Back
Next >
Install
Cancel


Oracle Grid Infrastructure - Setting up Grid Infrastructure - Step 17 of 18
Install Product
ORACLE 11g DATABASE
Download Software Updates
Installation Option
Installation Type
Product Languages
Grid Plug and Play
Cluster Node Information
Network Interface Usage
Storage Option
Create ASM Disk Group
ASM Password
Failure Isolation
Operating System Groups
Installation Location
Create Inventory
Prerequisite Checks
Summary
Install Product
Finish
Progress
65%
updating '/grid/app/11.2.0/grid/install/cluster.ini.
Status
Install Grid Infrastructure for a Cluster In Progress
• Prepare Succeeded
• Copy files Succeeded
• Link binaries Succeeded
• Setup files Succeeded
• Perform remote operations Pending
Execute Root Scripts Pending
Configure Oracle Grid Infrastructure for a Cluster Pending
Details
Retry
Skip
ORACLE 11g DATABASE
Information Management
<XML>
Integrating Spatial, XML, and SecureFiles
Help
< Back
Next >
Install
Cancel

b. 使用 root 用户执行配置脚本(2 个节点执行)



[root@rac1 grid]# cd /grid/
[root@rac1 grid]# cd app/oraInventory/
[root@rac1 oraInventory]# ./orainstRoot.sh
Changing permissions of /grid/app/oraInventory.
Adding read,write permissions for group.
Removing read,write,execute permissions for world.

Changing groupname of /grid/app/oraInventory to oinstall.
The execution of the script is complete.

[root@rac1 oraInventory]# cd /grid
[root@rac1 grid]# cd app/11.2.0/grid/

[root@rac1 oracle]# /grid/app/11.2.0/grid/root.sh

Performing root user operation for Oracle 11g

The following environment variables are set as:

ORACLE_OWNER= grid

ORACLE_HOME= /grid/app/11.2.0/grid

Enter the full pathname of the local bin directory: [/usr/local/bin]:

Copying dbhome to /usr/local/bin ...

Copying oraenv to /usr/local/bin ...

Copying coraenv to /usr/local/bin ...

Creating /etc/oratab file...

Entries will be added to the /etc/oratab file as needed by

Database Configuration Assistant when a database is created

Finished running generic part of root script.

Now product-specific root actions will be performed.

Using configuration parameter file: /grid/app/11.2.0/grid/crs/install/crsconfig_params

Creating trace directory

User ignored Prerequisites during installation

OLR initialization - successful

root wallet

root wallet cert

root cert export

peer wallet

profile reader wallet

pa wallet

peer wallet keys

pa wallet keys

peer cert request

pa cert request

peer cert

pa cert

peer root cert TP

profile reader root cert TP

pa root cert TP

peer pa cert TP

pa peer cert TP

profile reader pa cert TP

profile reader peer cert TP

peer user cert

pa user cert

Adding Clusterware entries to inittab

CRS-2672: Attempting to start 'ora.mdnsd' on 'rac1'

CRS-2676: Start of 'ora.mdnsd' on 'rac1' succeeded

CRS-2672: Attempting to start 'ora.gpnpd' on 'rac1'

CRS-2676: Start of 'ora.gpnpd' on 'rac1' succeeded

CRS-2672: Attempting to start 'ora.cssdmonitor' on 'rac1'

CRS-2672: Attempting to start 'ora.gipcd' on 'rac1'

CRS-2676: Start of 'ora.cssdmonitor' on 'rac1' succeeded

CRS-2676: Start of 'ora.gipcd' on 'rac1' succeeded

CRS-2672: Attempting to start 'ora.cssd' on 'rac1'

CRS-2672: Attempting to start 'ora.diskmon' on 'rac1'

CRS-2676: Start of 'ora.diskmon' on 'rac1' succeeded

CRS-2676: Start of 'ora.cssd' on 'rac1' succeeded

ASM created and started successfully.

Disk Group ocr_voting created successfully.

clscfg: -install mode specified

Successfully accumulated necessary OCR keys.

Creating OCR keys for user 'root', privgrp 'root'..

Operation successful.

CRS-4256: Updating the profile

Successful addition of voting disk 5f19433243aa4f6bbf8246b2043a2105.

Successfully replaced voting disk group with +ocr_voting.

CRS-4256: Updating the profile

CRS-4266: Voting file(s) successfully replaced

STATE File Universal Id File Name Disk group

-- ----- ----------------- --------- ---------

1. ONLINE 5f19433243aa4f6bbf8246b2043a2105 (/dev/rac-ocr-voting) [OCR_VOTING]

Located 1 voting disk(s).

CRS-2672: Attempting to start 'ora.asm' on 'rac1'

CRS-2676: Start of 'ora.asm' on 'rac1' succeeded

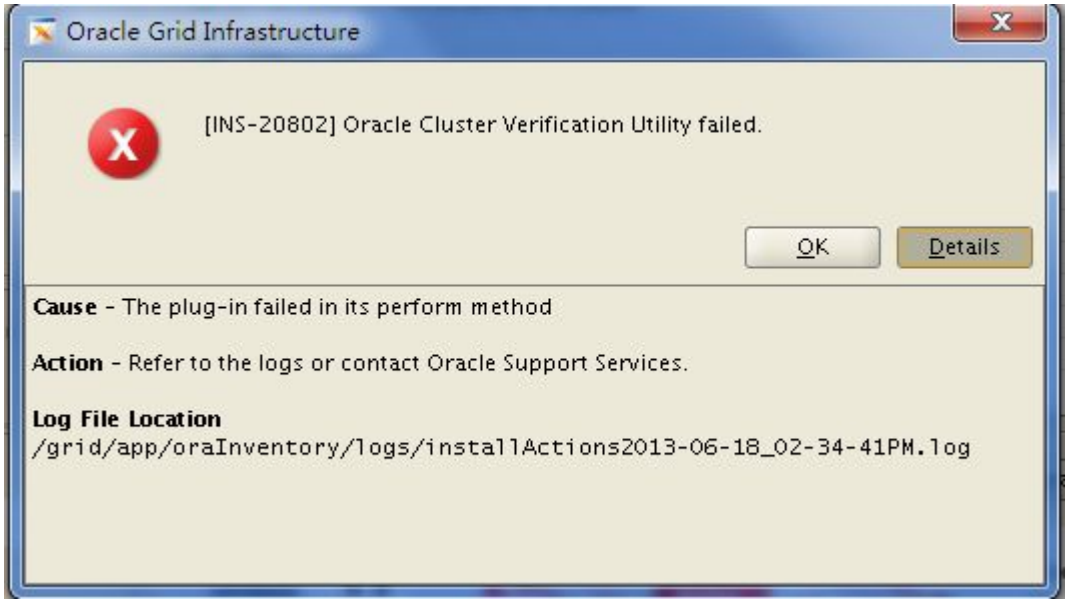
CRS-2672: Attempting to start 'ora.OCR_VOTING.dg' on 'rac1'

CRS-2676: Start of 'ora.OCR_VOTING.dg' on 'rac1' succeeded

Preparing packages for installation...

cvuqdisk-1.0.9-1

Configure Oracle Grid Infrastructure for a Cluster ... Succeeded



INFO: NTP Configuration file check started...

INFO: NTP Configuration file check passed

INFO: Checking daemon liveness...

INFO: Liveness check failed for "ntpd"

INFO: Check failed on nodes:

INFO: rac2,rac1

INFO: PRVF-5494 : The NTP Daemon or Service was not alive on all nodes

INFO: PRVF-5415 : Check to see if NTP daemon or service is running failed

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

INFO: PRVF-9652 : Cluster Time Synchronization Services check failed

INFO: Checking VIP configuration.

INFO: Checking VIP Subnet configuration.

INFO: Check for VIP Subnet configuration passed.

INFO: Checking VIP reachability

INFO: Check for VIP reachability passed.

INFO: Post-check for cluster services setup was unsuccessful on all the nodes.

INFO:

WARNING:

INFO: Completed Plugin named: Oracle Cluster Verification Utility

NTP 服务异常，该错误可以忽略。

c. 配置 grid 用户环境变量

[grid@rac1 ~]$ vi .bash_profile

```
CRS_HOME=/grid/app/11.2.0/grid
ORACLE_BASE=/grid
ORACLE_SID=+ASM1

PATH=$PATH:$HOME/bin:$CRS_HOME/bin

export PATH CRS_HOME ORACLE_BASE ORACLE_SID
```

[grid@rac1 ~]$ . .bash_profile

[grid@rac1 ~]$ scp .bash_profile rac2:~

d. 如何卸载 Grid Infrastructure

[grid@rac1 deinstall]$ cd $CRS_HOME/deinstall
[grid@rac1 deinstall]$ ./deinstall
Checking for required files and bootstrapping ...
Please wait ...

Location of logs /tmp/deinstall2013-01-17_01-38-32AM/logs/
############ ORACLE DEINSTALL & DECONFIG TOOL START ############

######################### CHECK OPERATION START #########################
[START] Install check configuration

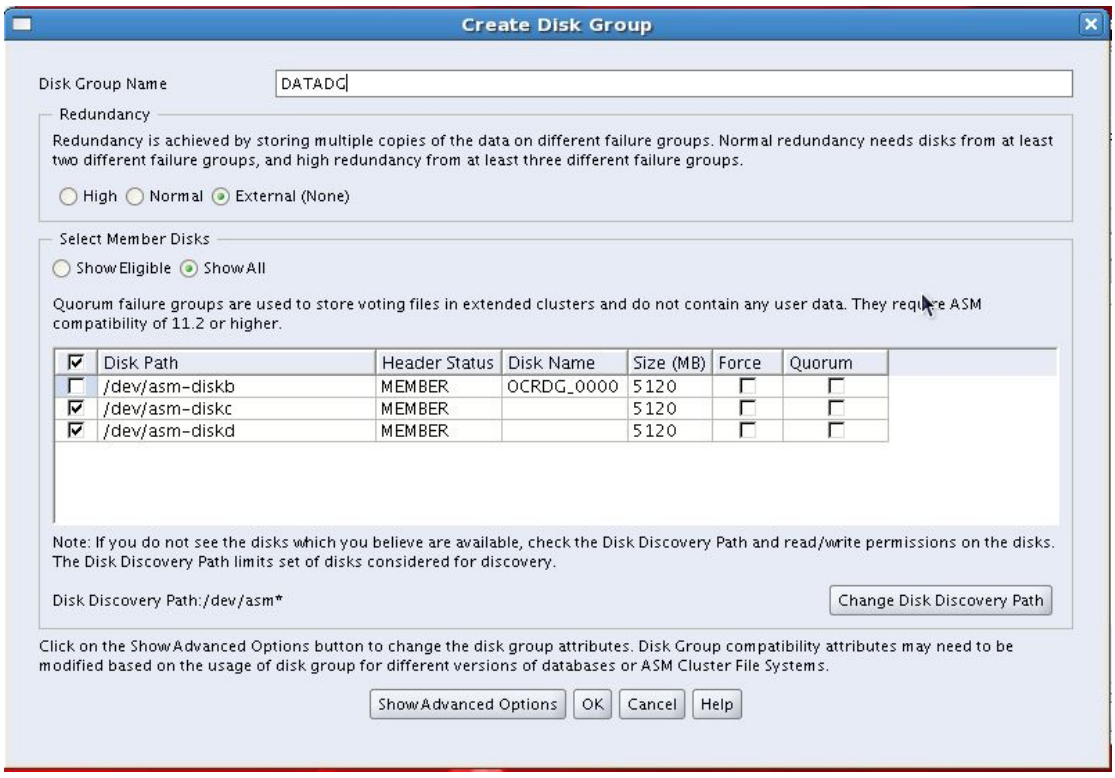
Run 'rm -rf /etc/oraInst.loc' as root on node(s) 'rac1,rac2' at the end of the session.

Run 'rm -rf /opt/ORCLfmap' as root on node(s) 'rac1,rac2' at the end of the session.

主要注意日志中的提示信息，手工在 2 个节点清理信息。

6. 配置 asm 磁盘组(使用 grid 用户)

[grid@rac1 ~]$ asmca



[grid@rac1 ~]$ asmcmd
ASMCMD> 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 10240 10145

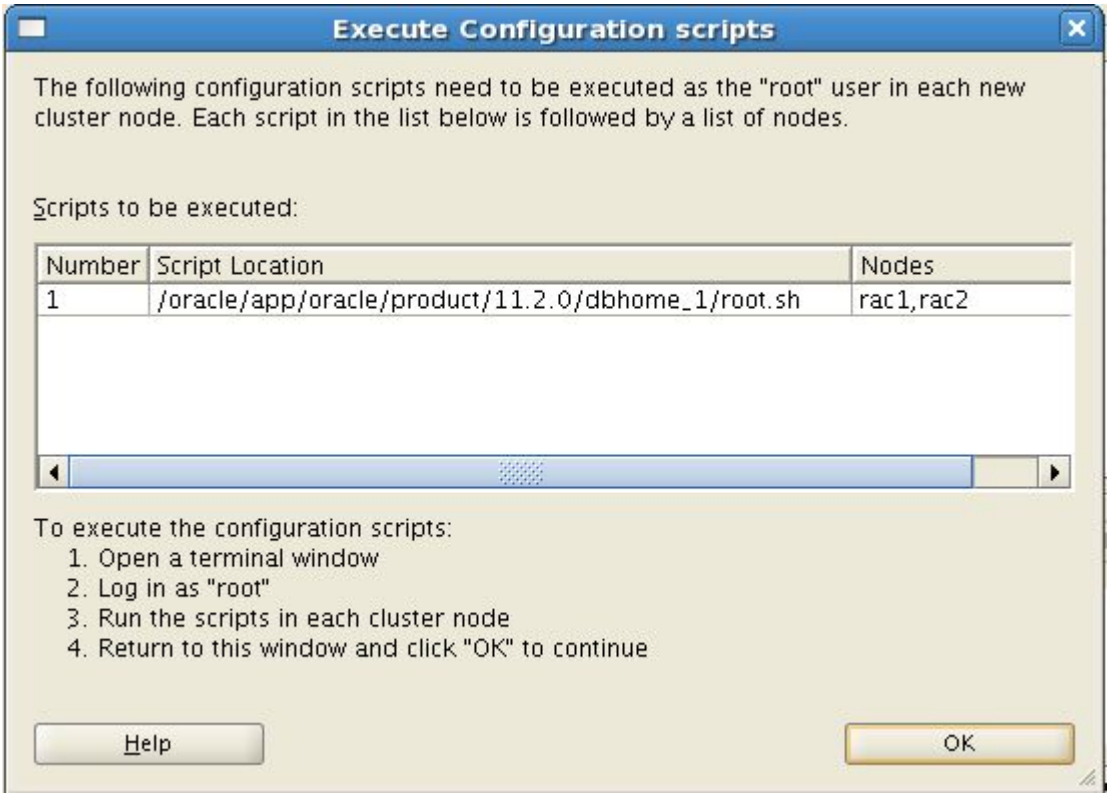
0 10145 0 N DATADG/
MOUNTED EXTERN N 512 4096 1048576 1024 628
0 628 0 Y OCRDG/

7. 安装数据库软件(使用 oracle 用户)

[root@rac1 ~]# su - oracle
[oracle@rac1 ~]$ ls
p10404530_112030_Linux-x86-64_1of7.zip p10404530_112030_Linux-x86-64_2of7.zip
[oracle@rac1 ~]$ mkdir database
[oracle@rac1 ~]$ cd database/

[oracle@rac1 database]$ unzip ../p10404530_112030_Linux-x86-64_1of7.zip
[oracle@rac1 database]$ unzip ../p10404530_112030_Linux-x86-64_2of7.zip

[oracle@rac1 database]$ cd database/
[oracle@rac1 database]$ ./runInstaller



[root@rac1 ~]# cd /oracle/app/oracle/product/11.2.0/dbhome_1/
[root@rac1 dbhome_1]# ./root.sh
Performing root user operation for Oracle 11g

The following environment variables are set as:
    ORACLE_OWNER= oracle
    ORACLE_HOME=   /oracle/app/oracle/product/11.2.0/dbhome_1

Enter the full pathname of the local bin directory: [/usr/local/bin]:
The contents of "dbhome" have not changed. No need to overwrite.
The contents of "oraenv" have not changed. No need to overwrite.
The contents of "coraenv" have not changed. No need to overwrite.

Entries will be added to the /etc/oratab file as needed by
Database Configuration Assistant when a database is created
Finished running generic part of root script.
Now product-specific root actions will be performed.
Finished product-specific root actions.

8. 修改环境变量，dbca 建库

```
[oracle@node1 ~]$ more .bash_profile

ORACLE_HOME=/oracle
ORACLE_HOME=/oracle/product/11.2.0/dbhome_1
ORACLE_SID=acct1

PATH=$PATH:$HOME/bin:$ORACLE_HOME/bin:/sbin

export ORACLE_BASE ORACLE_HOME ORACLE_SID PATH
```

```
[oracle@rac1 ~]$ scp .bash_profile    rac2:~
.bash_profile                                 100%   316         0.3KB/s      00:00
```

9. 日常维护命令

1. Asm 实例

[grid@rac1 ~]$ asmcmd
ASMCMD> ls
DATADG/

OCRDG/

```
[grid@rac1 ~]$ crsctl check crs
CRS-4638: Oracle High Availability Services is online
CRS-4537: Cluster Ready Services is online
CRS-4529: Cluster Synchronization Services is online
CRS-4533: Event Manager is online

[grid@rac1 ~]$ crsctl check cluster
CRS-4537: Cluster Ready Services is online
CRS-4529: Cluster Synchronization Services is online
CRS-4533: Event Manager is online

[grid@rac1 ~]$ crsctl check css
CRS-4529: Cluster Synchronization Services is online

[grid@rac1 ~]$ crsctl query crs activeversion
Oracle Clusterware active version on the cluster is [11.2.0.3.0]

[grid@rac1 ~]$ crsctl stat res -t
--------------------------------------------------------------------------------
NAME                           TARGET  STATE        SERVER
STATE_DETAILS
--------------------------------------------------------------------------------
Local Resources
--------------------------------------------------------------------------------
ora.DATADG.dg
               ONLINE  ONLINE       rac1
               ONLINE  ONLINE       rac2
ora.LISTENER.lsnr
               ONLINE  ONLINE       rac1
               ONLINE  ONLINE       rac2
ora.OCRDG.dg
               ONLINE  ONLINE       rac1
               ONLINE  ONLINE       rac2
ora.asm
               ONLINE  ONLINE       rac1                    Started
               ONLINE  ONLINE       rac2                    Started
ora.gsd
               OFFLINE OFFLINE      rac1
               OFFLINE OFFLINE      rac2
ora.net1.network
               ONLINE  ONLINE       rac1
               ONLINE  ONLINE       rac2
```

```
ora.ons
                      ONLINE    ONLINE          rac1
                      ONLINE    ONLINE          rac2
--------------------------------------------------------------------------------
Cluster Resources
--------------------------------------------------------------------------------
ora.LISTENER_SCAN1.lsnr
      1               ONLINE    ONLINE          rac1
ora.cvu
      1               ONLINE    ONLINE          rac1
ora.oc4j
      1               ONLINE    ONLINE          rac1
ora.rac1.vip
      1               ONLINE    ONLINE          rac1
ora.rac2.vip
      1               ONLINE    ONLINE          rac2
ora.scan1.vip
      1               ONLINE    ONLINE          rac1

[grid@rac1 ~]$ srvctl status scan
SCAN VIP scan1 is enabled
SCAN VIP scan1 is running on node rac1

[grid@rac1 ~]$ oifcfg getif
eth0    192.168.56.0    global    public
eth1    10.10.10.0    global    cluster_interconnect
[oracle@rac2 public]# oifcfg setif -global eth0/192.168.56.0:public
[oracle@rac2 public]# oifcfg setif -global eth1/10.10.10.0:cluster_interconnect
```