

使用 VBox 安装 Oracle Database 12c Flex Cluster for OEL 5.8

第 5 部分 总结

本系列为 [Lunar\(www.lunar2013.com\)](http://www.lunar2013.com) 原创，一共 5 篇，分别为：

[第 1 部分 环境介绍](#)

[第 2 部分 前期准备工作](#)

[第 3 部分 准备网络环境](#)

[第 4 部分 开始安装](#)

[第 5 部分 总结](#)

```
[root@lunar1 Disk1]# /u01/app/oraInventory/orainstRoot.sh
Changing permissions of /u01/app/oraInventory.
Adding read,write permissions for group.
Removing read,write,execute permissions for world.
```

```
Changing groupname of /u01/app/oraInventory to oinstall.
The execution of the script is complete.
[root@lunar1 Disk1]#
```

```
[root@lunar1 Disk1]# /u01/app/12.1.0/grid/root.sh
Performing root user operation for Oracle 12c
```

The following environment variables are set as:

```
ORACLE_OWNER= grid
ORACLE_HOME= /u01/app/12.1.0/grid
```

```
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.
```

```
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: /u01/app/12.1.0/grid/crs/install/crsconfig_params

2013/08/27 20:13:34 CLSRSC-363: 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

2013/08/27 20:14:34 CLSRSC-330: Adding Clusterware entries to file '/etc/inittab'

CRS-4133: Oracle High Availability Services has been stopped.
CRS-4123: Oracle High Availability Services has been started.
CRS-4133: Oracle High Availability Services has been stopped.
CRS-4123: Oracle High Availability Services has been started.
CRS-2673: Attempting to stop 'ora.drivers.acfs' on 'lunar1'
CRS-2677: Stop of 'ora.drivers.acfs' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.evmd' on 'lunar1'
CRS-2672: Attempting to start 'ora.mdnsd' on 'lunar1'
CRS-2676: Start of 'ora.evmd' on 'lunar1' succeeded
CRS-2676: Start of 'ora.mdnsd' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.gpnpd' on 'lunar1'
CRS-2676: Start of 'ora.gpnpd' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.cssdmonitor' on 'lunar1'
CRS-2672: Attempting to start 'ora.gipcd' on 'lunar1'
CRS-2676: Start of 'ora.cssdmonitor' on 'lunar1' succeeded
CRS-2676: Start of 'ora.gipcd' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.cssd' on 'lunar1'
CRS-2672: Attempting to start 'ora.diskmon' on 'lunar1'

CRS-2676: Start of 'ora.diskmon' on 'lunar1' succeeded

CRS-2676: Start of 'ora.cssd' on 'lunar1' succeeded

ASM created and started successfully.

Disk Group DATA_DG created successfully.

CRS-2672: Attempting to start 'ora.crf' on 'lunar1'

CRS-2672: Attempting to start 'ora.storage' on 'lunar1'

CRS-2676: Start of 'ora.storage' on 'lunar1' succeeded

CRS-2676: Start of 'ora.crf' on 'lunar1' succeeded

CRS-2672: Attempting to start 'ora.crsd' on 'lunar1'

CRS-2676: Start of 'ora.crsd' on 'lunar1' succeeded

CRS-4256: Updating the profile

Successful addition of voting disk 5459fa10c52d4f82bfc29edae6d2e65c.

Successfully replaced voting disk group with +DATA_DG.

CRS-4256: Updating the profile

CRS-4266: Voting file(s) successfully replaced

##	STATE	File Universal Id	File Name Disk group
1.	ONLINE	5459fa10c52d4f82bfc29edae6d2e65c (/dev/sdb) [DATA_DG]	

Located 1 voting disk(s).

CRS-2791: Starting shutdown of Oracle High Availability Services-managed resources on 'lunar1'

CRS-2673: Attempting to stop 'ora.crsd' on 'lunar1'

CRS-2677: Stop of 'ora.crsd' on 'lunar1' succeeded

CRS-2673: Attempting to stop 'ora.storage' on 'lunar1'

CRS-2673: Attempting to stop 'ora.mdnsd' on 'lunar1'

CRS-2673: Attempting to stop 'ora.gpnpd' on 'lunar1'

CRS-2673: Attempting to stop 'ora.crf' on 'lunar1'

CRS-2673: Attempting to stop 'ora.drivers.acfs' on 'lunar1'

CRS-2677: Stop of 'ora.storage' on 'lunar1' succeeded

CRS-2673: Attempting to stop 'ora.ctssd' on 'lunar1'

CRS-2673: Attempting to stop 'ora.evmd' on 'lunar1'

CRS-2673: Attempting to stop 'ora.asm' on 'lunar1'

CRS-2677: Stop of 'ora.drivers.acfs' on 'lunar1' succeeded

CRS-2677: Stop of 'ora.crf' on 'lunar1' succeeded

CRS-2677: Stop of 'ora.gpnpd' on 'lunar1' succeeded

CRS-2677: Stop of 'ora.evmd' on 'lunar1' succeeded

CRS-2677: Stop of 'ora.mdnsd' on 'lunar1' succeeded

CRS-2677: Stop of 'ora.ctssd' on 'lunar1' succeeded

CRS-2677: Stop of 'ora.asm' on 'lunar1' succeeded

CRS-2673: Attempting to stop 'ora.cluster_interconnect.haip' on 'lunar1'

CRS-2677: Stop of 'ora.cluster_interconnect.haip' on 'lunar1' succeeded

CRS-2673: Attempting to stop 'ora.cssd' on 'lunar1'

CRS-2677: Stop of 'ora.cssd' on 'lunar1' succeeded

CRS-2673: Attempting to stop 'ora.gipcd' on 'lunar1'
CRS-2677: Stop of 'ora.gipcd' on 'lunar1' succeeded
CRS-2793: Shutdown of Oracle High Availability Services-managed resources on 'lunar1' has completed
CRS-4133: Oracle High Availability Services has been stopped.
CRS-4123: Starting Oracle High Availability Services-managed resources
CRS-2672: Attempting to start 'ora.mdnsd' on 'lunar1'
CRS-2672: Attempting to start 'ora.evmd' on 'lunar1'
CRS-2676: Start of 'ora.evmd' on 'lunar1' succeeded
CRS-2676: Start of 'ora.mdnsd' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.gpnpd' on 'lunar1'
CRS-2676: Start of 'ora.gpnpd' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.gipcd' on 'lunar1'
CRS-2676: Start of 'ora.gipcd' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.cssdmonitor' on 'lunar1'
CRS-2676: Start of 'ora.cssdmonitor' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.cssd' on 'lunar1'
CRS-2672: Attempting to start 'ora.diskmon' on 'lunar1'
CRS-2676: Start of 'ora.diskmon' on 'lunar1' succeeded
CRS-2789: Cannot stop resource 'ora.diskmon' as it is not running on server 'lunar1'
CRS-2676: Start of 'ora.cssd' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.cluster_interconnect.haip' on 'lunar1'
CRS-2672: Attempting to start 'ora.ctssd' on 'lunar1'
CRS-2676: Start of 'ora.ctssd' on 'lunar1' succeeded
CRS-2676: Start of 'ora.cluster_interconnect.haip' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.asm' on 'lunar1'
CRS-2676: Start of 'ora.asm' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.storage' on 'lunar1'
CRS-2676: Start of 'ora.storage' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.crf' on 'lunar1'
CRS-2676: Start of 'ora.crf' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.crsd' on 'lunar1'
CRS-2676: Start of 'ora.crsd' on 'lunar1' succeeded
CRS-6023: Starting Oracle Cluster Ready Services-managed resources
CRS-6017: Processing resource auto-start for servers: lunar1
CRS-6016: Resource auto-start has completed for server lunar1
CRS-6024: Completed start of Oracle Cluster Ready Services-managed resources
CRS-4123: Oracle High Availability Services has been started.
2013/08/27 20:25:10 CLSRSC-343: Successfully started Oracle clusterware stack

/proc/net/ipv6_route: No such file or directory
/proc/net/ipv6_route: No such file or directory
CRS-2672: Attempting to start 'ora.net1.network' on 'lunar1'
CRS-2676: Start of 'ora.net1.network' on 'lunar1' succeeded

CRS-2672: Attempting to start 'ora.gns.vip' on 'lunar1'
CRS-2676: Start of 'ora.gns.vip' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.gns' on 'lunar1'
CRS-2676: Start of 'ora.gns' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.ASMNET1LSNR_ASM.lsnr' on 'lunar1'
CRS-2676: Start of 'ora.ASMNET1LSNR_ASM.lsnr' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.asm' on 'lunar1'
CRS-2676: Start of 'ora.asm' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.DATA_DG.dg' on 'lunar1'
CRS-2676: Start of 'ora.DATA_DG.dg' on 'lunar1' succeeded
CRS-2791: Starting shutdown of Oracle High Availability Services-managed resources on 'lunar1'
CRS-2673: Attempting to stop 'ora.crsd' on 'lunar1'
CRS-2790: Starting shutdown of Cluster Ready Services-managed resources on 'lunar1'
CRS-2673: Attempting to stop 'ora.DATA_DG.dg' on 'lunar1'
CRS-2673: Attempting to stop 'ora.LISTENER_SCAN1.lsnr' on 'lunar1'
CRS-2673: Attempting to stop 'ora.cvu' on 'lunar1'
CRS-2673: Attempting to stop 'ora.oc4j' on 'lunar1'
CRS-2673: Attempting to stop 'ora.LISTENER_SCAN3.lsnr' on 'lunar1'
CRS-2673: Attempting to stop 'ora.gns' on 'lunar1'
CRS-2673: Attempting to stop 'ora.lunar1.vip' on 'lunar1'
CRS-2673: Attempting to stop 'ora.LISTENER_SCAN2.lsnr' on 'lunar1'
CRS-2677: Stop of 'ora.lunar1.vip' on 'lunar1' succeeded
CRS-2677: Stop of 'ora.LISTENER_SCAN3.lsnr' on 'lunar1' succeeded
CRS-2673: Attempting to stop 'ora.scan3.vip' on 'lunar1'
CRS-2677: Stop of 'ora.LISTENER_SCAN1.lsnr' on 'lunar1' succeeded
CRS-2673: Attempting to stop 'ora.scan1.vip' on 'lunar1'
CRS-2677: Stop of 'ora.LISTENER_SCAN2.lsnr' on 'lunar1' succeeded
CRS-2673: Attempting to stop 'ora.scan2.vip' on 'lunar1'
CRS-2677: Stop of 'ora.scan3.vip' on 'lunar1' succeeded
CRS-2677: Stop of 'ora.scan1.vip' on 'lunar1' succeeded
CRS-2677: Stop of 'ora.scan2.vip' on 'lunar1' succeeded
CRS-2677: Stop of 'ora.DATA_DG.dg' on 'lunar1' succeeded
CRS-2673: Attempting to stop 'ora.asm' on 'lunar1'
CRS-2677: Stop of 'ora.gns' on 'lunar1' succeeded
CRS-2673: Attempting to stop 'ora.gns.vip' on 'lunar1'
CRS-2677: Stop of 'ora.asm' on 'lunar1' succeeded
CRS-2673: Attempting to stop 'ora.ASMNET1LSNR_ASM.lsnr' on 'lunar1'
CRS-2677: Stop of 'ora.gns.vip' on 'lunar1' succeeded
CRS-2677: Stop of 'ora.ASMNET1LSNR_ASM.lsnr' on 'lunar1' succeeded
CRS-2677: Stop of 'ora.oc4j' on 'lunar1' succeeded
CRS-2677: Stop of 'ora.cvu' on 'lunar1' succeeded
CRS-2673: Attempting to stop 'ora.ons' on 'lunar1'
CRS-2677: Stop of 'ora.ons' on 'lunar1' succeeded
CRS-2673: Attempting to stop 'ora.net1.network' on 'lunar1'

CRS-2677: Stop of 'ora.net1.network' on 'lunar1' succeeded
CRS-2792: Shutdown of Cluster Ready Services-managed resources on 'lunar1' has completed
CRS-2677: Stop of 'ora.crsd' on 'lunar1' succeeded
CRS-2673: Attempting to stop 'ora.crf' on 'lunar1'
CRS-2673: Attempting to stop 'ora.evmd' on 'lunar1'
CRS-2673: Attempting to stop 'ora.drivers.acfs' on 'lunar1'
CRS-2673: Attempting to stop 'ora.ctssd' on 'lunar1'
CRS-2673: Attempting to stop 'ora.mdnsd' on 'lunar1'
CRS-2673: Attempting to stop 'ora.gpnpd' on 'lunar1'
CRS-2677: Stop of 'ora.drivers.acfs' on 'lunar1' succeeded
CRS-2677: Stop of 'ora.crf' on 'lunar1' succeeded
CRS-2677: Stop of 'ora.evmd' on 'lunar1' succeeded
CRS-2677: Stop of 'ora.gpnpd' on 'lunar1' succeeded
CRS-2677: Stop of 'ora.mdnsd' on 'lunar1' succeeded
CRS-2677: Stop of 'ora.ctssd' on 'lunar1' succeeded
CRS-2673: Attempting to stop 'ora.storage' on 'lunar1'
CRS-2677: Stop of 'ora.storage' on 'lunar1' succeeded
CRS-2673: Attempting to stop 'ora.asm' on 'lunar1'
CRS-2677: Stop of 'ora.asm' on 'lunar1' succeeded
CRS-2673: Attempting to stop 'ora.cluster_interconnect.haip' on 'lunar1'
CRS-2677: Stop of 'ora.cluster_interconnect.haip' on 'lunar1' succeeded
CRS-2673: Attempting to stop 'ora.cssd' on 'lunar1'
CRS-2677: Stop of 'ora.cssd' on 'lunar1' succeeded
CRS-2673: Attempting to stop 'ora.gipcd' on 'lunar1'
CRS-2677: Stop of 'ora.gipcd' on 'lunar1' succeeded
CRS-2793: Shutdown of Oracle High Availability Services-managed resources on 'lunar1' has completed
CRS-4133: Oracle High Availability Services has been stopped.

此时看安装日志:

```
Aug 27 20:20:18 lunar1 logger: exec /u01/app/12.1.0/grid/perl/bin/perl
-I/u01/app/12.1.0/grid/perl/lib /u01/app/12.1.0/grid/bin/crswrapexece.pl
/u01/app/12.1.0/grid/crs/install/s_crsconfig_lunar1_env.txt
/u01/app/12.1.0/grid/bin/ohasd.bin "reboot
_ORA_BLOCKING_STACK_LOCALE=AMERICAN_AMERICA.AL32UTF8"
Aug 27 20:27:04 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth0
Aug 27 20:27:05 lunar1 dhcpd: DHCPOFFER on 192.168.14.254 to 00:00:00:00:00:00 via eth0
Aug 27 20:27:10 lunar1 dhcpd: Wrote 1 leases to leases file.
Aug 27 20:27:10 lunar1 dhcpd: DHCPREQUEST for 192.168.14.254 (192.168.14.11) from
00:00:00:00:00:00 via eth0
Aug 27 20:27:10 lunar1 dhcpd: DHCPACK on 192.168.14.254 to 00:00:00:00:00:00 via eth0
Aug 27 20:27:10 lunar1 dhcpd: DHCPREQUEST for 192.168.14.254 (192.168.14.11) from
00:00:00:00:00:00 via eth2
Aug 27 20:27:10 lunar1 dhcpd: DHCPACK on 192.168.14.254 to 00:00:00:00:00:00 via eth2
```

Aug 27 20:27:20 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth0
Aug 27 20:27:21 lunar1 dhcpd: DHCPOFFER on 192.168.14.253 to 00:00:00:00:00:00 via eth0
Aug 27 20:27:26 lunar1 dhcpd: DHCPREQUEST for 192.168.14.253 (192.168.14.11) from 00:00:00:00:00:00 via eth0
Aug 27 20:27:26 lunar1 dhcpd: DHCPACK on 192.168.14.253 to 00:00:00:00:00:00 via eth0
Aug 27 20:27:26 lunar1 dhcpd: DHCPREQUEST for 192.168.14.253 (192.168.14.11) from 00:00:00:00:00:00 via eth2
Aug 27 20:27:26 lunar1 dhcpd: DHCPACK on 192.168.14.253 to 00:00:00:00:00:00 via eth2
Aug 27 20:27:27 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth0
Aug 27 20:27:28 lunar1 dhcpd: DHCPOFFER on 192.168.14.252 to 00:00:00:00:00:00 via eth0
Aug 27 20:27:33 lunar1 dhcpd: DHCPREQUEST for 192.168.14.252 (192.168.14.11) from 00:00:00:00:00:00 via eth0
Aug 27 20:27:33 lunar1 dhcpd: DHCPACK on 192.168.14.252 to 00:00:00:00:00:00 via eth0
Aug 27 20:27:33 lunar1 dhcpd: DHCPREQUEST for 192.168.14.252 (192.168.14.11) from 00:00:00:00:00:00 via eth2
Aug 27 20:27:33 lunar1 dhcpd: DHCPACK on 192.168.14.252 to 00:00:00:00:00:00 via eth2
Aug 27 20:27:34 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth0
Aug 27 20:27:35 lunar1 dhcpd: DHCPOFFER on 192.168.14.251 to 00:00:00:00:00:00 via eth0
Aug 27 20:27:40 lunar1 dhcpd: DHCPREQUEST for 192.168.14.251 (192.168.14.11) from 00:00:00:00:00:00 via eth0
Aug 27 20:27:40 lunar1 dhcpd: DHCPACK on 192.168.14.251 to 00:00:00:00:00:00 via eth0
Aug 27 20:27:40 lunar1 dhcpd: DHCPREQUEST for 192.168.14.251 (192.168.14.11) from 00:00:00:00:00:00 via eth2
Aug 27 20:27:40 lunar1 dhcpd: DHCPACK on 192.168.14.251 to 00:00:00:00:00:00 via eth2

Aug 27 20:36:28 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth2
Aug 27 20:36:28 lunar1 dhcpd: DHCPOFFER on 192.168.14.251 to 00:00:00:00:00:00 via eth2
Aug 27 20:36:29 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth0
Aug 27 20:36:29 lunar1 dhcpd: Abandoning IP address 192.168.14.253: pinged before offer
Aug 27 20:36:34 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth2
Aug 27 20:36:34 lunar1 dhcpd: Abandoning IP address 192.168.14.252: pinged before offer
Aug 27 20:36:39 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth0
Aug 27 20:36:39 lunar1 dhcpd: Abandoning IP address 192.168.14.254: pinged before offer
Aug 27 20:36:44 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth0
Aug 27 20:36:44 lunar1 dhcpd: DHCPOFFER on 192.168.14.251 to 00:00:00:00:00:00 via eth0
Aug 27 20:36:44 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth2
Aug 27 20:36:44 lunar1 dhcpd: DHCPOFFER on 192.168.14.251 to 00:00:00:00:00:00 via eth2
Aug 27 20:36:50 lunar1 dhcpd: DHCPREQUEST for 192.168.14.251 (192.168.14.11) from 00:00:00:00:00:00 via eth0
Aug 27 20:36:50 lunar1 dhcpd: DHCPACK on 192.168.14.251 to 00:00:00:00:00:00 via eth0
Aug 27 20:36:50 lunar1 dhcpd: DHCPREQUEST for 192.168.14.251 (192.168.14.11) from 00:00:00:00:00:00 via eth2
Aug 27 20:36:50 lunar1 dhcpd: DHCPACK on 192.168.14.251 to 00:00:00:00:00:00 via eth2
Aug 27 20:36:50 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth2

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Aug 27 20:36:51 lunar1 dhcpd: DHCPOFFER on 192.168.14.250 to 00:00:00:00:00:00 via eth2
Aug 27 20:36:51 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth2
Aug 27 20:36:51 lunar1 dhcpd: DHCPOFFER on 192.168.14.250 to 00:00:00:00:00:00 via eth2
Aug 27 20:36:51 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth0
Aug 27 20:36:51 lunar1 dhcpd: DHCPOFFER on 192.168.14.250 to 00:00:00:00:00:00 via eth0
Aug 27 20:36:56 lunar1 dhcpd: DHCPREQUEST for 192.168.14.250 (192.168.14.101) from
00:00:00:00:00:00 via eth0
Aug 27 20:36:56 lunar1 dhcpd: DHCPACK on 192.168.14.250 to 00:00:00:00:00:00 via eth0
Aug 27 20:36:56 lunar1 dhcpd: DHCPREQUEST for 192.168.14.250 (192.168.14.101) from
00:00:00:00:00:00 via eth2
Aug 27 20:36:56 lunar1 dhcpd: DHCPACK on 192.168.14.250 to 00:00:00:00:00:00 via eth2
Aug 27 20:36:56 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth0
Aug 27 20:36:57 lunar1 dhcpd: DHCPOFFER on 192.168.14.249 to 00:00:00:00:00:00 via eth0
Aug 27 20:36:57 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth0
Aug 27 20:36:58 lunar1 dhcpd: DHCPOFFER on 192.168.14.248 to 00:00:00:00:00:00 via eth0
Aug 27 20:36:58 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth0
Aug 27 20:36:58 lunar1 dhcpd: DHCPOFFER on 192.168.14.248 to 00:00:00:00:00:00 via eth0
Aug 27 20:36:58 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth2
Aug 27 20:36:58 lunar1 dhcpd: DHCPOFFER on 192.168.14.248 to 00:00:00:00:00:00 via eth2
Aug 27 20:37:03 lunar1 dhcpd: DHCPREQUEST for 192.168.14.248 (192.168.14.101) from
00:00:00:00:00:00 via eth0
Aug 27 20:37:03 lunar1 dhcpd: DHCPACK on 192.168.14.248 to 00:00:00:00:00:00 via eth0
Aug 27 20:37:03 lunar1 dhcpd: DHCPREQUEST for 192.168.14.248 (192.168.14.101) from
00:00:00:00:00:00 via eth2
Aug 27 20:37:03 lunar1 dhcpd: DHCPACK on 192.168.14.248 to 00:00:00:00:00:00 via eth2
Aug 27 20:37:03 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth2
Aug 27 20:37:03 lunar1 dhcpd: DHCPOFFER on 192.168.14.249 to 00:00:00:00:00:00 via eth2
Aug 27 20:37:03 lunar1 dhcpd: DHCPDISCOVER from 00:00:00:00:00:00 via eth0
Aug 27 20:37:03 lunar1 dhcpd: DHCPOFFER on 192.168.14.249 to 00:00:00:00:00:00 via eth0
Aug 27 20:37:08 lunar1 dhcpd: DHCPREQUEST for 192.168.14.249 (192.168.14.101) from
00:00:00:00:00:00 via eth0
Aug 27 20:37:08 lunar1 dhcpd: DHCPACK on 192.168.14.249 to 00:00:00:00:00:00 via eth0
Aug 27 20:37:08 lunar1 dhcpd: DHCPREQUEST for 192.168.14.249 (192.168.14.101) from
00:00:00:00:00:00 via eth2
Aug 27 20:37:08 lunar1 dhcpd: DHCPACK on 192.168.14.249 to 00:00:00:00:00:00 via eth2
Aug 27 20:37:27 lunar1 named[20248]: listening on IPv4 interface eth0:1, 192.168.14.102#53
Aug 27 20:37:27 lunar1 named[20248]: could not listen on UDP socket: address in use
Aug 27 20:37:27 lunar1 named[20248]: creating IPv4 interface eth0:1 failed; interface ignored
Aug 27 20:37:27 lunar1 named[20248]: listening on IPv4 interface eth0:2, 192.168.14.251#53
Aug 27 20:37:27 lunar1 named[20248]: listening on IPv4 interface eth0:3, 192.168.14.253#53
Aug 27 20:37:27 lunar1 named[20248]: listening on IPv4 interface eth0:4, 192.168.14.252#53
Aug 27 20:37:27 lunar1 named[20248]: listening on IPv4 interface eth0:5, 192.168.14.254#53
Aug 27 20:37:27 lunar1 named[20248]: listening on IPv4 interface eth1:1, 169.254.191.77#53
```


继续, 执行了快 10 分钟了, 还没完。。。

```
CRS-4123: Starting Oracle High Availability Services-managed resources
CRS-2672: Attempting to start 'ora.mdnsd' on 'lunar1'
CRS-2672: Attempting to start 'ora.evmd' on 'lunar1'
CRS-2676: Start of 'ora.evmd' on 'lunar1' succeeded
CRS-2676: Start of 'ora.mdnsd' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.gpnpd' on 'lunar1'
CRS-2676: Start of 'ora.gpnpd' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.gipcd' on 'lunar1'
CRS-2676: Start of 'ora.gipcd' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.cssdmonitor' on 'lunar1'
CRS-2676: Start of 'ora.cssdmonitor' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.cssd' on 'lunar1'
CRS-2672: Attempting to start 'ora.diskmon' on 'lunar1'
CRS-2676: Start of 'ora.diskmon' on 'lunar1' succeeded
CRS-2789: Cannot stop resource 'ora.diskmon' as it is not running on server 'lunar1'
CRS-2676: Start of 'ora.cssd' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.cluster_interconnect.haip' on 'lunar1'
CRS-2672: Attempting to start 'ora.ctssd' on 'lunar1'
CRS-2676: Start of 'ora.ctssd' on 'lunar1' succeeded
CRS-2676: Start of 'ora.cluster_interconnect.haip' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.asm' on 'lunar1'
CRS-2676: Start of 'ora.asm' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.storage' on 'lunar1'
CRS-2676: Start of 'ora.storage' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.crf' on 'lunar1'
CRS-2676: Start of 'ora.crf' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.crsd' on 'lunar1'
CRS-2676: Start of 'ora.crsd' on 'lunar1' succeeded
CRS-6023: Starting Oracle Cluster Ready Services-managed resources
CRS-5014: Agent "/u01/app/12.1.0/grid/bin/oraagent.bin" timed out starting process
"/u01/app/12.1.0/grid/bin/lsnrctl" for action "check": details at "(:CLSN00009:)" in
"/u01/app/12.1.0/grid/log/lunar1/agent/crsd/oraagent_grid/oraagent_grid.log"
CRS-5017: The resource action "ora.MGMTLSNR check" encountered the following error:
(:CLSN00009:)Utils:execCmd aborted. For details refer to "(:CLSN00109:)" in
"/u01/app/12.1.0/grid/log/lunar1/agent/crsd/oraagent_grid/oraagent_grid.log".
CRS-6017: Processing resource auto-start for servers: lunar1
CRS-2672: Attempting to start 'ora.cvu' on 'lunar1'
CRS-2672: Attempting to start 'ora.ons' on 'lunar1'
CRS-2672: Attempting to start 'ora.oc4j' on 'lunar1'
CRS-2676: Start of 'ora.cvu' on 'lunar1' succeeded
CRS-2676: Start of 'ora.ons' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.scan3.vip' on 'lunar1'
```

```
CRS-2672: Attempting to start 'ora.scan2.vip' on 'lunar1'
CRS-2672: Attempting to start 'ora.scan1.vip' on 'lunar1'
CRS-2672: Attempting to start 'ora.lunar1.vip' on 'lunar1'
CRS-2676: Start of 'ora.scan1.vip' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.LISTENER_SCAN1.lsnr' on 'lunar1'
CRS-2676: Start of 'ora.scan2.vip' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.LISTENER_SCAN2.lsnr' on 'lunar1'
CRS-2676: Start of 'ora.scan3.vip' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.LISTENER_SCAN3.lsnr' on 'lunar1'
CRS-2676: Start of 'ora.lunar1.vip' on 'lunar1' succeeded
CRS-2676: Start of 'ora.LISTENER_SCAN2.lsnr' on 'lunar1' succeeded
CRS-2676: Start of 'ora.LISTENER_SCAN3.lsnr' on 'lunar1' succeeded
CRS-2676: Start of 'ora.LISTENER_SCAN1.lsnr' on 'lunar1' succeeded
CRS-2676: Start of 'ora.oc4j' on 'lunar1' succeeded
CRS-6016: Resource auto-start has completed for server lunar1
CRS-6024: Completed start of Oracle Cluster Ready Services-managed resources
CRS-4123: Oracle High Availability Services has been started.
2013/08/27 20:46:28 CLSRSC-325: Configure Oracle Grid Infrastructure for a Cluster ... succeeded
```

```
[root@lunar1 Disk1]#
```

```
[root@lunar1 ~]# crsctl status res -t
```

Name	Target	State	Server
State details			

Local Resources			

ora.ASMNET1LSNR_ASM.lsnr			
	ONLINE	ONLINE	lunar1
STABLE			
ora.DATA_DG.dg			
	OFFLINE		
OFFLINE	lunar1		STABLE
ora.LISTENER.lsnr			
	ONLINE	ONLINE	lunar1
STABLE			
ora.net1.network			
	ONLINE	ONLINE	lunar1
STABLE			
ora.ons			
	ONLINE	ONLINE	lunar1
STABLE			
ora.proxy_advm			
	ONLINE	OFFLINE	lunar1

STABLE				

Cluster Resources				

ora.LISTENER_SCAN1.lsnr				
1	ONLINE	ONLINE	lunar1	
STABLE				
ora.LISTENER_SCAN2.lsnr				
1	ONLINE	ONLINE	lunar1	
STABLE				
ora.LISTENER_SCAN3.lsnr				
1	ONLINE	ONLINE	lunar1	
STABLE				
ora.MGMTLSNR				
1	OFFLINE			
OFFLINE				STABLE
ora.asm				
1	ONLINE	ONLINE	lunar1	
STABLE				
2	OFFLINE			
OFFLINE				STABLE
3	OFFLINE			
OFFLINE				STABLE
ora.cvu				
1	ONLINE	ONLINE	lunar1	
STABLE				
ora.gns				
1	ONLINE	OFFLINE		
STABLE				
ora.gns.vip				
1	ONLINE	ONLINE	lunar1	
STABLE				
ora.lunar1.vip				
1	ONLINE	ONLINE	lunar1	
STABLE				
ora.oc4j				
1	ONLINE	ONLINE	lunar1	
STABLE				
ora.scan1.vip				
1	ONLINE	ONLINE	lunar1	
STABLE				
ora.scan2.vip				
1	ONLINE	ONLINE	lunar1	
STABLE				

```
ora.scan3.vip
      1          ONLINE    ONLINE          lunar1
      STABLE
```

```
[root@lunar1 ~]#
```

在节点 2 执行 root.sh:

```
[root@lunar2 ~]# /u01/app/12.1.0/grid/root.sh
Performing root user operation for Oracle 12c
```

The following environment variables are set as:

```
ORACLE_OWNER= grid
ORACLE_HOME= /u01/app/12.1.0/grid
```

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.

Using configuration parameter file: /u01/app/12.1.0/grid/crs/install/crsconfig_params

2013/08/27 20:52:58 CLSRSC-363: User ignored prerequisites during installation

OLR initialization - successful

2013/08/27 20:53:30 CLSRSC-330: Adding Clusterware entries to file '/etc/inittab'

CRS-4133: Oracle High Availability Services has been stopped.

CRS-4123: Oracle High Availability Services has been started.

CRS-4133: Oracle High Availability Services has been stopped.

CRS-4123: Oracle High Availability Services has been started.

CRS-2673: Attempting to stop 'ora.drivers.acfs' on 'lunar1'

CRS-2677: Stop of 'ora.drivers.acfs' on 'lunar1' succeeded

CRS-2672: Attempting to start 'ora.evmd' on 'lunar1'

CRS-2672: Attempting to start 'ora.mdnsd' on 'lunar1'

CRS-2676: Start of 'ora.evmd' on 'lunar1' succeeded

CRS-2676: Start of 'ora.mdnsd' on 'lunar1' succeeded

CRS-2672: Attempting to start 'ora.gpnpd' on 'lunar1'

CRS-2676: Start of 'ora.gpnpd' on 'lunar1' succeeded

CRS-2672: Attempting to start 'ora.cssdmonitor' on 'lunar1'

CRS-2672: Attempting to start 'ora.gipcd' on 'lunar1'

CRS-2676: Start of 'ora.cssdmonitor' on 'lunar1' succeeded

CRS-2676: Start of 'ora.gipcd' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.cssd' on 'lunar1'
CRS-2672: Attempting to start 'ora.diskmon' on 'lunar1'
CRS-2676: Start of 'ora.diskmon' on 'lunar1' succeeded
CRS-2676: Start of 'ora.cssd' on 'lunar1' succeeded
CRS-2791: Starting shutdown of Oracle High Availability Services-managed resources on 'lunar1'
CRS-2673: Attempting to stop 'ora.mdnsd' on 'lunar1'
CRS-2673: Attempting to stop 'ora.evmd' on 'lunar1'
CRS-2673: Attempting to stop 'ora.gpnpd' on 'lunar1'
CRS-2677: Stop of 'ora.mdnsd' on 'lunar1' succeeded
CRS-2677: Stop of 'ora.gpnpd' on 'lunar1' succeeded
CRS-2677: Stop of 'ora.evmd' on 'lunar1' succeeded
CRS-2673: Attempting to stop 'ora.cssd' on 'lunar1'
CRS-2677: Stop of 'ora.cssd' on 'lunar1' succeeded
CRS-2673: Attempting to stop 'ora.gipcd' on 'lunar1'
CRS-2677: Stop of 'ora.gipcd' on 'lunar1' succeeded
CRS-2793: Shutdown of Oracle High Availability Services-managed resources on 'lunar1' has completed
CRS-4133: Oracle High Availability Services has been stopped.
CRS-4123: Starting Oracle High Availability Services-managed resources
CRS-2672: Attempting to start 'ora.evmd' on 'lunar1'
CRS-2672: Attempting to start 'ora.mdnsd' on 'lunar1'
CRS-2676: Start of 'ora.evmd' on 'lunar1' succeeded
CRS-2676: Start of 'ora.mdnsd' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.gpnpd' on 'lunar1'
CRS-2676: Start of 'ora.gpnpd' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.gipcd' on 'lunar1'
CRS-2676: Start of 'ora.gipcd' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.cssdmonitor' on 'lunar1'
CRS-2676: Start of 'ora.cssdmonitor' on 'lunar1' succeeded
CRS-2672: Attempting to start 'ora.cssd' on 'lunar1'
CRS-2672: Attempting to start 'ora.diskmon' on 'lunar1'
CRS-2676: Start of 'ora.diskmon' on 'lunar1' succeeded
CRS-2789: Cannot stop resource 'ora.diskmon' as it is not running on server 'lunar1'
CRS-2883: Resource 'ora.cssdmonitor' failed during Clusterware stack start.
CRS-4406: Oracle High Availability Services synchronous start failed.
CRS-4000: Command Start failed, or completed with errors.
2013/08/27 20:57:37 CLSRSC-117: Failed to start Oracle Clusterware stack

Died at /u01/app/12.1.0/grid/crs/install/crsinstall.pm line 941.
[root@lunar2 ~]# The command '/u01/app/12.1.0/grid/perl/bin/perl
-I/u01/app/12.1.0/grid/perl/lib -I/u01/app/12.1.0/grid/crs/install
/u01/app/12.1.0/grid/crs/install/rootcrs.pl ' execution failed

```
[root@lunar1 ~]# ps -ef|grep d.bin
root          9381          1   1 20:31 ?                00:01:01
/u01/app/12.1.0/grid/bin/ohasd.bin reboot
_ORA_BLOCKING_STACK_LOCALE=AMERICAN_AMERICA.AL32UTF8
grid          9486          1   0 20:31 ?                00:00:12
/u01/app/12.1.0/grid/bin/oraagent.bin
grid          9501          1   0 20:31 ?                00:00:33
/u01/app/12.1.0/grid/bin/evmd.bin
grid          9503          1   0 20:31 ?                00:00:00
/u01/app/12.1.0/grid/bin/mdnsd.bin
grid          9517          1   0 20:31 ?                00:00:03
/u01/app/12.1.0/grid/bin/gpnpd.bin
grid          9535          0 20:31 ?                00:00:00
/u01/app/12.1.0/grid/bin/evmlogger.bin -o
/u01/app/12.1.0/grid/log/[HOSTNAME]/evmd/evmlogger.info -l
/u01/app/12.1.0/grid/log/[HOSTNAME]/evmd/evmlogger.log
grid          9539          1   2 20:31 ?                00:01:32
/u01/app/12.1.0/grid/bin/gipcd.bin
root          9569          1   0 20:32 ?                00:00:02
/u01/app/12.1.0/grid/bin/cssdmonitor
root          9581          1   0 20:32 ?                00:00:02
/u01/app/12.1.0/grid/bin/cssdagent
grid          9592          1   1 20:32 ?                00:00:45
/u01/app/12.1.0/grid/bin/ocssd.bin
root          9651          1   0 20:32 ?                00:00:32
/u01/app/12.1.0/grid/bin/octssd.bin reboot
root          9827          1   1 20:33 ?                00:00:47
/u01/app/12.1.0/grid/bin/osysmond.bin
root          9837          1   1 20:33 ?                00:00:45
/u01/app/12.1.0/grid/bin/crsd.bin reboot
root          9849          1   0 20:33 ?                00:00:11
/u01/app/12.1.0/grid/bin/ologgerd -M -d /u01/app/12.1.0/grid/crf/db/lunar1
grid          9987          1   0 20:35 ?                00:00:15
/u01/app/12.1.0/grid/bin/oraagent.bin
root          9991          1   1 20:35 ?                00:00:54
/u01/app/12.1.0/grid/bin/orarootagent.bin
grid         10155          1   0 20:35 ?                00:00:01
/u01/app/12.1.0/grid/bin/scriptagent.bin
grid         10347          1   0 20:36 ?                00:00:00
/u01/app/12.1.0/grid/bin/tnslsnr LISTENER_SCAN2 -no_crs_notify -inherit
grid         10348          1   0 20:36 ?                00:00:00
/u01/app/12.1.0/grid/bin/tnslsnr ASMNET1LSNR_ASM -no_crs_notify -inherit
grid         10349          1   0 20:36 ?                00:00:00
/u01/app/12.1.0/grid/bin/tnslsnr LISTENER_SCAN1 -no_crs_notify -inherit
```

```
grid          10350          1    0 20:36 ?              00:00:00
/u01/app/12.1.0/grid/bin/tnslsnr LISTENER_SCAN3 -no_crs_notify -inherit
root          12885          1    0 20:41 ?              00:00:07
/u01/app/12.1.0/grid/bin/orarootagent.bin
grid          13966          1    0 20:46 ?              00:00:00
/u01/app/12.1.0/grid/bin/tnslsnr LISTENER -no_crs_notify -inherit
root          16640    3178    0 21:47 pts/1          00:00:00 grep d.bin
[root@lunar1 ~]#

[root@lunar1 ~]# ifconfig
eth0          Link encap:Ethernet  HWaddr 08:00:27:6C:AA:97
               inet addr:192.168.14.11  Bcast:192.168.14.255  Mask:255.255.255.0
               UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
               RX packets:956355 errors:0 dropped:0 overruns:0 frame:0
               TX packets:4682921 errors:0 dropped:0 overruns:0 carrier:0
               collisions:0 txqueuelen:1000
               RX bytes:68403556 (65.2 MiB)  TX bytes:6828045037 (6.3 GiB)

eth0:1        Link encap:Ethernet  HWaddr 08:00:27:6C:AA:97
               inet addr:192.168.14.102  Bcast:192.168.14.255  Mask:255.255.255.0
               UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1

eth0:2        Link encap:Ethernet  HWaddr 08:00:27:6C:AA:97
               inet addr:192.168.14.254  Bcast:192.168.14.255  Mask:255.255.255.0
               UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1

eth0:3        Link encap:Ethernet  HWaddr 08:00:27:6C:AA:97
               inet addr:192.168.14.253  Bcast:192.168.14.255  Mask:255.255.255.0
               UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1

eth0:4        Link encap:Ethernet  HWaddr 08:00:27:6C:AA:97
               inet addr:192.168.14.252  Bcast:192.168.14.255  Mask:255.255.255.0
               UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1

eth0:5        Link encap:Ethernet  HWaddr 08:00:27:6C:AA:97
               inet addr:192.168.14.251  Bcast:192.168.14.255  Mask:255.255.255.0
               UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1

eth1          Link encap:Ethernet  HWaddr 08:00:27:0C:B7:CF
               inet addr:192.168.55.101  Bcast:192.168.55.255  Mask:255.255.255.0
               UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
               RX packets:2555 errors:0 dropped:0 overruns:0 frame:0
               TX packets:2360 errors:0 dropped:0 overruns:0 carrier:0
               collisions:0 txqueuelen:1000
               RX bytes:344652 (336.5 KiB)  TX bytes:404919 (395.4 KiB)
```

```
eth1:1      Link encap:Ethernet  HWaddr 08:00:27:0C:B7:CF
            inet addr:169.254.191.77  Bcast:169.254.255.255  Mask:255.255.0.0
            UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1

eth2        Link encap:Ethernet  HWaddr 08:00:27:3F:B0:77
            inet addr:192.168.14.101  Bcast:192.168.14.255  Mask:255.255.255.0
            UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
            RX packets:23486 errors:0 dropped:0 overruns:0 frame:0
            TX packets:430 errors:0 dropped:0 overruns:0 carrier:0
            collisions:0 txqueuelen:1000
            RX bytes:1625328 (1.5 MiB)  TX bytes:59337 (57.9 KiB)

lo          Link encap:Local Loopback
            inet addr:127.0.0.1  Mask:255.0.0.0
            UP LOOPBACK RUNNING  MTU:16436  Metric:1
            RX packets:951695 errors:0 dropped:0 overruns:0 frame:0
            TX packets:951695 errors:0 dropped:0 overruns:0 carrier:0
            collisions:0 txqueuelen:0
            RX bytes:145574017 (138.8 MiB)  TX bytes:145574017 (138.8 MiB)
```

[root@lunar1 ~]#

[root@lunar2 ~]# crsctl status res -t

Name	Target	State	Server

State details			

Local Resources			

ora.ASMNET1LSNR_ASM.lsnr		OFFLINE	
OFFLINE	lunar2		STABLE
ora.DATA_DG.dg		ONLINE	lunar2
STABLE		ONLINE	
ora.LISTENER.lsnr		OFFLINE	
OFFLINE	lunar2		STABLE
ora.net1.network		ONLINE	lunar2
STABLE		ONLINE	
ora.ons		ONLINE	lunar2
STABLE		ONLINE	
ora.proxy_advm			

	ONLINE	OFFLINE	lunar2	
STABLE				

Cluster Resources				

ora.LISTENER_SCAN1.lsnr				
1	ONLINE	ONLINE	lunar2	
STABLE				
ora.LISTENER_SCAN2.lsnr				
1	ONLINE	ONLINE	lunar2	
STABLE				
ora.LISTENER_SCAN3.lsnr				
1	ONLINE	ONLINE	lunar2	
STABLE				
ora.MGMTLSNR				
1	OFFLINE			
OFFLINE				STABLE
ora.asm				
1	ONLINE	OFFLINE		
STABLE				
2	ONLINE	ONLINE	lunar2	
Started, STABLE				
3	OFFLINE			
OFFLINE				STABLE
ora.cvu				
1	ONLINE	ONLINE	lunar2	
STABLE				
ora.gns				
1	ONLINE	ONLINE	lunar2	
STABLE				
ora.gns.vip				
1	ONLINE	ONLINE	lunar2	
STABLE				
ora.lunar1.vip				
1	ONLINE	INTERMEDIATE		
lunar2		FAILED OVER, STABLE		
ora.lunar2.vip				
1	OFFLINE			
OFFLINE				STABLE
ora.oc4j				
1	ONLINE	ONLINE	lunar2	
STABLE				
ora.scan1.vip				
1	ONLINE	ONLINE	lunar2	

```

        STABLE
ora.scan2.vip
        1                ONLINE    ONLINE                lunar2
        STABLE
ora.scan3.vip
        1                ONLINE    ONLINE                lunar2
        STABLE

```

[root@lunar2 ~]#

总结:

节点 2 以为磁盘 IO 和网络超时等问题, root.sh 重复执行了几次, 始终未能成功完成, 因此重启了节点 2, 再次执行, 问题依旧, 且磁盘 IO 已经很严重了, 已经放弃了, 不过这次安装的经验在于我已经知道如何部署 Flex Cluster 了, 且用 vm 怎么折腾能更好也长了经验, o(∩_∩)o 哈哈

1, 如果是用 X230, 把 SSD 放在本地, 然后将两个 VM 放在 SSD 上, 估计可以解决 IO 超时的问题

2, 每个 VM 给 1.5G 内存就可以了, ASM SGA 给 270G, DB 手工配置 SGA, SHARE POOL 给 160M (防止太少了报 ORA-4031), BUFFER CACHE 给 30M 就可以, 具体参考前面的《贫民电脑 (8G mem) 玩 12c standalone 需要的配置多大内存的 vm 呢? 》

<http://www.lunar2013.com/2013/08/%E8%B4%AB%E6%B0%91%E7%94%B5%E8%84%91%E7%BC%88g-mem%E7%BC%89%E7%8E%A912c-standalone%E9%9C%80%E8%A6%81%E7%9A%84%E9%85%8D%E7%BD%AE%E5%A4%9A%E5%A4%A7%E5%86%85%E5%AD%98%E7%9A%84vm%E5%91%A2%E7%BC%9F.html>

3, VBox 上配置多个虚拟网卡供 public 和 private 使用, 缓解网络超时

4, DNS 和 DHCP 最好配置在宿主机上, 这样最节省资源, 不过不行就退而求其次, 装一个 300M 的 windows 或者 linux, 专门干这个

5, 安装前, 对于官方文档要先浏览一遍