

Oracle® Tutor™



Section 7 注意事项和答案

0. 注意事项

RAC 的安装只是一个很简单的题目，可以说是个送分的题目。RAC 的考点还是网络的设置：如侦听的设置，tnsnames 的设置，service 的设置，在考试的时候特别需要注意看清题意再做。具体来说：

1. 安装 crs、asm 和 db 软件
2. 创建 rac db
3. 添加 service，service 可以 dbca 一次性搞定
4. 启用 archive
5. 奇数机上能网络连接到 RAC 环境

RAC 服务器与 SAN 存储都是奇数机上隐藏的虚拟机，如果虚拟机没有启动，或者有任何 VNC 连接的问题，都可以向考场老师询问。

考试时需要你通过 VNC 或 SSH 连接过去部署 RAC。奇数机必须能通过网络登陆到 RAC 数据库。VNC 进去只有最简单的 terminal 界面，也就是 twm & 的方式。如果你不会 VNC，平时用 xmanager 比较多，还是在考前熟悉一下 VNC 比较好，比如修改

```
vi /root/.vnc/xstartup
```

```
#twm &
```

```
gnome-session &
```

之后重新启动 VNC：service vncserver start，这样会方便很多。

在开始本 Section 之前一定要检查 2 台机器的网卡是否都工作正常，public 卡是否配置了 default gateway，如果这个不配，在运行完 root.sh 之后，配置 vipca 的时候会报错的。

本 Section 陷阱之一：在做 vipca 时候，自动输入的 hostname 竟然不对，不是 -vip 的名字，而是主机 hostname，有好多人遇到这个，不小心就挂了。还有如果节点或者 IP 是不连续的，在 VIPCA 时输入第一个 IP 之后，他也会顺序增加，所以也需要手动调节一下。OU 老师的解答却是：因为/etc/hosts 主机条目太多了，次序错乱的。狂晕。

本 Section 陷阱之二：还有个人，在 dbca 创建 asm disk group 时候，按钮不能点击。那个按钮是平的，鼠标放上去，会凹下去的，环境很怪，但大部分人点击还是没有任何问题。最后那家伙不得不手工 command line 创建 asm。

注意：/home/oracle/.ssh 的目录权限，如果有问题改成 700。

注意：运行完成后，运行 orainstRoot.sh 和 root.sh 注意执行完在节点 2 会报错 vip 的问题，我们需要再次 vipca，进行配置后才能按 ok。

注意：开始安装之前，要检查两台机器的时间是否同步。

1.操作系统方面的配置（考试时不需要做）

```
/etc/udev/permissions.d/50-udev.permissions
```

把此文件第 113 行修改如下：

```
raw/*:oracle:oinstall:0660
```

2.具体步骤简介

配置两台机器的 SSH 信任：

（注意：在开始配置前，检查/etc/hosts 文件，并使用 Ping 命令检查一下各个节点是否可达）

1、在 Racone 执行：

```
mkdir ~/.ssh
```

```
chmod 700 ~/.ssh
```

```
ssh-keygen -t rsa （输三下回车）
```

```
ssh-keygen -t dsa （输三下回车）
```

2、在 Ractwo 中也执行上面四条命令

```
mkdir ~/.ssh
```

```
chmod 700 ~/.ssh
```

```
ssh-keygen -t rsa （输三下回车）
```

```
ssh-keygen -t dsa （输三下回车）
```

3、在 Racone 中继续：

```
cat ~/.ssh/id_rsa.pub >> ~/.ssh/authorized_keys
cat ~/.ssh/id_dsa.pub >> ~/.ssh/authorized_keys
ssh ractwo cat ~/.ssh/id_rsa.pub >> ~/.ssh/authorized_keys
(先输入 yes，再输入 ractwo 的密码)
ssh ractwo cat ~/.ssh/id_dsa.pub >> ~/.ssh/authorized_keys
(输入 ractwo 的密码)
scp ~/.ssh/authorized_keys ractwo:~/.ssh/authorized_keys
(输入 ractwo 的密码)
配置完成，第三步不需要在 RACTWO 中再执行了。
```

安装 Cluster：

1、可以先检查环境，在 Oracle 用户执行

```
[oracle@racone cluvfy]$ ./runcluvfy.sh stage -pre crsinst -n racone,ractwo -verbose
```

注意，此步执行时，最好两台机器处于同一状态下，/etc/hosts 文件中的内容最好一模一样。

2、安装到 Specify Cluster Configuration 时：

点击右下方的 Add 按钮，依次输入 ractwo 的主机名、私有连接名和虚拟连接名

(注意此步，如果两台机器的/etc/hosts 配置不一样，很可能会出现错误。注意都要有 127.0.0.1，此 IP 只能对应 localhost.localdomain localhost)

3、设置网卡

会出现两卡，将 eth0 设为公共的

4、OCR 设置，选外部冗余，位置看题目

5、voting disk 的存储位置，外部冗余，位置看题目

6、安装过程很快

7、运行要求的脚本：

在 RACONE 上执行：/opt/ora10g/orainventory/orainstRoot.sh;

在 RACTWO 上执行：/opt/ora10g/orainventory/orainstRoot.sh;

在 RACONE 上执行：/opt/ora10g/product/10.2.0/crs_1/root.sh;

在 RACTWO 上执行：/opt/ora10g/product/10.2.0/crs_1/root.sh;

一般在 RACTWO 中执行最后一步时会报错：

"eth0" is not public. Public interfaces should be used to configure virtual

解决方法，

```
[root@RACTWO opt]# xhost +
```

```
[root@RACTWO opt]# /opt/ora10g/product/10.2.0/crs_1/bin/vipca
```

在第二个画面中，会有 eth0、eth1 两块网卡，都选中，点下一步。

在接下来的画面中第二列输入虚拟网卡 IP 地址对应的主机名 RACONE-VIP 和 RACTWO-VIP，

在第三列输入对应的 IP 地址。

之后才能点“OK”

安装 Oracle 软件：

安装完成后要执行一个脚本，应该在两台机器分别执行。

创建数据库：

1、注意在第二（或第三个）画面中，选择主机时要选两台主机

- 2、输入全局数据库名时注意大、小写
- 3、选择在 ASM 中创建数据库，ASM 的参数文件选择使用 PFILE（选择 SPFILE 可能会报错）
- 4、创建 ASM 磁盘组
- 5、选择使用 OMF，文本框中的内容不必改，直接下一步

3.具体步骤

- 1、配置用户互信关系【注意.ssh 的目录权限，一定要是 700，中间提示的输入，除了密码都直接回车】

参考联机文档：Oracle Clusterware and Oracle Real Application Clusters Installation Guide 10g Release 2 (10.2) for Linux--->2.4.7 Configuring SSH on All Cluster Nodes--->2.4.7.1 Configuring SSH on Cluster Member Nodes

```
[oracle@rac1 ~]$ mkdir ~/.ssh
[oracle@rac1 ~]$ chmod 700 ~/.ssh
[oracle@rac1 ~]$ ssh-keygen -t rsa
Generating public/private rsa key pair.
Enter file in which to save the key (/home/oracle/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/oracle/.ssh/id_rsa.
Your public key has been saved in /home/oracle/.ssh/id_rsa.pub.
The key fingerprint is:
d2:69:eb:ac:86:62:27:50:99:ff:e8:1e:a2:e6:5d:7f oracle@rac1
[oracle@rac1 ~]$ ssh-keygen -t dsa
Generating public/private dsa key pair.
Enter file in which to save the key (/home/oracle/.ssh/id_dsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/oracle/.ssh/id_dsa.
Your public key has been saved in /home/oracle/.ssh/id_dsa.pub.
The key fingerprint is:
0a:9a:20:46:a2:28:ec:72:23:82:f2:9d:f8:62:9b:d1 oracle@rac1
```

然后换 rac2 执行

```
[root@rac2 ~]# ping 192.168.100.102
[root@rac2 ~]# ping 10.10.17.222
[root@rac2 opt]# su - oracle
[oracle@rac2 ~]$ mkdir ~/.ssh
[oracle@rac2 ~]$ chmod 700 ~/.ssh
[oracle@rac2 ~]$ ssh-keygen -t rsa
Generating public/private rsa key pair.
Enter file in which to save the key (/home/oracle/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/oracle/.ssh/id_rsa.
```

Your public key has been saved in /home/oracle/.ssh/id_rsa.pub.

The key fingerprint is:

dd:be:7a:37:e4:b5:f0:b2:24:95:50:61:ea:a1:61:07 oracle@rac2

```
[oracle@rac2 ~]$ ssh-keygen -t dsa
```

Generating public/private dsa key pair.

Enter file in which to save the key (/home/oracle/.ssh/id_dsa):

Enter passphrase (empty for no passphrase):

Enter same passphrase again:

Your identification has been saved in /home/oracle/.ssh/id_dsa.

Your public key has been saved in /home/oracle/.ssh/id_dsa.pub.

The key fingerprint is:

bc:b5:cb:43:c7:19:53:d6:f7:16:69:85:12:7f:aa:be oracle@rac2

切换回 rac1，接着执行：

```
[oracle@rac1 ~]$ cat ~/.ssh/id_rsa.pub >> ~/.ssh/authorized_keys
```

```
[oracle@rac1 ~]$ cat ~/.ssh/id_dsa.pub >> ~/.ssh/authorized_keys
```

提示：下列命令会提示你输入 rac2 的 oracle 密码，按照提示输入即可，如果失败可重新尝试执行命令。

```
[oracle@rac1 ~]$ ssh rac2 cat ~/.ssh/id_rsa.pub >> ~/.ssh/authorized_keys
```

The authenticity of host 'rac2 (192.168.100.102)' can't be established.

RSA key fingerprint is 92:d1:ce:5b:c8:a1:52:d5:ac:00:5f:48:5d:12:06:e4.

Are you sure you want to continue connecting (yes/no)? yes

Warning: Permanently added 'rac2,192.168.100.102' (RSA) to the list of known hosts.

oracle@rac2's password:

```
[oracle@rac1 ~]$ ssh rac2 cat ~/.ssh/id_dsa.pub >> ~/.ssh/authorized_keys
```

oracle@rac2's password:

```
[oracle@rac1 ~]$ scp ~/.ssh/authorized_keys rac2:~/.ssh/authorized_keys
```

oracle@rac2's password:

```
authorized_keys          100% 1992    2.0KB/s   00:00
```

两机相互执行，看看是否还需要输入密码，“yes”也要打掉

```
[oracle@rac1 ~]$ ssh rac1 date
```

```
[oracle@rac1 ~]$ ssh rac2 date
```

```
[oracle@rac1 ~]$ ssh rac1_priv date
```

```
[oracle@rac1 ~]$ ssh rac2_priv date
```

切换至 rac2 执行

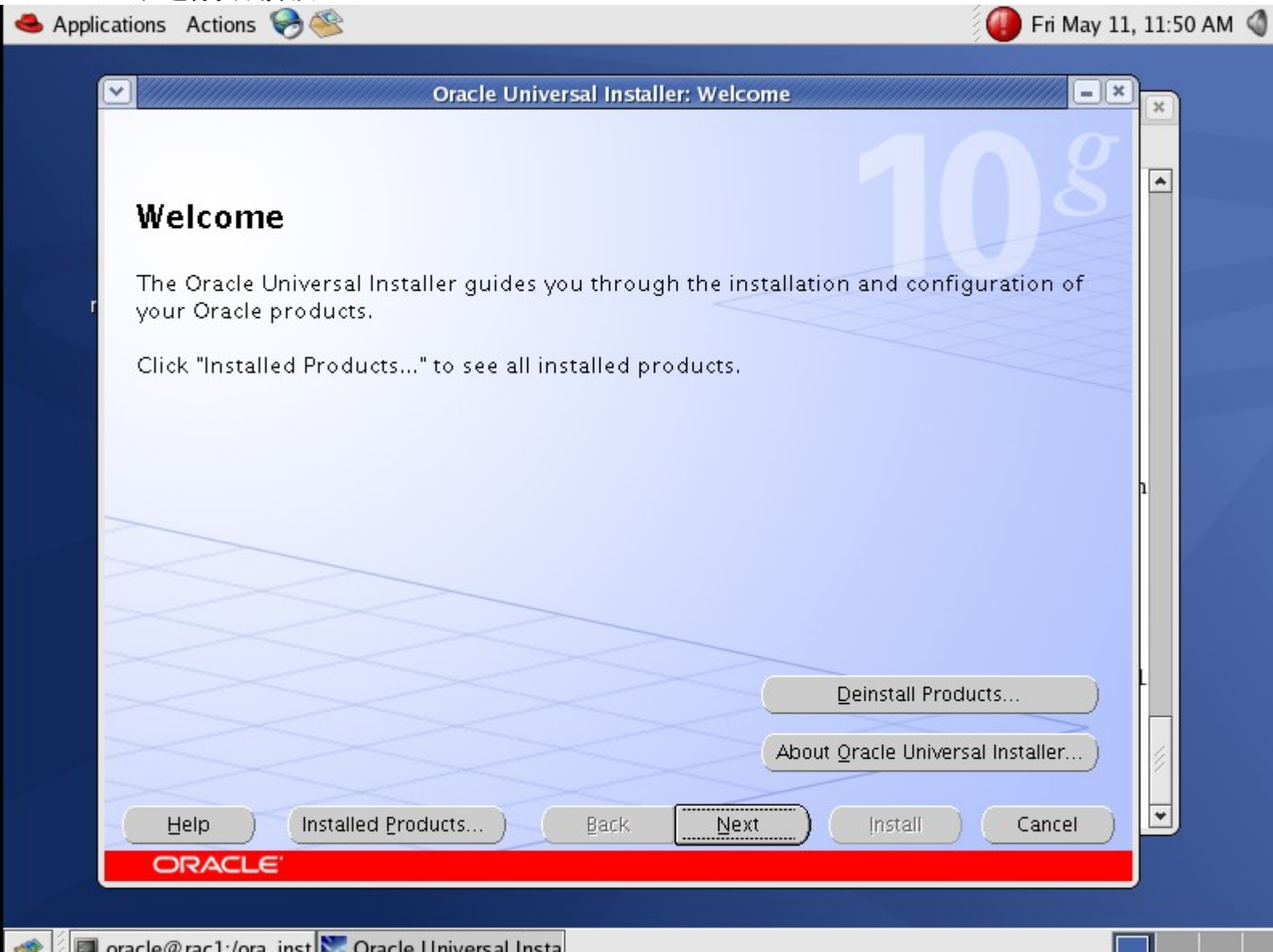
```
[oracle@rac2 ~]$ ssh rac1 date
```

```
[oracle@rac2 ~]$ ssh rac2 date
```

```
[oracle@rac2 ~]$ ssh rac1_priv date
```

```
[oracle@rac2 ~]$ ssh rac2_priv date
```

2、运行安装介质：



选择 Inventory 目录

Oracle Universal Installer: Specify Inventory directory and credentials

Specify Inventory directory and credentials

You are starting your first installation on this host. As part of this install, you need to specify a directory for installer files. This is called the "inventory directory". Within the inventory directory, the installer automatically sets up subdirectories for each product to contain inventory data and will consume typically 150 Kilobytes per product.

Enter the full path of the inventory directory.

You can specify an Operating System group that has write permission to the above inventory directory. You can leave the field blank if you want to perform the above operations as a Superuser.

Specify Operating System group name:

ORACLE

Oracle Universal Installer: Specify Home Details

Specify Home Details

Destination

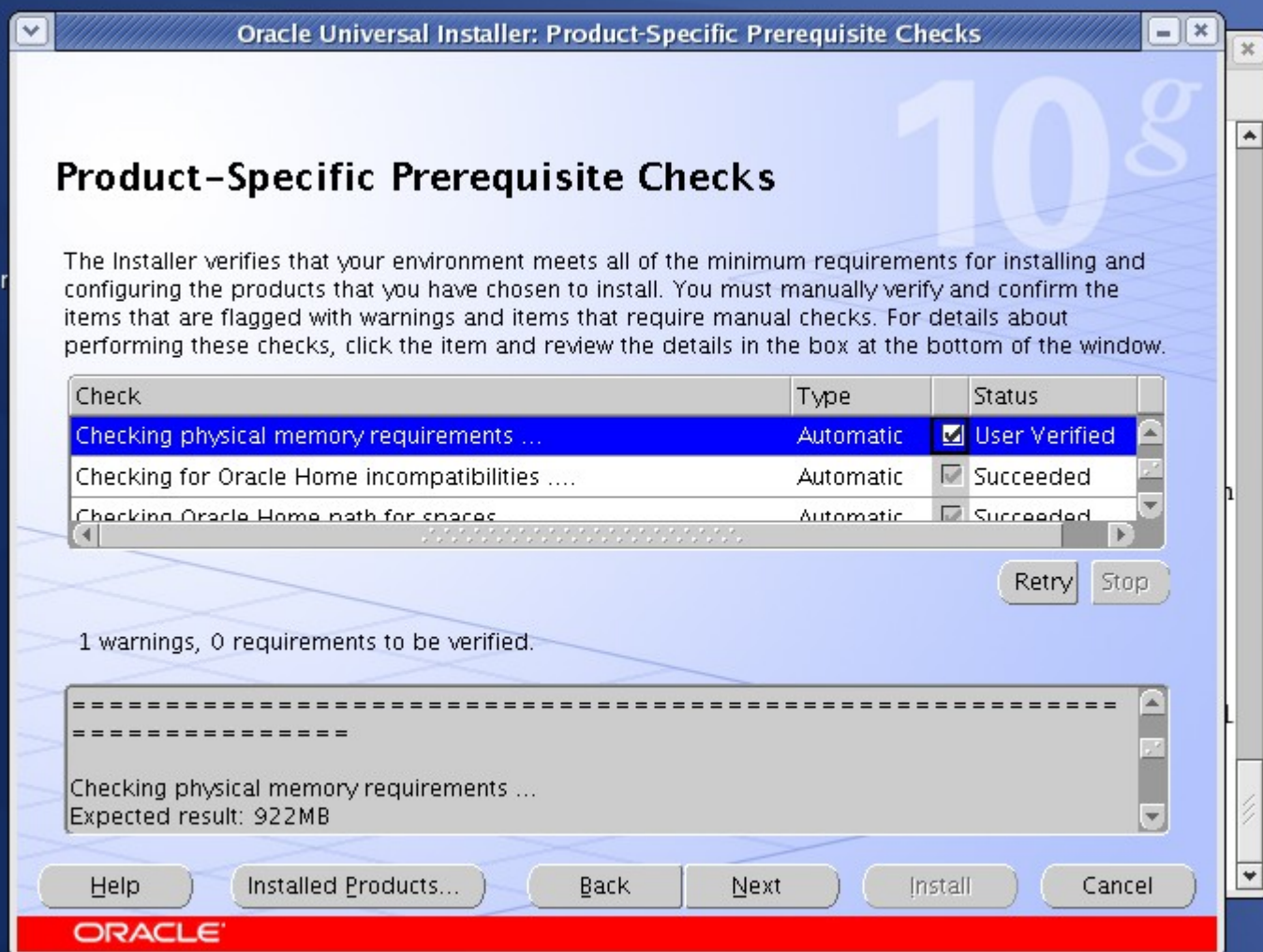
Enter or select a name for the installation and the full path where you want to install the product.

Name:

Path:

ORACLE

oracle@rac1:/ora_install/cl Oracle Universal Installer:
环境检查



Oracle Universal Installer: Specify Cluster Configuration

Specify Cluster Configuration

Enter a name for the cluster and select the nodes to be managed by the Oracle Clusterware. For each node, specify the name for the public IP address, the name for the private interconnect, and the name for the virtual IP address on the node.

You can use a cluster configuration file to configure your cluster by clicking Use Cluster Configuration File instead of completing the Cluster Nodes box. The Use Cluster Configuration File option is helpful if you have many nodes.

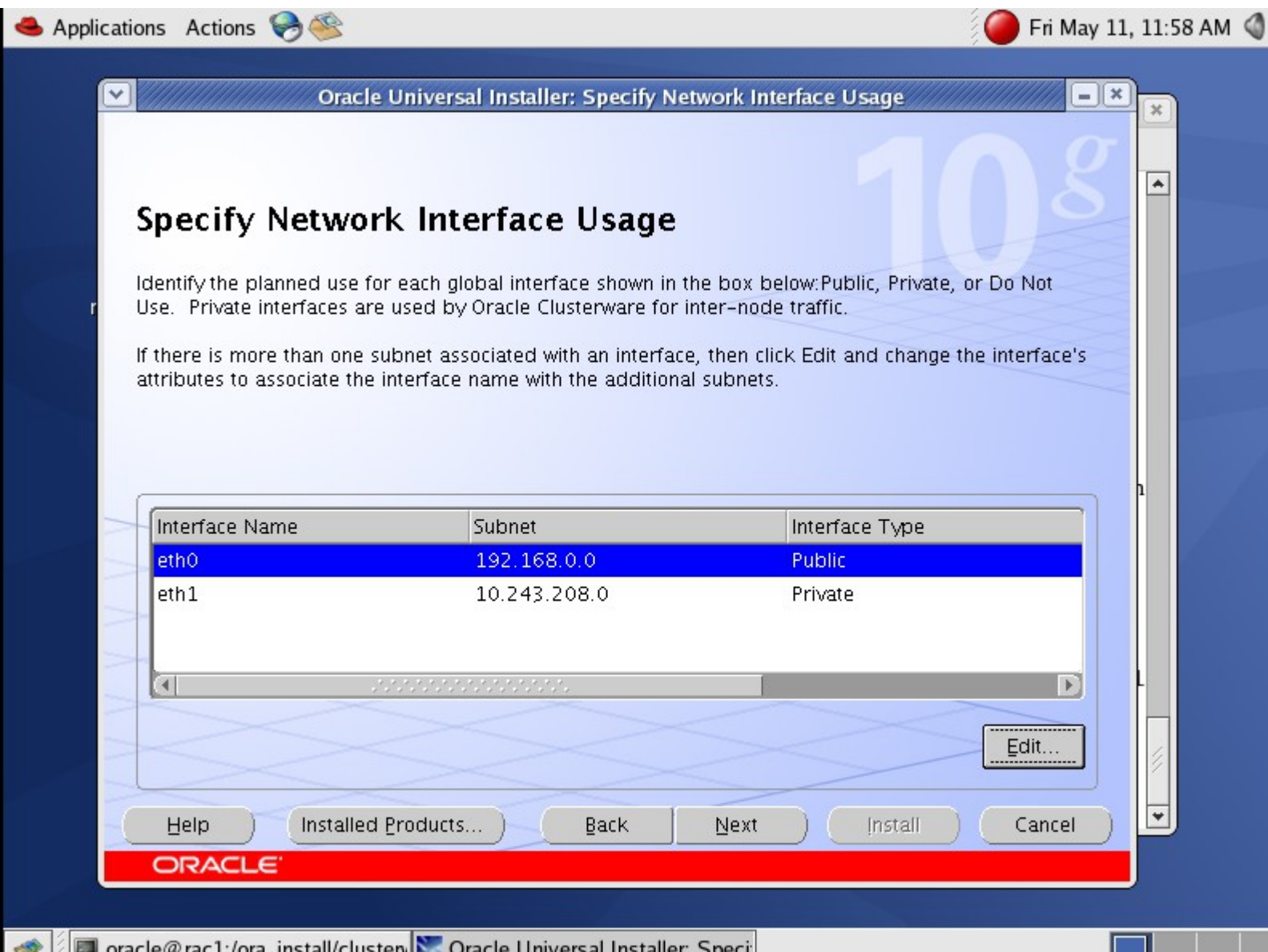
Cluster Name:

Cluster Nodes

Public Node Name	Private Node Name	Virtual Host Name
rac1	rac1_priv	rac1_vip
rac2	rac2_priv	rac2_vip

ORACLE

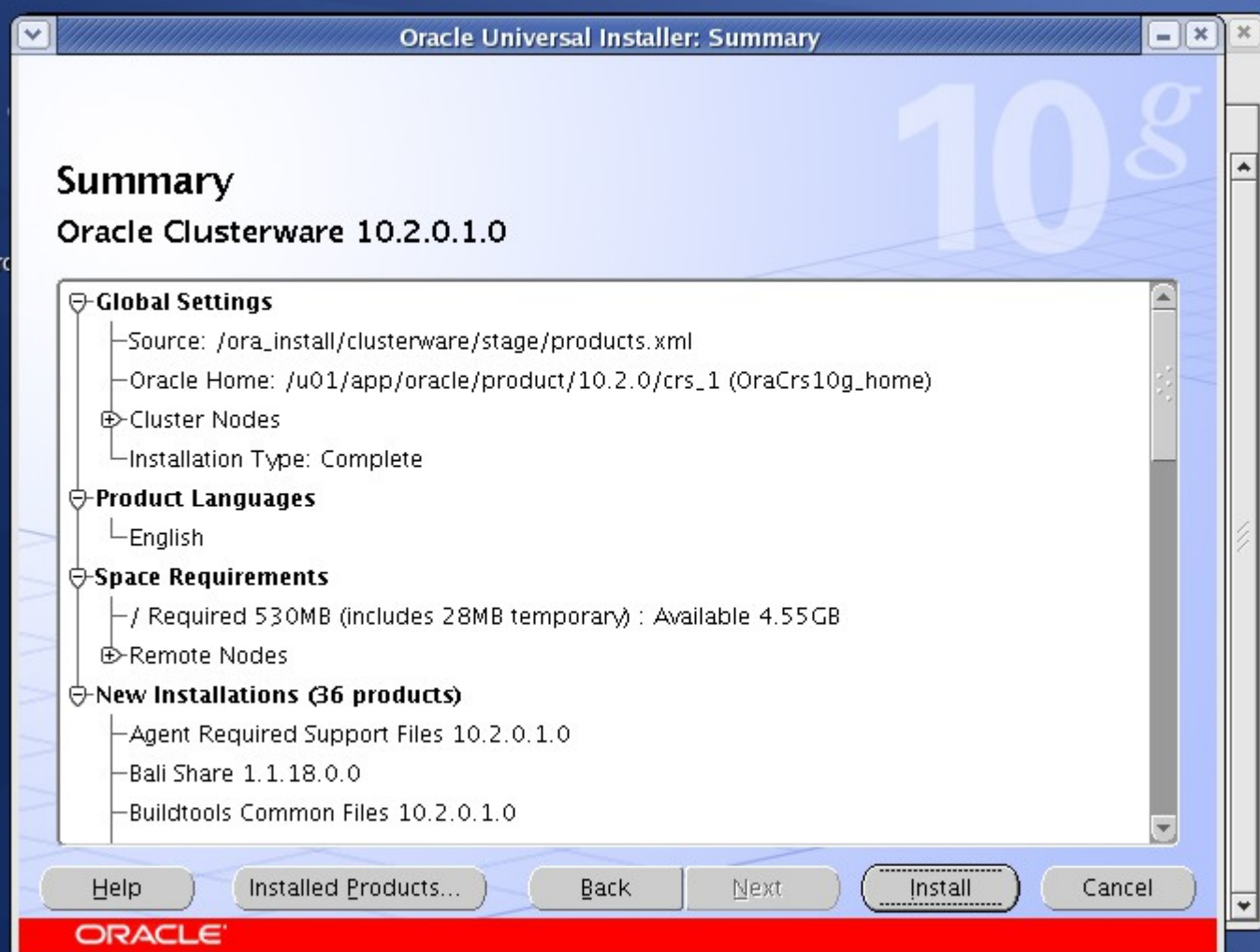
设置网卡，这里我们指定 eth0 为 public 地址。

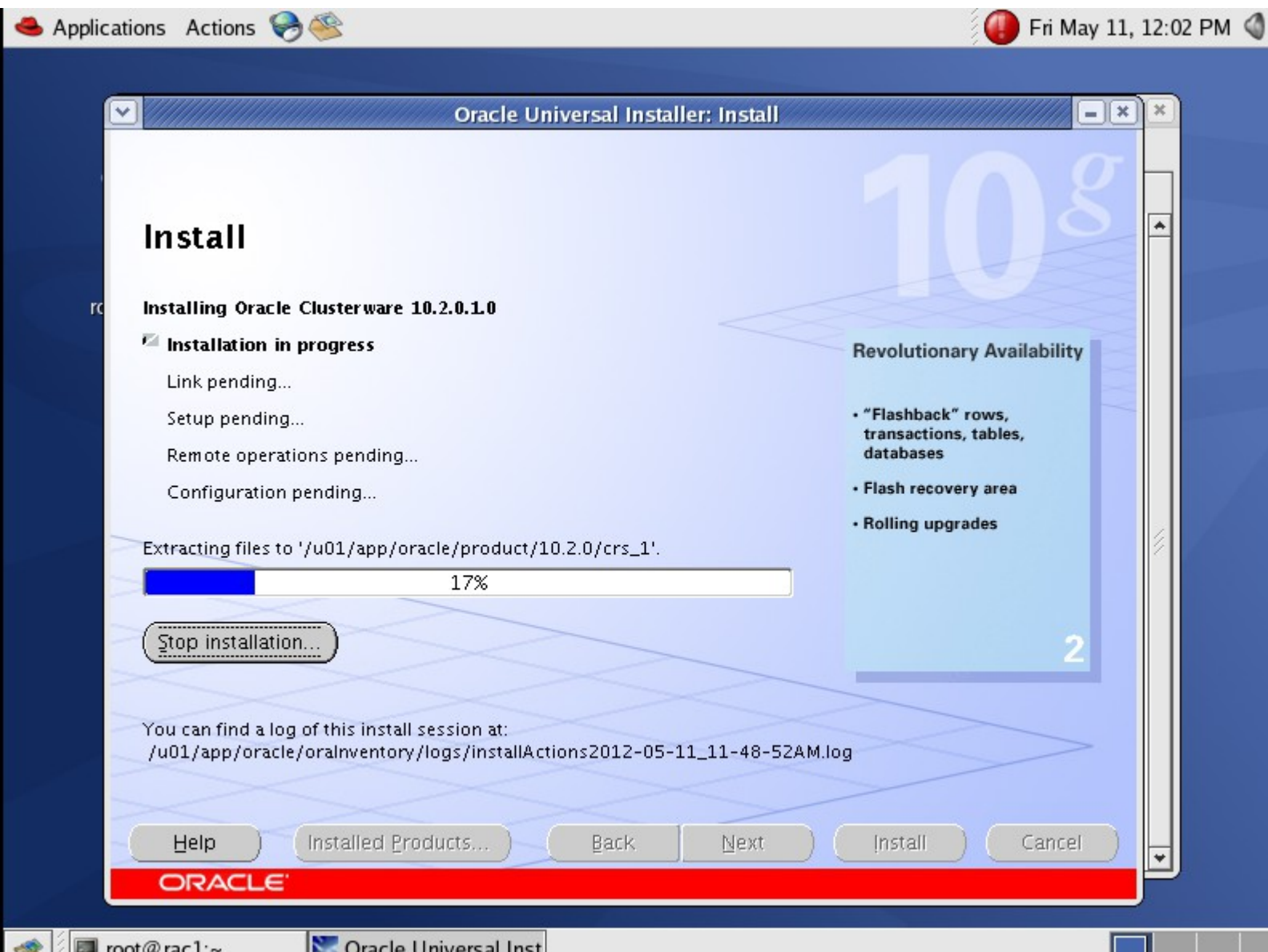


指定 OCR 的存储位置

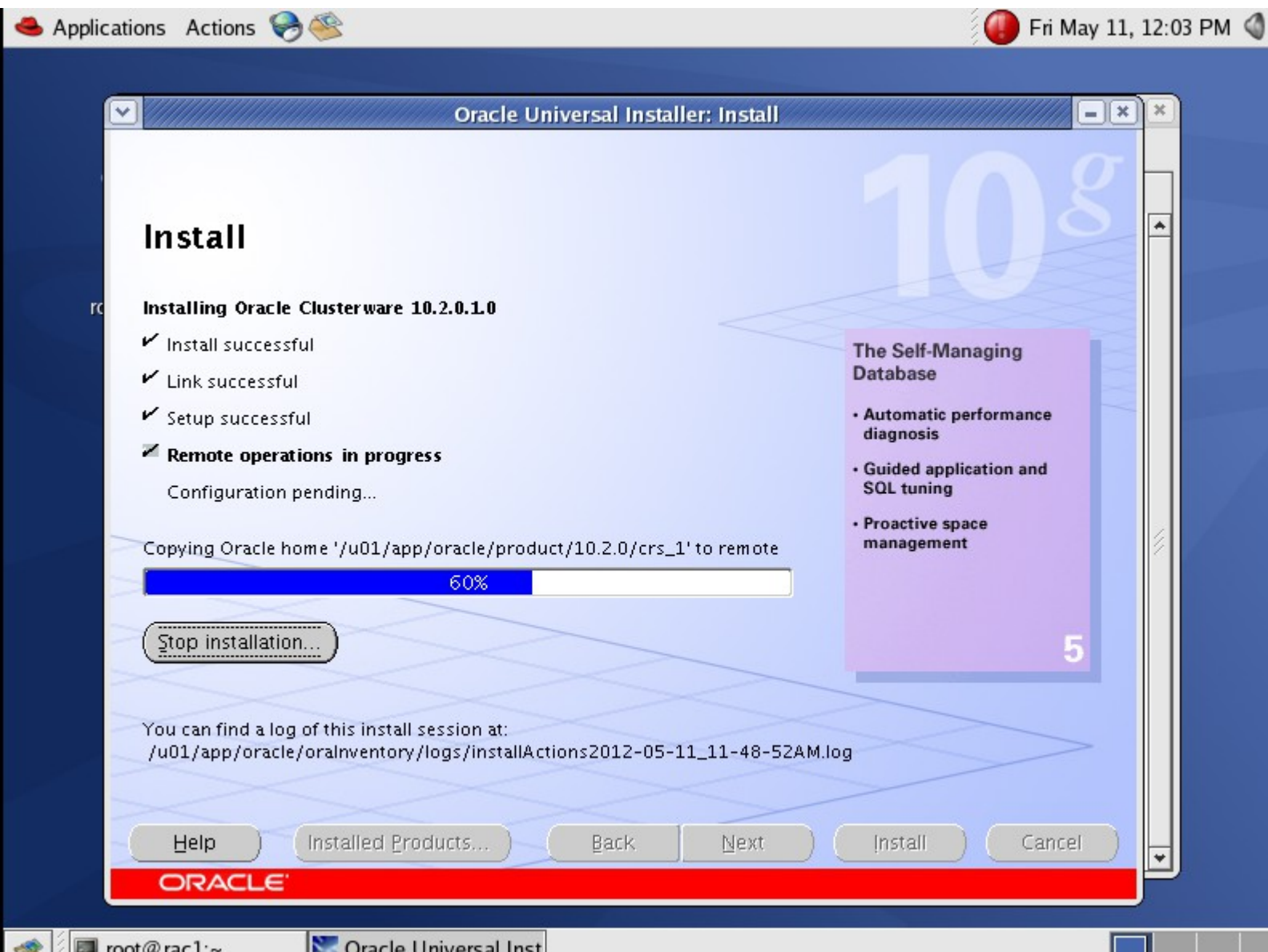
指定 voting disk 的存储位置

综合看一下，没问题点击 Install

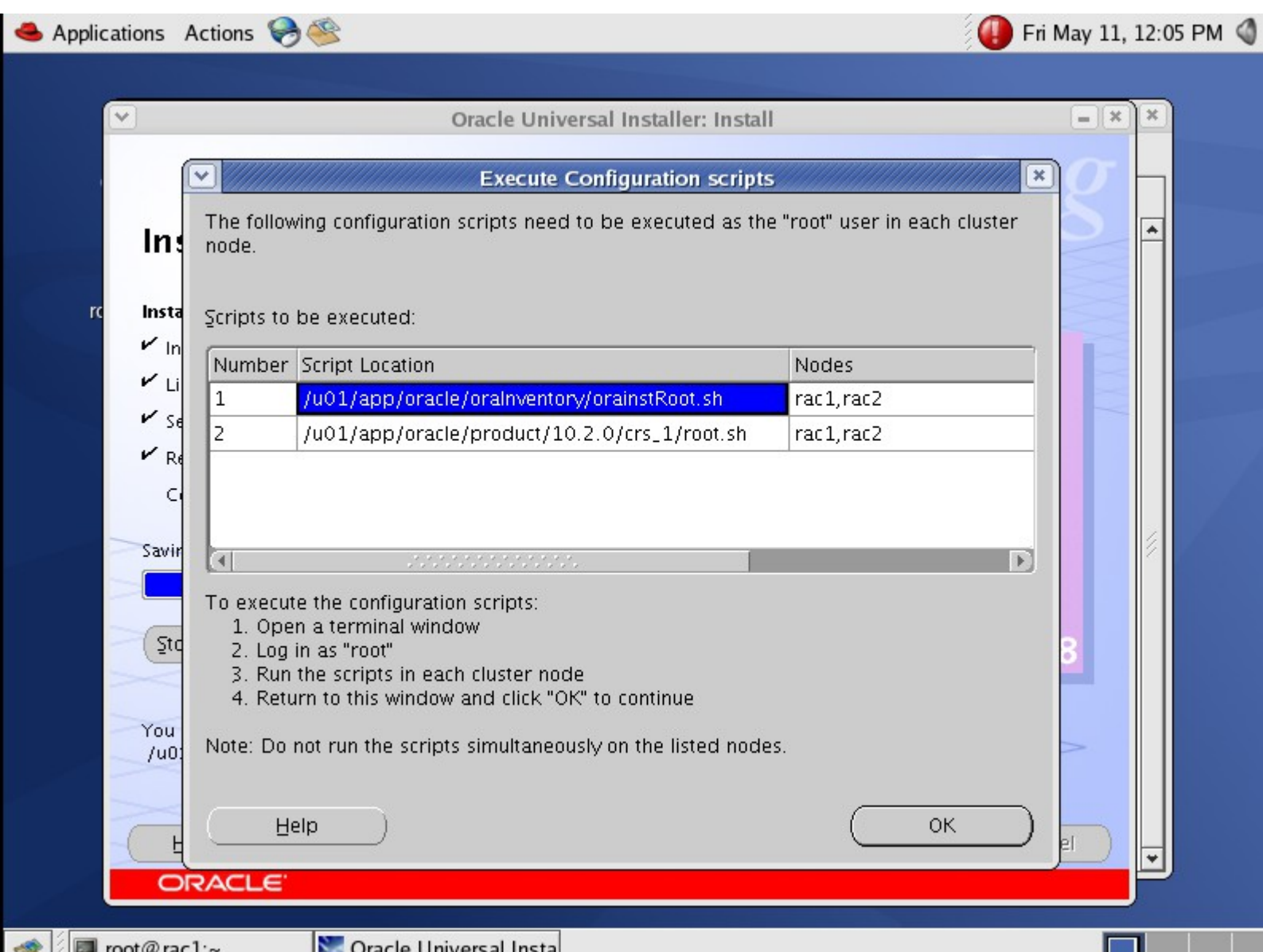




同时也在将文件复制到其它节点



用 root 在几个节点上分别执行所列的两个脚本



按照下列顺序执行

在 rac1 上执行：/u01/app/oracle/orainventory/orainstRoot.sh

在 rac2 上执行：/u01/app/oracle/orainventory/orainstRoot.sh

在 rac1 上执行：/u01/app/oracle/product/10.2.0/crs_1/root.sh

在 rac2 上执行：/u01/app/oracle/product/10.2.0/crs_1/root.sh

```
[root@rac1 ~]# /u01/app/oracle/orainventory/orainstRoot.sh
```

Changing permissions of /u01/app/oracle/orainventory to 770.

Changing groupname of /u01/app/oracle/orainventory to oinstall.

The execution of the script is complete

```
[root@rac2 ~]# /u01/app/oracle/orainventory/orainstRoot.sh
```

Changing permissions of /u01/app/oracle/orainventory to 770.

Changing groupname of /u01/app/oracle/orainventory to oinstall.

The execution of the script is complete

```
[root@rac1 ~]# /u01/app/oracle/product/10.2.0/crs_1/root.sh
```

WARNING: directory '/u01/app/oracle/product/10.2.0' is not owned by root

WARNING: directory '/u01/app/oracle/product' is not owned by root

WARNING: directory '/u01/app/oracle' is not owned by root
WARNING: directory '/u01/app' is not owned by root
WARNING: directory '/u01' is not owned by root
Checking to see if Oracle CRS stack is already configured
/etc/oracle does not exist. Creating it now.

Setting the permissions on OCR backup directory
Setting up NS directories
Oracle Cluster Registry configuration upgraded successfully
WARNING: directory '/u01/app/oracle/product/10.2.0' is not owned by root
WARNING: directory '/u01/app/oracle/product' is not owned by root
WARNING: directory '/u01/app/oracle' is not owned by root
WARNING: directory '/u01/app' is not owned by root
WARNING: directory '/u01' is not owned by root
assigning default hostname rac1 for rac 1.
assigning default hostname rac2 for rac 2.
Successfully accumulated necessary OCR keys.
Using ports: CSS=49895 CRS=49896 EVMC=49898 and EVMR=49897.
rac <racnumber>: <racname> <private interconnect name> <hostname>
rac 1: rac1 rac1_priv rac1
rac 2: rac2 rac2_priv rac2
Creating OCR keys for user 'root', privgrp 'root'..
Operation successful.
Now formatting voting device: /u01/oradata/voting/voting.dbf
Format of 1 voting devices complete.
Startup will be queued to init within 90 seconds.
Adding daemons to inittab
Expecting the CRS daemons to be up within 600 seconds.
CSS is active on these racs.
 rac1
CSS is inactive on these racs.
 rac2
Local rac checking complete.
Run root.sh on remaining racs to start CRS daemons.
[root@rac2 ~]# /u01/app/oracle/product/10.2.0/crs_1/root.sh
WARNING: directory '/u01/app/oracle/product/10.2.0' is not owned by root
WARNING: directory '/u01/app/oracle/product' is not owned by root
WARNING: directory '/u01/app/oracle' is not owned by root
WARNING: directory '/u01/app' is not owned by root
WARNING: directory '/u01' is not owned by root
Checking to see if Oracle CRS stack is already configured
/etc/oracle does not exist. Creating it now.

Setting the permissions on OCR backup directory

Setting up NS directories

Oracle Cluster Registry configuration upgraded successfully

WARNING: directory '/u01/app/oracle/product/10.2.0' is not owned by root

WARNING: directory '/u01/app/oracle/product' is not owned by root

WARNING: directory '/u01/app/oracle' is not owned by root

WARNING: directory '/u01/app' is not owned by root

WARNING: directory '/u01' is not owned by root

clscfg: EXISTING configuration version 3 detected.

clscfg: version 3 is 10G Release 2.

assigning default hostname rac1 for rac 1.

assigning default hostname rac2 for rac 2.

Successfully accumulated necessary OCR keys.

Using ports: CSS=49895 CRS=49896 EVMC=49898 and EVMR=49897.

rac <racnumber>: <racname> <private interconnect name> <hostname>

rac 1: rac1 rac1_priv rac1

rac 2: rac2 rac2_priv rac2

clscfg: Arguments check out successfully.

NO KEYS WERE WRITTEN. Supply -force parameter to override.

-force is destructive and will destroy any previous cluster configuration.

Oracle Cluster Registry for cluster has already been initialized

Startup will be queued to init within 90 seconds.

Adding daemons to inittab

Expecting the CRS daemons to be up within 600 seconds.

CSS is active on these racs.

rac1

rac2

CSS is active on all racs.

Waiting for the Oracle CRSD and EVMD to start

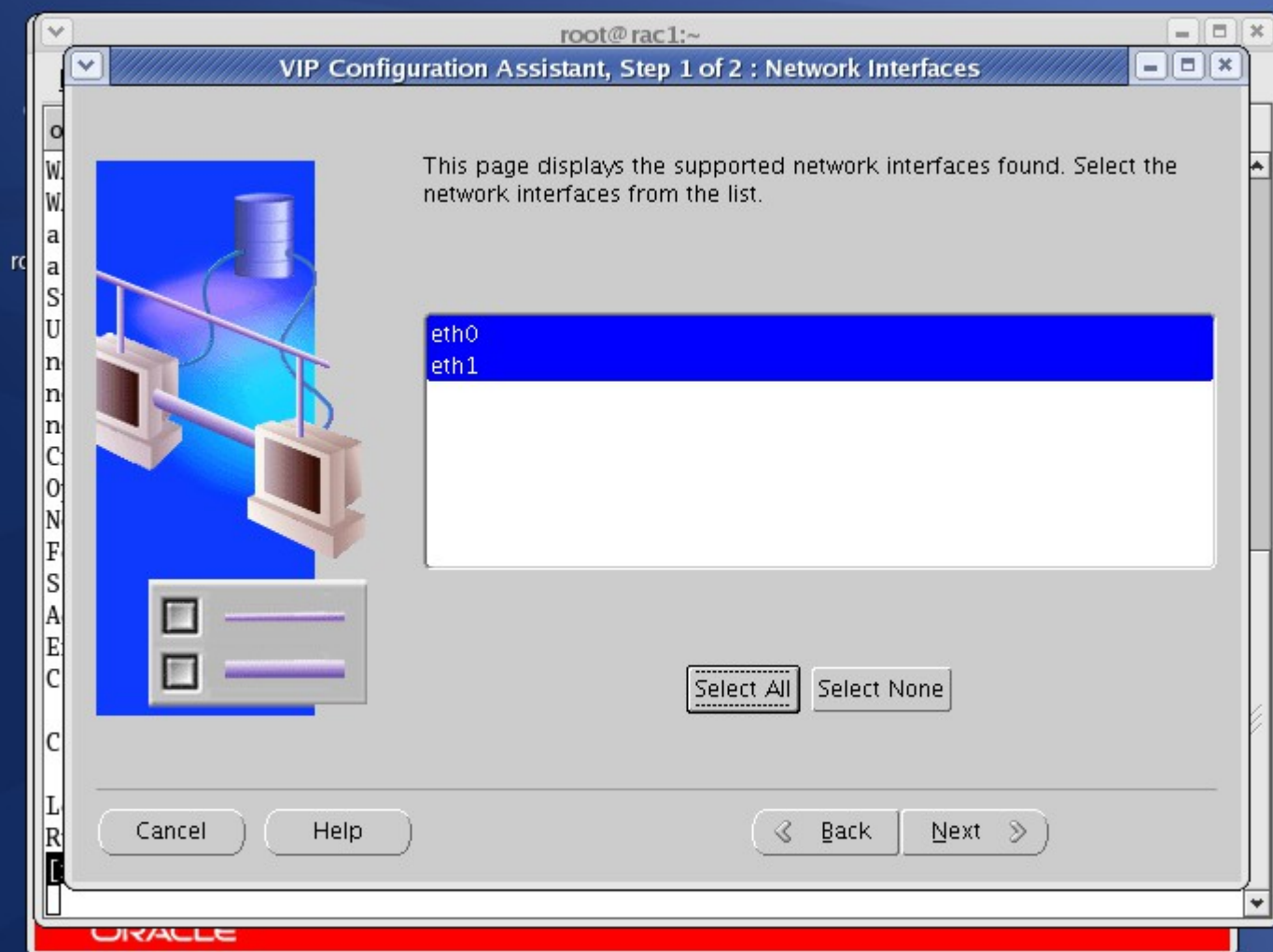
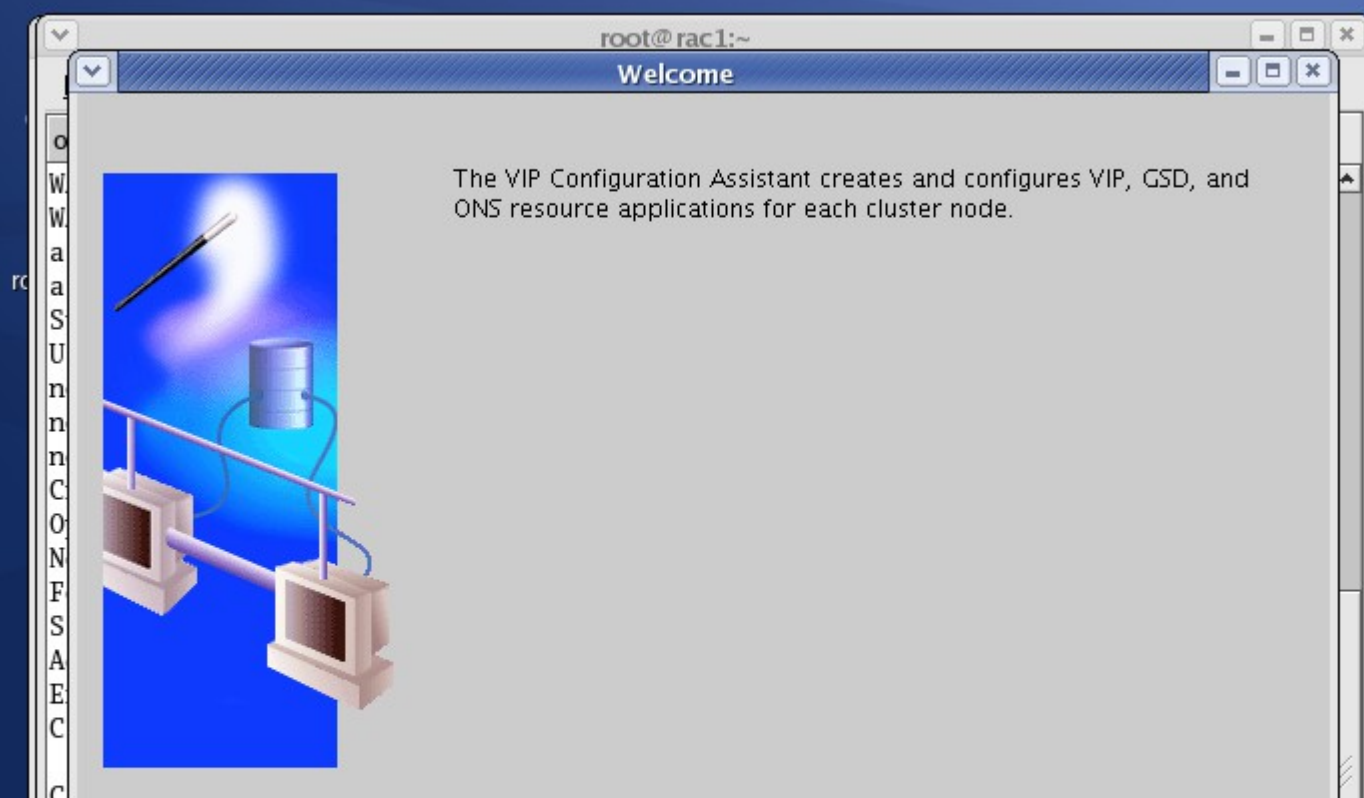
Oracle CRS stack installed and running under init(1M)

Running vipca(silent) for configuring racapps

The given interface(s), "eth0" is not public. Public interfaces should be used to configure virtual IPs.

在第二个节点执行 VIPCA

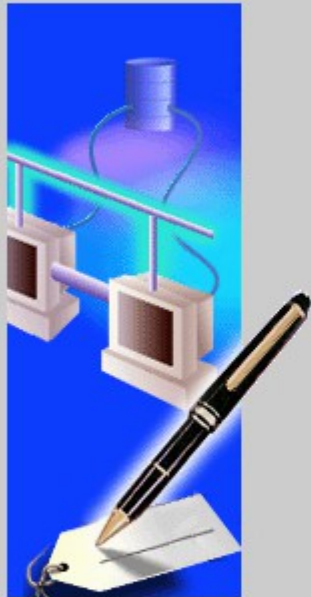
[root@rac2 ~]# vipca



root@rac1:~

VIP Configuration Assistant, Step 2 of 2 : Virtual IPs for cluster nodes

IP addresses are required for defining virtual IP resource application for each cluster node.

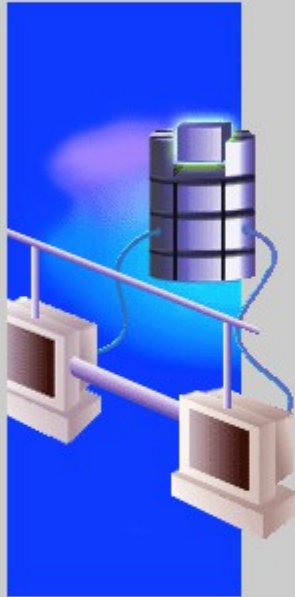


Node name	IP Alias Name	IP address	Subnet Mask
rac1	rac1_vip	192.168.0.121	255.255.255.0
rac2	rac2_vip	192.168.0.123	255.255.255.0

Clear Clear all

root@rac1:~

Summary



Summary

The VIP Configuration Assistant will now create application resources for each selected node.

Nodes: rac1,rac2

Network Interfaces: eth0,eth1

Mapping of nodes and virtual IP addresses:

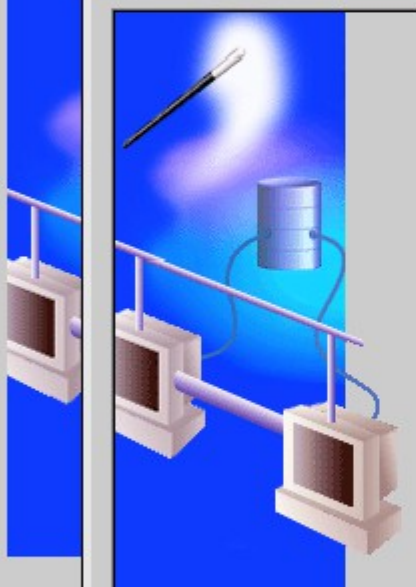
Node name	IP Alias Name	IP address	Subnet Mask
rac1	rac1_vip	192.168.0.121	255.255.255.0
rac2	rac2_vip	192.168.0.123	255.255.255.0

Cancel Help Back Next Finish

root@rac1:~

Summary

Configuration Assistant Progress Dialog



- ✓ Creating VIP application resource on (2) nodes
- ✓ Creating GSD application resource on (2) nodes
- ✓ Creating ONS application resource on (2) nodes

Starting VIP application resource on (2) nodes
Starting GSD application resource on (2) nodes
Starting ONS application resource on (2) nodes
VIP Configuration Assistant Progress

30%

Stop

Configuration Results

Configuration Results

The VIP Configuration Assistant has successfully created resource applications for each cluster node.

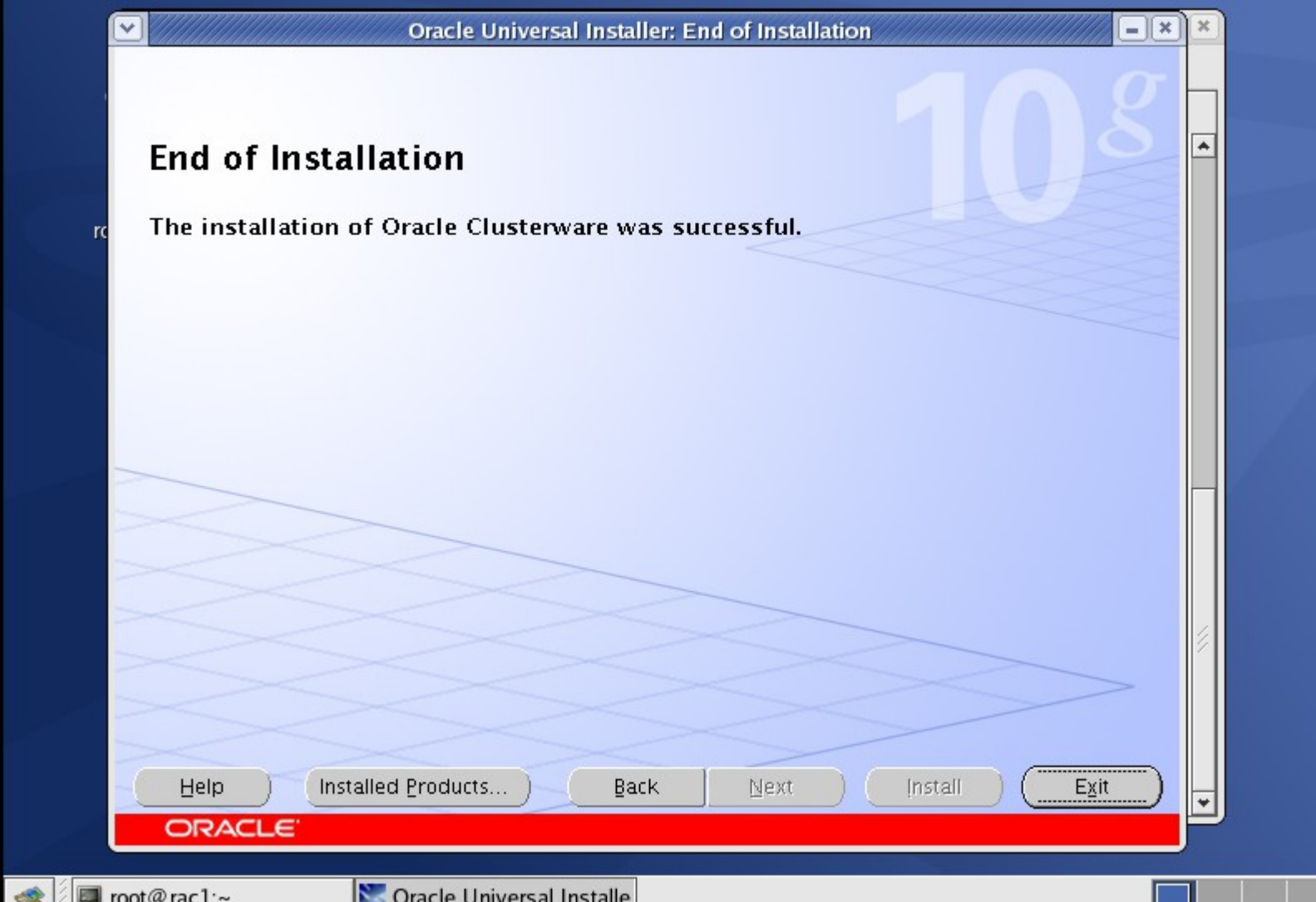
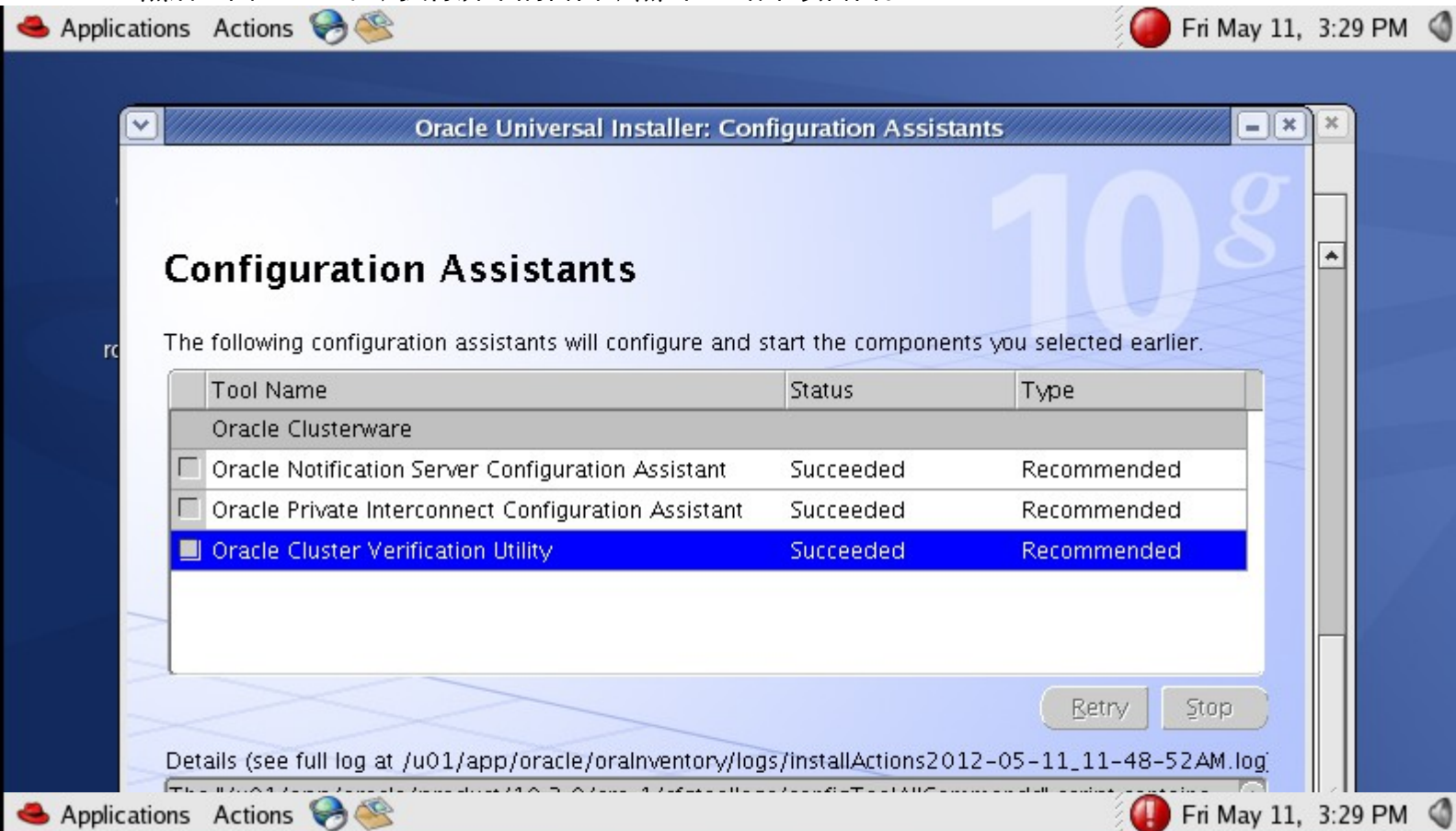
Nodes: rac1,rac2

Network Interfaces: eth0,eth1

Mapping of nodes and virtual IP addresses:

Node name	IP Alias Name	IP address	Subnet Mask
rac1	rac1_vip	192.168.0.121	255.255.255.0
rac2	rac2_vip	192.168.0.123	255.255.255.0

然后返回 RAC1 中，执行脚本的窗口，点击 ok 结束该窗口。

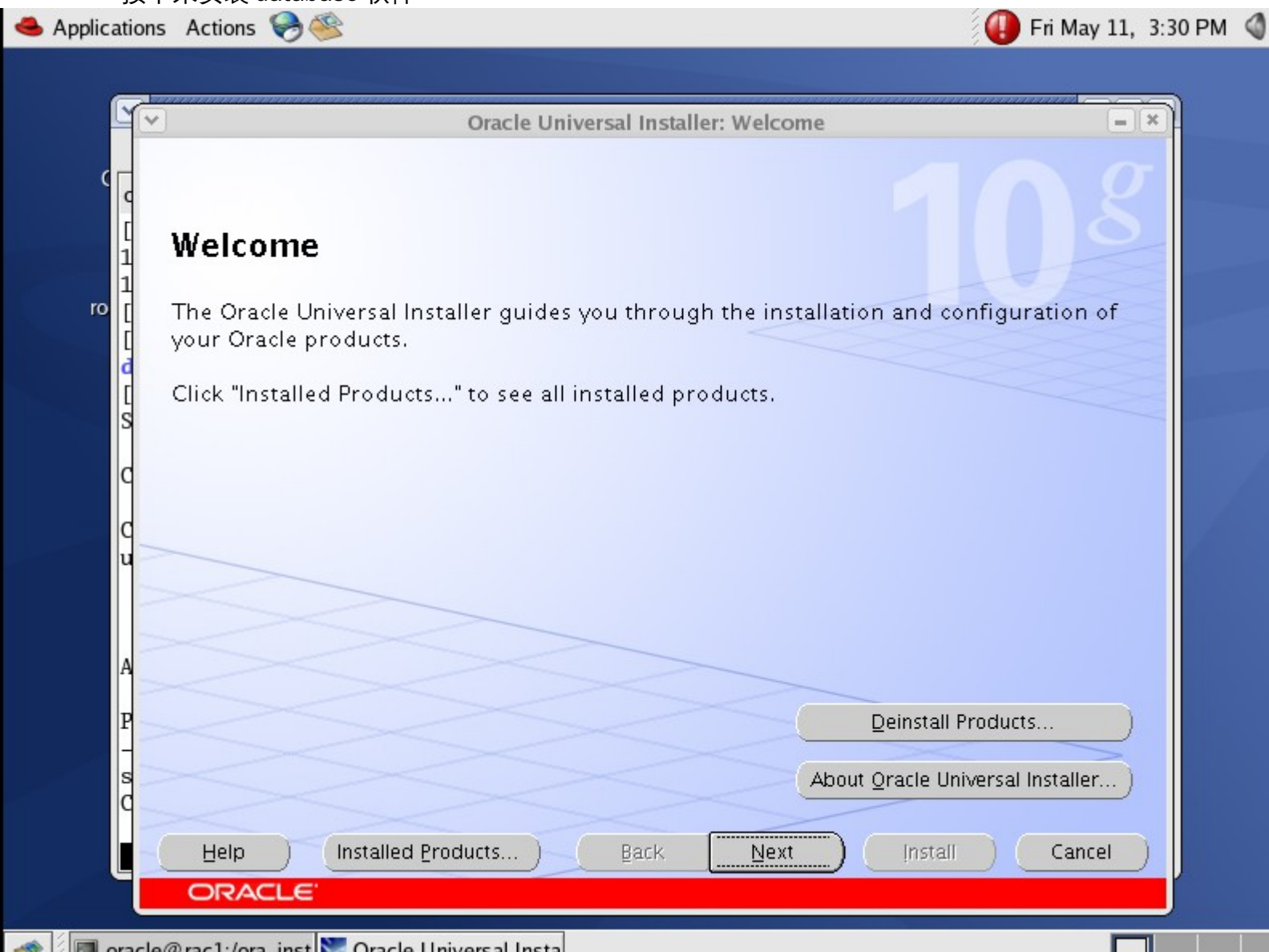


检查：

```
[root@rac1 ~]# crs_stat -t
```

Name	Type	Target	State	Host
ora.rac1.gsd	application	ONLINE	ONLINE	rac1
ora.rac1.ons	application	ONLINE	ONLINE	rac1
ora.rac1.vip	application	ONLINE	ONLINE	rac1
ora.rac2.gsd	application	ONLINE	ONLINE	rac2
ora.rac2.ons	application	ONLINE	ONLINE	rac2
ora.rac2.vip	application	ONLINE	ONLINE	rac2

接下来安装 database 软件



选择企业版



选择目录

Oracle Universal Installer: Specify Home Details

Specify Home Details

Destination

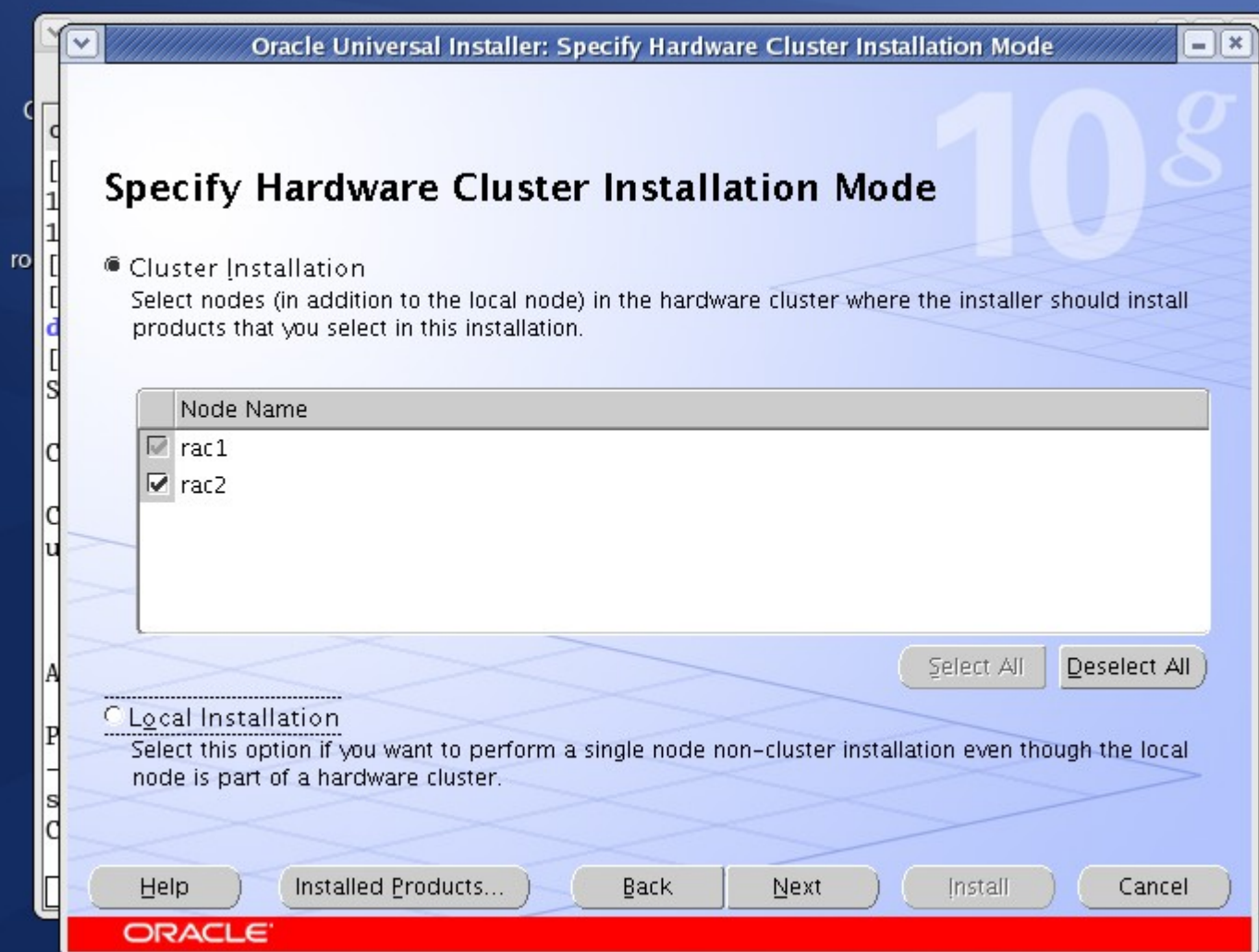
Enter or select a name for the installation and the full path where you want to install the product.

Name:

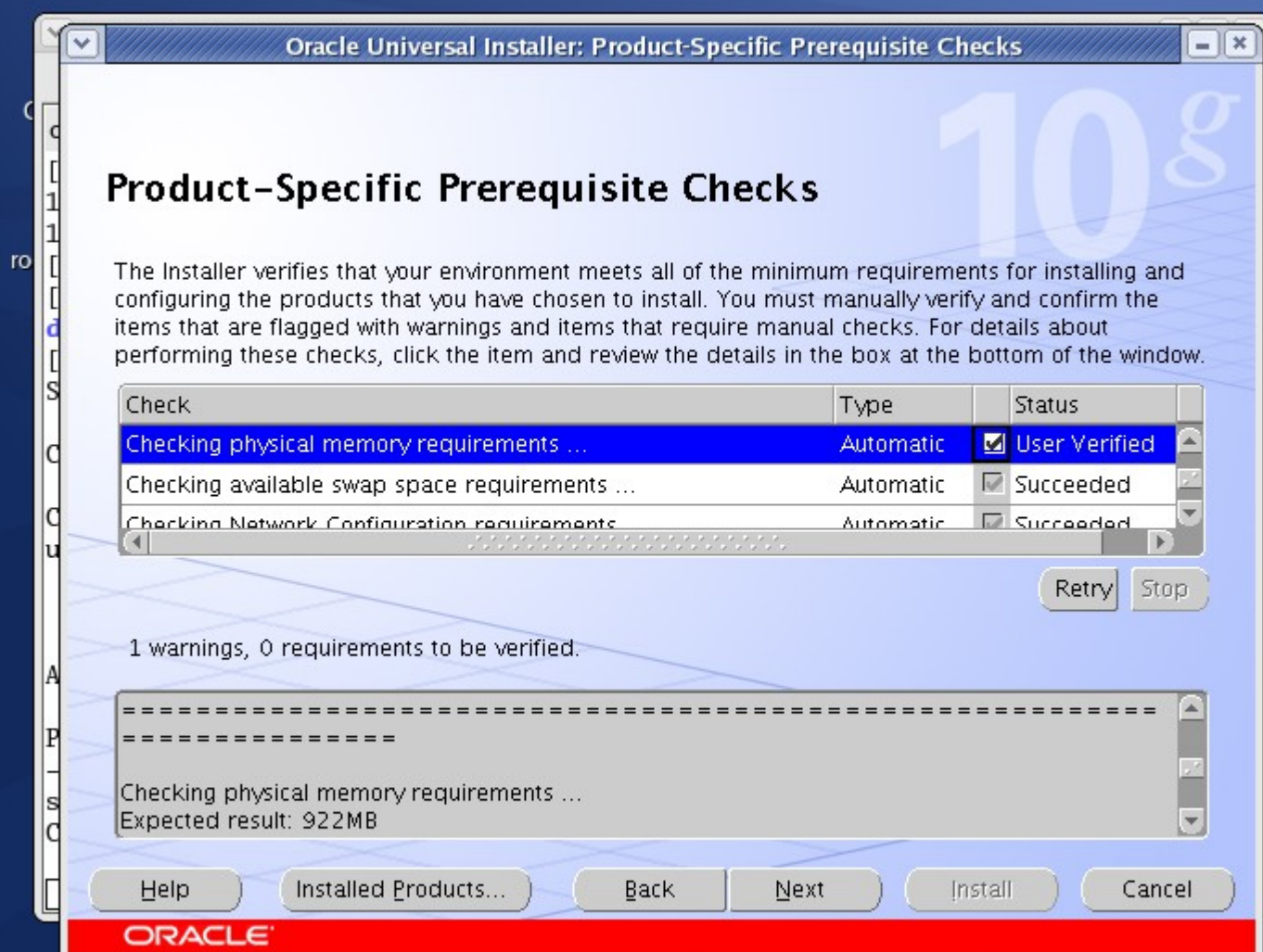
Path:

ORACLE

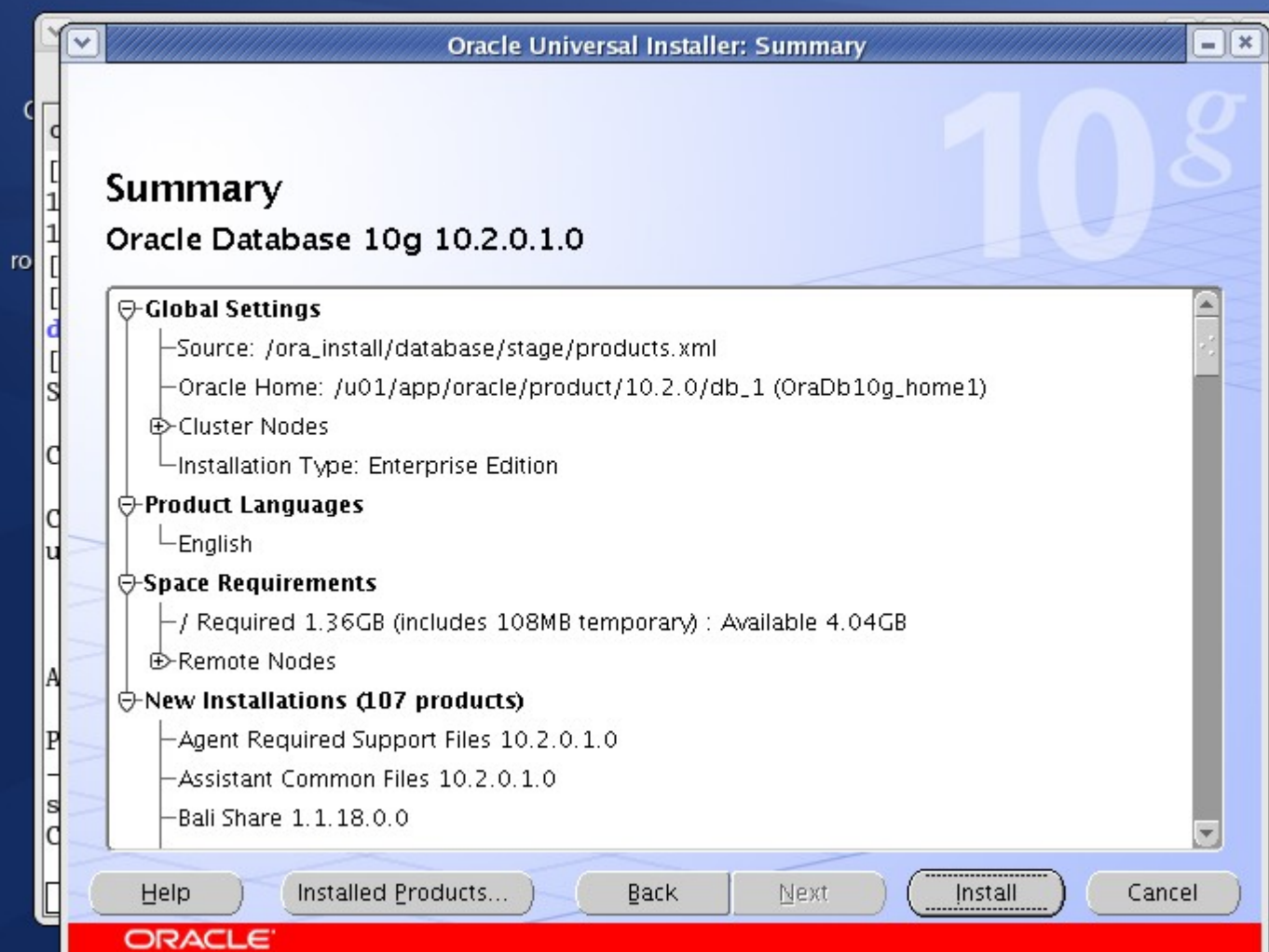
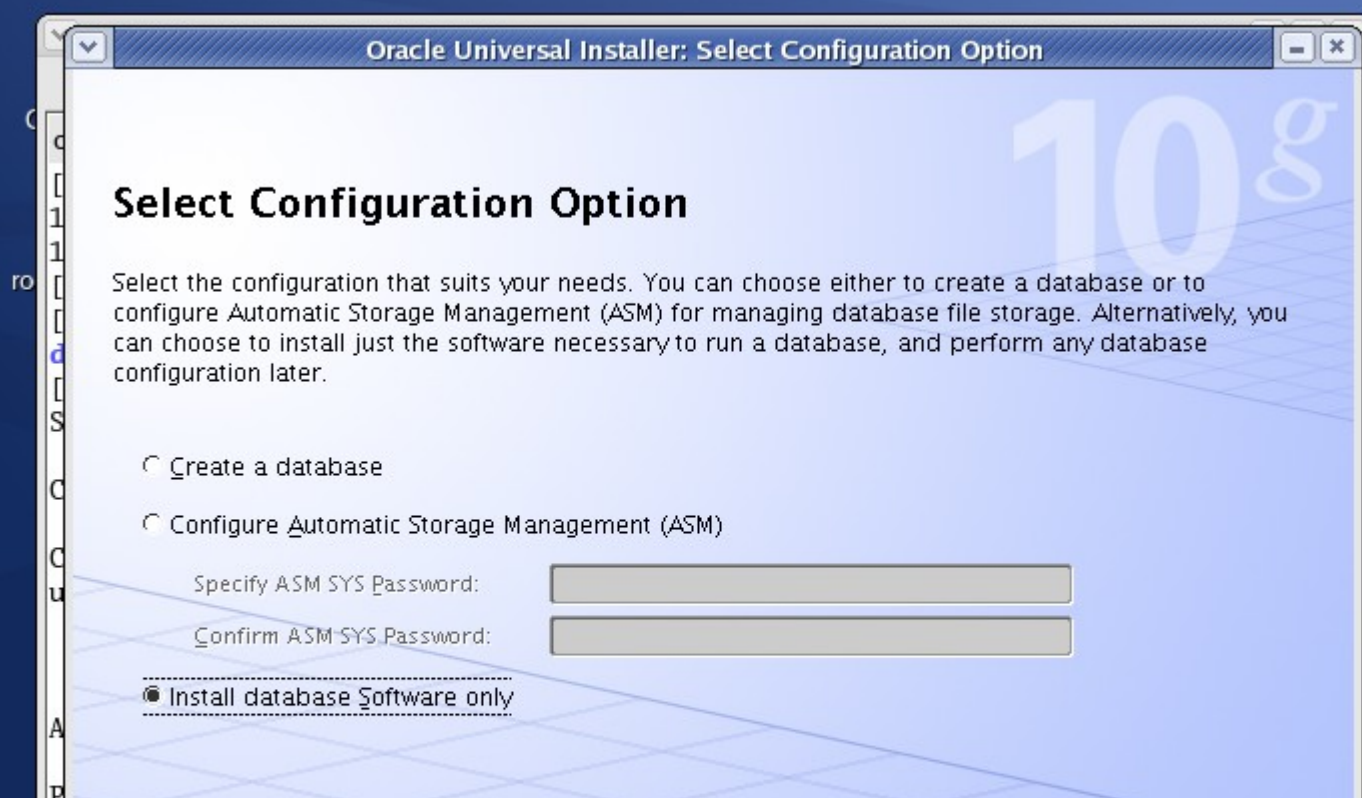
选择节点：



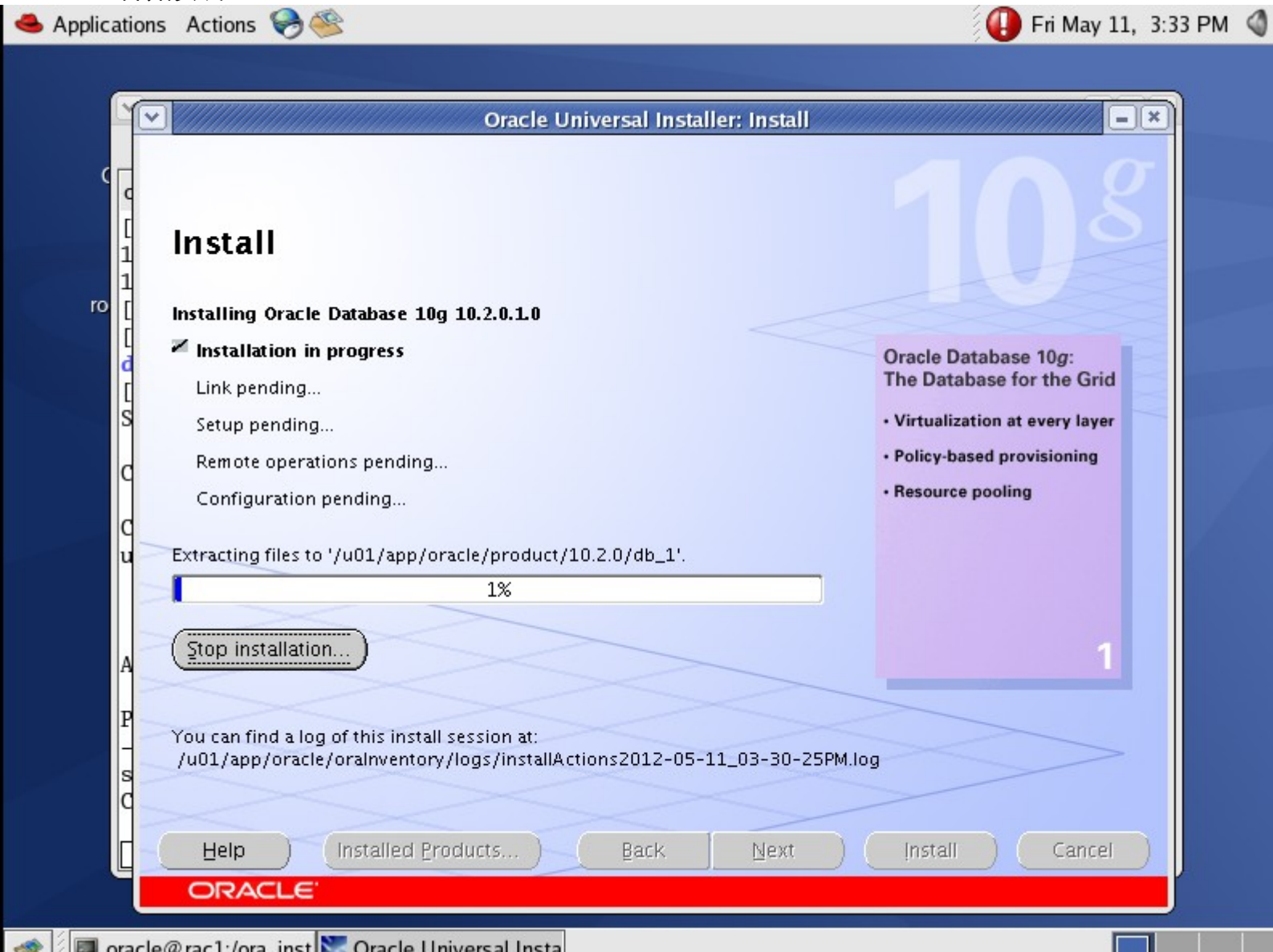
环境检查：



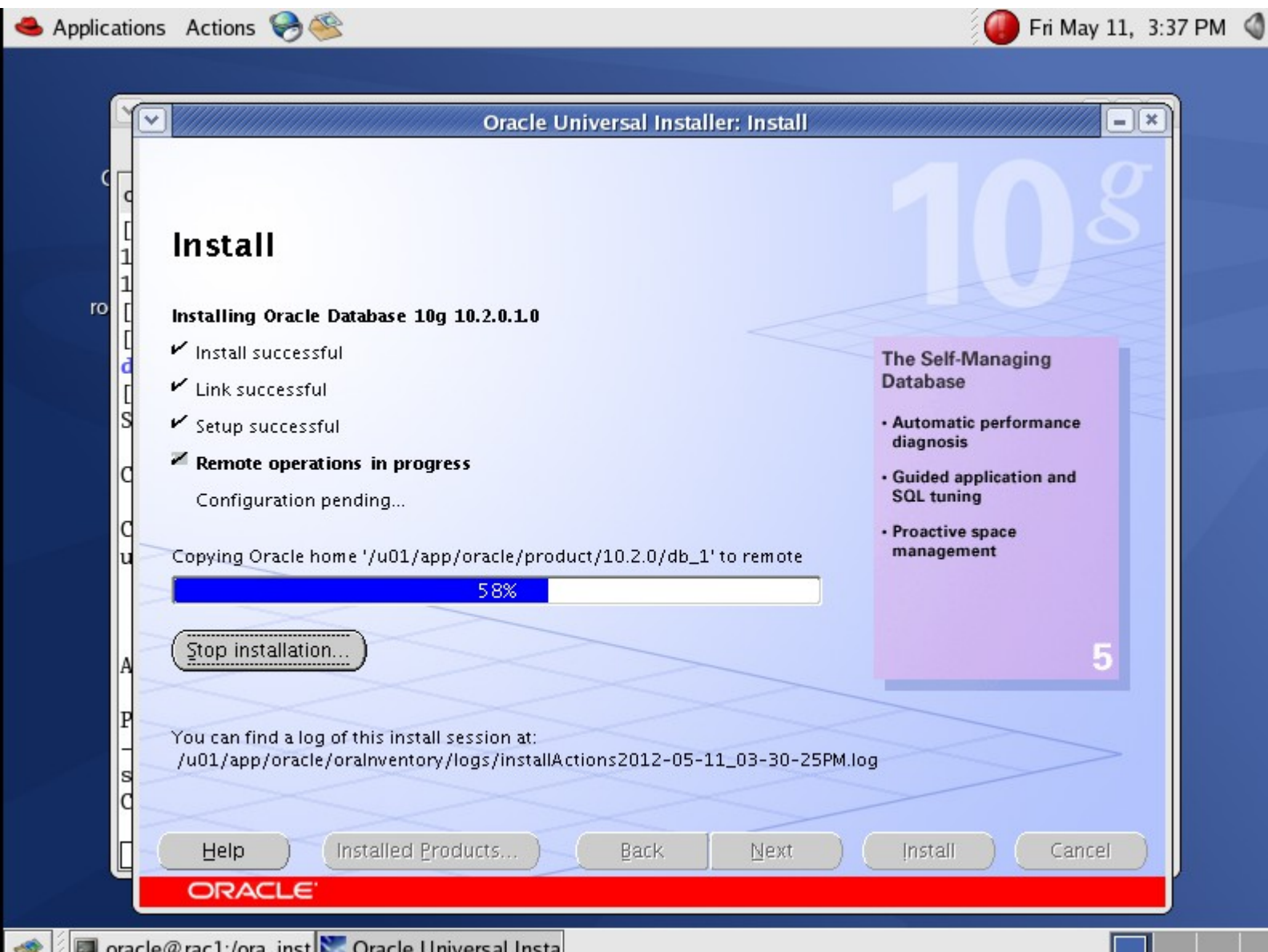
选择只安装软件：



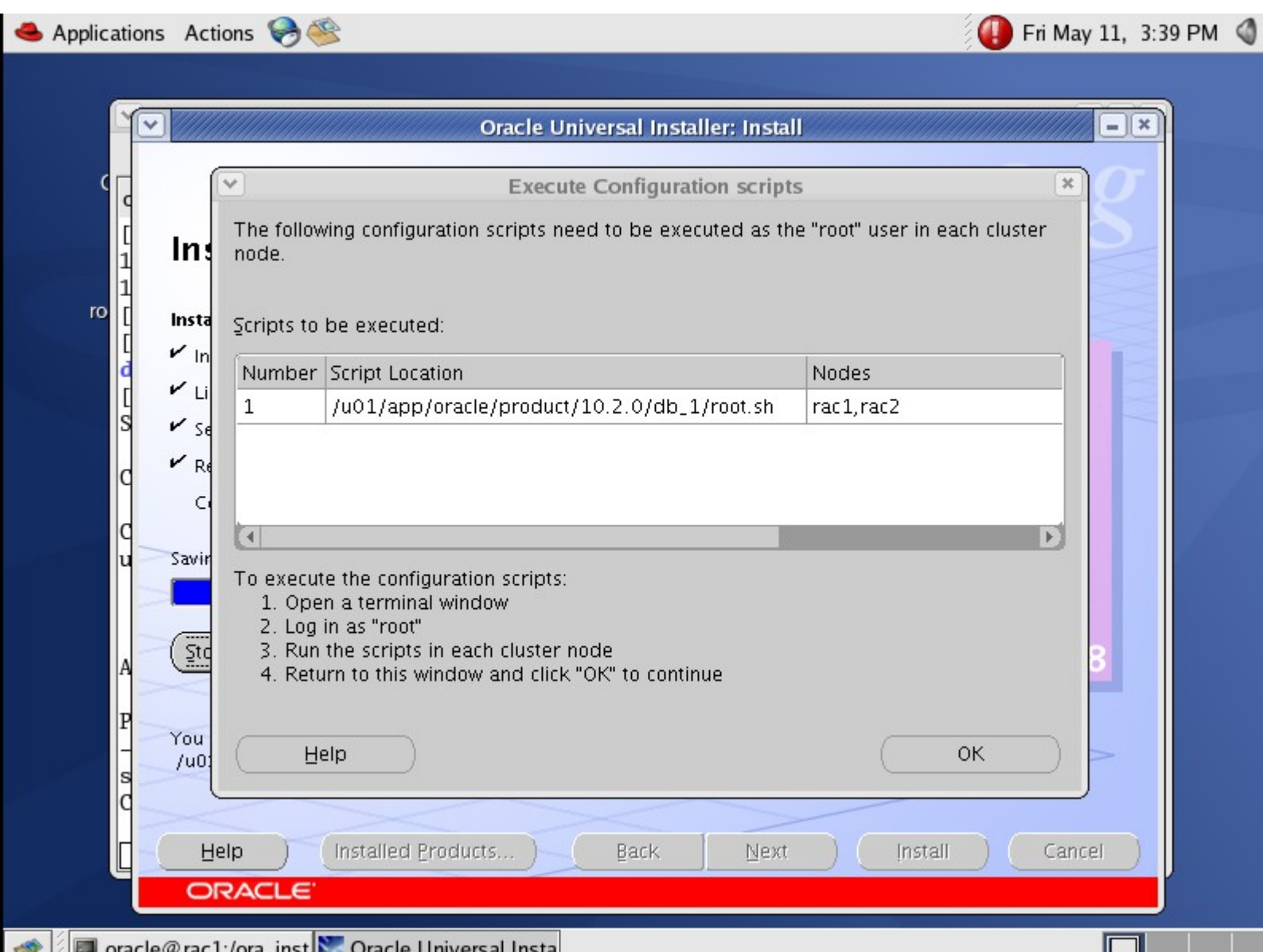
开始安装：



安装完一个节点，将文件传送到另一个节点：



安装完成，在两个节点上都执行 root.sh



```
[root@rac1 ~]# /u01/app/oracle/product/10.2.0/db_1/root.sh
Running Oracle10 root.sh script...
```

The following environment variables are set as:

```
ORACLE_OWNER= oracle
```

```
ORACLE_HOME= /u01/app/oracle/product/10.2.0/db_1
```

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

The file "dbhome" already exists in /usr/local/bin. Overwrite it? (y/n)

```
[n]: y
```

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

The file "oraenv" already exists in /usr/local/bin. Overwrite it? (y/n)

```
[n]: y
```

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

The file "coraenv" already exists in /usr/local/bin. Overwrite it? (y/n)

```
[n]: y
```


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.sh script.
Now product-specific root actions will be performed.

```
[root@rac2 ~]# /u01/app/oracle/product/10.2.0/db_1/root.sh
```

Running Oracle10 root.sh script...

The following environment variables are set as:

ORACLE_OWNER= oracle

ORACLE_HOME= /u01/app/oracle/product/10.2.0/db_1

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

The file "dbhome" already exists in /usr/local/bin. Overwrite it? (y/n)

[n]: y

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

The file "oraenv" already exists in /usr/local/bin. Overwrite it? (y/n)

[n]: y

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

The file "coraenv" already exists in /usr/local/bin. Overwrite it? (y/n)

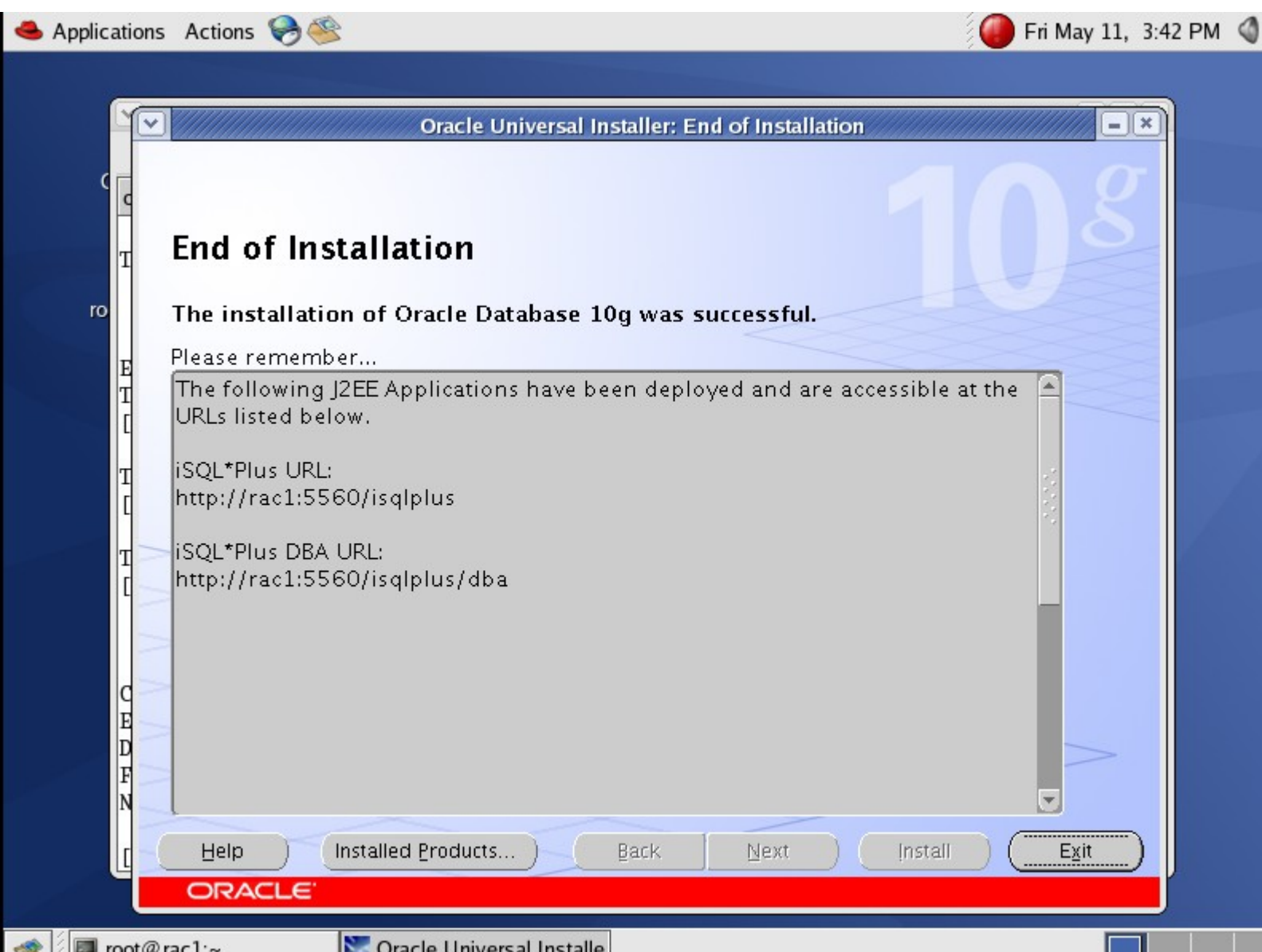
[n]: y

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.sh script.
Now product-specific root actions will be performed.

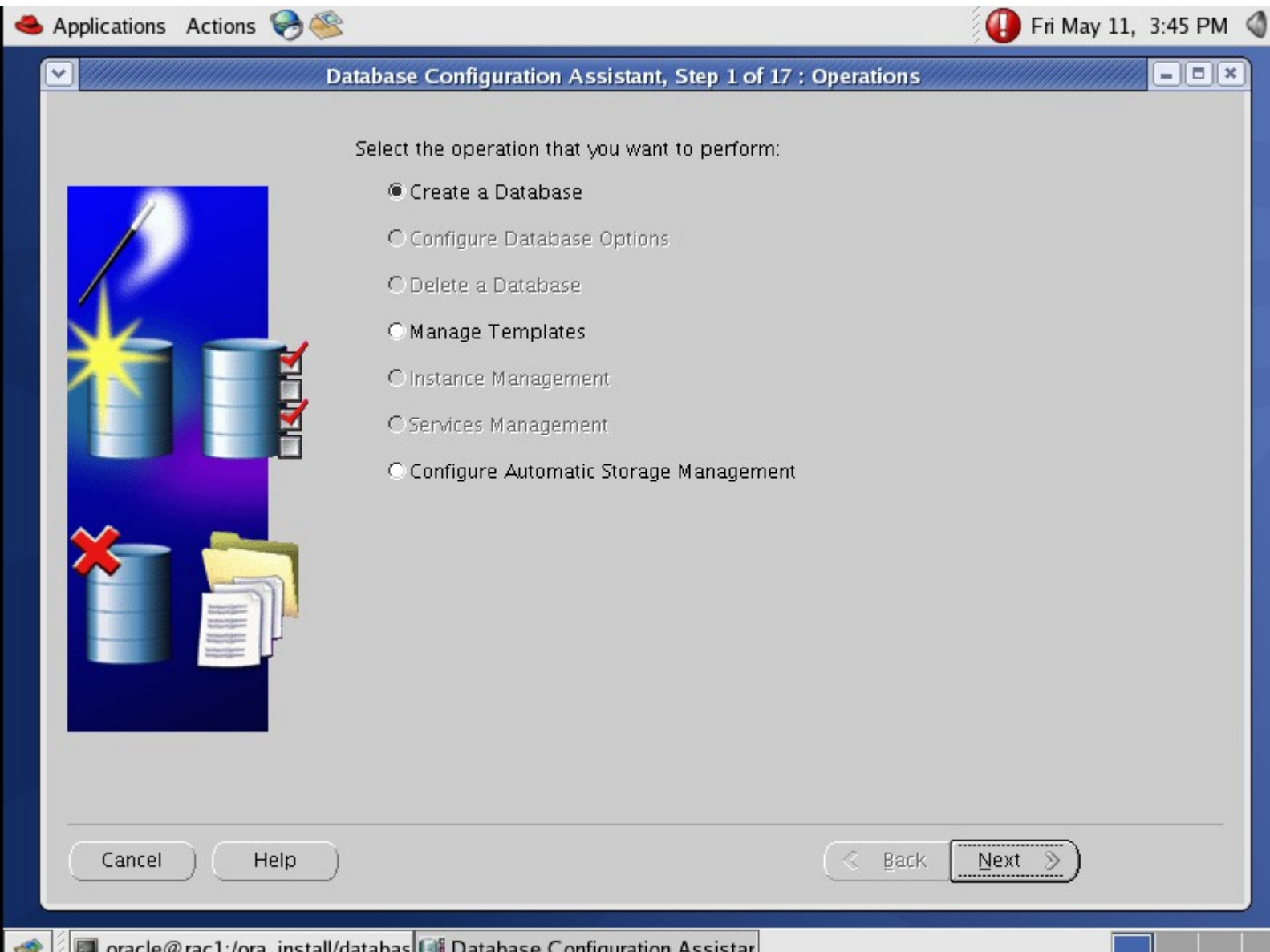
执行完了，点 OK



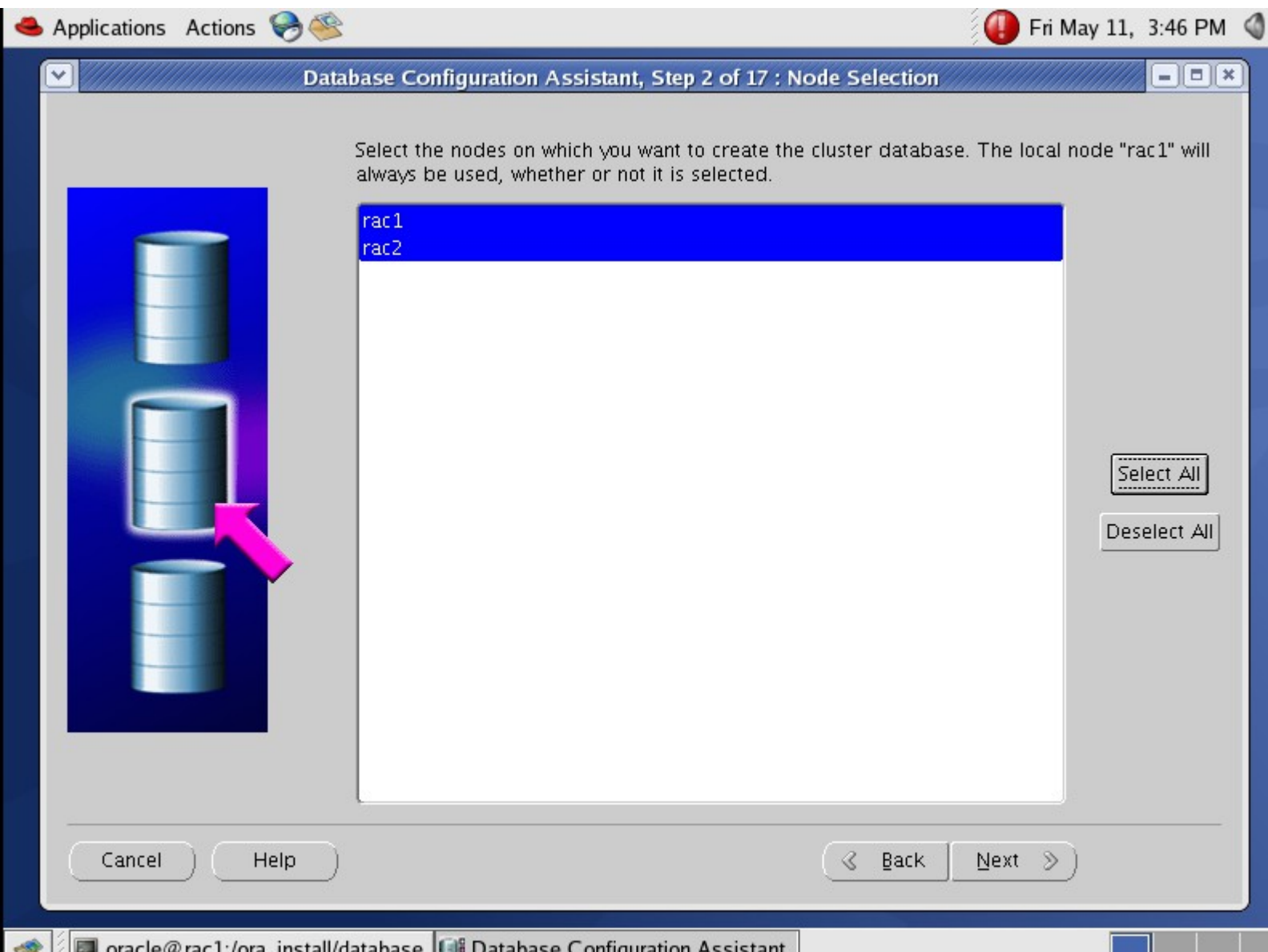
DBCA 建库，选择 RAC



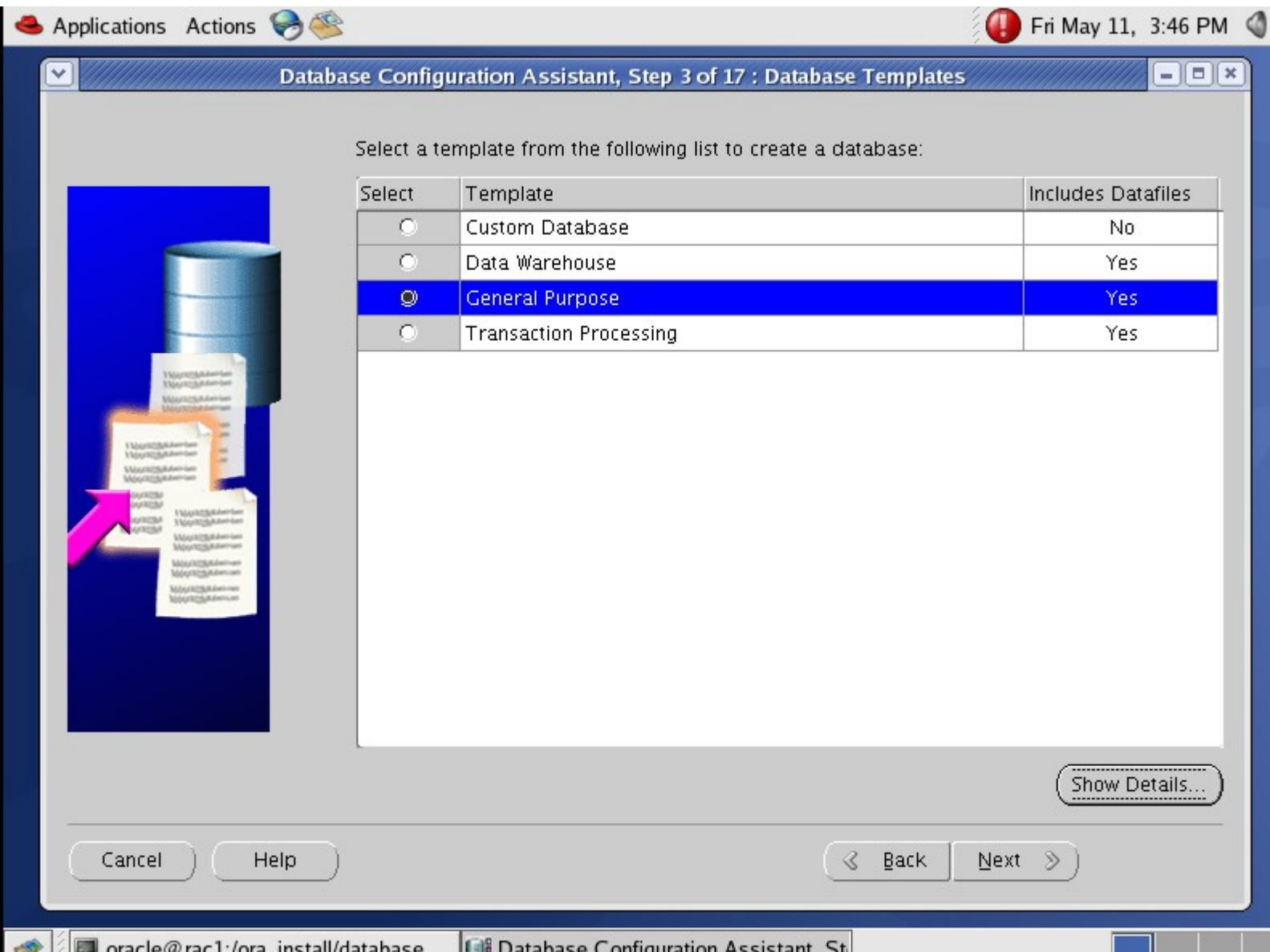
创建数据库：



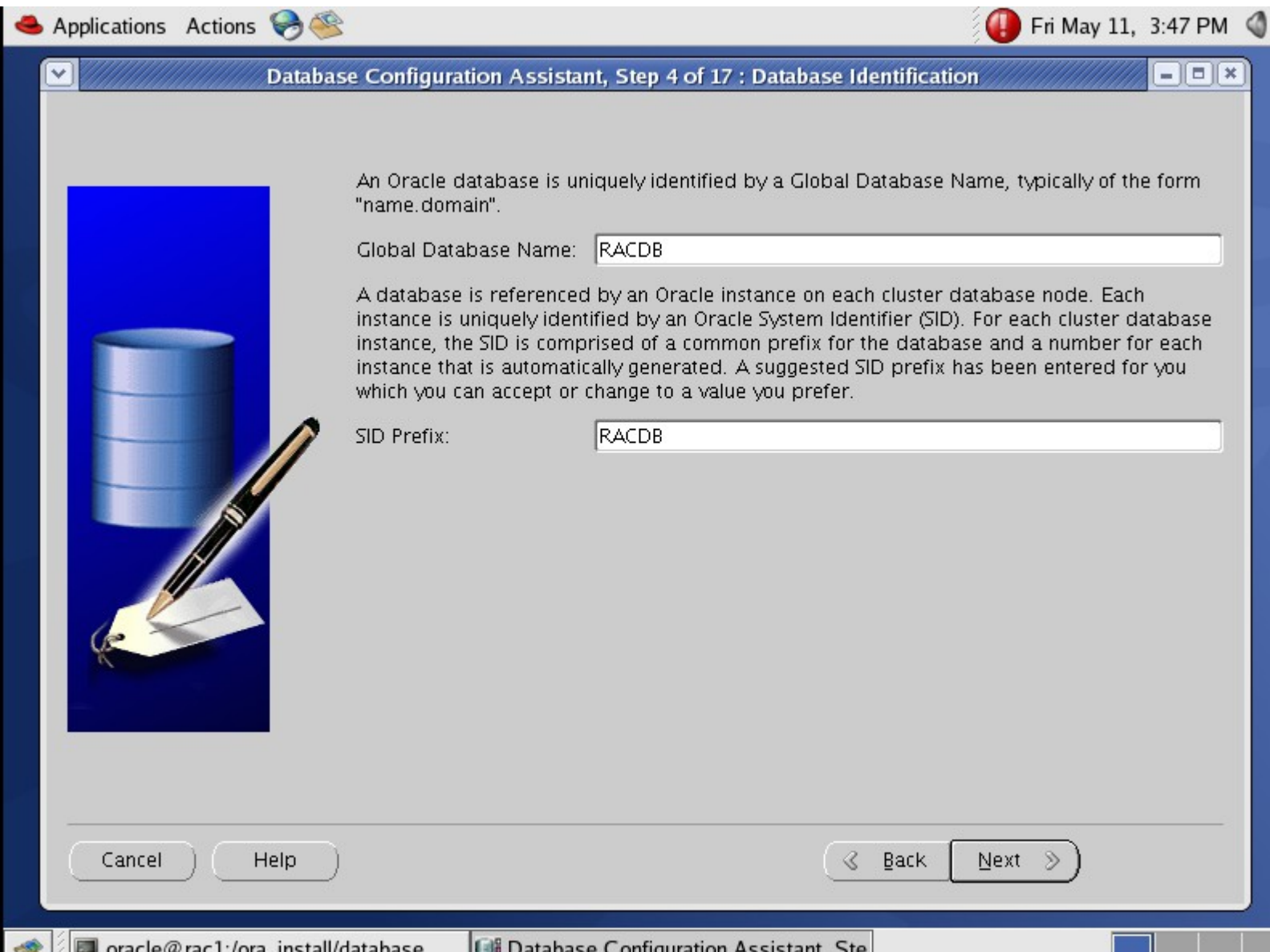
选择两个节点：



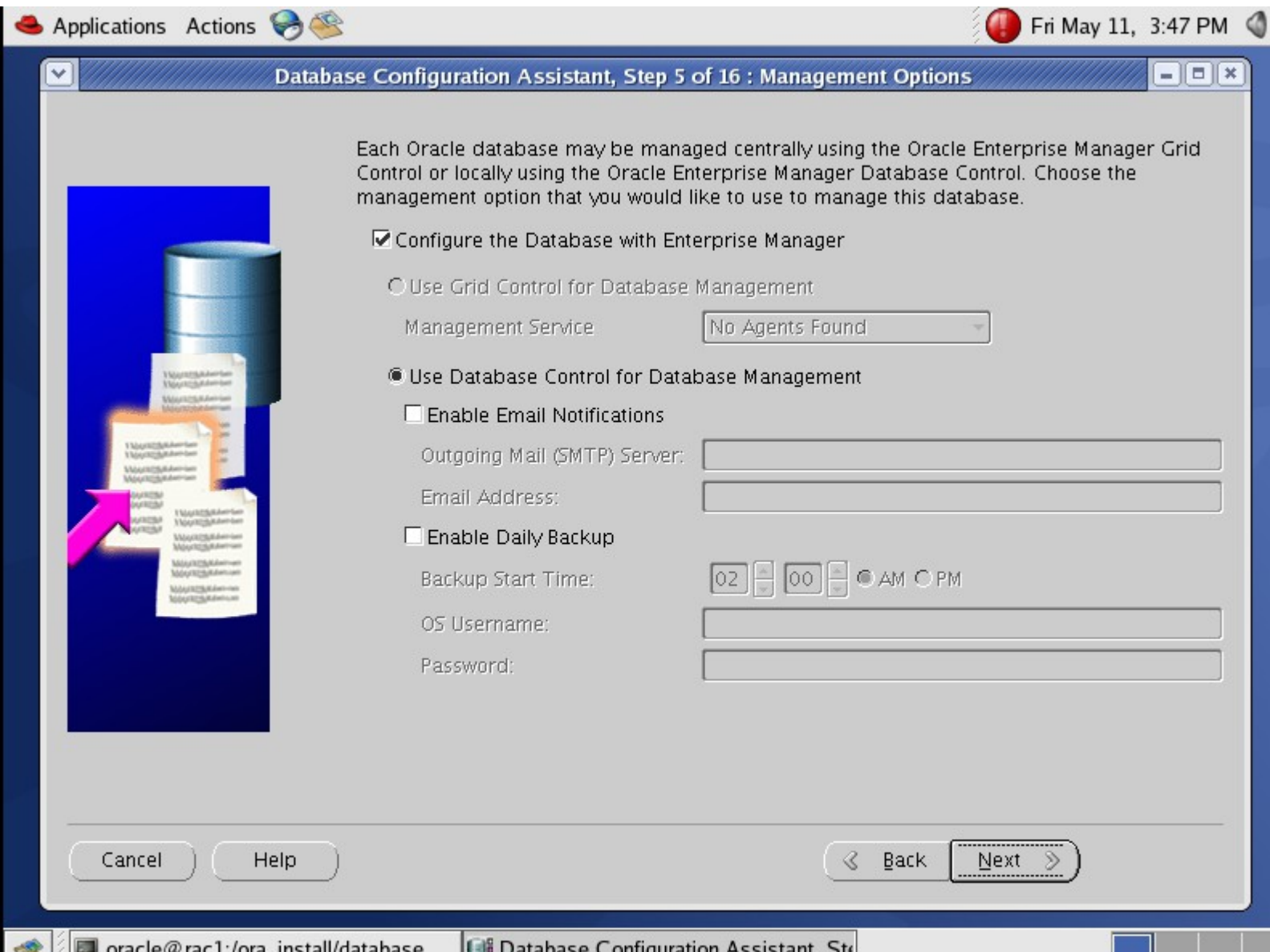
选择一般目的：



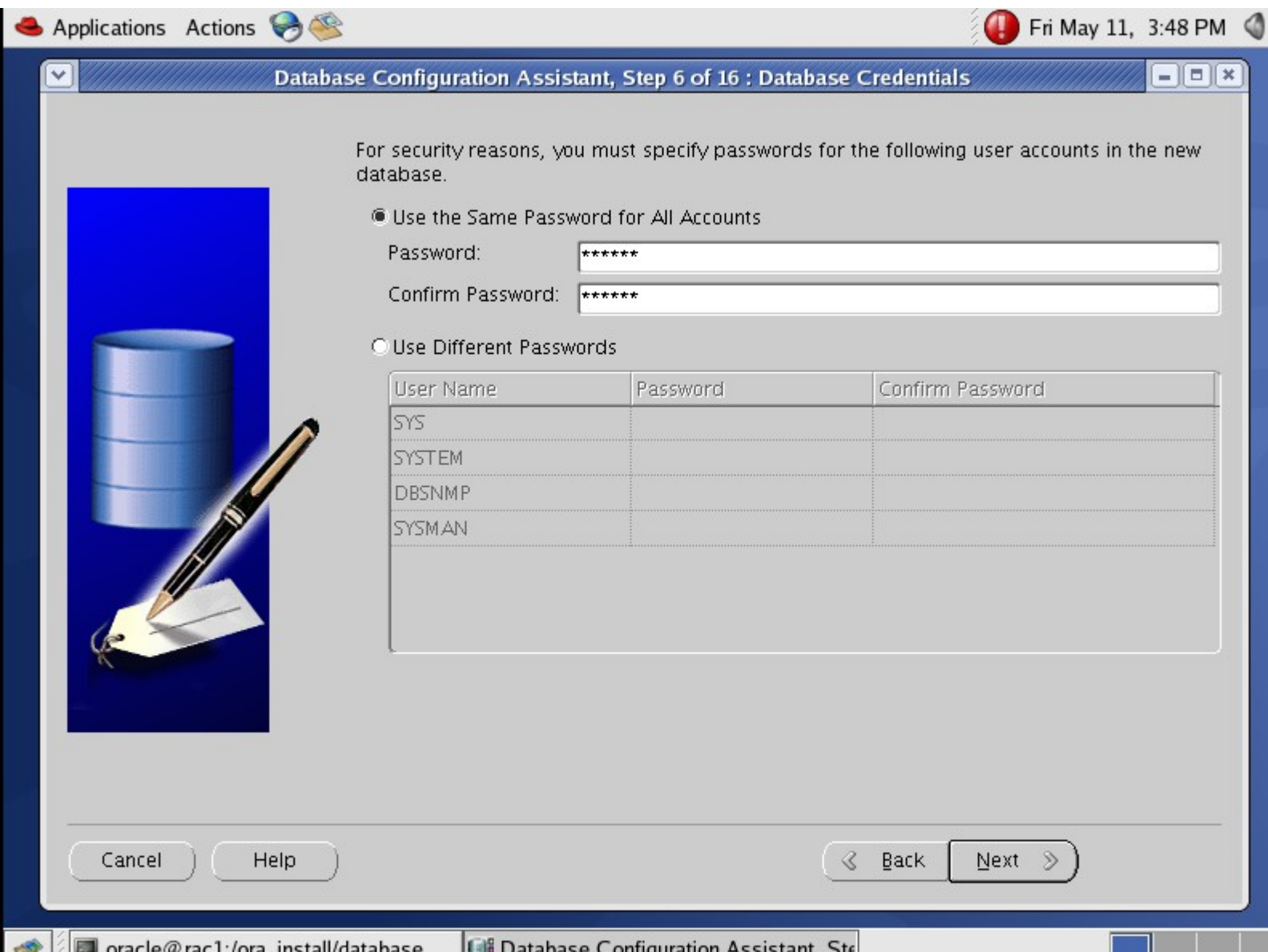
输入数据库名：



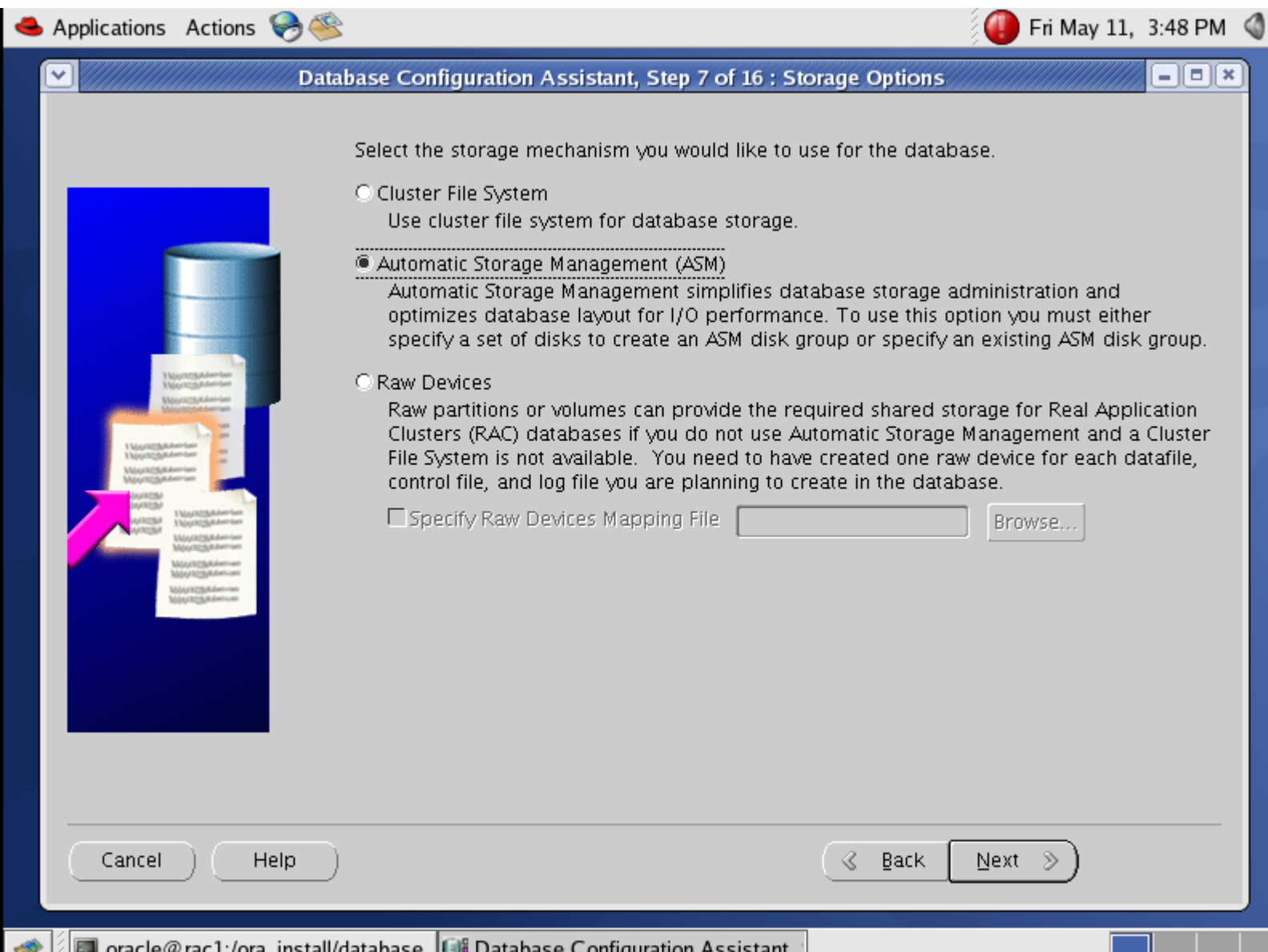
选择 EM



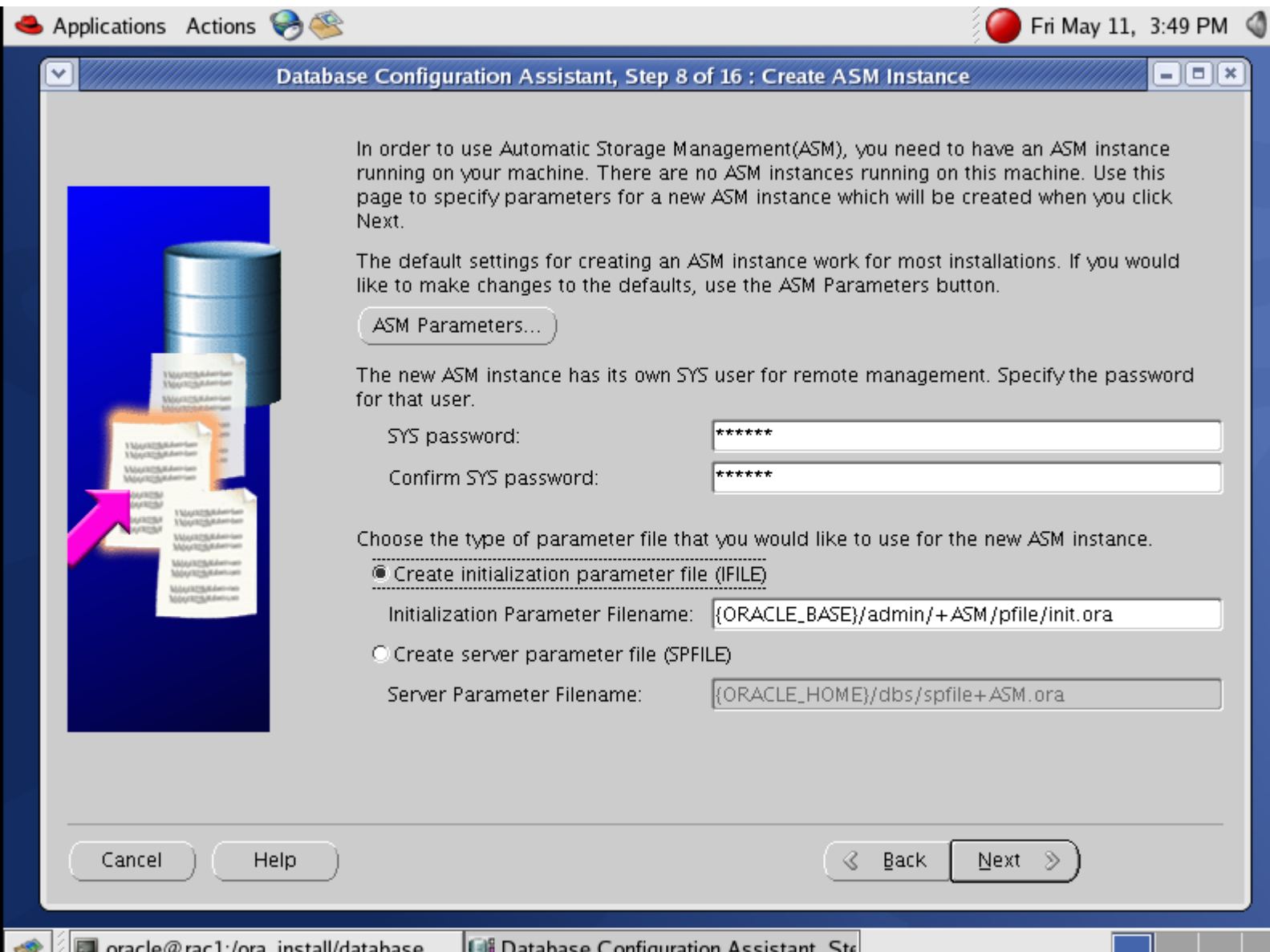
输入密码：



选择 ASM :



输入 ASM 实例的密码和 PFile 文件的位置：



创建 DISK GROUP :

Create Disk Group

Disk Group Name:

Redundancy

☐ High ☐ Normal ☒ External

Select Member Disks

☐ Show Candidates ☒ Show All

<input type="checkbox"/>	Disk Path	Header Status	ASM Name	Size (MB)	Force
<input checked="" type="checkbox"/>	/dev/raw/raw3	MEMBER		3067	<input checked="" type="checkbox"/>
<input type="checkbox"/>	/dev/raw/raw4	MEMBER		3067	<input type="checkbox"/>

Note: If you don't see disks which you believe should be available, you may need to change the disk discovery path.

Create Disk Group

Disk Group Name:

Redundancy

☐ High ☐ Normal ☒ External

Select Member Disks

☐ Show Candidates ☒ Show All

<input type="checkbox"/>	Disk Path	Header Status	ASM Name	Size (MB)	Force
<input type="checkbox"/>	/dev/raw/raw3	MEMBER	DATA_0000	3067	<input type="checkbox"/>
<input checked="" type="checkbox"/>	/dev/raw/raw4	MEMBER		3067	<input checked="" type="checkbox"/>

Note: If you don't see disks which you believe should be available, you may need to change the disk discovery path.

[Change Disk Discovery Path...](#)

OK Cancel Help

Applications Actions Fri May 11, 3:52 PM

Database Configuration Assistant, Step 8 of 15 : ASM Disk Groups

Select one or more disk groups to be used as storage for the database. You can choose to create a new disk group or add disks to an existing disk group.

Available Disk Groups

Select	Disk Group Name	Size (MB)	Free (MB)	Redundancy	State
<input checked="" type="checkbox"/>	DATA	3067	2974	EXTERN	MOUNTED (2/2)
<input checked="" type="checkbox"/>	RECOVER	3067	2974	EXTERN	MOUNTED (2/2)

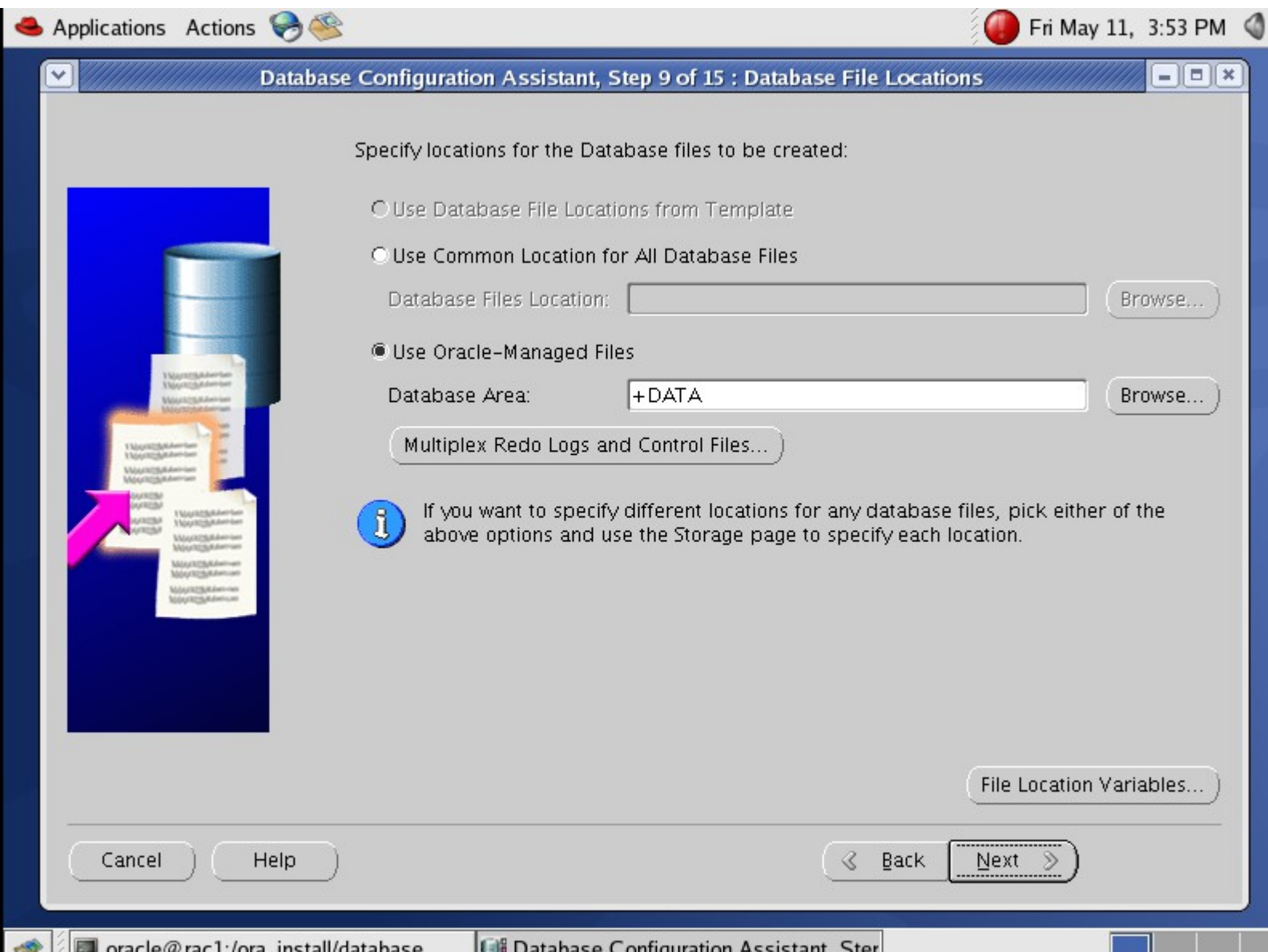
Note: Free (MB) reflects the free space available by taking mirroring into account.

Create New Add Disks Mount Mount All

Cancel Help Back Next

oracle@rac1:/ora_install/database Database Configuration Assistant. S

选择 OMF，方便管理：



编辑归档模式参数，将归档放在 RECOVER 磁盘组中：

选择 Sample Schemas：

创建一个服务 racdb_serv，将 RACDB1 设为首选，RACDB2 设为备用

Database Configuration Assistant, Step 12 of 15 : Database Services

Expand the tree and click the Oracle database services from the left panel to see the service details in the right panel. Review the configuration details for each service.

Database Services

- ⊖ RACDB

Service details

Instance	Not Used	Preferred	Available
----------	----------	-----------	-----------

Add a Service

Enter Service Name: racdb_serv

OK Cancel Help

Database Configuration Assistant, Step 12 of 15 : Database Services Friday May 11

Expand the tree and click the Oracle database services from the left panel to see the service details in the right panel. Review the configuration details for each service.

Database Services

- ⊖ RACDB
 - racdb_serv

Details for racdb_serv

Instance	Not Used	Preferred	Available
RACDB1	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
RACDB2	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

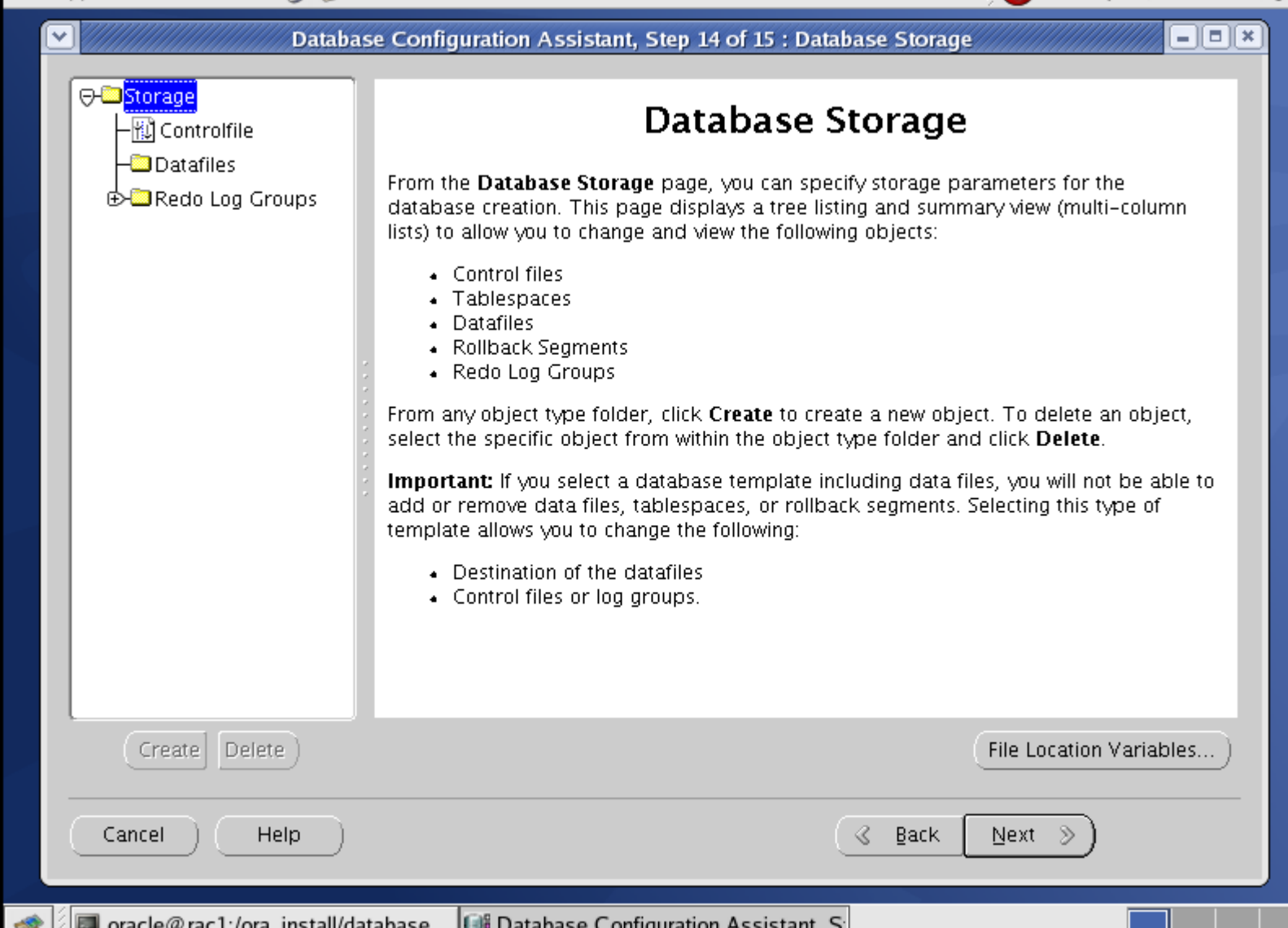
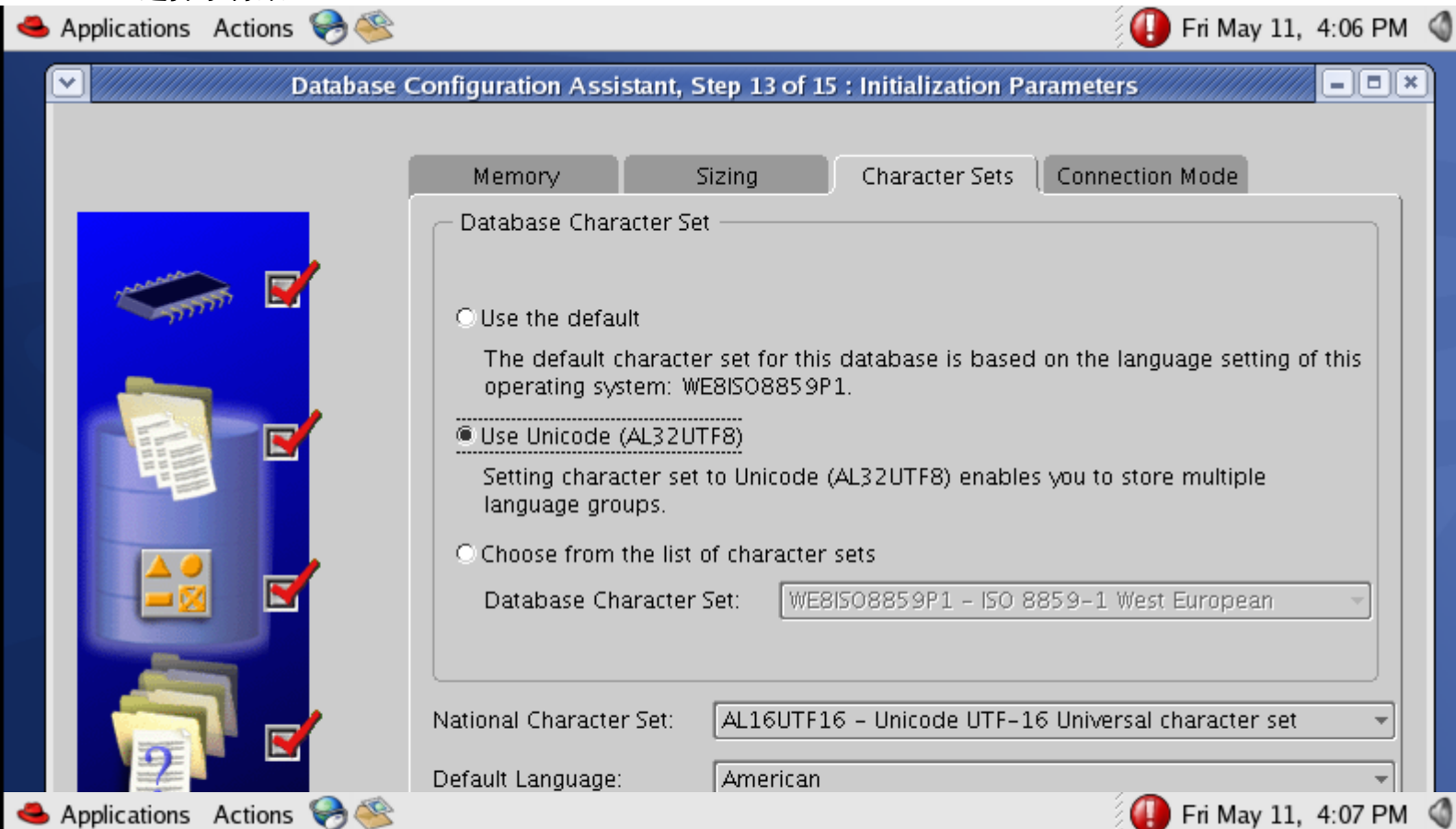
TAF Policy: ☒ None ☐ Basic ☐ Pre-connect

Add Remove

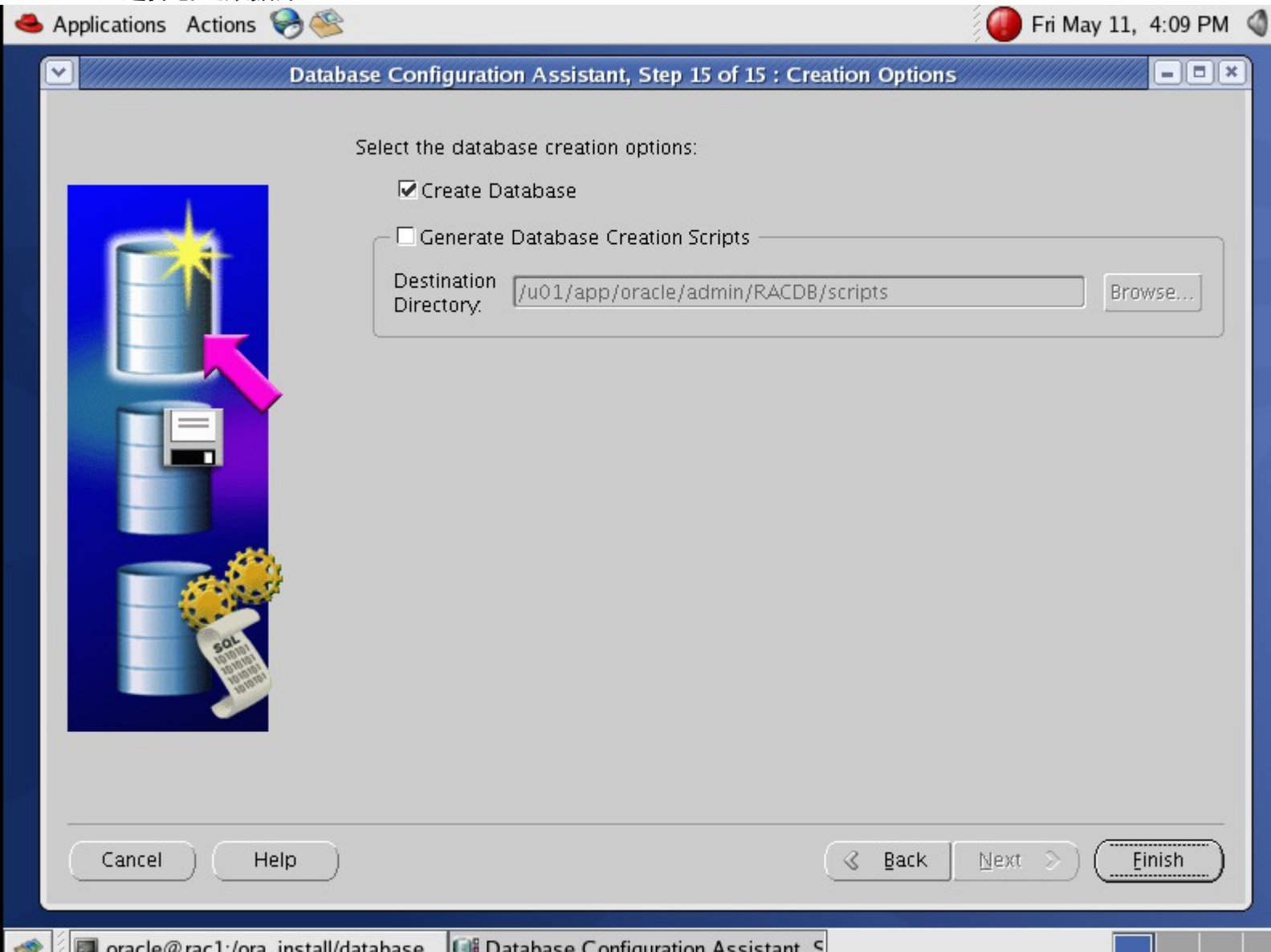
Cancel Help

Back Next

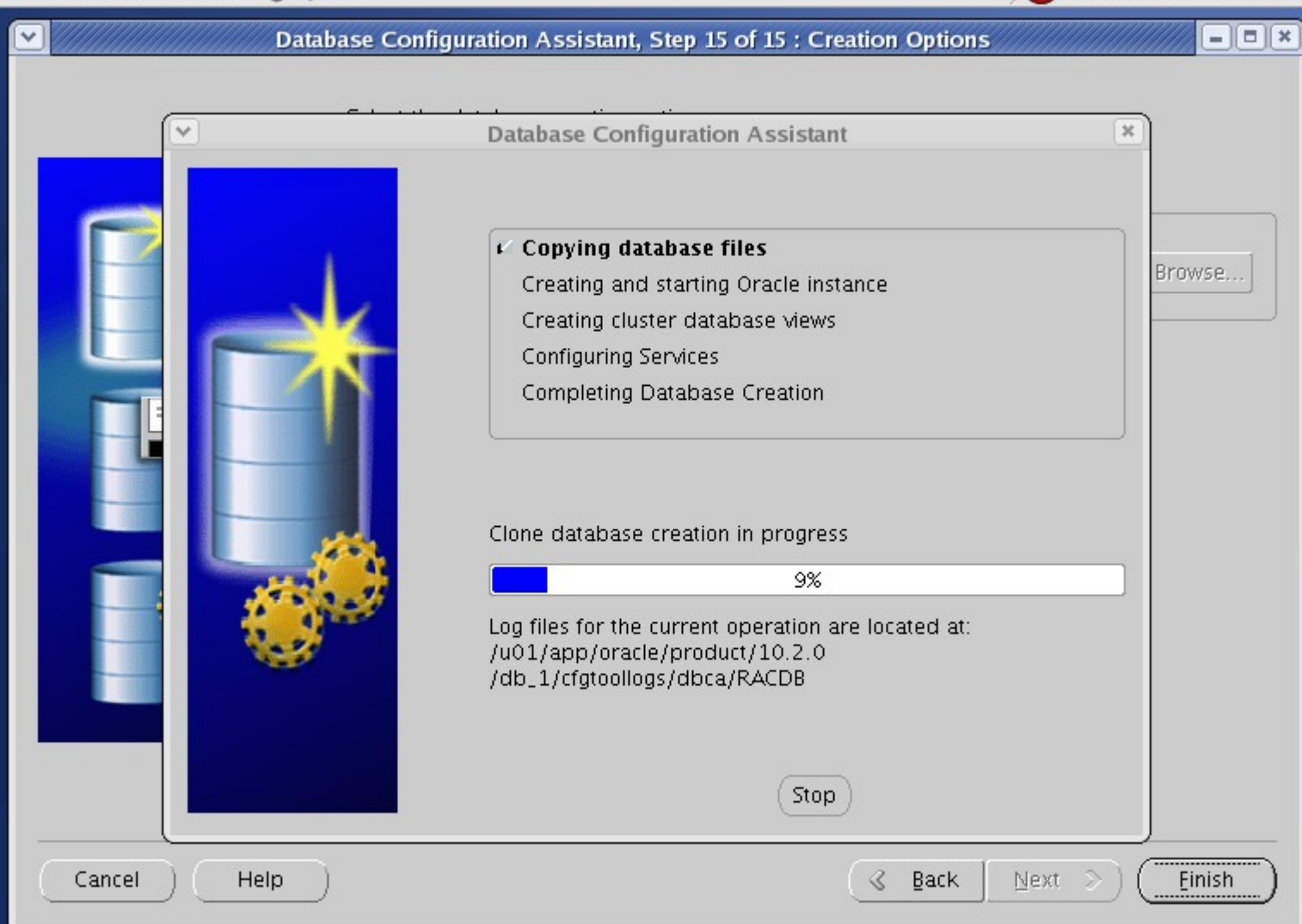
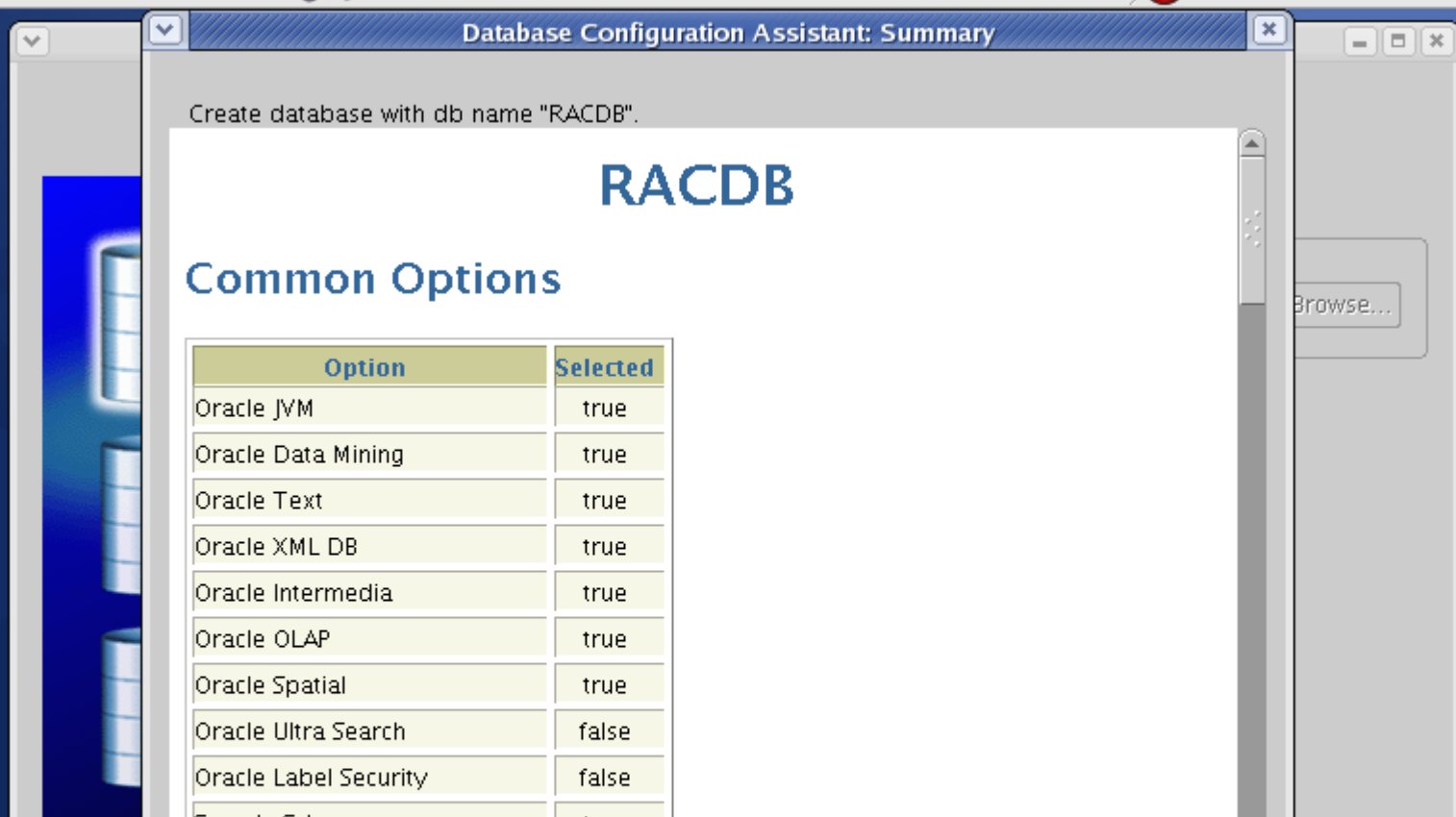
选择字符集：

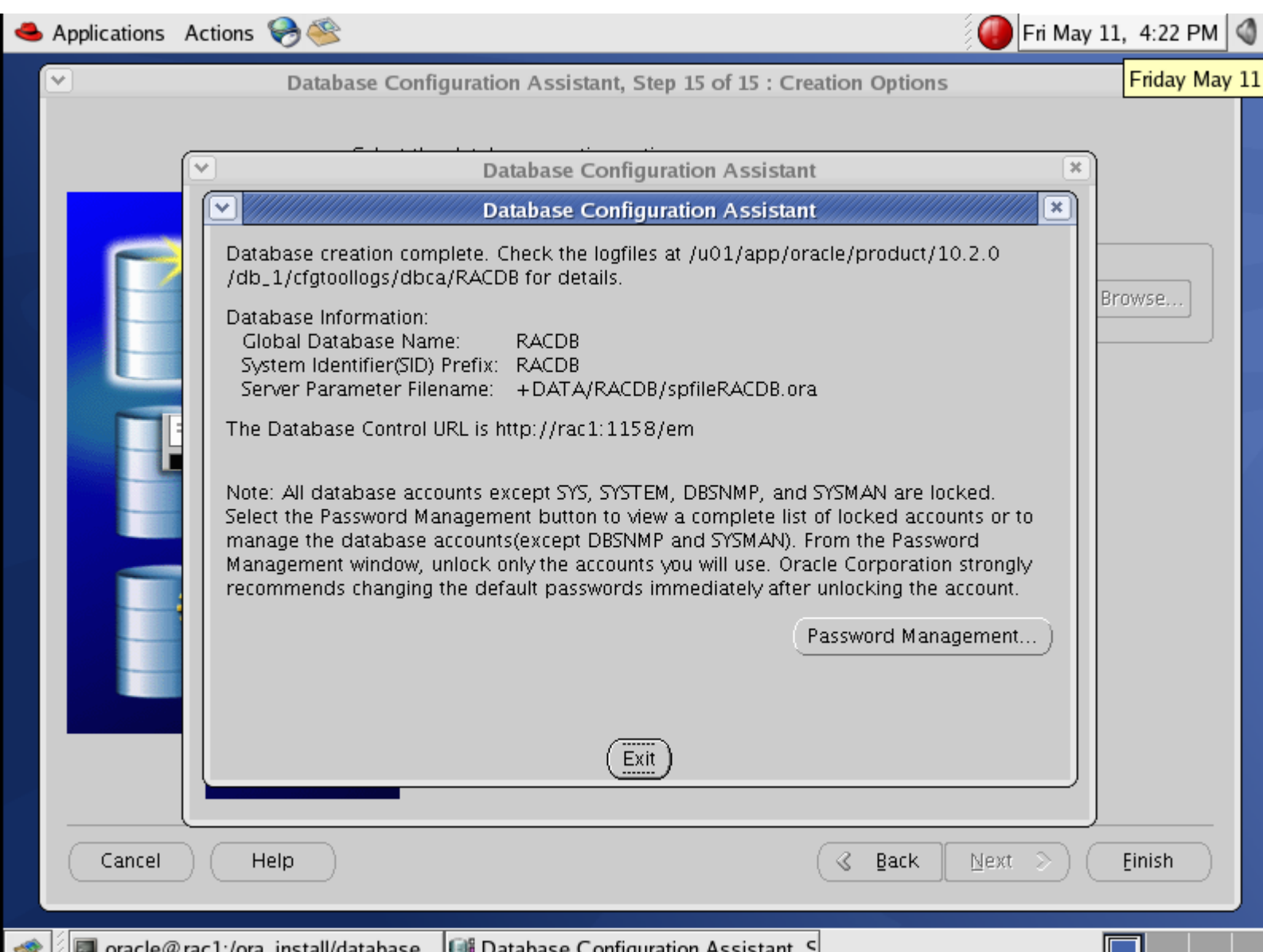


选择创建数据库：



汇总信息，点 OK 开始安装





点 Exit 退出

4. 考题的要求：添加服务、配置归档

1、添加服务

看这篇文档：Oracle Clusterware and Oracle Real Application Clusters Administration and Deployment Guide

注意有三步：

(1)、创建服务：

```
srvctl add service -d RACDB -s test1 -r RACDB1,RACDB2 -a RACDB1,RACDB2
```

(2)、激活服务

这命令只创建服务，在启动新建的服务前，service_name 参数不变。下面的命令启动服务：

```
srvctl start service -d RACDB -s test1
```

(3)、在 Tnsnames.ora 中添加 TEST2。

2、配置归档

停止所有实例，重启到 Mount 状态：

```
srvctl stop instance -d RACDB -i RACDB1,RACDB2 -o immediate  
srvctl start instance -d RACDB -i RACDB1,RACDB2 -o mount
```

在任一实例执行如下命令：

```
SQL> alter database archivelog;  
Database altered.
```

在两个实例中都执行 alter database open

归档配置完成

3、配置闪回数据库

(1)、设置两个参数：

```
SQL> alter system set DB_RECOVERY_FILE_DEST_SIZE=500m;  
System altered.
```

```
SQL> alter system set db_recovery_file_dest='+DG1';  
System altered.
```

(2)、关闭并重启实例到 Mount

```
[oracle@racone admin]$ srvctl stop instance -d RACDB -i RACDB1,RACDB2 -o immediate
```

注意，只能在某一个节点上启动到 Mount 状态：

```
[oracle@racone admin]$ srvctl start instance -d RACDB -i RACDB1 -o mount
```

(3)、开启闪回数据库：

```
alter database flashback on;
```