【DBCA -SILENT】静默方式安装 11gR2 数据库软件单实例

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相关文章链接:

DBCA 静默方式建库 : http://blog.itpub.net/26736162/viewspace-1448220/

【DBCA -SILENT】静默安装如何启用归档模式: http://blog.itpub.net/26736162/viewspace-1585925/

【DBCA -SILENT】静默安装之 rac 数据库安装: http://blog.itpub.net/26736162/viewspace-1586352/

数据库: 11.2.0.3 OS:RHEL6.5

最近一直在研究 oracle 的静默方式,觉得挺好的,免去了图形界面的方式,今天我们来看看单实例的 oracle 数据库软件的静默安装方式,rac 的数据库软件安装后边再补上吧。

一、安装前的准备工作

安装前的准备工作和图形界面的安装无异,都是配置。。。

1、检查硬件

注意这里的内存应该满足要求,不然可能引起数据库在安装过程中长时间的挂起等待。。。。

在正式安装开始前,请先检查你的软硬件条件是否满足安装需要。

1. 查看系统物理内存,以下输出可以看出,有 2G的内存,内存最低要求 1G

[root@rhel6 tmp]# grep MemTotal /proc/meminfo

MemTotal: 1914492 kB

2. 查看交换空间大小,以下输出可以看出,有 2G 的交换空间,交换空间的最优设置与你物理内存大小相关,详细说明请参考安装文档

[root@rhel6 tmp]# grep SwapTotal /proc/meminfo

SwapTotal: 1015800 kB

3.查看可用物理内存和交换空间

[root@rhel6 tmp]# free

total used free shared buffers cached

Mem: 1914492 1558568 355924 0 79604 1092996

-/+ buffers/cache: 385968 1528524

Swap: 1015800 170592 845208

4.查看挂载的临时分区空间情况

[root@rhel6 tmp]# df -h

Filesystem Size Used Avail Use% Mounted on

/dev/sda2 48G 29G 17G 63% /

/dev/sr0 3.6G 3.6G 0 100% /media/RHEL 6.5 x86 64 Disc 1

[root@rhel6 tmp]#

2、检查软件

```
1.查看 Linux 版本
```

```
Red Hat Enterprise Linux Server release 6.5 (Santiago)
```

Kernel \r on an \m

2.查看内核版本

```
[root@rhel6 tmp]# uname -a
Linux rhel6.5 2.6.32-431.el6.x86_64 #1 SMP Sun Nov 10 22:19:54 EST 2013 x86_64 x86_64 x86_64 GNU/Linux
```

3、修改 host 文件

永久生效:

[root@rhel6 tmp]# more /etc/sysconfig/network

[root@rhel6 tmp]# cat /etc/issue

NETWORKING=yes

HOSTNAME=orcltest

[root@rhel6 tmp]#

查看/etc/hosts 文件中必须包含 a fully qualified name for the server

[root@rhel6 tmp]# cat /etc/hosts

127.0.0.1 localhost localhost.localdomain localhost4 localhost4.localdomain4

:1 localhost localhost.localdomain localhost6 localhost6.localdomain6

192.168.59.129 orcltest

[root@rhel6 tmp]#

4、安装软件包检查

可以统一检查:

```
rpm -q binutils \
compat-libstdc++-33 \
elfutils-libelf \
gcc \
gcc-c++ \
glibc \
glibc-common \
glibc-devel \
```

```
glibc-headers \
ksh \
libaio \
libaio-devel \
libgomp \
libstdc++ \
libstdc++-devel \
make \
sysstat \
unixODBC \
unixODBC-devel \
numactl-devel \
humactl-devel \
elfutils-libelf-devel
```

我们可以看到没有安装过的包会已 is not installed 出现:

[root@rhel6_lhr ~]# rpm -q binutils \

- > compat-libstdc++-33 \
- > elfutils-libelf \
- > gcc \
- > gcc-c++ \
- > glibc \
- > glibc-common \
- > glibc-devel \
- > glibc-headers \
- > ksh \
- > libaio \
- > libaio-devel \
- > libgomp \
- > libgcc \
- > libstdc++ \
- > libstdc++-devel \
- > make \
- > sysstat \
- > unixODBC \
- > unixODBC-devel \
- > numactl-devel

binutils-2.20.51.0.2-5.36.el6.x86 64

compat-libstdc++-33-3.2.3-69.el6.x86_64

compat-libstdc++-33-3.2.3-69.el6.i686

elfutils-libelf-0.152-1.el6.x86 64

gcc-4.4.7-4.el6.x86 64

gcc-c++-4.4.7-4.el6.x86 64

glibc-2.12-1.132.el6.x86_64

glibc-common-2.12-1.132.el6.x86 64

glibc-devel-2.12-1.132.el6.x86_64

glibc-headers-2.12-1.132.el6.x86 64

package ksh is not installed

libaio-0.3.107-10.el6.x86 64

libaio-devel-0.3.107-10.el6.x86 64

libaio-devel-0.3.107-10.el6.i686

libgomp-4.4.7-4.el6.x86 64

libgcc-4.4.7-4.el6.x86 64

libstdc++-4.4.7-4.el6.x86 64

libstdc++-devel-4.4.7-4.el6.x86 64

libstdc++-devel-4.4.7-4.el6.i686

make-3.81-20.el6.x86 64

sysstat-9.0.4-22.el6.x86 64

unixODBC-2.2.14-12.el6 3.x86 64

unixODBC-2.2.14-12.el6 3.i686

unixODBC-devel-2.2.14-12.el6 3.i686

unixODBC-devel-2.2.14-12.el6 3.x86 64

package numactl-devel is not installed

[root@rhel6 lhr ~]#

如果部分包不存在

可以批量更新安装,但如果依赖关系缺失,可能需要多执行两遍

或者手工调整

5、内核参数--shell 限制

(1), limits.conf

为了优化性能,需要添加 oracle 用户 3 个限制参数: [root@localhost~]# vi /etc/security/limits.conf

为 oracle 用户设置 Shell 限制,修改/etc/security/limits.conf,加入

 $[root@oracle \sim] \#\ vi\ /etc/security/limits.conf$

oracle soft nproc 2047 oracle hard nproc 16384 oracle soft nofile 1024 oracle hard nofile 65536



修改/etc/pam.d/login, 加入
[root@oracle ~]# vim /etc/pam.d/login
session required pam_limits.so

3, profile

[root@oracle ~]# vim /etc/profile
if [\\$USER = "oracle"]; then
if [\\$SHELL = "/bin/ksh"]; then
ulimit -p 16384
ulimit -n 65536
else
ulimit -u 16384 -n 65536
fi
umask 022
fi

4, sysctl.conf

Configuring Kernel Parameters for Linux vim /etc/sysctl.conf fs.aio-max-nr = 1048576 fs.file-max = 6815744 kernel.shmall = 4294967296 kernel.shmmax = 4294967295 kernel.shmmni = 4096 kernel.sem = 250 32000 100 128 net.ipv4.ip_local_port_range = 9000 65500 net.core.rmem_default = 262144 net.core.rmem_max = 4194304 net.core.wmem_default = 262144 net.core.wmem_max = 1048576

⑤、 关闭 selinux

#/sbin/sysctl-p

vi /etc/selinux/config

SELINUX=disabled

6、关闭防火墙

关闭防火墙 chkconfig iptables off ---永久 /etc/init.d/iptables status

7、新建用户和组

The Oracle Inventory group (oinstall) 数据库安装组 The OSDBA group (dba) 数据库管理员组 The Oracle software owner (oracle) 管理员用户

groupadd oinstall groupadd dba groupadd oper useradd -g oinstall -G dba -m oracle passwd oracle

[root@oracle ~]# groupadd oinstall [root@oracle ~]# groupadd dba [root@oracle ~]# useradd -g oinstall -G dba -m oracle [root@oracle ~]# passwd oracle

- -m 表示为用户 oracle 新建一个根目录
- -g 表示为用户指定一个主 group
- -G 表示为用户指定一个副 group

这样 oracle 既属于 oinstall 组也属于 dba 组。

平时主要是 oinstall 组发生作用。

8、新建安装目录

ROOT 执行:

mkdir -p /u02/app/oracle/product/11.2.0/dbhome_1 chown -R oracle:oinstall /u02 chmod -R 775 /u02

9、新建/etc/oralnst.loc

在/etc 目录下创建一个名为 oraInst.loc 的文件,文件中的内容(两行代码)如下: inventory_loc=\$ORACLE_BASE/oraInventory inst_group= oinstall

```
[root@ORCLTEST ~]# vi /etc/oraInst.loc
inventory_loc=/u02/app/oracle/oraInventory
inst_group= oinstall
```

4. 输入下面的命令在 oraInst.loc 文件上设置合适的拥有者,组和权限:

[root@ORCLTEST ~] chown oracle:oinstall /etc/oraInst.loc
[root@ORCLTEST ~] chmod 664 /etc/oraInst.loc

10、 设置环境变量

Vi ~/.bash profile 增加如下内容:

export ORACLE_SID=orcltest
export ORACLE_BASE=/u02/app/oracle
export ORACLE_BASE=/u02/app/oracle
export ORACLE_HOME=\$ORACLE_BASE/product/11.2.0/dbhome_1
export LD_LIBRARY_PATH=\$ORACLE_HOME/lib:/usr/lib:/usr/local/lib
export PATH=\$ORACLE_HOME/bin:\$PATH
export CLASSPATH=\$ORACLE_HOME/JRE:\$ORACLE_HOME/jlib:\$ORACLE_HOME/rdbms/jlib:\$ORACLE_HOME/network/jlib

umask 022

#export NLS_LANG="SIMPLIFIED CHINESE_CHINA.AL32UTF8" export NLS_LANG=AMERICAN_AMERICA.ZHS16GBK export SQLPATH=\$ORACLE_HOME/sqlplus/admin

二、开始安装

1、准备 oracle 安装文件

解压oracle安装文件包

[oracle@rhe16 tmp]\$ 11 total 2442088

```
drwxr-x---. 2 grid oinstall
                                                 4096 Jan 6 00:10 hsperfdata grid
                                                 4096 Jan 6 00:36 hsperfdata oracle
drwxr-x--. 2 oracle oinstall
                                                4096 Jan 5 23:49 hsperfdata_root
4096 Jan 5 22:08 keyring-5qr0Bb
4096 Jan 5 22:08 orbit-gdm
drwxr-xr-x. 2 root root
                2 oracle oinstall
                2 gdm gdm
                                                4096 Apr 21 09:26 orbit-oracle
drwx---- 2 oracle oinstall
                                                                09:35 p10404530_112030_Linux-x86-64_1of7.zip
09:36 p10404530_112030_Linux-x86-64_2of7.zip
-rwxr-xr-x. 1 oracle oinstall 135845
-rwxr-xr-x. 1 oracle oinstall 114219
drwx----. 2 oracle oinstall drwx----. 2 root root 

oracle@rhel6 tmp]$
                                                4096 Jan 5 22:08 pulse-LbDtLtLYhc91
4096 Apr 8 17:40 vmware-root-2083271499
oracle@rhel6 tmp]$ unzip p10404530 112030 Linux-x86-64 lof7.zip && unzip p10404530 112030 Linux-x86-64 2of7.zip
  0 0 0 0 0 0 0 0 0 0 0 0
```

2、执行静默安装

修改解压后的安装文件夹下 response 下面的 db_install.rsp 文件,将相关的参数设置为如下: ORACLE_HOSTNAME=192.168.59.129 UNIX_GROUP_NAME=oinstall INVENTORY_LOCATION=/uo2/app/oracle/oraInventory SELECTED_LANGUAGES=en,zh_CN ORACLE_HOME=/uo2/app/oracle/product/11.2.0/dbhome_1 ORACLE_BASE=/uo2/app/oracle oracle.install.db.InstallEdition=EE oracle.install.db.EEOptionsSelection=false oracle.install.db.DBA GROUP=dba

oracle.install.db.isRACOneInstall=false oracle.install.db.config.starterdb.type=GENERAL_PURPOSE SECURITY_UPDATES_VIA_MYORACLESUPPORT=false oracle.installer.autoupdates.option=SKIP_UPDATES

oracle.install.db.OPER GROUP=oper

```
然后执行安装:
oracle@ORCLTEST database | $ cd /tmp/database
[oracle@ORCLTEST database]$ ./runInstaller -silent -noconfig -responseFile /tmp/database/response/db_install.rsp -ignoreSysPrereqs -ignorePrereq
Starting Oracle Universal Installer...
Checking Temp space: must be greater than 120 MB. Checking swap space: must be greater than 150 MB.
                                                             Actual 20781 MB
Actual 796 MB
                                                                                    Passed
                                                                                  Passed
Preparing to launch Oracle Universal Installer from /tmp/OraInstall2015-04-21 12-09-17PM. Please wait ... oracle@ORCLTEST database | WARNING | INS-13014 | Target
environment do not meet some optional requirements.
   CAUSE: Some of the optional prerequisites are not met. See logs for details. /u02/app/oracle/oraInventory/logs/installActions2015-04-21_12-09-17PM.log ACTION: Identify the list of failed prerequisite checks from the log: /u02/app/oracle/oraInventory/logs/installActions2015-04-21_12-09-17PM.log. Then either
from the log file or from installation manual find the appropriate configuration to meet the prerequisites and fix it manually.
You can find the log of this install session at:
 /u02/app/oracle/oraInventory/logs/installActions2015-04-21 12-09-17PM. log
The installation of Oracle Database 11g was successful.
Please check '/u02/app/oracle/oraInventory/logs/silentInstall2015-04-21 12-09-17PM.log' for more details.
As a root user, execute the following script(s):
```

1. /u02/app/oracle/product/11.2.0/dbhome 1/root.sh

Successfully Setup Software.

[oracle@ORCLTEST database]\$

安装时后台进程

```
| Iron@ORCLTEST dbhome | | 2 ps -ef|grep | install | oracle | 48527 | 1 48 | 12:09 pts/5 | 00:00:046 | tmp/OraInstall2015-04-21 | 12-09-17PM/oui/lib/linux64 | Doracle, installer, library | loc=/tmp/OraInstall2015-04-21 | 12-09-17PM/oui | Doracle, installer, library | loc=/tmp/OraInstall2015-04-21 | 12-09-17PM/oui | Doracle, installer, inst
```

文件大小:

[root@ORCLTEST dbhome_1]# du . -sh
4.1G .
[root@ORCLTEST dbhome 1]#

Root 脚本:

[root@ORCLTEST]# /u02/app/oracle/product/11.2.0/dbhome_1/root.sh Check /u02/app/oracle/product/11.2.0/dbhome_1/install/root_ORCLTEST_2015-04-21_12-16-26.log for the output of root script [root@ORCLTEST]# more /u02/app/oracle/product/11.2.0/dbhome_1/install/root_ORCLTEST_2015-04-21_12-16-26.log

Performing root user operation for Oracle 11g

The following environment variables are set as:

ORACLE_OWNER= oracle
ORACLE_HOME= /u02/app/oracle/product/11.2.0/dbhome_1
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.

[root@ORCLTEST] #

至此,数据库软件静默安装完成。

如果安装错误,可以删除目录(rm-rf/u02)然后重新创建目录再执行命令创建。

rm -rf /u02

mkdir -p /u02/app/oracle/product/11.2.0/dbhome 1

chown -R oracle:oinstall /u02

chmod -R 775 /u02

3、 Dbca 静默方式建库

```
[oracle@orcltest database]$ strings $ORACLE HOME/assistants/dbca/templates/General Purpose.dbc | grep -i arch
            <archiveLogMode>true</archiveLogMode>
 |oracle@orcltest database|$
[oracle@ORCLTEST oracle]$ dbca -silent -createDatabase -templateName General_Purpose.dbc -gdbname orcltest -sid orcltest -sysPassword lhr -systemPassword lhr -responseFile NO_VALUE -datafileDestination /u02/app/oracle/oradata/ -redoLogFileSize 50 -recoveryAreaDestination /u02/app/oracle/flash_recovery_area
 -storageType FS -characterSet ZHS16GBK -nationalCharacterSet AL16UTF16 -sampleSchema true -memoryPercentage 20 -totalMemory 200 -databaseType OLTP
 -emConfiguration NONE
1% complete
3% complete
11% complete
18% complete
26% complete
37% complete
Creating and starting Oracle instance
40% complete
45% complete
50% complete
55% complete
56% complete
57% complete
60% complete
62% complete
Completing Database Creation
66% complete
70% complete
73% complete
85% complete
96% complete
100% complete
 Look at the log file "/u02/app/oracle/cfgtoollogs/dbca/orcltest/orcltest.log" for further details.
 [oracle@orcltest database]$ more /u02/app/oracle/cfgtoollogs/dbca/orcltest/orcltest.log
 Copying database files
DBCA PROGRESS : 1%
DBCA PROGRESS : 3%
DBCA_PROGRESS : 11%
DBCA_PROGRESS: 18%
DBCA_PROGRESS: 26%
DBCA_PROGRESS: 37%
Creating and starting Oracle instance
DBCA_PROGRESS: 40%
DBCA_PROGRESS: 45%
DBCA_PROGRESS: 50%
DBCA_PROGRESS: 55%
DBCA_PROGRESS: 56%
DBCA_PROGRESS: 57%
DBCA_PROGRESS: 60%
DBCA_PROGRESS : 62%
```

```
Completing Database Creation
DBCA_PROGRESS : 66%
DBCA_PROGRESS: 70%
DBCA_PROGRESS: 73%
DBCA_PROGRESS: 85%
DBCA_PROGRESS : 96%
DBCA_PROGRESS : 100%
Database creation complete. For details check the logfiles at:
 /u02/app/oracle/cfgtoollogs/dbca/orcltest.
Database Information:
Global Database Name:orcltest
System Identifier(SID):orcltest
Loracle@ORCLTEST oracle|$ ORACLE SID=orcltest
[oracle@orcltest database]$ sqlplus / as sysdba
SQL*Plus: Release 11.2.0.3.0 Production on Tue Apr 21 15:41:57 2015
Copyright (c) 1982, 2011, Oracle. All rights reserved.
Connected to:
Oracle Database 11g Enterprise Edition Release 11.2.0.3.0 - 64bit Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options
SQL> show parameter name
NAME
                                       TYPE
                                                    VALUE
db file name convert
                                       string
db name
                                       string
                                                    orcltest
                                                    orcltest
db_unique_name
                                       string
global names
                                       boolean
                                                    FALSE
instance name
                                                    orcltest
                                       string
lock_name_space
                                       string
log_file_name_convert
                                       string
processor_group_name
                                       string
service_names
                                       string
                                                    orcltest
SQL> archive log list;
Database log mode
                                 Archive Mode
Automatic archival
                                 Enabled
                                 USE DB RECOVERY FILE DEST
Archive destination
Oldest online log sequence
                                 6
Next log sequence to archive
Current log sequence
```

三、静默配置监听

通过 response 文件运行 netca, 生成 sqlnet.ora 和 listener.ora 文件, 位于\$ORACLE_HOME/network/admin 目录下: # su - oracle

\$ \$ORACLE HOME/bin/netca /silent /responsefile /u01/database/netca.rsp

\$ 11 \$ORACLE HOME/network/admin/*.ora

\$ lsnrctl status

```
[oracle@orcltest admin]$ netca -silent -responsefile $ORACLE_HOME/assistants/netca/netca.rsp

Parsing command line arguments:
    Parameter "silent" = true
    Parameter "responsefile" = /u02/app/oracle/product/11.2.0/dbhome_1/assistants/netca/netca.rsp
```

成功运行后在\$ORACLE HOME/network/admin 目录下生成 sqlnet.ora 和 listener.ora 两个文件。

.....

本文作者:小麦苗,只专注于数据库的技术,更注重技术的运用

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