Manually create oracle 9i database in RedHat Linux Advanced Server 2.1

by
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1) Install Redhat Advanced Server 2.1 with X and GNOME and KDE

2) Choose Advanced Server in the installation step

3) Use disk druid to partition as follows (In this case 20GB Hard disk)

/	5GB
/boot	128MB
/tmp	1GB
/usr	7GB
/home	4GB
swap	2*RAM

4) Under package group selection you must select "Software Development" along with GNOME and KDE

5) Install binutils following version as follows (This rpm is given in your CD). The binutils version of RH Advanced Server 2.1 is `binutils-2.11.90.0.8-12` you must upgrade it to `binutils-2.11.90.0.8-13` to avoid relinking error while installation.

```
[root@suranga root]#mount /mnt/cdrom
[root@suranga root]#cd /mnt/cdrom
[root@suranga cdrom]#cp binutils-2.11.90.0.8-13.i386.rpm /root
[root@suranga root]#rpm -Uvh --force binutils-2.11.90.0.8-13.i386.rpm
```

6) Adding Users and Groups

First, you will need to create the Oracle installation and users and groups. Oracle installation needs two Unix user groups and one runtime Oracle user.

Log in as root and issue the following commands in a terminal:

```
[root@suranga root]# groupadd dba
[root@suranga root]# groupadd oinstall
[root@suranga root]# useradd -g oinstall -G dba oracle
[root@suranga root]# passwd oracle
```

The last command will prompt you to enter the password for your oracle user. Make sure you remember it, because you will

probably need it as we go along.

7) Creating Directories

For the sake of simplicity, we will install everything under /opt/ora9.

Just make sure you have at least 3.5GB available for a full installation including one database, and issue the following commands as root:

```
[root@suranga root]# mkdir -p /opt/ora9/product/9.2
[root@suranga root]# mkdir /var/opt/oracle
[root@suranga root]# chown oracle.dba /var/opt/oracle
[root@suranga root]# chown -R oracle.dba /opt/ora9
[root@suranga root]# chmod 755 /var/opt/oracle
```

You have now created Oracle runtime directories and granted write privileges to user oracle and execute privileges to group dba.

8) Log in as the oracle user:

```
[root@suranga root]#su - oracle
[oracle@suranga oracle]#vi ~/.bashrc
```

append the following environmental variables in ~/.bashrc

```
# oracle 9i
export ORACLE_BASE=/opt/ora9
export ORACLE_HOME=/opt/ora9/product/9.2
export PATH=$ORACLE_HOME/bin:$ORACLE_HOME/Apache/Apache/bin:$PATH
export ORACLE_OWNER=oracle
export ORACLE_SID=sura
export ORACLE_TERM=xterm
# Edit paths
export LD_LIBRARY_PATH=/opt/ora9/product/9.2/lib:$LD_LIBRARY_PATH
export PATH=/opt/ora9/product/9.2/bin:$PATH
```

note:=

ORACLE_SID=sura means that we are going to create a database called "sura"

9) Running the Installer

To install 9iR2 on Linux, Oracle recommends at least 512MB of RAM and at least 400MB of swap space. If you have less then

512MB of RAM and upgrading is not an option, you can resize your swap partition or create temporary swapping space.

To set up a temporary Linux swap area, execute these lines as root:

```
[root@suranga root]#dd if=/dev/zero of=tmp_swap bs=1k count=900000
[root@suranga root]#chmod 600 tmp_swap
[root@suranga root]#mkswap tmp_swap
[root@suranga root]#swapon tmp_swap
```

After you finish installing, you can free this space:

```
[root@suranga root]#swapoff tmp_swap
[root@suranga root]#rm tmp_swap
```

Now that you have all the major obstacles out of the way, you can run the installer. Please remember that the Oracle

installer must be run from X. You will need to allow the local oracle user to write to your X display:

```
[root@suranga root]#xhost +127.0.0.1
```

Do not change to your CD-ROM mount directory (e.g., /mnt/cdrom), because you will not be able to unmount the first CD to

insert others when asked. Start the installer from your home directory using:

```
[root@suranga root]#su - oracle
[oracle@suranga oracle]#/mnt/cdrom/install/linux/runInstaller
```

Under database configuration select software only and give "sura" as the name of the database.

makesure to install the old binutils as follows (this rpm is also given in the CD). You must install old binutils before creating database.

```
[root@suranga root]#rpm -Uvh --force binutils-2.11.90.0.8-12.i386.rpm
```

10) Create Database

you can use dbca utility to create "sura" database which is located in $ORACLE_HOME/bin as follows

```
[oracle@suranga root]#$ORACLE_HOME/bin/dbca
```

or else you can create the database manually as follows

I created my database manually by copying the initsura.ora and dbca.sql in /suradb folder. You can find my scripts in the

latter part of my doc.

```
[oracle@suranga oracle]#sqlplus "/ as sysdba"
```

SQL*Plus: Release 9.2.0.2.0 - Production on Fri Jul 25 14:08:37 2003

Connected to an idle instance.

```
SQL>startup nomount pfile=/suradb/initsura.ora
ORACLE instance started.

Total System Global Area  160925320 bytes
Fixed Size                   730760 bytes
Variable Size             109051904 bytes
Database Buffers           50331648 bytes
Redo Buffers                 811008 bytes
```

Important***

Now we are going to create the password file, for that open another prompt and type su - oracle

```
[oracle@suranga oracle]#orapwd file=$ORACLE_HOME/dbs/orapwsura
password=suranga
```

Go to the previous SQL prompt and type following

```
SQL>@/suradb/dbca.sql
```

Next you need to run following scripts

```
SQL>@/$ORACLE_HOME/rdbms/admin/catalog.sql

SQL>@/$ORACLE_HOME/rdbms/admin/catproc.sql

SQL>@/$ORACLE_HOME/rdbms/admin/catexp.sql
```

Once you finish you can shutdown the database as follows

```
SQL>shutdown immediate
```

Now you need to edit the following files

$ORACLE_HOME/network/admin/tnsnames.ora
$ORACLE_HOME/network/admin/listener.ora

Here are the files that I used…

######################Here is my
$ORACLE_HOME/network/admin/tnsnames.ora######################

TNSNAMES.ORA Network Configuration File:
/opt/ora9/product/9.2/network/admin/tnsnames.ora
Generated by Oracle configuration tools.

SURA =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = localhost.localdomain)(PORT =
1521))
)
    (CONNECT_DATA =

```
    (SERVER = DEDICATED)
    (SERVICE_NAME = sura)
   )
 )

db18 =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = localhost.localdomain)(PORT =
1521))
    )
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = db18)
    )
  )

INST1_HTTP =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = localhost.localdomain)(PORT =
1521))
    )
    (CONNECT_DATA =
      (SERVER = SHARED)
      (SERVICE_NAME = MODOSE)
      (PRESENTATION = http://HRService)
    )
  )


####################Here is my
$ORACLE_HOME/network/admin/listener.ora#######################

# LISTENER.ORA Network Configuration File:
/opt/ora9/product/9.2/network/admin/listener.ora
# Generated by Oracle configuration tools.

LISTENER =
  (DESCRIPTION_LIST =
    (DESCRIPTION =
      (ADDRESS_LIST =
        (ADDRESS = (PROTOCOL = TCP)(HOST = localhost.localdomain)(PORT =
1521))
      )
    )
```

```
  )

SID_LIST_LISTENER =
  (SID_LIST =
    (SID_DESC =
      (SID_NAME = PLSExtProc)
      (ORACLE_HOME = /opt/ora9/product/9.2)
      (PROGRAM = extproc)
    )
    (SID_DESC =
      (GLOBAL_DBNAME = sura)
      (ORACLE_HOME = /opt/ora9/product/9.2)
      (SID_NAME = sura)
    )
    (SID_DESC =
      (GLOBAL_DBNAME = db18)
      (ORACLE_HOME = /opt/ora9/product/9.2)
      (SID_NAME = db18)
    )
  )

################################################################################
##########
```

Start the listener as follows

```
[oracle@orasura admin]$ lsnrctl start
```

LSNRCTL for Linux: Version 9.2.0.1.0 - Production on 30-DEC-2004 10:27:40

Copyright (c) 1991, 2002, Oracle Corporation. All rights reserved.

Starting /opt/ora9/product/9.2/bin/tnslsnr: please wait...

TNSLSNR for Linux: Version 9.2.0.1.0 - Production
System parameter file is /opt/ora9/product/9.2/network/admin/listener.ora
Log messages written to /opt/ora9/product/9.2/network/log/listener.log
Listening on:
(DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=orasura.jic.com)(PORT=152
1)))

Connecting to
(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=localhost.localdomain)(PO
RT=1521)))

STATUS of the LISTENER

Alias LISTENER
Version TNSLSNR for Linux: Version 9.2.0.1.0 - Production
Start Date 30-DEC-2004 10:27:40
Uptime 0 days 0 hr. 0 min. 0 sec
Trace Level off
Security OFF
SNMP OFF
Listener Parameter File /opt/ora9/product/9.2/network/admin/listener.ora
Listener Log File /opt/ora9/product/9.2/network/log/listener.log
Listening Endpoints Summary...

(DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=orasura.jic.com)(PORT=152
1)))
Services Summary...
Service "PLSExtProc" has 1 instance(s).
Instance "PLSExtProc", status UNKNOWN, has 1 handler(s) for this service...
Service "db18" has 1 instance(s).
Instance "db18", status UNKNOWN, has 1 handler(s) for this service...
Service "sura" has 1 instance(s).
Instance "sura", status UNKNOWN, has 1 handler(s) for this service...
The command completed successfully

You should see a simmilar output as above.

Now start the oracle instance again as follows

```
[oracle@orasura oracle]$ sqlplus "/ as sysdba"
```

SQL*Plus: Release 9.2.0.1.0 - Production on Thu Dec 30 10:16:39 2004

Connected to an idle instance.

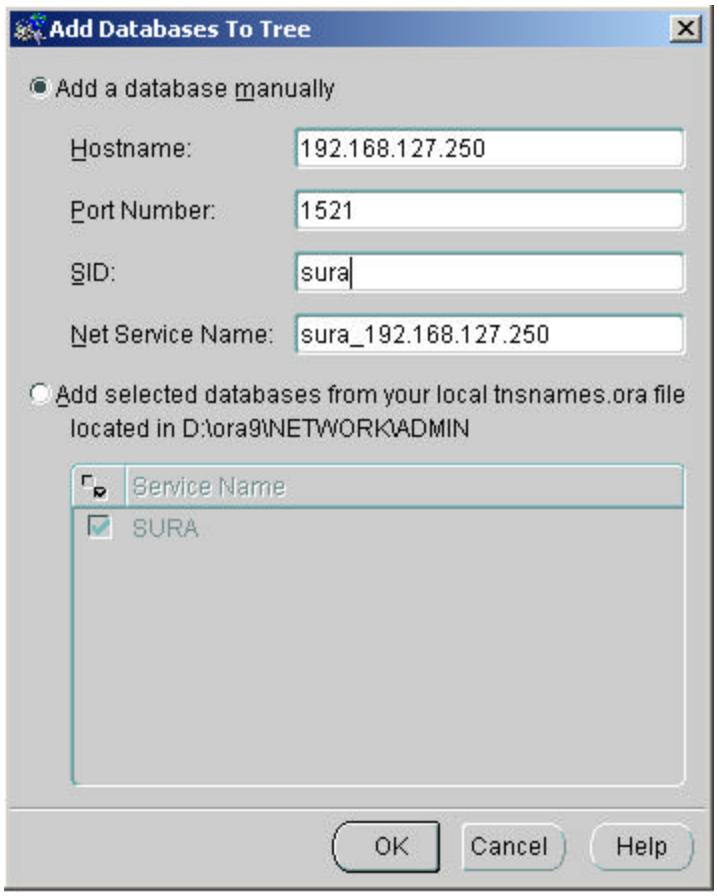
```
SQL> conn sura as sysdba
Enter password:
Connected to an idle instance.
SQL> startup pfile=/suradb/sura/initsura.ora
```
ORACLE instance started.

Total System Global Area 135336416 bytes
Fixed Size 451040 bytes

Variable Size 109051904 bytes
Database Buffers 25165824 bytes
Redo Buffers 667648 bytes
Database mounted.
Database opened.
SQL>

If the listener is successful means, you can connect from any PC in the network with Enterprise Manager Console. I used my windows PC to connect to the oracle server as follows.

The following parameters I have given in Add Database To Tree under Navigator of OEM.



After this you can successfully connect your database as sys / sysdba with the password you have given above.

/////HERE IS MY initsura.ora

```
#############################################################################
###
###
# Copyright (c) 1991, 2001, 2002 by Oracle Corporation
#############################################################################
###
###
##########################################
# Cache and I/O
##########################################
db_block_size=8192
db_cache_size=25165824
db_file_multiblock_read_count=16
##########################################
# Cursors and Library Cache
##########################################
open_cursors=300
##########################################
# Database Identification
##########################################
db_domain=""
db_name=sura
##########################################
# Diagnostics and Statistics
##########################################

background_dump_dest=/suradb/sura
core_dump_dest=/suradb/sura
timed_statistics=TRUE
user_dump_dest=/suradb/sura
##########################################
# File Configuration
##########################################
control_files=("/suradb/control01.ctl", "/suradb/CONTROL02.ctl",
"/suradb/CONTROL03.ctl")
##########################################
# Instance Identification
##########################################
instance_name=sura
##########################################
# Job Queues
##########################################
job_queue_processes=10
##########################################
# MTS
##########################################
```

dispatchers="(PROTOCOL=TCP) (SERVICE=orcl1XDB)"
###
Miscellaneous
###
aq_tm_processes=1
compatible=9.2.0.0.0
###
Optimizer
###
hash_join_enabled=TRUE
query_rewrite_enabled=FALSE
star_transformation_enabled=FALSE
###
Pools
###
java_pool_size=33554432
large_pool_size=8388608
shared_pool_size=50331648
###
Processes and Sessions
###
processes=150
###
Redo Log and Recovery
###
fast_start_mttr_target=300
###
Security and Auditing
###
remote_login_passwordfile=EXCLUSIVE
###
Sort, Hash Joins, Bitmap Indexes
###
pga_aggregate_target=25165824
sort_area_size=524288
###
System Managed Undo and Rollback Segments
###
undo_management=AUTO
undo_retention=1
undo_tablespace=UNDOTBS

/////HERE IS MY dbca.sql

CREATE DATABASE sura

```
LOGFILE GROUP 1('/suradb/sura/redo01.log') SIZE 100M,
GROUP 2('/suradb/sura/redo02.log') SIZE 100M,
GROUP 3('/suradb/sura/redo03.log') SIZE 100M
MAXLOGFILES 5
MAXLOGMEMBERS 5
MAXLOGHISTORY 1
MAXDATAFILES 100
MAXINSTANCES 1
CHARACTER SET US7ASCII
NATIONAL CHARACTER SET AL16UTF16
DATAFILE '/suradb/sura/system01.dbf' SIZE 325M
UNDO TABLESPACE UNDOTBS
DATAFILE '/suradb/sura/UNDOTBS.dbf'
SIZE 200M REUSE AUTOEXTEND ON NEXT 5120K MAXSIZE UNLIMITED;
```