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APPLIES TO:

Linux OS - Version 2.4 to 2.6
Oracle Server - Enterprise Edition - Version 8.0.3.0 to 11.2.0.3 [Release 8.0.3 to 11.2]
Linux x86
Linux x86-64
Linux Itanium
Linux Kernel - Version: 2.4 to 2.6
This document applies to:
SLES7, SLES8, SLES9, SLES10
RHAS 2.1, RHEL 3,4,5, OEL 4,5

Checked for relevance on 22-November-2010

PURPOSE

This document aims to demonstrate automatic startup and shutdown of Oracle databases on Linux.

SCOPE

The information in this document is useful for system administrators and database administrators trying to automate Oracle database startup and shutdown. The document describes the detailed steps for configuration on Red Hat Advanced Server 2.1, RedHat Enterprise Linux (RHEL) 3,4,5, SuSE SLES7, United Linux 1.0 (SuSE SLES8 Edition), SLES9, SLES10, Oracle Enterprise Linux (OEL) 4,5. The information may not apply to other Linux distributions.

The following configuration is done to allow Oracle database be up and running in runlevels 3 (character mode) and 5 (X-Window system) and the start / stop commands does not provide the exhaustive list of all possibilities and it presents an example. Therefore the exact scripts may not work with your configuration

Since the configuration is based on dbstart and dbshut scripts provided by the Oracle Server installation, please see [Note 207508.1](#)

The configuration also facilitates automated startup shutdown of Intelligent Agent, Management Server and HTTP Server, which are available with Oracle Server.

The information in this document does not apply to Oracle Internet Application Server. Still the script can be configured to handle starting up and shutting down iAS processes.

As per Note:105957.1 and Note 1397813.1,
When using an 11.2 ASM or CRS managed database (using the 11.2 Grid Infrastructure), the startup/shutdown script may no longer be used. CRS manages automatic restarts/startups for RAC and single instance databases are managed with Oracle Restart. See the following for more information:

- [Document 105957.1](#) How to setup Oracle to startup automatically if the system is restarted
- [Document 1397813.1](#) Oratab - # Line Added By Agent

DETAILS

1. Update 'oratab' (under /etc or /var/opt/oracle) as:

    <SID>:<ORACLE_HOME>:Y

where Y states that the database can be started up and shutdown using
dbstart/dbshut.

2. Create the service script:

    /etc/init.d/dbora

Note: In Red Hat Advanced Server 2.1, the /etc/init.d is is a symbolic link to /etc/rc.d/init.d

Content of the script is as follows:

```
 #!/bin/bash

#

# chkconfig: 35 99 10

# description: Starts and stops Oracle processes

#

# Set ORA_HOME to be equivalent to the $ORACLE_HOME

# from which you wish to execute dbstart and dbshut;

#

# Set ORA_OWNER to the user id of the owner of the

# Oracle database in ORA_HOME.

#

ORA_HOME=<Type your ORACLE_HOME in full path here>

ORA_OWNER=<Type your Oracle account name here>



case "$1" in

  'start')

     # Start the TNS Listener

     su - $ORA_OWNER -c "$ORA_HOME/bin/lsnrctl start"

     # Start the Oracle databases:

     # The following command assumes that the oracle login
```

```
    # will not prompt the user for any values

    su - $ORA_OWNER -c $ORA_HOME/bin/dbstart

    # Start the Intelligent Agent

    if [ -f $ORA_HOME/bin/emctl ]; then

       su - $ORA_OWNER -c "$ORA_HOME/bin/emctl start agent"

    elif [ -f $ORA_HOME/bin/agentctl ]; then

       su - $ORA_OWNER -c "$ORA_HOME/bin/agentctl start"

    else

       su - $ORA_OWNER -c "$ORA_HOME/bin/lsnrctl dbsnmp_start"

    fi

    # Start Management Server

    if [ -f $ORA_HOME/bin/emctl ]; then

       su - $ORA_OWNER -c "$ORA_HOME/bin/emctl start dbconsole"

    elif [ -f $ORA_HOME/bin/oemctl ]; then

       su - $ORA_OWNER -c "$ORA_HOME/bin/oemctl start oms"

    fi

    # Start HTTP Server

    if [ -f $ORA_HOME/Apache/Apache/bin/apachectl ]; then

       su - $ORA_OWNER -c "$ORA_HOME/Apache/Apache/bin/apachectl start"

    fi

    touch /var/lock/subsys/dbora

    ;;

'stop')

    # Stop HTTP Server

    if [ -f $ORA_HOME/Apache/Apache/bin/apachectl ]; then

       su - $ORA_OWNER -c "$ORA_HOME/Apache/Apache/bin/apachectl stop"
```

```
        fi

        # Stop the TNS Listener

        su - $ORA_OWNER -c "$ORA_HOME/bin/lsnrctl stop"

        # Stop the Oracle databases:

        # The following command assumes that the oracle login

        # will not prompt the user for any values

        su - $ORA_OWNER -c $ORA_HOME/bin/dbshut

        rm -f /var/lock/subsys/dbora

        ;;

    esac

    # End of script dbora
```

NOTE 1:
The lines:

```
  # chkconfig: 35 99 10

 # description: Starts and stops Oracle database
```

are mandatory since they describe the characteristics of the service where:

- 35 means that the service will be started in init levels 3 and 5 and will be stopped in other levels.
- 99 means that the service will be started at the near end of the init level processing
- 10 means that the service will be stopped at the near beginning of the init level processing

NOTE 2:
The Management Server is not shut down during service stop since it requires interaction and there is no harm in system killing the processes since the database is shut down already.

3. Set script permissions:

```
    chmod 755 /etc/init.d/dbora
```

4. Register the Service

```
    /sbin/chkconfig --add dbora
```

This action registers the service to the Linux service mechanism. On SuSE SLES7 and Red Hat Advanced Server 2.1 it will arrange symbolic links under rc<runlevel>.d directories to /etc/init.d/dbora script.

The above configuration applies also to RHEL 3,4,5 and OEL 4.5.

NOTE 3:
The chkconfig utility calls 'insserv' to register and add services. The 'insserv' version shipped with SUSE SLES8, SLES9 and SLES10 is using the following header to define run level and start/shutdown order.

```
    ### BEGIN INIT INFO

  # Provides:       dbora
```

```
  # Required-Start: $local_fs $remote_fs $netdaemons

  # Required-Stop:

  # Default-Start:  3 5

  # Default-Stop:   0 1 2 3 4 5 6

  # Description:    Oracle Startup

  ### END INIT INFO
```

On SuSE SLES7 the following symbolic links are created:

- /etc/init.d/rc0.d/K10dbora
- /etc/init.d/rc1.d/K10dbora
- /etc/init.d/rc2.d/K10dbora
- /etc/init.d/rc3.d/S99dbora
- /etc/init.d/rc4.d/K10dbora
- /etc/init.d/rc5.d/S99dbora
- /etc/init.d/rc6.d/K10dbora

On Red Hat Advanced Server 2.1 the following symbolic links are created:

- /etc/rc.d/rc0.d/K10dbora
- /etc/rc.d/rc1.d/K10dbora
- /etc/rc.d/rc2.d/K10dbora
- /etc/rc.d/rc3.d/S99dbora
- /etc/rc.d/rc4.d/K10dbora
- /etc/rc.d/rc5.d/S99dbora
- /etc/rc.d/rc6.d/K10dbora

The symbolic links are not created in SLES8 and after with the 'chkconfig -add' command. To have the symbolic links created run the following in addition:

```
/sbin/chkconfig --set dbora 35
```

After this action, the following symbolic links will be created pointing to /etc/init.d/dbora script:

- /etc/init.d/rc3.d/S01dbora
- /etc/init.d/rc3.d/K22dbora
- /etc/init.d/rc5.d/S01dbora
- /etc/init.d/rc5.d/K22dbora

In all cases, the 'dbora' service will be running in runlevels 3,5 and it will be stopped in other runlevels (i.e. 0,1,2,4,6).

NOTE 4:
The script in this document assumes that:

- ORACLE_HOME and other required environment settings are done in the login script of ORA_OWNER
- There is no auto-running script like multiple ORACLE_HOME selection in the login profile of ORA_OWNER

NOTE 5:
If SELinux is enabled use "sudo su" instead of "su" in the dbora script. See Note 357906.1

NOTE 6:
It has been suggested (but not yet verified) that /etc/init.d/dbora should call dbstart and dbshut in the following way, rather than the way stated above:

```
su - $ORA_OWNER -c "$ORA_HOME/bin/dbstart $ORA_HOME"
su - $ORA_OWNER -c "$ORA_HOME/bin/dbshut $ORA_HOME"
```

REFERENCES

NOTE:1016388.102 - LINUX: DBSHUT FAILS WHEN ISSUING REBOOT, INIT6, OR SHUTDOWN.
NOTE:1074016.6 - 'dbora' does Not Work on RedHat Linux
NOTE:126146.1 - Customizing System Startup in RedHat Linux
NOTE:207508.1 - Dbstart does not work if using an spfile only
NOTE:357906.1 - Automated Database Startup Fails When SELinux Is Enabled

Related

Products

- Oracle Linux and Virtualization > Oracle Linux > Operating System > Linux OS > Linux Kernel > Generic kernel issues (sched, init, etc)
- Oracle Database Products > Oracle Database > Oracle Database > Oracle Database - Enterprise Edition > Dataserver Installation and Relinking issue > Post Installation tasks

Keywords

AUTOMATIC; DBSHUT; DBSTART; INIT; LINUX; LISTENER; ORACLE DATABASE; ORATAB; REDHAT; RHEL; RUNLEVEL; SHUTDOWN; START LISTENER; STARTUP

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