

# Oracle 11.2.0.2

Oracle 11.2.0.2 (, database-linux-x86-64-11.2.0.2.zip).

## oracle

```
# groupadd -r oinstall && \  
groupadd dba && \  
useradd -r -g oinstall -G dba -s /bin/bash -d /opt/oracle -m oracle
```

, nobody, :

```
# groupadd -r nobody
```

dba , oracle:

```
# usermod -a -G dba nixon && \  
usermod -a -G dba llama && \  
usermod -a -G dba gordon && \  
usermod -a -G dba fly && \  
usermod -a -G dba tischenko && \  
usermod -a -G dba netflash && \  
usermod -a -G dba sda && \  
usermod -a -G dba matsak && \  
usermod -a -G dba chornobay
```

sudo /etc/sudoers.d/oracle :

```
# echo "%dba ALL=(oracle) NOPASSWD: ALL" > /etc/sudoers.d/oracle && \  
chmod 0440 /etc/sudoers.d/oracle
```

```
root@hydra:~# aptitude install bc
```

:

```
# setparam() { val=`cat /proc/sys/${1//./}/`; if [ "$1" = "kernel.sem" ] || [ "$2" -gt "$val" ]; then val="$2";  
fi; echo "$1 = $val" >> /etc/sysctl.d/oracle.conf; }  
echo -n "Memory per DB [GB]: " && read DB_MEM && \  
echo -n "DB count: " && read DB_COUNT && \  
setparam "kernel.shmall" `echo "$((free -b|grep Mem|awk '{print$2}')/$(getconf PAGE_SIZE))|bc` && \  
setparam "kernel.shmmax" `echo "$DB_COUNT*$DB_MEM*1024*1024*1024*3/2"|bc` && \  
setparam "kernel.shmmni" 4096 && \  
setparam "kernel.sem" "250 32000 100 128" && \  
setparam "fs.file-max" 6815744 && \  
setparam "fs.aio-max-nr" 1048576 && \  
setparam "net.core.rmem_default" 262144 && \  
setparam "net.core.wmem_default" 262144 && \  
setparam "net.core.rmem_max" 4194304 && \  
setparam "net.core.wmem_max" 1048576 && \  
sysctl -p /etc/sysctl.d/oracle.conf
```

( - 4 ) ( - 1 ).

## oracle

/etc/security/limits.conf :

```
oracle soft nproc 4096
oracle hard nproc 16384
oracle soft nofile 1024
oracle hard nofile 65536
oracle soft stack 10240
```

/etc/pam.d/login ( ):

```
session    required    pam_limits.so
```

## 1. Debian Linux

/etc/environment :

```
ORACLE_BASE="/opt/oracle"
ORACLE_HOME="/opt/oracle/product/11.2.0.2"
ORACLE_SID="$ORACLE_SID"
ORACLE_OWNER="oracle"
TNS_ADMIN="/etc/oracle"
NLS_LANG="AMERICAN_RUSSIA.AL32UTF8"
DISABLE_HUGETLBFS="1"
TZ="$TZ"
```

\$TZ (, Europe/Moscow), \$ORACLE\_SID — ( , , ).  
/etc/profile

```
export PATH
```

:

```
PATH="$PATH:/opt/oracle/product/11.2.0.2/bin:/opt/oracle/product/11.2.0.2/OPatch"
```

## 2. Ubuntu Linux

/etc/environment PATH, :

```
:/opt/oracle/product/11.2.0.2/bin:/opt/oracle/product/11.2.0.2/OPatch
```

:

```
ORACLE_BASE="/opt/oracle"
ORACLE_HOME="/opt/oracle/product/11.2.0.2"
ORACLE_SID="$ORACLE_SID"
ORACLE_OWNER="oracle"
TNS_ADMIN="/etc/oracle"
NLS_LANG="AMERICAN_RUSSIA.AL32UTF8"
DISABLE_HUGETLBFS="1"
TZ="$TZ"
```

\$TZ (, Europe/Moscow), \$ORACLE\_SID — ( , , ).

## 3. Red Hat Enterprise Linux

/etc/environment :

```
ORACLE_BASE="/opt/oracle"
ORACLE_HOME="/opt/oracle/product/11.2.0.2"
ORACLE_SID="$ORACLE_SID"
ORACLE_OWNER="oracle"
TNS_ADMIN="/etc/oracle"
NLS_LANG="AMERICAN_RUSSIA.AL32UTF8"
DISABLE_HUGETLBFS="1"
PATH="$PATH"
TZ="$TZ"
```

```
$TZ      (, Europe/Moscow), $ORACLE_SID — ( , , ).
$PATH   :
```

```
# echo $PATH:/opt/oracle/product/11.2.0.2/bin:/opt/oracle/product/11.2.0.2/OPatch
```

```
, .
```

## Oracle

### 1. Ubuntu Linux (x64), Debian Linux (x64) squeeze

```
# apt-get install gcc libaiol libstdc++5 lesstif2 lesstif2-dev libc6-i386 && \
apt-get install libc6-dev-i386 lib32stdc++6 lib32z1 ia32-libs sysstat && \
apt-get install rlwrap unixodbc unixodbc-dev elfutils rpm make g++
```

```
:
```

```
# ln -s /usr/bin/awk /bin/awk && \
ln -s /usr/bin/arch /bin/arch && \
ln -s /usr/bin/sort /bin/sort && \
ln -s /usr/bin/rpm /bin/rpm && \
ln -s /lib/libgcc_s.so.1 /lib/libgcc_s.so && \
ln -s /usr/bin/basename /bin/basename
```

### 2. Debian Linux (x64) wheeze

```
# aptitude install libstdc++5 x11-utils libmotif4 libaiol lesstif2 lesstif2-dev lib32stdc++6 lib32z1
sysstat rlwrap unixodbc unixodbc-dev elfutils rpm make g++ gcc
```

```
# mkdir /usr/lib64 ;
ln -s /usr/lib/x86_64-linux-gnu/libpthread_nonshared.a /usr/lib64/libpthread_nonshared.a && \
ln -s /usr/lib/x86_64-linux-gnu/libc_nonshared.a /usr/lib64/ && \
ln -s /lib/x86_64-linux-gnu/libgcc_s.so.1 /lib64/ && \
ln -s /usr/lib/x86_64-linux-gnu/libstdc++.so.6 /usr/lib64/ && \
ln -s /usr/bin/awk /bin/awk && \
ln -s /usr/bin/rpm /bin/rpm && \
ln -s /usr/bin/arch /bin/arch && \
ln -s /usr/bin/sort /bin/sort && \
ln -s /lib/libgcc_s.so.1 /lib/libgcc_s.so && \
ln -s /usr/bin/basename /bin/basename
```

```
/etc/fstab .
```

```
# See "man tmpfs" and https://forums.oracle.com/forums/thread.jspa?messageID=9057494
none      /dev/shm tmpfs      defaults,size=16G    0    0
```

### 3. CentOS Linux (x64)

:

```
# yum install setarch-2* make-3* glibc-2* libaio-0* && \
yum install compat-libstdc++-33-3* compat-gcc-34-3* compat-gcc-34-c++-3* gcc-4* libXp-1* && \
yum install openmotif-2* compat-db-4*
```

:

```
# ln -s /lib/libgcc_s.so.1 /lib/libgcc_s.so
```

**Oracle 11.2.0.2** ssh- "X11Forwarding". :

```
$ ssh -X user@server
```

( **oracle**):

```
$ chmod o+r ~/.Xauthority && \
sudo -u oracle -E ./database/runInstaller -ignoreSysPrereqs
```

### Enterprise Edition .

( Install database software only ), Oracle RAC ( Single instance database installation Oracle Grid).

Oracle Base — **/opt/oracle**

— **/opt/oracle/product/11.2.0.2**

Oracle Inventory — **/opt/oracle/oraInventory**

.

*Debian Wheezy:*

agent nmhs ( *Debian Wheezy*). : <https://community.oracle.com/message/4396359#4396359>  
emagent. Continue.

2 **root**:

```
# /opt/oracle/oraInventory/orainstRoot.sh && \
/opt/oracle/product/11.2.0.2/root.sh
```

/var/oradata **oracle**, Oracle:

```
# install -d -ooracle -goinstall -m750 /var/oradata
```

*Debian Wheezy:* :

```
oracle$ cd $ORACLE_HOME/sysman/lib ;
make -f ins_emagent.mk "agent"
```

, gcc

```
-lnmmsso -lcore11 -lnnz11
```

: [http://www.debian-administration.org/article/656/Installing\\_Oracle11\\_on\\_Debian\\_Squeeze\\_and\\_Lenny](http://www.debian-administration.org/article/656/Installing_Oracle11_on_Debian_Squeeze_and_Lenny)

## Oracle

```
/etc/oracle, :
```

```
# mkdir /etc/oracle
```

```
listener.ora
```

```
LISTENER = (  
  ADDRESS_LIST =  
    (ADDRESS = (PROTOCOL = TCP)(HOST = 127.0.0.1)(PORT = 1521))  
)  
  
SID_LIST_LISTENER = (  
  SID_LIST =  
    (SID_DESC = (SID_NAME = $ORACLE_SID)(ORACLE_HOME = /opt/oracle/product/11.2.0.2))  
)
```

```
$ORACLE_SID ( !). :
```

```
# chmod o-r /etc/oracle/listener.ora
```

```
/etc/oracle:
```

```
# chown -R oracle:oinstall /etc/oracle
```

## Oracle

```
:
```

### a. Ubuntu Linux, Debian Linux

```
2 /etc/init.d :
```

```
i. ora.database —
```

```
#!/bin/bash  
  
# ". Oracle  
# : . .  
# (C) " "  
# www.latera.ru | info@latera.ru  
  
### BEGIN INIT INFO  
# Provides: ora.database  
# Required-Start: $network  
# Required-Stop: $network  
# Should-Start: network-manager  
# Should-Stop: network-manager  
# Default-Start: 2 3 4 5  
# Default-Stop: 0 1 6  
# Short-Description: Oracle database  
### END INIT INFO  
  
#  
RET_OK="0"  
RET_BAD_USAGE="1"  
RET_FAILED_RUN="2"  
  
# -  
. /lib/lsb/init-functions  
  
#  
function echo_err {
```

```

    echo $@ >&2
}

#
function init_environment {
    . /etc/environment
    export ORACLE_HOME
    export ORACLE_OWNER
}

#
function run_cmd {
    #
    eval $@

    #
    if [ $? != "0" ]; then
        #
        log_end_msg $RET_FAILED_RUN
        exit $RET_FAILED_RUN
    fi
}

#
case "$1" in
    #
    start)
        log_daemon_msg "Starting Oracle Database"

        #
        init_environment

        #
        run_cmd "su $ORACLE_OWNER -c \"\$ORACLE_HOME/bin/dbstart \$ORACLE_HOME\""

        # c
        log_end_msg $RET_OK
        exit $RET_OK
        ;;
    #
    stop)
        log_daemon_msg "Stopping Oracle Database"

        #
        init_environment

        #
        run_cmd "su $ORACLE_OWNER -c \"\$ORACLE_HOME/bin/dbshut \$ORACLE_HOME\""

        # c
        log_end_msg $RET_OK
        exit $RET_OK
        ;;
    #
    restart)
        #
        $0 stop
        #
        $0 start

        #
        exit $RET_OK
        ;;
    *)
        #
        echo_err "Usage: $0 (start|stop|restart)"

        #
        exit $RET_BAD_USAGE

```

```
;;
esac
```

## ii. ora.listener —

```
#!/bin/bash

# ".      Oracle
# :      .
# (C)    "
# www.latera.ru | info@latera.ru

### BEGIN INIT INFO
# Provides:      ora.listener
# Required-Start: $network
# Required-Stop:  $network
# Should-Start:   network-manager ora.database
# Should-Stop:    network-manager ora.database
# Default-Start:  2 3 4 5
# Default-Stop:   0 1 6
# Short-Description: Oracle listener
### END INIT INFO

#
RET_OK="0"
RET_BAD_USAGE="1"
RET_FAILED_RUN="2"

# -
. /lib/lsb/init-functions

#
function echo_err {
    echo "$@" >&2
}

#
function init_environment {
    . /etc/environment
    export ORACLE_HOME
    export ORACLE_OWNER
}

#
function run_cmd {
    #
    eval "$@"

    #
    if [ $? != "0" ]; then
        #
        log_end_msg $RET_FAILED_RUN
        exit $RET_FAILED_RUN
    fi
}

#
case "$1" in
    #
    start)
        log_daemon_msg "Starting Oracle listener"

        #

```

```

init_environment

#
run_cmd "su $ORACLE_OWNER -c \"\$ORACLE_HOME/bin/lsnrctl start LISTENER\""

# c
log_end_msg $RET_OK
exit $RET_OK
;;

#
stop)
log_daemon_msg "Stopping Oracle listener"

#
init_environment

#
run_cmd "su $ORACLE_OWNER -c \"\$ORACLE_HOME/bin/lsnrctl stop LISTENER\""

# c
log_end_msg $RET_OK
exit $RET_OK
;;

#
restart)
#
$0 stop
#
$0 start

#
exit $RET_OK
;;

#
*)
#
echo_err "Usage: $0 (start|stop|restart)"

#
exit $RET_BAD_USAGE
;;
esac

```

:

```

# chmod +x /etc/init.d/ora.* && \
update-rc.d ora.database defaults && \
update-rc.d ora.listener defaults

```

## b. Red Hat Enterprise Linux

2 /etc/init.d :

i. ora.database —

```

#!/bin/bash

# ". Oracle
# : . .
# (C) " "
# www.latera.ru | info@latera.ru

### BEGIN INIT INFO# Provides:          ora.database
# Required-Start:    $network
# Required-Stop:     $network
# Should-Start:      network-manager
# Should-Stop:       network-manager
# Default-Start:     2 3 4 5
# Default-Stop:      0 1 6

```



```

# Short-Description: Oracle database
### END INIT INFO
#
RET_OK="0"
RET_BAD_USAGE="1"
RET_FAILED_RUN="2"

#
function echo_err {
    echo $@ >&2
}

#
function init_environment {
    . /etc/environment
    export ORACLE_HOME
    export ORACLE_OWNER
}

#
function run_cmd {
    #
    eval $@

    #
    if [ $? != "0" ]; then
        #
        #log_end_msg $RET_FAILED_RUN
        exit $RET_FAILED_RUN
    fi
}

#
case "$1" in
    #
    start)
        echo "Starting Oracle Database..."

        #
        init_environment

        #
        run_cmd "su $ORACLE_OWNER -c \"\$ORACLE_HOME/bin/dbstart \$ORACLE_HOME\""

        # c
        exit $RET_OK
        ;;
    #
    stop)
        echo "Stopping Oracle Database..."

        #
        init_environment

        #
        run_cmd "su $ORACLE_OWNER -c \"\$ORACLE_HOME/bin/dbshut \$ORACLE_HOME\""

        # c
        exit $RET_OK
        ;;
    #
    restart)
        #
        $0 stop
        #
        $0 start

        #
        exit $RET_OK

```

```

        ;;
    #
    *)
    #
    echo_err "Usage: $0 (start|stop|restart)"

    #
    exit $RET_BAD_USAGE
    ;;
esac

```

## ii. ora.listener —

```

#!/bin/bash

# ".      Oracle
# :      .
# (C)    " "
# www.latera.ru | info@latera.ru

### BEGIN INIT INFO
# Provides:      ora.listener
# Required-Start: $network
# Required-Stop: $network
# Should-Start:   network-manager ora.database
# Should-Stop:    network-manager ora.database
# Default-Start:  2 3 4 5
# Default-Stop:   0 1 6
# Short-Description: Oracle listener
### END INIT INFO

#
RET_OK="0"
RET_BAD_USAGE="1"
RET_FAILED_RUN="2"

#
function echo_err {
    echo $@ >&2
}

#
function init_environment {
    . /etc/environment
    export ORACLE_HOME
    export ORACLE_OWNER
}

#
function run_cmd {
    #
    eval $@

    #
    if [ $? != "0" ]; then
        #
        # log_end_msg $RET_FAILED_RUN
        exit $RET_FAILED_RUN
    fi
}

#
case "$1" in
    #
    start)
        echo "Starting Oracle listener..."

```

```

#
init_environment

#
run_cmd "su $ORACLE_OWNER -c \"$ORACLE_HOME/bin/lsnrctl start LISTENER\""

# c
exit $RET_OK
;;
#
stop)
echo "Stopping Oracle listener..."

#
init_environment

#
run_cmd "su $ORACLE_OWNER -c \"$ORACLE_HOME/bin/lsnrctl stop LISTENER\""

# c
exit $RET_OK
;;
#
restart)
#
$0 stop
#
$0 start

#
exit $RET_OK
;;
#
*)
#
echo_err "Usage: $0 (start|stop|restart)"

#
exit $RET_BAD_USAGE
;;
esac

```

:

```

~]#      chmod +x /etc/init.d/ora.* && \
      chkconfig --add ora.database \
      chkconfig --add      ora.listener

```

## Oracle

:

```
# /etc/init.d/ora.listener start
```