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Linux OS ??

OS ???????

- X Window System
- GNOME Desktop
- Editors
- Graphical Internet
- Text-based Internet
- Server Configuration Tools
- Legacy Network Server
 - ? rusers
 - ? rwho
- Development Tools
- Compatibility Arch Development
- Legacy Software Development
 - ? compat-boost-1331
- Administration Tools
- System Tools
- Compatibility Arch Support

???????

- pdksh
- nfs-utils
- rsh-server

?????????

?? /etc/sysctl.conf

```
fs.file-max = 8192
kernel.shmmax = 1073741824
kernel.shmall = 471859
kernel.msgmni = 4096
kernel.sem = 250 256000 32 2048
vm.lower_zone_protection = 250 #for CentOS 4.x only
```

TIPs?

kernel.shmax : 32bit ???????? 268435456 (256 MB)??? 64 ???????? 1073741824 (1 GB)?????????????
 kernel.shmall: physical memory(KB) * 90% / 4, 2048 * 1024 * 90% /4= 471859.2 , ??????? Table ???
 buffer pool???????????????? 90%?

kernel.shmall: Maximum total size of shared memory in pages (normally 4096 bytes)

kernel.shmmax: Maximum size of shared memory segment in bytes

????

[Modifying kernel parameters and user limits \(Linux, AIX, HP-UX, Solaris\)](#)

[?????\(Linux\)](#)

???

```
#> sysctl -p
```

```
#> ipcs -l
```

```
----- Shared Memory Limits -----
```

```
max number of segments = 4096      //SHMMNI
max seg size (kbytes) = 1048576    //SHMMAX
max total shared memory (kbytes) = 1887436 //SHMALL
min seg size (bytes) = 1
```

```
----- Semaphore Limits -----
```

```
max number of arrays = 2048        //SEMMNI
max semaphores per array = 250
max semaphores system wide = 64000
max ops per semop call = 32
semaphore max value = 32767
```

```
----- Messages: Limits -----
```

```
max queues system wide = 4096      //MSGMNI
max size of message (bytes) = 8192
default max size of queue (bytes) = 16384 //MSGMAX
```

TIPS:

?????????????????????:

```
cat /proc/sys/kernel/shmall
cat /proc/sys/kernel/shmax
```

oom-kill ??? 0 (for CentOS 4.x only)

```
#> echo 0 > /proc/sys/vm/oom-kill
```

???? DB2 Server ???

? X Window ??????)

```
#> tar xzf DB2_V82_ESE_LNX_AMD64_NLV.tar.gz
```

```
#> cd ese
```

```
#> db2setup
```

Install Products

> Installation Type: Typical

> Install DAS

- username: db2as
- group: db2asadm
- Home: /home/db2as

> Set up a DB2 Instance: **Do not create a DB2 Instance**

> Set up the administration contact list

- Local
- Enable notification: ???

NOTE:

?????????? SMTP server

?? OK ??????

> Finish?????????

TIPS:

?? X Window ?????????? ./db2_install????? DB2.ESE

?? DB2 FixPak 18

```
#> tar xf FP18_MI00295.tar
```

```
#> cd FP18_MI00295
```

```
#> mkdir db2fp18
```

```
#> tar xf FP18_MI00295.tar -C db2fp18/
```

```
#> cd db2fp18
```

```
#> ./installFixPak -y
```

????

?? Instance

?? ??/??

```
#> groupadd db2adm
```

```
#> useradd -g db2adm -c "DB2 Instance" db2inst
```

???????????? Instance ????????????

?? /etc/services

```
# DB2_db2inst 60000/tcp DB2_db2inst_1 60001/tcp DB2_db2inst_2 60002/tcp DB2_db2inst_END
60003/tcp
```

?? DB2 Instance

```
#> cd /opt/IBM/db2/V8.1/instance/
#> ./db2icrt -s ese -u db2inst -w 64 db2inst
```

TIPS:

64-bit ???????? -w 64????? 32-bit ? Instance

????????????? db2idrop <instance-name>

??????

```
#> su - db2inst
#> db2licm -l
```

```
Product Name           = "DB2 Enterprise Server Edition"
Product Identifier      = "DB2ESE"
Version Information     = "8.2"
Expiry Date            = "11/06/2013 (Try & Buy)"
Registered Connect User Policy = "Disabled"
Number Of Entitled Connect Users = "5"
Enforcement Policy     = "Soft Stop"
Number of processors    = "1"
Number of licensed processors = "1"
Database partitioning feature = "Entitled"
Annotation             = ""
Other information
```

????

```
#> su - db2inst
#> db2level
```

DB21085I Instance "db2inst" uses "32" bits and DB2 code release "SQL08029" with level identifier "030A0106".

Informational tokens are "DB2 v8.1.3.160", "s090715", "MI00295", and FixPak "18".

Product is installed at "/opt/IBM/db2/V8.1".

???? "32" bits ??? instance ?? 64-bit?

?????

```
#> su - db2inst
#> db2licm -a db2ese.lic
```

```
??????
```

```
#> db2licm -l
```

```
Product Name           = "DB2 Enterprise Server Edition"
Product Identifier      = "DB2ESE"
Version Information     = "8.2"
Expiry Date            = "Permanent"
Registered Connect User Policy = "Disabled"
Number Of Entitled Connect Users = "5"
Enforcement Policy     = "Soft Stop"
Number of processors    = "1"
Number of licensed processors = "1"
Database partitioning feature = "Not entitled"
Annotation              = ""
Other information       = ""
```

```
DB2 ?????
```

```
#> su - db2inst
#> db2 "update dbm cfg using svcename DB2_db2inst"
#> db2set DB2COMM=TCPIP
#> db2set DB2CODEPAGE=950
#> db2set DB2AUTOSTART=NO
#> db2start
#> ps -ef | grep db2sysc
```

TIPS:

```
????? DB2 ???? db2set ?????
```

```
??????????? netstat -lt ???????? *:DB2_db2inst??????????? Instance ????
db2set DB2COMM=tcpip
```

```
??????????? DB2COMM=tcpip ??
```

SQL5043N Support for one or more communications protocols failed to start successfully.
However, core database manager functionality started successfully.

```
??????
```

```
#> su - db2inst
$> mkdir devmmdb/
$> db2 "create db DEVMMDB on /home/db2inst/devmmdb using codeset big5 territory TW collate using identity"
```

```
$> db2 list db directory
$> db2 connect to devmmdb
```

?????

Transaction Log

???????????????? DB ?????? import ???

```
$> db2 "get db cfg"
```

DB ????

```
Log file size (4KB)           (LOGFILSIZ) = 1000
Number of primary log files    (LOGPRIMARY) = 3
Number of secondary log files  (LOGSECOND) = 2
Changed path to log files      (NEWLOGPATH) =
Path to log files              = /home/devmm/DEVMMDB/devmm/NODE0000/SQL00001/
SQLOGDIR
Block log on disk full        (BLK_LOG_DSK_FUL) = YES
```

TIPS:

$1000 \times 4KB \times (3+2) = 20MB$

Making sure the filesystem of traction log('Path to log files') has sufficient available space.

```
$> mkdir /home/devmm/DEVMMDB/log
$> db2 "update db cfg for DEVMMDB using LOGFILSIZ 12800"
$> db2 "update db cfg for DEVMMDB using LOGPRIMARY 10"
$> db2 "update db cfg for DEVMMDB using LOGSECOND 10"
$> db2 "update db cfg for DEVMMDB using NEWLOGPATH /home/devmm/DEVMMDB/log"
$> db2 "update db cfg for DEVMMDB using BLK_LOG_DSK_FUL YES"
```

Sample:

```
db2 "update db cfg for RMMDB using LOGFILSIZ 20480"
db2 "update db cfg for RMMDB using LOGPRIMARY 20"
db2 "update db cfg for RMMDB using LOGSECOND 25"
db2 "update db cfg for RMMDB using NEWLOGPATH /istrmm/RMMDB/log"
db2 "update db cfg for RMMDB using BLK_LOG_DSK_FUL YES"
```

????

DB2 Instance?

```
$> db2 "update dbm cfg using HEALTH_MON OFF"
```

