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- RedHat/CentOS 5/6 x86_64
 - IBM DB2 v9.7 Server

???? Linux ??? Hypervisors (???????)

?????<http://www-969.ibm.com/software/repo...Platform=Linux>

?????????????????????????

?????

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1. DB2_AESE_97_Linux_x86-64.tar.gz?DB2 ????????????????
 2. v9.7fp11_linuxx64_universal_fixpack.tar.gz?DB2 fixpack???????

CentOS ?????**Minimal Desktop**

?????????

NOTE?

- *libstdc++ ?? 32bit ? 64bit ????*
- *??? 32bit ?????????????????????????? DVD2 ??????*
- *CentOS 7 ? 32bit ????? CentOS-7.-x86_64-**Everything**-??? ISO ???*

CentOS 6, 7)

```
# yum install libaio ksh rsh-server pam-devel nfs-utils compat-libstdc++-33
# yum install libstdc++.i686 pam-devel.i686 compat-libstdc++-33.i686
```

```
# rpm -qa | grep
"ksh\|openssh\|rsh-server\|nfs-utils\|libaio\|libstdc++\|libstdc++.i686\|pam-devel\|pam-devel.i686\|compat-libstdc++-4.4.7-16.el6.x86_64
nfs-utils-lib-1.1.5-11.el6.x86_64
openssl-clients-5.3p1-111.el6.x86_64
pam-devel-1.1.1-20.el6.i686
libaio-0.3.107-10.el6.x86_64
ksh-20120801-28.el6.x86_64
libstdc++-4.4.7-16.el6.i686
openssl-server-5.3p1-111.el6.x86_64
pam-devel-1.1.1-20.el6.x86_64
nfs-utils-1.2.3-64.el6.x86_64
openssl-5.3p1-111.el6.x86_64
rsh-server-0.17-64.el6.x86_64
```

CentOS 5.11)

```
#> yum install pdksh nfs-utils rsh-server compat-libstdc++-296.i386 compat-libstdc++-33.i386
compat-libstdc++-33.x86_64 openssh
```

CentOS ?????

```
?? SELinux
#> setenforce 0
#> sed -i 's/SELINUX=.*$/SELINUX=disabled/' /etc/selinux/config
```

```
?? NetworkManager
#> service NetworkManager stop
#> chkconfig NetworkManager off
```

?????????

```
#> ipcs -l
```

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

max number of segments = 4096	// SHMMNI
max seg size (kbytes) = 67108864	// SHMMAX
max total shared memory (kbytes) = 17179869184	// SHMALL
min seg size (bytes) = 1	

----- Semaphore Limits -----

max number of arrays = 128	// SEMMNI
max semaphores per array = 250	// SEMMSL
max semaphores system wide = 32000	// SEMMNS
max ops per semop call = 32	// SEMOPM
semaphore max value = 32767	

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

max queues system wide = 7916	// MSGMNI
max size of message (bytes) = 65536	// MSGMAX
default max size of queue (bytes) = 65536	// MSGMNB

??. /etc/sysctl.conf

- shmmmax: ??????? (byte)????: ??? CentOS/RedHat 32-bit????????? Linux kernel ???? 3GB (3221225472)????
hugemem kernel ???? 4GB?????? https://access.redhat.com/documentation/MAX_Parameter
- shmall: ??????? 90% (Pages, 4KB/page)????: ??? 32-bit ??????????????????
- NOTE: ? v9.7 ?????????????????????? DB2 Instance ?????????????????? db2diag.log?
- msgmni, sem : ?????
- randomize_va_space: ??? FP5 ?????

?????????

for DB2

```
# shmmmax: 4GB
kernel.shmmmax = 4294967296
fs.file-max = 16384
kernel.randomize_va_space = 0
```

kernel.shmall, fs.file-max, kernel.msgmni, kernel.sem ???? v9.7 ???????fs.file-max ??????? 16384???
DB2 Instance ??????? 16384?????????????

?????????

```
#> sysctl -p
#> ipcs -l
```

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

max number of segments = 4096
 max seg size (kbytes) = 4194304
 max total shared memory (kbytes) = 3670016
 min seg size (bytes) = 1

----- Semaphore Limits -----

max number of arrays = 2048
 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
 max size of message (bytes) = 65536
 default max size of queue (bytes) = 65536

???????

???????????

```
#> cat /proc/sys/kernel/shmmax
#> cat /proc/sys/kernel/shmall
```

```
#> ipcs -lm
```

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

max number of segments = 4096	SHMMAX
max seg size (kbytes) = 3145728	SHMALL
max total shared memory (kbytes) = 2621440	
min seg size (bytes) = 1	

????

????

```
tar xzf DB2_AESE_97_Linux_x86-64.tar.gz
cd aese/
./db2prereqcheck
./db2_install -f NOTSAMP
```

-f NOTSAMP : ???? SAMP (System Automation for Multiplatforms)??? CentOS ????????

Default directory for installation of products - /opt/ibm/db2/V9.7

Do you want to choose a different directory to install [yes/no] ?

no

Specify one of the following keywords to install DB2 products.

AESE
CLIENT
RTCL

Enter "help" to redisplay product names.

Enter "quit" to exit.

```
*****
```

AESE

?? fixpack ??
????: v9.7fp11_linuxx64_universal_fixpack.tar.gz

```
tar xzf v9.7fp11_linuxx64_universal_fixpack.tar.gz
cd universal/
./db2prereqcheck
```

?????:

- DBT3534W The db2prereqcheck utility determined that ASLR is set to ON and that this could cause issues with some tools.

```
??: ?? /etc/sysctl.conf, ??????
kernel.randomize_va_space = 0
? echo 0 > /proc/sys/kernel/randomize_va_space
```

- WARNING:

The 32-bit library file libpam.so is not found on the system.

??: ??????

yum install pam-devel pam-devel.i686

- WARNING:

The 32 bit library file libstdc++.so.5 is not found on the system.

??: yum install compat-libstdc++-33.i686

./installFixPack

Enter full path name for the install directory -

/opt/ibm/db2/V9.7 <= ?? DB2 ???????

?? DB Instance

```
#> groupadd db2adm
#> useradd -g db2adm -c "DB2 Instance User" devinst

#> cd /opt/ibm/db2/V9.7/instance/
#> ./db2icrt -s ese -u devinst devinst
```

?? DB2 ???**????:**

- ?? license ???? DB Instance ???
- ??????????????
- ? db2aese_c.lic - DB2 Advanced Enterprise Server Edition(aese), CPU License type(_c)
- ? db2ese_c.lic - DB2 Enterprise Server Edition(ese), CPU License type(_c)
- ? db2wse_c.lic - DB2 Workgroup Server Edition(wse)?CPU License type(_c)
- ? db2aese_t.lic - DB2 Advanced Enterprise Server Edition(aese), Trial License type(_t)
- ????????????
- V9.1 ? V9.7 ???????

TIP

_c ? CPU ??
 _t ???
 _u ? USER ???

????

```
su - db2inst
unzip DB2_AESE_CPU_QS_Activation_97.zip
cd aese_c/
```

?????????**db2licm -l**

Product name:	"DB2 Advanced Enterprise Server Edition"
License type:	"License not registered"
Expiry date:	"License not registered"
Product identifier:	"db2aese"
Version information:	"9.7"

db2level

DB21085I This instance or install (instance name, where applicable: "mydev") uses "64" bits and DB2 code release "SQL0907B" with level identifier "080C0107".
 Informational tokens are "DB2 v9.7.0.11", "s150922", "IP23944", and Fix Pack "11".
 Product is installed at "/opt.ibm/db2/V9.7".

?????

db2licm -a db2/license/db2aese_c.lic

LIC1402I License added successfully.

LIC1426I This product is now licensed for use as outlined in your License Agreement. USE OF THE PRODUCT CONSTITUTES ACCEPTANCE OF THE TERMS OF THE IBM LICENSE AGREEMENT, LOCATED IN THE FOLLOWING DIRECTORY: "/opt.ibm/db2/V9.7/license/en_US.iso88591"

?????????

db2licm -l

Product name:	"DB2 Advanced Enterprise Server Edition"
License type:	"CPU Option"
Expiry date:	"Permanent"
Product identifier:	"db2aese"
Version information:	"9.7"
Enforcement policy:	"Soft Stop"

TIPs?

???????????

db2licm -r [Product identifier]

DB2 Instance ??

```
#> su - mydev
$> db2 "update dbm cfg using svcname DB2_mydev"
$> db2set DB2COMM=TCPIP
$> db2set DB2CODEPAGE=950
$> db2set DB2AUTOSTART=NO
$> db2start
$> ps -ef | grep db2sysc
```

TIPs?

?????? Port????? /etc/services?

????

DB2 Instance?

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

```
$> db2 "update dbm cfg using DIAGSIZE 50"
```

```
db2 "update db cfg for <db-name> using AUTO_MAINT off"
db2 "update db cfg for <db-name> using AUTO_TBL_MAINT off"
db2 "update db cfg for <db-name> using AUTO_RUNSTATS off"
db2 "update db cfg for <db-name> using AUTO_STMT_STATS off"
```

// If enabled HADR

```
db2 "update db cfg for <db-name> using BLOCKNONLOGGED yes"
```

FAQ

Q: ?? db2_install ??????

db2_install.log?

DBI1130E The IBM Tivoli System Automation for Multiplatforms (SA MP)
could not be installed or updated because system prerequisites
were not met. See the log file /tmp/prereqSAM.log.3380 for details.

prereqSAM.log?

```
prereqSAM: OPTIONS      = '-l /tmp/prereqSAM.log.8304 --noliccheck --silent'
prereqSAM: OPT_SILENT    = 1
prereqSAM: OPT_NOLICCHECK = 1
prereqSAM: Detected operating system: Linux
prereqSAM: Detected architecture: i386x
prereqSAM: Detected distribution: RH
prereqSAM: Supported operating system versions: RH Linux i386x - 4.6 5.0
prereqSAM: Detected operating system version:
Red Hat Enterprise Linux Server release 6.7 (Santiago)
prereqSAM: Error: None of the supported operating system versions matched the version
detected for the operating system: RH Linux i386x
prereqSAM: Supported operating system versions: RH Linux i386x - 4.6 5.0
prereqSAM: Detected operating system version:
Red Hat Enterprise Linux Server release 6.7 (Santiago)
```

prereqSAM: Error: Prerequisite checking for the ITSAMP installation failed: Linux i386x RH
Red Hat Enterprise Linux Server release 6.7 (Santiago)
prereqSAM: Most severe error code returned: 22
prereqSAM: The operating system has a version that is not supported.

?????? CentOS 6.7 ? RedHat 6.7 ?????????????? SLES 11 ?????????? SAMP ???? CentOS/RedHat??????????
???

./db2_install -f NOTSAMP