

AIX VM with QEMU

Introduction

What can it be used for?

- AIX Training and Practice
- Testing/Developing Environment for AIX
- Cybersecurity Lab for AIX
- Running AIX on your laptop for whatever you want to accomplish
- System/Database Recovery Exercise in compliance with ISO27001 (No Power Servers Required)

Prerequisites:

1. [QEMU Install](#)
2. aix_7200-04-00-1937_1of2_112019.iso
3. Fedora 40 Linux Install (Recommended)

Updated by 2025/2/17: AIX 7200-04-00 ????? 7200-05-06-2320???????????????? 5 ??
10 ??

QEMU commands

PowerPC System Board-specific

```
qemu-system-ppc64 --machine help
```

```
cobra@fedora-vm:~$ qemu-system-ppc64 --version
```

```
QEMU emulator version 8.2.6 (qemu-8.2.6-3.fc40)
```

```
Copyright (c) 2003-2023 Fabrice Bellard and the QEMU Project developers
```

??? QEMU ????? ps, crontab, cron, java ?????

Install AIX from CD-ROM

Create a VM disk

```
mkdir aix72VM
cd aix72VM
qemu-img create -f qcow2 hdisk0.qcow2 20G
```

?: AIX ??? 7200-03-00 ????????

aix_7200-04-00-1937_1of2_112019.iso

```
cd aix72VM
mv aix_7200-04-00-1937_1of2_112019.iso AIX72.iso
```

Boot from cd-rom

```
cd aix72VM

qemu-system-ppc64 -cpu POWER8 \
-machine pseries -m 4096 -serial stdio \
-drive file=hdisk0.qcow2,if=none,id=drive-virtio-disk0 \
-device virtio-scsi-pci,id=scsi \
-device scsi-hd,drive=drive-virtio-disk0 \
-cdrom $PWD/AIX72.iso \
-prom-env "boot-command=boot cdrom:" \
-prom-env "input-device=/vdevice/vty@71000000" \
-prom-env "output-device=/vdevice/vty@71000000"
```

Type 1 and press Enter

```
***** Please define the System Console. *****
```

Type a 1 and press Enter to use this terminal as the system console.

Pour definir ce terminal comme console systeme, appuyez sur 1 puis sur Entree.

Taste 1 und anschliessend die Eingabetaste druecken, um diese Datenstation als Systemkonsole zu verwenden.

Premere il tasto 1 ed Invio per usare questo terminal come console.

Escriba 1 y pulse Intro para utilizar esta terminal como consola del sistema.

Escriviu 1 i premeu Intro per utilitzar aquest terminal com a consola del sistema.

Digite um 1 e pressione Enter para utilizar este terminal como console do sistema.

```
0c31
```

Press Enter

```
>>> 1 Type 1 and press Enter to have English during install.
    2 Entreu 2 i premeu Intro per veure la instal·lació en català.
    3 Entrez 3 pour effectuer l'installation en français.
    4 F4 Installation in deutscher Sprache 4 eingeben
      und die Eingabetaste drücken.
    5 Immettere 5 e premere Invio per l'installazione in Italiano.
    6 Digite 6 e pressione Enter para usar Português na instalação.
    7 Escriba 7 y pulse Intro para la instalación en español.
```

```
88 Help ?
```

```
>>> Choice [1]:
```

Type 2

Installation and Maintenance

Type the number of your choice and press Enter. Choice is indicated by >>>.

```
>>> 1 Start Install Now with Default Settings
    2 Change/Show Installation Settings and Install
    3 Start Maintenance Mode for System Recovery
    4 Make Additional Disks Available
    5 Select Storage Adapters

88 Help ?
99 Previous Menu
```

```
>>> Choice [1]: 2
```

Type 4

Either type 0 and press Enter to install with current settings, or type the number of the setting you want to change and press Enter.

```
1 System Settings:
  Method of Installation.....New and Complete Overwrite
  Disk Where You Want to Install....hdisk0

2 Primary Language Environment Settings (AFTER Install):
  Cultural Convention.....English (United States)
  Language .....English (United States)
  Keyboard .....English (United States)
  Keyboard Type.....Default
3 Security Model.....Default
4 More Options (Software install options)
5 Select Edition.....standard
>>> 0 Install with the current settings listed above.
```

```
88 Help ?      | +-----+
99 Previous Menu | | WARNING: Base Operating System Installation will
                | | destroy or impair recovery of ALL data on the
                | | destination disk hdisk0.
>>> Choice [0]: 4
```

Type 5

```
1. Graphics Software..... Yes
2. System Management Client Software..... Yes
3. OpenSSH Client Software..... No
4. OpenSSH Server Software..... No
5. Enable System Backups to install any system..... Yes
   (Installs all devices)

>>> 6. Install More Software

    0 Install with the current settings listed above.

    88 Help ?
    99 Previous Menu

>>> Choice [6]: 5
```

Type 0

```
1. Graphics Software..... Yes
2. System Management Client Software..... Yes
3. OpenSSH Client Software..... No
4. OpenSSH Server Software..... No
5. Enable System Backups to install any system..... No
   (Installs all devices)

>>> 6. Install More Software

    0 Install with the current settings listed above.

    88 Help ?
    99 Previous Menu

>>> Choice [6]: 0
```

Press Enter to install AIX

```
Disks:  hdisk0
Cultural Convention:  en_US
Language:  en_US
Keyboard:  en_US
Graphics Software:  Yes
System Management Client Software:  Yes
OpenSSH Client Software:  No
OpenSSH Server Software:  No
Enable System Backups to install any system:  No
Selected Edition:  standard
```

Optional Software being installed:

```
>>> 1  Continue with Install
```

```

      88  Help ?           |  +-----+
      99  Previous Menu  |  | WARNING: Base Operating System Installation will
                        |  | destroy or impair recovery of ALL data on the
                        |  | destination disk hdisk0.
>>> Choice [1]:  █
```

????????? AIX ????????????

?? Ctrl + C ??

Please wait...

Approximate	Elapsed time
% tasks complete	(in minutes)

```
Set_Bootlist: Could not set the bootlist to:
hdisk0 .
The boot device must be set in the host KVM.
Press 1 to continue:  █
```

Fix boot issue

Boot from cd-rom

```
cd aix72VM
```

```
qemu-system-ppc64 -cpu POWER8 \  
-machine pseries -m 4096 -serial stdio \  
-drive file=hdisk0.qcow2,if=none,id=drive-virtio-disk0 \  
-device virtio-scsi-pci,id=scsi \  
-device scsi-hd,drive=drive-virtio-disk0 \  
-cdrom $PWD/AIX72.iso \  
-prom-env "boot-command=boot cdrom:" \  
-prom-env "input-device=/vdevice/vty@71000000" \  
-prom-env "output-device=/vdevice/vty@71000000"
```

Type 1 and press Enter

```
***** Please define the System Console. *****  
  
Type a 1 and press Enter to use this terminal as the  
system console.  
Pour definir ce terminal comme console systeme, appuyez  
sur 1 puis sur Entree.  
Taste 1 und anschliessend die Eingabetaste druecken, um  
diese Datenstation als Systemkonsole zu verwenden.  
Premere il tasto 1 ed Invio per usare questo terminal  
come console.  
Escriba 1 y pulse Intro para utilizar esta terminal como  
consola del sistema.  
Escriuiu 1 1 i premeu Intro per utilitzar aquest  
terminal com a consola del sistema.  
Digite um 1 e pressione Enter para utilizar este terminal  
como console do sistema.  
  
0c31
```

Press Enter

```
>>> 1 Type 1 and press Enter to have English during install.
      2 Entreu 2 i premeu Intro per veure la instal·lació en català.
      3 Entrez 3 pour effectuer l'installation en français.
      4 F4 Installation in deutscher Sprache 4 eingeben
        und die Eingabetaste drücken.
      5 Immettere 5 e premere Invio per l'installazione in Italiano.
      6 Digite 6 e pressione Enter para usar Português na instalação.
      7 Escriba 7 y pulse Intro para la instalación en español.
```

88 Help ?

```
>>> Choice [1]:
```

Type 3

Installation and Maintenance

Type the number of your choice and press Enter. Choice is indicated by >>>.

```
>>> 1 Start Install Now with Default Settings
      2 Change/Show Installation Settings and Install
      3 Start Maintenance Mode for System Recovery
      4 Make Additional Disks Available
      5 Select Storage Adapters
```

88 Help ?
99 Previous Menu

```
>>> Choice [1]: 3
```

Type 0

If you choose to access a root volume group, you will not be able to return to the Base Operating System Installation menus without rebooting.

Type the number of your choice and press Enter.

0 Continue

88 Help ?

```
>>> 99 Previous Menu
```

```
>>> Choice [99]: 0
```

Type 1

```
Type the number for a volume group to display the logical volume information
and press Enter.
```

[illegible]

Choice: 1

Type 1

```
Volume Group ID 00000000000000000000192375ffe21 includes the following  
logical volumes:
```

hd5	hd6	hd8	hd4	hd2	hd9var
hd3	hd1	hd10opt	hd11admin	lg_dumplv	livedump

```
Volume Group ID 00000000000000000000192375ffe21 includes the following
logical volumes:
```

hd5	hd6	hd8	hd4	hd2	hd9var
hd3	hd1	hd10opt	hd11admin	lg_dumplv	livedump

```
Type the number of your choice and press Enter.

1) Access this Volume Group and start a shell
2) Access this Volume Group and start a shell before mounting filesystems
99) Previous Menu

Choice [99]: 1
```

- ```
Type the number of your choice and press Enter.

1) Access this Volume Group and start a shell
2) Access this Volume Group and start a shell before mounting filesystems
99) Previous Menu

Choice [99]: 1
```

```
Type the number of your choice and press Enter.

1) Access this Volume Group and start a shell
2) Access this Volume Group and start a shell before mounting filesystems
99) Previous Menu

Choice [99]: 1
```

```
Type the number of your choice and press Enter.

1) Access this Volume Group and start a shell
2) Access this Volume Group and start a shell before mounting filesystems
99) Previous Menu

Choice [99]: 1
```

????????

```

Changed: ipl_blv
Changed: ipldevice
mergedev replaced 55 files in the hardfile /dev directory
Checking and mounting the /tmp filesystem.

The current volume is: /dev/hd3
Primary superblock is valid.
Checking and mounting the /var filesystem.

The current volume is: /dev/hd9var
Primary superblock is valid.
Checking and mounting the /opt filesystem.

The current volume is: /dev/hd10opt
Primary superblock is valid.
Filesystems mounted for maintenance work.

```

```

Changed: ipl_blv
Changed: ipldevice
mergedev replaced 55 files in the hardfile /dev directory
Checking and mounting the /tmp filesystem.

The current volume is: /dev/hd3
Primary superblock is valid.
Checking and mounting the /var filesystem.

The current volume is: /dev/hd9var
Primary superblock is valid.
Checking and mounting the /opt filesystem.

The current volume is: /dev/hd10opt
Primary superblock is valid.
Filesystems mounted for maintenance work.

```

```

Changed: ipl_blv
Changed: ipldevice
mergedev replaced 55 files in the hardfile /dev directory
Checking and mounting the /tmp filesystem.

The current volume is: /dev/hd3
Primary superblock is valid.
Checking and mounting the /var filesystem.

The current volume is: /dev/hd9var
Primary superblock is valid.
Checking and mounting the /opt filesystem.

The current volume is: /dev/hd10opt
Primary superblock is valid.
Filesystems mounted for maintenance work.

```

```

Changed: ipl_blv
Changed: ipldevice
mergedev replaced 55 files in the hardfile /dev directory
Checking and mounting the /tmp filesystem.

The current volume is: /dev/hd3
Primary superblock is valid.
Checking and mounting the /var filesystem.

The current volume is: /dev/hd9var
Primary superblock is valid.
Checking and mounting the /opt filesystem.

The current volume is: /dev/hd10opt
Primary superblock is valid.
Filesystems mounted for maintenance work.

```

```

Changed: ipl_blv
Changed: ipldevice
mergedev replaced 55 files in the hardfile /dev directory
Checking and mounting the /tmp filesystem.

The current volume is: /dev/hd3
Primary superblock is valid.
Checking and mounting the /var filesystem.

The current volume is: /dev/hd9var
Primary superblock is valid.
Checking and mounting the /opt filesystem.

The current volume is: /dev/hd10opt
Primary superblock is valid.
Filesystems mounted for maintenance work.

```

## Fix boot issue

```
cd /sbin/helpers/jfs2
mv fsck64 fsck64.old
```

```
ln -s fsck fsck64

mv logredo64 logredo64.old
ln -s logredo logredo64

sync;sync;
halt
```

## First boot from hdisk

```
cd aix72VM

qemu-system-ppc64 -cpu POWER8 \
-machine pseries -m 4096 -serial stdio \
-drive file=hdisk0.qcow2,if=none,id=drive-virtio-disk0 \
-device virtio-scsi-pci,id=scsi \
-device scsi-hd,drive=drive-virtio-disk0 \
-cdrom $PWD/AIX72.iso \
-prom-env "boot-command=boot hdisk:" \
-prom-env "input-device=/vdevice/vty@71000000" \
-prom-env "output-device=/vdevice/vty@71000000"
```

Type vt100

```

 Set Terminal Type
The terminal is not properly initialized. Please enter a terminal type
and press Enter. Some terminal types are not supported in
non-English languages.

 ibm3101 tvi912 vt330 aixterm
 ibm3151 tvi920 vt340 dtterm
 ibm3161 tvi925 wyse30 xterm
 ibm3162 tvi950 wyse50 lft
 ibm3163 vs100 wyse60 sun
 ibm3164 vt100 wyse100
 ibmpc vt320 wyse350

 +-----Messages-----
 | If the next screen is unreadable, press Break (Ctrl-c)
 | to return to this screen.
 |
88 Help ?

>>> Choice []: vt100
```

## Select: Accept License Agreements

[illegible]

## Software License Agreements

Move cursor to desired item and press Enter.

Show Installed License Agreements

Accept License Agreements

F1=Helpssing

Esc+9=Shell

F2=Refresh

Esc+0=Exit

F3=Cancel

Enter=Do

Esc+8=Image

Select: Accept Software Maintenance Terms and Conditions

## Software Maintenance Agreement

Move cursor to desired item and press Enter.

View Software Maintenance Terms and Conditions

Accept Software Maintenance Terms and Conditions

F1=Helpsing  
Esc+9=Shell

F2=Refresh  
Esc+0=Exit

F3=Cancel  
Enter=Do

Esc+8=Image

Select: Set root Password

“ Tip: ????????????? Task Completed - Exit to  
Login????????????????????????????????

## Installation Assistant

Move cursor to desired item and press Enter.

Set Date and Time

Set root Password

Configure Network Communications

Install Software Applications

System Workload Partition Software Maintenance

Using SMIT (information only)

Tasks Completed - Exit to Login

F1=Helpssing

F2=Refresh

F3=Cancel

Esc+8=Image

Esc+9=Shell

Esc+0=Exit

Enter=Do

?????? root ????

AIX Version 7

Copyright IBM Corporation, 1982, 2019.

Console login:

## Post-tasks

## - Disable some problematic services

```
rmitab diagd
rmitab rcnfs
rmitab aso
rmitab clcomd
rmitab pfcdaemon
stopsrc -s clcomd
stopsrc -s pfcdaemon

lsitab -a
lssrc -a
```

## - Network setup

On Linux)

net\_tap.sh:

```
BRIDGE=virbr0
NETWORK=192.168.99.0
NETMASK=255.255.255.0
GATEWAY=192.168.99.1
DHCP RANGE=192.168.99.2,192.168.99.50
TAP=tap0

sudo ip link add $BRIDGE type bridge
sudo ip link set dev $BRIDGE up
sudo ip addr add dev $BRIDGE $GATEWAY/$NETMASK

sudo ip tuntap add $TAP mode tap
sudo ip link set $TAP master $BRIDGE
sudo ip link set up dev $TAP

Uncomment the following lines to enable the DHCP server
dns_cmd=(
dnsmasq
--strict-order
--except-interface=lo
--interface=$BRIDGE
```

```
--listen-address=$GATEWAY
--bind-interfaces
--dhcp-range=$DHCPRANGE
--conf-file=""
--pid-file=/var/run/qemu-dnsmasq-$BRIDGE.pid
--dhcp-leasefile=/var/run/qemu-dnsmasq-$BRIDGE.leases
--dhcp-no-override
#)
#echo ${dns_cmd[@]} | sudo bash
```

## Run net\_tap.sh

```
bash net_tap.sh
```

## Allow access to internet

```
sudo firewall-cmd --permanent --zone=public --add-interface=tap0
sudo firewall-cmd --permanent --add-masquerade
sudo firewall-cmd --reload
```

## Boot with network interface tap0

```
qemu-system-ppc64 -cpu POWER8 \
-m machine pseries -m 4096 -serial mon:stdio \
-drive file=hdisk0.qcow2,if=none,id=drive-virtio-disk0 \
-device virtio-scsi-pci,id=scsi \
-device scsi-hd,drive=drive-virtio-disk0 \
-cdrom $PWD/AIX72.iso \
-net nic -net tap,script=no,ifname=tap0 \
-prom-env "boot-command=boot disk:" \
-nographic
```

## On AIX)

```
Check the network interface
lsdev -Cc if
lsdev -Cc adapter

Set the ip
chdev -l en0 -a netaddr=192.168.99.100 -a netmask=255.255.255.0 -a state=up
```



```
route add 0 192.168.99.1
Alternatively, using the following command instead
/usr/sbin/mktdcpip -h'aixvm' -a'192.168.99.100' -m'255.255.255.0' -i'en0' -g'192.168.99.1' -A'no' -t'N/A'

echo "nameserver 1.1.1.1" > /etc/resolv.conf
```

## - Increase the filesystem size

```
lsdev -Cc disk
lscfg -vl hdisk0
chfs -a size=+1024M /home
chfs -a size=+2048M /opt
chfs -a size=+512M /tmp
chfs -a size=+2048M /usr
chfs -a size=+1024M /var
```

## - Install OpenSSH

```
mount -v cdrfs -o ro /dev/cd0 /mnt
mkdir /tmp/ssh_install
cd /mnt/install/ppc
cp openssh* /tmp/ssh_install
cd /tmp/ssh_install
installp -acgXYd . openssh.base openssh.license openssh.man.en_US openssh.msg.en_US
lssrc -s sshd
```

## - Fix the RPM issue

```
error: cannot open Packages index using db4 - Invalid argument (22)
error: cannot open Packages database in /opt/freeware/packages
error: db4 error(22) from dbenv->open: Invalid argument
```

Solution: `fixrpm.sh`

```
#!/usr/bin/ksh

cd /opt/freeware
rm -f *.rpm.packages.tar
tar -chvf `date +"%d%m%Y"` .rpm.packages.tar packages
rm -f /opt/freeware/packages/_*
```

```
/usr/bin/rpm --rebuilddb
```

```
exit 0
```

Edit /etc/initab, insert the line after the rctcpip

```
rctcpip:23456789:wait:/etc/rc.tcpip > /dev/console 2>&1 # Start TCP/IP daemons
```

```
fixrpm:23456789:once:/fixrpm.sh > /dev/null 2>&1 # Added by Alang
```

## - Install AIX Toolbox

Download the files

- dnf\_aixtoolbox.sh :  
[https://public.dhe.ibm.com/aix/freeSoftware/aixtoolbox/ezinstall/ppc/dnf\\_aixtoolbox.sh](https://public.dhe.ibm.com/aix/freeSoftware/aixtoolbox/ezinstall/ppc/dnf_aixtoolbox.sh)
- openssl-1.1.2.2000.tar.Z :  
[https://www.ibm.com/resources/mrs/assets?source=aixbp&S\\_PKG=openssl](https://www.ibm.com/resources/mrs/assets?source=aixbp&S_PKG=openssl)

```
cd /home/worktmp
uncompress openssl-1.1.2.2000.tar.Z
tar -xvf openssl-1.1.2.2000.tar
cd openssl-1.1.2.2000
installp -qaXFY -d . openssl.base openssl.license openssl.man.en_US
openssl version
```

```
cd /home/worktmp
rpm --rebuilddb
ksh dnf_aixtoolbox.sh -y
/opt/freeware/bin/dnf update
/opt/freeware/bin/dnf install bash
```

## - Optional tasks

> Custom the prompt, create the profile `/.profile`

```
PS1=""`whoami`@`hostname -s`:""${PWD##*/}> '
```

> Timezone

smitty > System Environments > Change/Show Date and Time > Change Time Zone Using System

```
echo $TZ
```

> The ordering of certain name resolution services

```
“ ?? ping ??????????????
```

Edit: `/etc/netsvc.conf`

```
hosts = local, bind4
```

> Set the environment variables

Edit: `/etc/environment`

```
Fix for not properly displaying with smitty on the tmux
TERM=xterm
```

??????

- ?? CD ISO ?

??qemu ??? -cdrom `/path/to/your-cd.iso`

```
qemu-system-ppc64 -cpu POWER8 \
-machine pseries -m 4096 -serial mon:stdio \
-drive file=hdisk0.qcow2,if=none,id=drive-virtio-disk0 \
-device virtio-scsi-pci,id=scsi \
-device scsi-hd,drive=drive-virtio-disk0 \
-cdrom $PWD/AIX72.iso \
-net nic -net tap,script=no,ifname=tap0 \
-prom-env "boot-command=boot disk:" \
-nographic
```

AIX ????

```
mount -v cdrfs -o ro /dev/cd0 /mnt
```

- ???2?????

? Linux ????? 5G ??? `hdisk1.qcow2`

```
cd aix72VM
qemu-img create -f qcow2 hdisk1.qcow2 5G
```

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

“ ?????????????? disk id ?????? AIX ?? hdisk ??????

```
-drive file=hdisk1.qcow2,if=none,id=drive-virtio-disk1 \
-device scsi-hd,drive=drive-virtio-disk1 \
```

? AIX ???????? hdisk1

```
root@aixvm:> lspv
```

|        |                  |        |        |
|--------|------------------|--------|--------|
| hdisk0 | 00000000375ffb46 | rootvg | active |
| hdisk1 | 00000000fdb40f0f | rootvg | active |

```
root@aixvm:> lsdev -Cc disk
```

```
hdisk0 Available 00-10 MPIO Other Virtio SCSI Disk Drive
hdisk1 Available 00-10 MPIO Other Virtio SCSI Disk Drive
```

```
root@aixvm:> lsmpio -q
```

| Device | Vendor Id | Product Id    | Size     | Volume Name |
|--------|-----------|---------------|----------|-------------|
| hdisk0 | QEMU      | QEMU HARDDISK | 20.00GiB | -           |
| hdisk1 | QEMU      | QEMU HARDDISK | 20.00GiB | -           |

```
root@aixvm:> lspv -u
```

|                       |                  |                                      |        |                               |
|-----------------------|------------------|--------------------------------------|--------|-------------------------------|
| hdisk0                | 00000000375ffb46 | rootvg                               | active | 33130drive-virtio-disk00DQEMU |
| HARDDISK04QEMUvrtscsi |                  | 8eca6bf6-b924-0872-c039-8cb2a62de21a |        |                               |
| hdisk1                | 00000000fdb40f0f | rootvg                               | active | 33130drive-virtio-disk10DQEMU |
| HARDDISK04QEMUvrtscsi |                  | c618c61a-8c74-19e4-6cfa-beae464aaf14 |        |                               |

- ????? vCPU

?? QEMU ?? 1 vCPU????? AIX ?????????????????? vCPU?

qemu-system-ppc64 ??????

```
-nographic -smp 2,sockets=2,cores=1,threads=1
```

## - ?????????

qemu-system-ppc64 ??????????????

```
-net nic \
-net nic \
-net tap,script=no,ifname=tap0 \
```

????? mac addr.

```
-net nic,macaddr=56:44:45:30:31:31 \
-net nic,macaddr=56:44:45:30:31:32 \
-net tap,script=no,ifname=tap0 \
```

## - ?? CPU ??

POWER 8

```
-cpu POWER8 -machine pseries
```

POWER 9

```
-cpu POWER9 -machine pseries,ic-mode=xics
```

## - ???????

```
qemu-system-ppc64 -cpu POWER8 \
-machine pseries -m 4096 -serial mon:stdio \
-cdrom $PWD/AIX72.iso \
-device virtio-scsi-pci,id=scsi \
-drive file=hdisk0.qcow2,if=none,id=drive-virtio-disk0 \
-device scsi-hd,drive=drive-virtio-disk0 \
-drive file=hdisk1.qcow2,if=none,id=drive-virtio-disk1 \
-device scsi-hd,drive=drive-virtio-disk1 \
-net nic -net tap,script=no,ifname=tap0 \
-prom-env "boot-command=boot disk:" \
-nographic -smp 2,sockets=2,cores=1,threads=1
```

## - NFS Share

- NFS Server: Fedora VM (192.168.99.1)

- NFS Client: AIX VM (192.168.99.100)

## NFS Server on Fedora VM)

```
Install the dependencies packages
[cobra@fedora-vm ~]$ rpm -qa | grep nfs
libnfsidmap-2.7.1-0.fc40.x86_64
sssd-nfs-idmap-2.9.5-1.fc40.x86_64
nfs-utils-2.7.1-0.fc40.x86_64

Configure the firewall
sudo firewall-cmd --permanent --add-service=nfs
sudo firewall-cmd --permanent --add-service=mountd
sudo firewall-cmd --permanent --add-service=rpc-bind
sudo firewall-cmd --reload
```

Edit `/etc/exports.d/aix_nfs.exports`

```
/dataVol/aix_nfs 192.168.99.100(rw,sync,no_root_squash)
```

## Startup the service

```
[cobra@fedora-vm ~]$ sudo systemctl enable nfs-server --now
```

## NFS Client on AIX VM)

- IP: 192.168.99.1 ?? AIX ? Gateway??????? Fedora ? IP?

```
showmount -e 192.168.99.1
mkdir /mnt/nfs
mount 192.168.99.1:/dataVol/aix_nfs /mnt/nfs
```

????

????

1. AIX ?? : ? 7200-05-06-2320 ? 7200-05-08-2420?????? 8 GB??????? 2.5 ???
2. AIX ?? : ? 7200-04-00-0000 ? 7200-05-06-2320?????? 7.9GB??????? 5 ?? 10 ??

3. DB2 Server: ?? v11.1 ?? 51 ????? FP 7 ?? 1.5 ???

## I/O ??

1. AIX ?? 4GB RAM ????? Fedora Linux ?? 12 GB?? RAM???? Fedora Linux ?? SWAP memory???? AIX ? I/O ???
2. ?? Fedora Linux ????? AIX VMs?Fedora Linux ??????????????
3. ?????? AIX ?????????????? scp ?????????????? Fedora Linux ?????? Fedora Linux ?????????????????????????????

## ????????????

- / : 1GB
- /usr : 5GB
- /var : 1.5GB
- /tmp : 1GB
- /opt : 7GB (For DB2 Server)

## ????? AIX ??

- [???? AIX 7.2 ??? QEMU VM](#)
- [AIX\\_QEMU\\_blog.pdf](#)

## ????

1. ?? `lspp -L` ????????????? `-l` ?????? AIX VM ???
2. ?? DB2 Server 11.1 ?????? FixPack ??? Instance ?????????????? db2chgpath ??????
3. ?? AIX ?????????????? VM disk hdisk0.qcow2 ?????????????? AIX ?????????? hdisk0.qcow2 ??????????????
  - ????????? AIX VM?? Host OS ?????? `virt-sparsify hdisk0.qcow2 hdisk0-shrink.qcow2` ?????? hdisk0-shrink.qcow2 ?? AIX VM disk?

## References

- [AIX on qemu-system-ppc64](#)
- [Run AIX 7.2 on x86 with QEMU – Kwakou SysAdmin](#)
- [Qemu?????AIX 7.2 ?? - ?????? - ??? \(cnblogs.com\)](#)
- [Run your AIX VM on x86 using KVM and QEMU \(ibm.com\)](#)
- [qemu7?????aix72,????????????\\_aix 7.2??qcow2????????-CSDN??](#)
- [AIX 7.2 ?????? - ???{????????????}??? \(jia.je\)](#)
- [AIX for System Administrators: DEVOPS - QEMU \(aix4admins.blogspot.com\)](#)
- YT: [AIX 7.2 installation in QEMU - YouTube](#)

- YT: [Install AIX on QEMU using virsh and virt-manager tools - YouTube](#)
- YT: [Updates on Install AIX and run PowerHA using virsh and virt-manager - YouTube](#)
- [libvirt: QEMU command-line passthrough](#)
- [Install AIX on x86 using QEMU](#)

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