

AIX ?????

Install package Isof

Where to download the Isof, bind, rsyslog, openssh, openssl, etc packages?

- URL:

https://www.ibm.com/resources/mrs/assets/packageList?source=aixbp&lang=en_US

Isof_4.892.tar

```
tar xf Isof_4.892.tar
cd Isof_4.892
installp -acgXYd . Isof.base Isof.license Isof.man.en_US
Isof -v
```

```
tar xf Isof_4.892.tar
cd Isof_4.892
smitty installp

# Install Software
# INPUT device / directory for software  [.] << Input a dot
# SOFTWARE to install                    [_all_latest] << Esc + 4, Esc + 7
# ACCEPT new license agreements?         yes
```

User & Group

```
# Create a new user
mkuser admin="false" pgrp="staff" gecos="Test User" test3
mkuser admin="false" pgrp="staff" groups="sshusers" gecos="Test User" test3

# Remove a user
rmuser -p <user-name>
```

Network

Check the interface

```
lsdev -Cc if
lsdev -Cc adapter
lscfg -vpl ent0
lsattr -El ent0
lsattr -El en0
```

Configure the network

```
# Set the ip/netmask/gateway
/usr/sbin/mktcpip -h'aixvm' -a'192.168.99.100' -m'255.255.255.0' -i'en0' -g'192.168.99.1' -A'no' -t'N/A'

# Set the DNS server addr
echo "nameserver 1.1.1.1" > /etc/resolv.conf
```

Check the port opened

```
netstat -Aan
```

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```
# Login Failed
who /etc/security/failedlogin | tail -50

# Check the number of previous unsuccessful logins for the account to confirm it is blocked
lsuser -a account_locked unsuccessful_login_count {ALL|user_name}

# To check with particular user's last password changed
pwdadm -q {user_name}
lssec -f /etc/security/passwd -a lastupdate -s {user_name}
lsuser -a lastupdate {user_name}

## Convert the EPOCH-TIME
perl -le 'print scalar localtime $ARGV[0]' {epochtime}

# Reset unsuccessful login counter
chsec -f /etc/security/lastlog -a unsuccessful_login_count=0 -s {user_name}

# Unlock the locked account
```

```
chuser account_locked=false {user_name}

# Lock account
chuser account_locked=true {user_name}

# List the locked accounts
lsuser ALL | sed -n '/account_locked=true/p' | sed '/sshd/d' | awk '{print $1}'
```

?????????

- ??????????
- ???retry ??????????????????????
- ?????????????????

```
chuser loginretries=5 <username>
lsuser -a loginretries <username>
```

Mount CD-ROM & ISO

```
# Mount CD-ROM
mount -V cdrfs -o ro /dev/cd0 /mnt

# Mount/Umount ISO file
loopmount -i aix61_dvd.iso -o "-V cdrfs -o ro" -m /mnt
loopumount -l loop0 -m /mnt
```

?? HMC root

- [?? HMC8 ? HMC9 ? root ??](#)

Restrictd users to switch to root

```
# Create a group sysadm
mkgroup sysadm

# Add the user1 that is allowed to su to root into the group sysadm
chgrpmem -m + user1 sysadm
lsgroup sysadm

chsec -f /etc/security/user -s root -a sugroups=sysadm
# Reset to the default, sugroups=ALL
```

```
# Alternatively
smitty user

# Change / Show Characteristics of a User

# User Name                [root]

# SU GROUPS                 [sysadm]
```

Restricted Shell

???????????????? Shell ????????

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- [How to Use a Restricted Shell](#)

Default Shell?

```
# Change the default shell for the user to the restricted shell such as rksh or Rsh.
chuser shell=/usr/bin/rksh <user-name>

# OR

chsh <user-name> /usr/bin/rksh
```

.profile?

```
# Add the commands that are allowd to run by the user into the directory.
mkdir /usr/bin/restricted
cd /usr/bin/restricted
ln -s /usr/bin/date date

# Create a .profile in the user's home directory and set the PATH environment variable to
# a directory containing all of the commands you want the user to be able to run
export PATH=/usr/bin/restricted
```

Core dump

```
# ☐ core file
dbx -C ./core

(dbx) corefile

(dbx) dump
```

```
(dbx) quit
```

System dump

errpt:

```
67145A39 0413095315  U  S  SYSDUMP  SYSTEM DUMP
```

Copy the dump from the dump device to a file using the `savecore` command:

```
savecore .
```

“ Yes, the period is necessary. It indicates you want the dump copied to your current directory

`savecore` will copy the dump to your current directory, and name it:

```
vmcore.0.BZ
```

Uncompress the dump using the `dmpuncompress` command:

```
dmpuncompress vmcore.0.BZ
```

Lastly, format the dump:

```
/usr/lib/ras/dmptns/dmpfmt -c vmcore.0
```

Reading a Dump

```
kdb vmcore.0 vmunix.0
```

????

Memory - svmon

```
# For a summary of the top 15 processes using memory on the system
svmon -Pt15 | perl -e 'while(<>){print if($.==2||$&&& !$s+ +);$.=0 if(/^-+$/))}'
```

Pid	Command	Inuse	Pin	Pgsp	Virtual	64-bit	Mthrd	16MB
18547096	db2sysc	3956861	12944	282407	4007901	Y	Y	N
19333470	db2sysc	690873	12944	26772	688572	Y	Y	N
19726694	db2sysc	271696	12944	6198	287133	Y	Y	N
13500914	db2sysc	263458	12943	18957	285159	Y	Y	N
1966448	shlap64	109377	12900	3432	122071	Y	N	N
13631924	db2vend	105589	12900	597	115784	Y	N	N
19005734	db2sysc	105082	12902	409	114965	Y	Y	N
20709798	db2sysc	105071	12900	409	114953	Y	N	N
20119938	db2sysc	105071	12900	409	114953	Y	N	N
20185458	db2sysc	105071	12900	408	114953	Y	N	N
15597848	db2vend	104222	12900	1771	115608	Y	N	N
21430722	db2sysc	103728	12900	1576	114777	Y	N	N
21037528	db2sysc	103724	12902	1576	114773	Y	Y	N
14025064	db2sysc	103696	12900	1608	114777	Y	N	N
18350424	db2sysc	103696	12900	1608	114777	Y	N	N

Sar

- [sar ?? - IBM ????](#)

```
''' ??? sar: 0551-201 Cannot open /var/adm/sa/sa09??????? sar -o
/var/adm/sa/sa09 10
```

```
# CPU
sar -u 2 10

# Mmemory
sar -r 2 10

# I/O
sar -b 2 10
```

iostat

```
iostat 2 10
```

Perl ??

??????????

```
perl -e "use LWP::UserAgent;"  
perl -e "use DBI;"
```

HTTP GET request

```
use LWP::UserAgent;  
  
my $ua = LWP::UserAgent->new;  
  
my $server_endpoint = "http://192.168.1.1:8000/service";  
  
# set custom HTTP request header fields  
my $req = HTTP::Request->new(GET => $server_endpoint);  
$req->header('content-type' => 'application/json');  
$req->header('x-auth-token' => 'kfksj48sdfj4jd9d');  
  
my $resp = $ua->request($req);  
if ($resp->is_success) {  
    my $message = $resp->decoded_content;  
    print "Received reply: $messagen";  
}  
else {  
    print "HTTP GET error code: ", $resp->code, "n";  
    print "HTTP GET error message: ", $resp->message, "n";  
}
```

HTTP POST request

```
use LWP::UserAgent;  
  
my $ua = LWP::UserAgent->new;  
  
my $server_endpoint = "http://192.168.1.1:8000/service";  
  
# set custom HTTP request header fields  
my $req = HTTP::Request->new(POST => $server_endpoint);  
$req->header('content-type' => 'application/json');  
$req->header('x-auth-token' => 'kfksj48sdfj4jd9d');
```

```
# add POST data to HTTP request body
my $post_data = '{ "name": "Dan", "address": "NY" }';
$req->content($post_data);

my $resp = $ua->request($req);
if ($resp->is_success) {
    my $message = $resp->decoded_content;
    print "Received reply: $message";
}
else {
    print "HTTP POST error code: ", $resp->code, "n";
    print "HTTP POST error message: ", $resp->message, "n";
}
```

NFS

```
# List NFS mount-points that were configured in /etc/filesystems
root@aixvm:> lsnsfsmnt -l
```

Name	Nodename	Mount Pt	VFS	Size	Options	Auto	Accounting
/dataVol/aix_nfs	fedoravm	/mnt/nfs	nfs	--	bg,hard,intr,retry=3,timeo=30,sec=sys	yes	no

????

bootinfo

```
# [ ] [ ] [ ] [ ] [ ]
bootinfo -v

# [ ] [ ] [ ] [ ] [ ]
bootinfo -b
```

bosboot

```
# [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
bosboot -ad hdisk0
```

bootlist


```
# [] normal/service [][][][]
```

```
bootlist -m normal -o
```

```
bootlist -m service -o
```

```
# [] normal/service [][][][]
```

```
bootlist -m normal hdisk0 hdisk1
```

```
bootlist -m service cd0 hdisk1
```

System Infomation

oslevel -s

7200-05-06-2320

prtconf

System Model: IBM pSeries (emulated by qemu)

Machine Serial Number: Not Available

Processor Type: PowerPC_POWER8

Processor Implementation Mode: POWER 8

Processor Version: PV_8_Compat

Number Of Processors: 2

Processor Clock Speed: 1000 MHz

CPU Type: 64-bit

Kernel Type: 64-bit

LPAR Info: 0 aix_on_kvm

Memory Size: 4096 MB

Good Memory Size: 4096 MB

Platform Firmware level: Not Available

Firmware Version: SLOF,HEAD

Console Login: enable

Auto Restart: true

Full Core: false

NX Crypto Acceleration: Not Capable

In-Core Crypto Acceleration: Capable, but not Enabled

...

INSTALLED RESOURCE LIST

The following resources are installed on the machine.

+/- = Added or deleted from Resource List.

* = Diagnostic support not available.

Model Architecture: chrp

Model Implementation: Uni-Processor, PCI bus

+ sys0	System Object
+ sysplanar0	System Planar
* vio0	Virtual I/O Bus
* ent0	Virtual I/O Ethernet Adapter (I-lan)
* vsa0	LPAR Virtual Serial Adapter
* vty0	Asynchronous Terminal
* pci0	PCI Bus
* scsi0	qemu_virtio-scsi-pci:0000:00:02.0 Virtio SCSI Client Adapter (f41a0800)
* hdisk4	qemu_virtio-scsi-pci:0000:00:02.0-LW_0 MPIO Other Virtio SCSI Disk Drive
* hdisk5	qemu_virtio-scsi-pci:0000:00:02.0-LW_0 MPIO Other Virtio SCSI Disk Drive
+ L2cache0	L2 Cache
+ mem0	Memory
+ proc0	Processor
+ proc1	Processor

lparstat -i

Node Name	: aixvm
Partition Name	: aix_on_kvm
Partition Number	: 0
Type	: Shared
Mode	: Capped
Entitled Capacity	: 2.00
Partition Group-ID	: 1
Shared Pool ID	: 1
Online Virtual CPUs	: 2
Maximum Virtual CPUs	: 2
Minimum Virtual CPUs	: 2
Online Memory	: 4096 MB
Maximum Memory	: 4096 MB
Minimum Memory	: 4096 MB
Variable Capacity Weight	: 128
Minimum Capacity	: 2.00

...

```
uname -L
```

```
0 aix_on_kvm
```

inittab ??

```
# List all items  
lsitab -a  
  
# Remove an item  
rmitab nim
```

????

```
# List all services  
lssrc -a  
lssrc -a | grep active  
  
# Check the service inetd  
lssrc -s inetd  
lssrc -ls inetd  
  
# Start/Reload/Stop the service  
startsrc -s xntpd  
refresh -s xntpd  
stopsrc -s xntpd
```

LPAR Check

```
# Lists details on the LPAR configuration  
lparstat -i
```

UAK Check (Update Access Key)

```
# Check UAK (Update Access Key) Expiration  
lparstat -u
```

UTF-8 locales

Check the current locale environment variables.

```
root@aixvm:> locale
LANG=en_US
LC_COLLATE="en_US"
LC_CTYPE="en_US"
LC_MONETARY="en_US"
LC_NUMERIC="en_US"
LC_TIME="en_US"
LC_MESSAGES="en_US"
LC_ALL=
```

```
root@aixvm:> locale -a
C
POSIX
en_US.8859-15
en_US.IBM-858
en_US.ISO8859-1
en_US
```

```
root@aixvm:> lspp -L bos.loc.*
Fileset          Level State Type Description (Uninstaller)
-----
bos.loc.iso.en_US 7.2.5.0 A  F  Base System Locale ISO Code
Set - U.S. English
```

Install the file set for en_US.UTF-8 from AIX Installer ISO

- file set: `bos.loc.utf.EN_US`

```
installp -qaXgY -d <path of install images> bos.loc.utf.EN_US
```

With smitty

```
smitty install_all
# Press F4 to select the INPUT device / directory for software
# Press F4 to select the SOFTWARE to install
# Use the "/" key to search for the fileset name
```

Applying the locale

```
root@aixvm:> locale -a
C
POSIX
EN_US.UTF-8
EN_US
en_US.8859-15
en_US.IBM-858
en_US.ISO8859-1
en_US.UTF-8
en_US

root@aixvm:> chlang -m EN_US.UTF-8 EN_US.UTF-8
# Relogin
root@aixvm:> locale
LANG=EN_US.UTF-8
LC_COLLATE="EN_US.UTF-8"
LC_CTYPE="EN_US.UTF-8"
LC_MONETARY="EN_US.UTF-8"
LC_NUMERIC="EN_US.UTF-8"
LC_TIME="EN_US.UTF-8"
LC_MESSAGES="EN_US.UTF-8"
LC_ALL=
```

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