

COMMAND

JTAC support info

request suport information

Restore factory settins

load override /packages/mnt/jbase/sbin/install/default-juniper.conf
load factory-default

Shell Commands (file related)

start shell
root% df -k
root% mgd -l
% sysctl -a | grep bootdev

Resetting cards

request chassis fpc slot 3 offline
request chassis fpc slot 3 online
request chassis pic fpc-slot 3 pic-slot 3 offline
request chassis pic fpc-slot 3 pic-slot 3 online

Processes & Connections

restart
#deactivate protocols ospf
% which rpd
% ps ax | grep rpd

% netstat -Aa from shell

% fstat | grep [PCB] from shell

show system connections

file show /etc/services

Core Files

file list detail /var/crash/
show system core-dumps
show system core-dumps core-file-info detail <core-filename>
request system core-dump [process] High mem tax!
% gcore -s path/binary-name pid disruptive!!
% gzip vmcore.0.gz
% cat vmcore.0 | gzip vmcore.0.gz

PCMCIA

from root shell

dd if=filename of=/dev/rdevice address bs=64k

```
dd if=/dev/zero of=/dev/rad3 count=20
dd if=install-media-7.0R1.5-export of=/dev/rad3 bs=64k
```

RE & Redundancy

```
show chassis routing-engine
show chassis routing-engine bios
request chassis routing-engine master switch
request routing-engine login other-routing-engine
root# rsh -T re1
request chassis routing-engine diagnostics all
fsck /dev/ad1s1f
```

(hidden)
from root shell

PFE

```
show pfe terse
show pfe fpc 0
show pfe statistics error
clear pfe statistics
show pfe route summary
show pfe next-hop
show pfe interface
show lchip ifd
show ichip ifd
```

!!
Hidden!
!!
Hidden!
Hidden!
Hidden!

Logging into PFE Components

```
show tnp addresses
start shell
% su
% vty [ntp address]
FPC2(host vty)# show nvram
FPC2(host vty)# show syslog messages
```

Hidden!
Shell required
requires su

(same but straight from CLI)

```
start shell pfe network fpc2
EGFPC2(GRTMIANA2 vty)# sh nvram
EGFPC2(GRTMIANA2 vty)# sh lchip
EGFPC2(GRTMIANA2 vty)# sh lchip 0 errors
```

SFM0/FEB/CFEB

```
show chassis sfm detail
start shell pfe network sfm0
(vty)# show nvram
(vty)# show syslog info
(vty)# show syslog messages
SFM0 (vty)# show sched
SFM0(vty)# sh throttle
SFM0(vty)# show cchip notif
SBR(Sydney vty)# bringup nic 0 reanimate
SBR(Sydney vty)# test mem all verbosity 5 size 10 loops 1
```

!!!
!!!

JUNOS upgrades

junos files are in

file copy *ftp://hostname/filename filename*

ftp

file copy

root% dd if=/dev/rad3 of=/dev/null bs=1k count=1

show system storage

% sysctl -a | grep bootdev

% sysctl -w machdep.bootdevs=pcmcia-flash,compact-flash,disk,lan

request chassis routing-engine diagnostics all (hidden)

request system snapshot

request system software add validate /var/tmp/jinstall-6.4R3-domestic.tgz

request system reboot

Memory & processes issues

show system processes

extensive/summa

show task memory detail

Shell Commands

i) Kernel related

% sysctl -a

% sysctl -a | grep dump

% sysctl -a | grep bootdev

% sysctl -w

ii) FreeBSD related

boot: /boot/loader

Description

collects shoversion, uptime, hardware, processes, pfe stats, fpc detail, boot messages, memory, buffers, stats, etc

Restores the router to its default config

Restores the router to its default config

shows files in the directory

initializes configuration database (commit related problems)

shows boot devices

puts fpc in slot 3 in offline state

puts fpc in slot 3 back in online state

puts pic in fpc 3 slot 3 in offline state

puts pic in fpc 3 slot 3 back in online state

restart a particular daemon process (kill -1)

bounces a particular instance of rpd only

obtains process path

obtains the PID associated with a process

Displays all connections (*ports*) on which the RE listens

displays sockets (-a) & all Protocol Control Blocks (PCB) info (-A)

Displays info about a file. If you specify a particular PCB you will

determine what PROCESS is actually using one particular port

(get the PCB from the netstat -Aa command listed port)

lists only active IP sockets on RE

similar to netstat but restricted only to Internet connections

gives you a list of services-to-port mappings

lists core files if there are

lists core files if there are

decode a core file

forces a core file for one particular process (creates copy of process)

forces a core file by suspending the daemon

compresses corefile to gz

same thing, but keeps original file

copies a file to a removable media

erases removable media (PCMCIA)
copies an install media from /var/tmp to flash

Displays info about the RE, memory & CPU utilization
Displays revision level of the RE BIOS
changes RE mastership from active to backup REs
logs into the other RE
logs into the other RE from a root shell prompt
runs a diagnostic script in compact-flash,hard-disk & memory
file system check

Show list of Packet Forwarding Engine component
Show FPC status and statistics
displays FPE ASIC-related errors
clears PFE statistics
Show summary version of routing tables (size and # of routes)
Show PFE next-hop information
shows interfaces and indexes (not snmp!)
shows which interface belongs to which PFE for T-series
shows which interface belongs to which PFE for I-chip based PFE

obtains list of tnp endpoints addresses

connects to vty ntp address (FPC, SSB, SFM...)
collects diagnostic info from FPC
shows syslog messages

status of the SFM and mastership
login into the SFM
collects data from the SFM
displays logs about the SFM
displays log messages
displays scheduler information (SFM CPU%)
Interrupt throttle information
shows C chip notification registers
restarts a dead FPC
runs memory address data tests (10 meg, loop 1)

| /var/home

Copy Files from a Remote System to the local router

copies files from one place to the other (i.e. between REs)
Checks there is no removable media inserted.
displays the amount of amount of free disk space on file system
shows boot devices
alters the order of the booting devices
runs a diagnostic script in compact-flash,hard-disk & memory
Save config in /altconfig and software in /altroot before upgrade
Installs JUNOS package, validating against potential config errors
Reboot the system

Show the process table
Shows memory tasks

displays all (-a) kernel parameters
confirms if kernel core dumps are enabled
shows boot devices in order
writes (-w) parameters to kernel components

If your router gets stuck after a reload and you get a
FreeBSD Prompt you might have to help your system
to find the CF

Example

Restores the router to its default config

```
GRTMADPE2> request chassis fpc slot 2 offline
GRTMADPE2> request chassis fpc slot 2 online
GRTMADPE2> request chassis pic fpc-slot 3 pic-slot 2 offline
GRTMADPE2> request chassis pic fpc-slot 3 pic-slot 2 online
```

```
GRTAMSTC1> restart routing
```

```
% netstat -Aa | grep 179
```

```
c3780200 tcp4 0 0 10.0.9.7. 179 10.0.9.6.3651 ESTABLISHED
```

```
% fstat | grep c3780200
```

```
root rpd 2456 20* internet stream tcp c3780200
```

```
GRTAMSTC1> file list detail /var/crash/
```

```
GRTAMSTC1> show system core-dumps
```

```
GRTAMSTC1> request system core-dump routing
```

```
root% gcore -s /usr/sbin/rpd 2275
```

GRTAMSTC1>dd if=install-media-7.0R1.5-export of=/dev/rad3 bs=64k

root@Sydney-3% fsck /dev/ad1s1f

show tnp addresses

lgomez@GRTAMSTC1> start shell pfe network sfn0

SFM0(GRTAMSTC1 vty)# show nvram

SFM0(GRTAMSTC1 vty)# show syslog info


```
root@host> file copy ftp://jvserver.uu.net/jbundle-package-name /var/tmp/jbundle-package-name
root@host> file copy ftp://lgomez@jvserver.uu.net/jbundle-package-name /var/tmp/jbundle-package-name
GRTAMSTC1> file copy /var/home/jinstall-6.2-20040424.0-domestic-signed.tgz re0:/var/home/lgomez
```

kern.coredump flag must be set to 1

% sysctl -w machdep.bootdevs=pcmcia-flash,compact-flash,disk,lan

```
>> FreeBSD/i386 BOOT
Default: 0:ad(0,a)mfs
boot:
```