

| COMMAND | Description | Example |
|---|--|--|
| Chassis Management | | |
| show chassis alarm | Chassis alarm status | |
| show chassis craft-interface | Information currently on craft display | |
| set chassis display message "M40e unit for swap" | displays a user defined message on the LCD craft interface | |
| show chassis environment | Environmental information & temperature | |
| show chassis temperature-thresholds | Displays temperature thresholds | |
| show chassis routing-engine | Displays info about the RE, memory & CPU utilization | |
| show chassis hardware | Hardware inventory + serial numbers; frus shows fans; ext shows eeprom, flash/disk capacity | detail/frus/ext |
| show chassis fpc | displays status of all FPCs installed (mem heap should be <80%) | |
| show chassis fpc detail | includes also SRAM/SDRAM available Mem and usage | |
| show chassis fpc pic-status | Displays info for all PICs | |
| show chassis pic fpc-slot 1 | Displays info about one particular PIC | |
| show chassis mac-addresses | MAC address | |
| show chassis [feb scb] [sb sfm slot] | displays status about PFE system control board (temp, cpu%,DRAM...) | |
| System management | | |
| show host | ns lookup | show host www.cisco.com |
| show version | displays software running on the box | |
| show system software | displays installed packages | |
| show system uptime | uptime of the router | |
| show system processes | Show the process table | extensive/summary |
| show system statistics | Show protocol statistics | ip, icmp, ... |
| show system connections | lists only active IP sockets on RE | |
| show system users | Show users currently logged into the system | |
| show system storage | displays the amount of amount of free disk space on file system | |
| root% df -k | show system storage from Shell | |
| show system boot-messages | displays contents of boot log (boot-up messages) | |
| show system virtual-memory | displays current memory state | |
| request system reboot | Restarts the system | |
| request system halt | Stops the router and prepares it to be shut down | |
| request system reboot | Reboot the system | |
| request system snapshot | Save config in /altconfig and software in /altroot before upgrade | |
| request support information | show tech | |
| request system software add <pkgname> | performs bsd pkgadd; always use jbundle (4->5 jinstall) | |
| restart -<process> gracefully, immediately, soft | Restart process | |
| request chassis routing-engine diagnostics all | runs a diagnostic script in compact-flash,hard-disk & memory | (hidden) |
| request system storage cleanup | Free storage space on the router by rotating log files and proposing a list of files for deletion. User input is required for file deletion. | |
| Configuration | | |
| configuration | enters configuration mode | |
| show | displays the current configuration | show protocols ospf |
| [match item] | filters the output of the command | show config match firewall |
| [find item] | filters starting with the regular expression | show config find firewall |
| [save <file>] | save configuration as <file> | |
| edit | modifies configuration statements | edit protocols ospf |
| set | sets configuration statements | set chassis alarm sonet lo1 red |
| delete | removes configuration statements | |
| exit | exists edit mode and also config mode | |
| commit | save, validate and activate a complete config | |
| commit check | just check config do not apply | |
| commit confirmed x | activates config for x minutes and then ask for confirmation, x=10 default | |
| commit and-quit | activates config and exists edit mode | |
| commit synchronize | activates config on active RE and replicates it into backup RE | |
| commit full | signals to all daemons a SIGHUP (kill -1) which forces them to read their config files (restarts all daemons) | |
| root% mgd -l | same as commit full but from shell | |
| commit at | activates config at a given time (schedule a commit) | commit at "18:00:00" |
| clear system commit | Clear all pending commit requests | |
| rollback 0 | deletes the new edited changes and returns to current config | |
| rollback | returns to the last committed config | |
| rollback + commit | it will return to previously saved config. Only at the top level! | |
| load merge </var/home/user/config> | combines the current config and the new one | |
| load override </var/home/user/config> | erases the candidate config and replaces it with "luis" | |
| load merge terminal | copy and paste portions of the config, varnaf root config | |
| load factory-default | loads the factory default settings config | router# load override /packages/mnt/base/sbin/install-default-juniper.conf |
| show compare | compares the candidate config with the running config | |
| show system rollback 40 | displays a rollback file | |
| show system rollback compare 0 32 | shows differences between rollbacks 0 and 32 files | |
| save | saves config in /var/home directory | save C1NR-reset |
| save username@host:filename | saves config in remote system using ssh | save luis@192.168.200.1:SYD-AJNR-basic-inf |
| show configuration groups junos-defaults | displays only certain JUNOS default settings (system/services/apps) | (hidden) |
| Managing files | | |
| start shell | | |
| /config | flashdisk | contains active config and rollbacks 1,2 & 3 |
| /var/db/config | harddisk | contains rollback files 4 through 49 |
| /var/tmp | harddisk | contains core files generated by the daemons when they crash |
| /var/log | harddisk | files generated by the logging and traceptions |
| /var/home | harddisk | contains subdirectory per user |
| /altroot | harddisk | contains a copy of the root file structure form the flash drive |
| /altconfig | harddisk | contains a copy of the /config file structure on the flash drive |
| file list | | displays all files on this user home directory |
| file list /config | | displays all files on the /config directory |
| file show <file> | | displays content of <file> |
| file delete | | deletes a file from hard disk |
| file copy source destination | | copies files from one RE to the other |
| file copy filename ftp://hostname/filename | ftp | Copy Files from the Local Router to a Remote System |
| file copy filename scp://user@hostname/filename | scp | |
| file copy ftp://hostname/filename filename | ftp | Copy Files from a Remote System to the local router |
| show system rollback 40 | | displays a rollback file |
| show system rollback compare 0 32 | | shows differences between rollbacks 0 and 32 files |
| Logs | | |
| | located in /var/log | |
| show log messages | shows all the logs, location is /var/log | |
| show log file-name | shows logs about an specific log file | show log bgp-events.0 |
| show log cli | shows logs about cli commands issued | |
| show log chassisd | show logs about chassis probs | |
| show log install | show logs relevant to an install JUNOS version | |
| show log debug | show daemon logs | |
| show log messages? | displays all the files with their dates of the collected logs | |
| show log inventory | shows logs about inventory | |
| monitor start file-name | monitors logs in real time | |
| monitor stop | stops monitoring | |
| help syslog | explanation of log meaning | help syslog ASP_SF_W_IP_FRAGMENT_ASSEMBLY_TIMEOUT |
| Show interfaces | | |
| show interfaces | shows detailed info about an interface | |
| extensive | shows all possible info about an interface (very detailed) | |
| terse | shows ip interface brief | |
| description | shows interfaces description | |
| media | Display media information | |
| statistics | Display statistics and detailed info | |
| routing | Display routing status | |
| monitor interface x-x/x/x | monitors interface real-time statistics | |
| monitor traffic interface x-x/x/x | prints packet headers to your terminal screen for info sent/received by the RE. No filtering allowed !! | |
| monitor traffic interface x-x/x/x write-file [file] | writes output to this command to a file, with I,2 headers present | monitor traffic interface fe-0/0/0 write-file dump |
| % tcpdump -r | all info is stored in a file so you can use tcpdump to read it | XRI.AMS6> start shell |
| monitor start <var/log/file> | read the contents of a tcpdump file | % tcpdump -r dump temp |
| show start <var/log/file> | prints logfile to your terminal screen | |
| show arp | shows ARP entries | |
| clear interfaces statistics so-2/0/1 | reset counters & statistics for this particular interface | |
| show interfaces diagnostics optics so-1/0/0 | displays SONET signaling power values and laser Tx Rx | |
| Routing | | |
| show route | show ip route | |
| show route protocol [static, isis...] | show ip route for a specific protocol | show route protocol static |
| show route x.x.x.x extensive | extensive view of a route | |

show route advertising-protocol
show route receiving-protocol

Forwarding

show route forwarding-table destination x.x.x.x
clear route forwarding-table x.x.x.x
SFM0 (vty)# show route ip prefix x.x.x.x

Shell command

displays route entries in the master copy of the FT (on RE)
clears entries from the FT (be careful! could lead to RIB/FIB inconsistencies!!)
displays route entries into the PFE FT (should be identical to RE FT)

XRI.AMS6> show route forwarding-table destination 192.168.20.1

Firewall

show firewall
show firewall log
clear firewall [allfilter-name|counter-name]
show interfaces filters
show interfaces policers
show policer

detail

show packet/byte counts for all policing filters
log in memory resident buffer/kernel cache (detail: packet length)
clears counters
displays all firewall filters on all interfaces
displays all firewall policers on all interfaces
displays all policers, where it is used and no. packets processed

Management & Interface testing

ping
ping atm interface <intf> vci <nr>
traceroute

icmp echo-request/echo-response
ping remote atm interface using oam cells
send udp 33434/ttl=1 - receive icmp time-exceeded
send udp 33435/ttl=2 - receive icmp time-exceeded
...
send udp 33439/ttl=6 - receive icmp port unreachable

Loopback test

set t3-options loopback local
set t3-options loopback remote

and delete
and delete

sets loopback on PIC towards router
sets loopback on PIC towards far-end

BERT test

set t3-options bert-period 120
set t3-options bert-algorithm all-ones-repeating
set t3-options bert-error-rate 0
test interface t3-1/2/0 t3-bert-start
test interface t3-1/2/0 t3-bert-stop
show interfaces t3-1/2/0 extensive | find bert

BERT test duration
BERT test pattern
BERT test error rate
Starts BERT test
Stops BERT test

Policy

test policy <policy-name> 0/0

Pass all routes (0/0) through the policy as test