



Commonly-used Commands

show ip interfaces brief - Displays summarized layer 3 (routing) information.

show interfaces status - Displays summarized layer 2 (switching) information.

show interfaces <int> - Displays detailed layer 3 (routing) information about a specific routed interface.

show ip interfaces <int> - Displays detailed layer 3 (routing) information about a specific routed interface.

show vlan - Displays VLAN mappings / desc.

show arp - Displays the IP-to-MAC associations.

show mac-address-table dynamic - Displays the physical port-to-MAC address mappings.

show cdp neighbors - Displays other Cisco devices connected to the local device.

show logging - Displays the local log file.

ping / traceroute <target> - Used to verify response time & reachability or path to a target host.

show module - Displays the type and status of each line card / module in the device.

show power status all - Displays the power usage of each module and the status of the power supplies.

show processes cpu - Displays CPU utilization of the whole device and the individual processes.

show memory - Shows the memory statistics

show ip route <network> <mask> - Displays the *best* path to a particular network.

show ip bgp <network> <mask> - Displays the known WAN / BGP paths to the destination network (all of them.)

Layer 2/Switch Port Details (Sample)

```
lab-6500-A#show interfaces fa 1/1
FastEthernet1/1 is up, line protocol is up (connected)
Hardware is 802.3, address is 000d.662c.cec0 (bia 000d.662c.cec0)
Description: link to lab-r1
Internet address is 172.22.33.1/24
    reliability 255/255, txload 1/255, rxload 1/255
Full-duplex, 100Mb/s
Last clearing of "show interface" counters never
5 minute input rate 3000 bits/sec, 6 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
L2 Switched: ucast: 11679717 pkt, 109054 bytes
L3 in Switched: ucast: 0 pkt, 0 bytes - mcast: 0 pkt, 0 bytes
L3 out Switched: ucast: 60 pkt, 6490 bytes mcast: 0 pkt, 0 bytes
7875 packets input, 545297 bytes, 0 no buffer
Received 67087 broadcasts (91 IP multicasts)
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
13634753 packets output, 137482 bytes, 0 underruns
0 output errors, 0 collisions, 2 interface resets
```

Layer 2/Switch Port Overview (Sample)

```
lab-6500-A>show interfaces status
Port      Name                Status      Vlan    Duplex  Speed  Type
Fa1/1     link to lab-r1      connected   routed  full    100    10/100BaseTX
Fa1/2     SSL Offloader 1     connected   322     full    100    10/100BaseTX
Fa1/3     SSL Offloader 2     connected   311     full    100    10/100BaseTX
Fa1/4     Load-Generator      connected   312     full    100    10/100BaseTX
Fa1/7     OPEN                disabled    1       full    100    10/100BaseTX
Fa1/8     Load-balancer_P1    connected   349     full    100    10/100BaseTX
Gi9/12    Sniffer             connected   329     full    1000   1000BaseSX
Gi9/13    PPL to ctn-oscl     connected   trunk   full    1000   1000BaseSX
Po11     Uplink to firewall  connected   302     a-full  a-1000
Po21     Uplink to LAB-CORE  connected   trunk   a-full  a-1000
```

Layer 3/Router Port Overview (Sample)

```
lab-6500-B#show ip interfaces brief | exclude unassigned
Interface      IP-Address      OK? Method  Status  Protocol
Vlan300        172.25.240.252  YES NVRAM     up      up
Vlan301        172.25.229.12   YES NVRAM     up      up
Vlan304        172.25.229.28   YES NVRAM     up      up
Vlan401        172.24.77.3     YES NVRAM     up      up
FastEthernet1/1 172.19.10.3     YES NVRAM     up      up
FastEthernet1/2 172.25.225.113  YES NVRAM     up      up
FastEthernet1/3 172.25.225.122  YES NVRAM     up      up
FastEthernet3/1 172.25.225.93   YES NVRAM     up      up
Port-channel177 172.25.225.18   YES NVRAM     up      up
Port-channel177 172.25.225.26   YES NVRAM     up      up
Loopback0      172.25.240.3    YES NVRAM     up      up
```

Errata

Break Sequence - To break out of a traceroute, ping, etc. use CTRL+SHIFT+6, not CTRL+C.

CPU Utilization - When displaying the CPU utilization, the five second utilization displays two numbers. The first is the total CPU utilization and the second is the CPU utilization derived from interrupts. If you subtract the second number from the first, you will get the CPU utilization due to processes.

Inband logging - While SSH-ed into a device, issuing the "terminal monitor" command will have the effect of duplicating any log entries to your screen. This has the same effect as a "tail -f" on a Unix log file.

Pagination - If you don't want to have the output pause every screen full, issue the command "terminal length 0." Any commands issued will then dump the complete output without pause. To return the behavior to normal, issue the command "terminal length 24."

Ping - If you ping the local IP address of a Serial/WAN interface, it will actually cross the entire WAN link and come back to ping itself and send the response out the wire, as well, hence pinging the local IP will take twice as long as pinging the other end!

Telnet - After telnetting to a device from a router, to disconnect and return to the router CLI, hit the break sequence, then press the letter "x." Typing disconnect will then close the socket connection to the remote host.

Traceroute - If there are multiple, equal-cost paths to a destination, a Cisco traceroute will show all of them. Please note: Cisco and Unix boxes use UDP packets for traceroutes, whereas Microsoft machines use ICMP. This can skew the success of your attempts.