

Packet Tracer - Interpret show Command Output

Objectives

Part 1: Analyze Show Command Output

Part 2: Reflection Questions

Background

This activity is designed to reinforce the use of router **show** commands. You are not required to configure, but rather to examine the output of several **show** commands. This activity does not automatically provide a score. Instructions

Part 1: Analyze Show Command Output

- To connect to ISPRouter, Click **ISP PC**, then the **Desktop** tab, followed by **Terminal**.
- Enter privileged EXEC mode.
- Use the following **show** commands to answer the Reflection Questions in Part 2.

Note: If a command pauses with the —More—prompt, make certain to hit the spacebar until the **ISPRouter#** prompt appears in order to obtain all of the command output.

show arp

```
ISPRouter#show arp
Protocol  Address          Age (min)  Hardware Addr  Type   Interface
Internet  209.165.201.1    -          0030.F275.CE01  ARPA   GigabitEthernet0/0
```

show flash:

```
ISPRouter#show flash

System flash directory:
File  Length  Name/status
  3   33591768  cl900-universalk9-mz.SPA.151-4.M4.bin
  2    28282   sigdef-category.xml
  1    227537   sigdef-default.xml
[33847587 bytes used, 221896413 available, 255744000 total]
249856K bytes of processor board System flash (Read/Write)
```

show ip route

```
ISPRouter#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

    209.165.200.0/24 is variably subnetted, 2 subnets, 2 masks
C       209.165.200.224/27 is directly connected, Serial0/0/1
L       209.165.200.226/32 is directly connected, Serial0/0/1
    209.165.201.0/24 is variably subnetted, 2 subnets, 2 masks
C       209.165.201.0/27 is directly connected, GigabitEthernet0/0
L       209.165.201.1/32 is directly connected, GigabitEthernet0/0
```

show interfaces

```
ISPRouter#show interfaces
GigabitEthernet0/0 is up, line protocol is up (connected)
  Hardware is CN Gigabit Ethernet, address is 0030.f275.ce01 (bia 0030.f275.ce01)
  Internet address is 209.165.201.1/27
  MTU 1500 bytes, BW 1000000 Kbit, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, 100Mb/s, media type is RJ45
  output flow-control is unsupported, input flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00,
  Last input 00:00:08, output 00:00:05, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0 (size/max/drops); Total output drops: 0
  Queueing strategy: fifo
  Output queue :0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
    0 watchdog, 1017 multicast, 0 pause input
    0 input packets with dribble condition detected
--More--
```

show ip interface brief

```
ISPRouter#show ip interface brief
Interface          IP-Address      OK? Method Status      Protocol
GigabitEthernet0/0 209.165.201.1   YES manual up          up
GigabitEthernet0/1 unassigned      YES unset  administratively down down
Serial0/0/0        unassigned      YES unset  administratively down down
Serial0/0/1        209.165.200.226 YES manual up          up
Vlan1              unassigned      YES unset  administratively down down
```

show protocols

```
ISPRouter#show ip interface brief
Interface                IP-Address      OK? Method Status  Protocol
GigabitEthernet0/0       209.165.201.1   YES manual up      up
GigabitEthernet0/1       unassigned      YES unset  administratively down down
Serial0/0/0              unassigned      YES unset  administratively down down
Serial0/0/1              209.165.200.226 YES manual up      up
Vlan1                    unassigned      YES unset  administratively down down
ISPRouter#show protocols
Global values:
  Internet Protocol routing is enabled
GigabitEthernet0/0 is up, line protocol is up
  Internet address is 209.165.201.1/27
GigabitEthernet0/1 is administratively down, line protocol is down
Serial0/0/0 is administratively down, line protocol is down
Serial0/0/1 is up, line protocol is up
  Internet address is 209.165.200.226/27
Vlan1 is administratively down, line protocol is down
```

show users

```
ISPRouter#show users
  Line      User      Host(s)      Idle      Location
*  0 con 0      idle                00:00:00

  Interface  User      Mode      Idle      Peer Address
```

show version

```
ISPRouter#show version
Cisco IOS Software, C1900 Software (C1900-UNIVERSALK9-M), Version 15.1(4)M4, RELEASE
SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Wed 23-Feb-11 14:19 by pt_team

ROM: System Bootstrap, Version 15.1(4)M4, RELEASE SOFTWARE (fc1)
cisc01941 uptime is 6 minutes, 51 seconds
System returned to ROM by power-on
System image file is "flash0:c1900-universalk9-mz.SPA.151-1.M4.bin"
Last reload type: Normal Reload

This product contains cryptographic features and is subject to United
States and local country laws governing import, export, transfer and
use. Delivery of Cisco cryptographic products does not imply
third-party authority to import, export, distribute or use encryption.
Importers, exporters, distributors and users are responsible for
compliance with U.S. and local country laws. By using this product you
agree to comply with applicable laws and regulations. If you are unable
to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:
http://www.cisco.com/wwl/export/crypto/tool/stqrg.html

If you require further assistance please contact us by sending email to
export@cisco.com.
Cisco CISC01941/K9 (revision 1.0) with 491520K/32768K bytes of memory.
Processor board ID FTX152400KS
2 Gigabit Ethernet interfaces
2 Low-speed serial(sync/async) network interface(s)
DRAM configuration is 64 bits wide with parity disabled.
255K bytes of non-volatile configuration memory.
249856K bytes of ATA System CompactFlash 0 (Read/Write)

License Info:

License UDI:

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Device#    PID                      SN
-----
*0         CISC01941/K9             FTX15240488

Technology Package License Information for Module: 'c1900'

-----
Technology    Technology-package      Technology-package
Current       Type                   Next reboot
-----
ipbase        ipbasek9               Permanent          ipbasek9
security      disable                None               None
data          disable                None               None

Configuration register is 0x2102
```

Part 2: Reflection Questions

1. Which commands can you use to determine the IP address and network prefix of interfaces?
`show ip route, show interfaces, show protocols`
2. Which command provides the IP address and interface assignment, but not the network prefix?
`show ip interface brief`
3. Which commands would you use to determine if an interface is up?
`show interfaces, show ip interface brief, show protocols`
4. You need to determine the IOS version that is running on a router. Which command will give you this information?
`show version`
5. Which commands provide information about the addresses of the router interfaces?
`show arp, show interfaces, show ip route, show ip interface brief, show protocols`
6. You are considering an IOS upgrade and need to determine if router flash can hold the new IOS. Which commands provide information about the amount of Flash memory available?
`show version, show flash`
7. You need to adjust a router configuration, but you suspect that a colleague may also be working on the router from another location. Which command provides information about the lines being used for configuration or device monitoring?
`show users`
8. You have been asked to check the performance of a device interface. Which command provides traffic statistics for router interfaces?
`show interfaces`
9. Customers are complaining that they cannot reach a server that they use for file storage. You suspect that the network may have become unreachable due to a recent upgrade. Which command provides information about the paths that are available for network traffic?
`show ip route`
10. Which interfaces are currently active on the ISP Router?
`GigabitEthernet 0/0, Serial 0/0/1`