CISCO Networking Class

From the CISCO Network Academy website, along with other useful commands and notes gathered by me, Alex Kolar

IOS Commands

Line editing commands:

ctrl-a (go to the beginning of the current line)

ctrl-e (go to the end of the current line)

ctrl-p or up-arrow (repeat up to 10 previous commands in the current mode)

ctrl-n or dn-arrow (if you have gone back in command history, this moves forward)

backspace-key (erase the character to the left of the current cursor position)

ctrl-z or **end** (return to privilege mode)

exit (move back one level in the hierarchical command structure)

ctrl-c (cancel current command or leave Setup mode if you accidentally get into it)

S1> enable (enter privilege mode)

S1# erase startup-configuration (Remove the starting configuration from NVRAM)

S1# delete vlan.dat(remove VLAN information from the Switch)

S1# reload (restart the Switch and load the startup-configuration; should be blank if erased first; answer 'no' if asked to save configuration changes)

S1# copy running-configuration startup-configuration (save config in NVRAM)

S1# wr (legacy command - Same as copy running-configuration startup-configuration)

S1# configure terminal (enter global configuration mode)

Switch(config)# hostname NAME (change from default 'Switch' to NAME)

S1(config)# enable secret PASSWORD (make the privilege level password PASSWORD)

S1(config)# banner motd MESSAGE (create a MESSAGE that will display when logging in)

S1(config)# ! (Remark or comment line – will not execute or get saved in the running configuration)

S1(config)# line console 0 [zero] (enter the console connection configuration mode)

S1(config-line)# password PASSWORD (make the user level password PASSWORD)

S1(config-line)# login (instruct the Switch that you want it to check for a password)

S1(config-line)# logging synchronous (assists by keeping command entry more orderly)

S1(config-line)# exec-timeout 0 0 [zeroes] (no timeout while configuring the Switch. The first 0 is mimutes, the second is optional and is seconds.)

S1(config)# line vty 0 4 [zero 4] (configure the same options as 'line console' above)

S1(config)# service password-encryption (encrypt passwords on the Switch)

S1# show version (show Platform, IOS version, Memory, Interfaces, etc)

S1# show running-configuration (display active Switch configuration)

S1# show startup-configuration (display backup Switch configuration)

S1# show ip interface brief (display interfaces and status)

S1# show arp (display ARP table)

S1# terminal length 0 [zero or 24] (set to 0 for continuous output, 24 is normal paging)

S1(config)# do COMMAND (execute a privilege level command in config mode; example- do show running-configuration

(Any mode) no COMMAND (do the opposite of the command. That's why "no shutdown" changes the state of interfaces from administratively down to up.)

R1(config)# no ip domain-lookup (disable only DNS packets generated by Cisco IOS software)

R1(config)# copy running-config startup-config (save the running configuration files to NVRAM as startup configuration files. May need to be in config-if or just privileged-EXEC mode)

R1(config)# line con 0 (enter line configuration mode (config-line).)

R1(config)# line vty 0 4 (enter Virtual Terminal line configuration mode. Virtual Terminal lines are only used to control inbound Telnet connections. They are a function of software – no hardware is involved.) On routers, there are 5 (0-4), on switches, there are 16 (0-15).

R1(config)# service password-encryption (encrypts a password created with the "password" method. Still not very secure.)

NOTE: the computer will not ask for a password until you log out of Privileged-EXEC mode.

S1> clock update-calendar (copies the current date and time from the software clock to the hardware clock. Must have both a software clock and a hardware clock already set.)

S1(config-if)# IPv6 address ... (automatically configures a link-local iPv6 address to the interface)

S1(config)# ipv6 unicast-routing (enable ipv6 addressing)

Route print OR **netstat –r** (shows the host routing table, which is comprised of three sections: the Interface List (Lists the Media Access Control (MAC) address and assigned interface number of every network-capable interface on the host including Ethernet, Wi-Fi, and Bluetooth adapters.), the IPv4 Route Table (Lists all known IPv4 routes, including direct connections, local network, and local default routes.), and the IPv6 Route Table (Lists all known IPv6 routes, including direct connections, local network, and local default routes.). Command output varies, depending on how the host is configured, and the interface types it has.)