

CCENT

Cisco IOS

Cisco Switch Lights – System, RPS (Redundant power supply), Status, Utilisation, Duplex, Speed
Terminal Settings – 9600 Bits Per Second, 8 Data Bits, Parity - None, Stop Bits - 1, Flow Control - None
Start of command line – [CTRL] + [A]
End of command line – [CTRL] + [E]
Show next line of output – [ENTER]
Show next screen of output – [SPACE]
Cancel command – [CTRL] + [C]
Finish command – [TAB]
Command help – [?]
Stop a ping or traceroute – [CTRL] + [SHIFT] + [6]
Suspend telnet session - [CTRL] + [SHIFT] + [6] ... [X]

Switch> enable	User mode
Switch# configure terminal	Privilege EXEC mode
Switch(Config)# exit	Global configuration mode
Switch# end	Move all the way back to Privileged EXEC mode
Switch# [CTRL] + [Z]	Move all the way back to Privileged EXEC mode
Switch# exit	Move back one level at a time
Switch>	

Switch# clock set <hh:mm:ss> <dd month yyyy>	Set time
Switch(Config)# hostname <name>	Set hostname

Switch# show history	Show last 5 used commands
Switch# show version	Show IOS version information
Switch# terminal monitor	Show status messages
Switch# show running-config / sh run	Show the 'running config'

Switch# copy running-config startup-config / copy run start / wr	Saving configuration
Switch# copy tftp:Config.txt running-config	Merges config
Switch# copy tftp:Config.txt startup-config	Replaces config after reload

Switch> en	
Switch# conf t	
Switch(Config)# interface vlan 1	Setup the management interface VLAN 1
Switch(Config-if)# ip address <192.168.0.1> <255.255.255.0>	Give the interface an IP address
Switch(Config-if)# no shutdown	Enable the port
Switch(Config-if)# do show interface vlan 1	'Do' runs the next command in any mode
Switch(Config)# ip default-gateway <192.168.0.254>	Set a default gateway

Switch> en	
Switch# conf t	
Switch(Config)# enable password <password>	Set 'Enable' password (clear text)
Switch(Config)# enable secret <password>	Set 'Enable' password (encrypted)
Switch(Config)# no enable password	Remove clear text 'Enable' password
Switch(Config)# line console 0 or line vty 0 4	
Switch(Config-line)# login	Enables console/vty logins
Switch(Config-line)# password <password>	Set password
Switch(Config-line)# logging synchronous	Stop status messages from interrupting typing
Switch(Config-line)# exec-timeout 30 0	Session timeout 30 mins from the default 5 mins
Switch(Config)# service password-encryption	Enable service to encrypt all passwords
Switch(Config)# banner motd [Message Of The Day Banner
Switch(Config)# banner login [Login Banner
Switch(Config)# username <name> secret <password>	Create user
Switch(Config)# ip domain-name <domain.com>	Create domain
Switch(Config)# crypto key generate rsa	Generate keys
Switch(Config)# ip ssh version 2	Specify SSH version
Switch(Config)# line vty 0 4	Configure VTY lines to use SSH
Switch(Config-line)# transport input ssh	Enables ssh transport
Switch# show ip interface brief	
Switch# show mac address-table	
Switch(Config)# interface fa 0/1 or interface range fa 0/1 - 24	
Switch(Config-if)# description Port 1	
Switch(Config-if)# duplex full	
Switch(Config-if)# speed 100	
Switch(Config-if)# switchport mode access	Enable Switchport mode as access
Switch(Config-if)# switchport port-security <maximum 1>	Default MAC maximum of 1
Switch(Config-if)# switchport port-security violation <protect(ignore)/restrict(ignore & logs it)/shutdown>	
Switch(Config-if)# switchport port-security mac-address <0000.0000.0000/sticky>	
Switch# show port-security interface fa 0/1	
Switch(Config)# no ip domain-lookup	Turns off lookups of unknown commands
Switch(Config)# alias exec s show ip interface brief	Creates an alias in EXEC mode using 's'

Router(Config)# username <name> privilege 15 secret <password>	Create user with privilege level 15
Router(Config)# ip domain-name <domain.com>	Create domain
Router(Config)# crypto key generate rsa	Generate keys
Router(Config)# ip ssh version 2	Specify SSH version
Router(Config)# ip http server	Enable HTTP server port 80
Router(Config)# ip http secure-server	Enable HTTPS server port 443
Router(Config)# ip http authentication local	Enable HTTP local authentication
Router(Config)# line vty 0 4	Configure VTY lines to use SSH
Router(Config-line)# login local	Login local
Router(Config-line)# transport input ssh	Enables ssh transport
Router(Config)# ip route <network> <subnet> <next hop>	Add a static route
Router(Config)# ip route 0.0.0.0 0.0.0.0 <isp>	Add a gateway of last resort
Router(Config)# ip name-server 4.2.2.2	Resolves domain names
Router# show ip route	Show the routing table
Router# show ip route include ip route	Show static routes – useful command for no ip route
Router# show ip interface brief	Show interfaces
Router# show ip protocols	Show running protocols
Router# debug ip rip	Debug RIP
Router# debug ip packet	Debug packets – can be dangerous!
Router# undebug all / u all	Turn off all debugs
Router# clear ip route *	Clear routing table of dynamically learned routes & force update – dangerous!
Distance Vector – RIP, IGRP – Easy to configure, not many features	
Link State – OSPF, IS-IS – Difficult to configure (more knowledge required), feature-riffic	
Hybrid – EIGRP – “The best of both worlds”, Cisco proprietary	
RIPv1 – Classful version, no support for VLSM, no authentication, no manual route summarisation, uses broadcasts	
RIPv2 – Classless version, supports VLSM, adds authentication, manual route summarisation support, uses multicasts	
Router(Config)# router rip	Routing with RIP
Router(Config-router)# version 2	
Router(Config-router)# network <NetworkSerial>	(Class A – 68.0.0.0)
Router(Config-router)# network <NetworkFastEthernet>	Enter using a classful address
Router(Config-router)# no auto-summary	Stop classful address summarisation
Router(Config)# interface serial 0/0	
Router(Config-if)# encapsulation hdlc or ppp	HDLC or PPP encapsulation
Router(Config-if)# clock rate 64000	Set the clocking rate on the DCE end
Router# show controllers serial 0/0	
Router# show sessions / where	Telnet/SSH sessions
Router# disconnect <session#>	Forcefully disconnect session
Router# show users	Logged on users
Router# show line	Show lines in use
Router# clear line <line#>	Forcefully disconnect user

Router# show cdp

Show CDP

Router# show cdp neighbours

Show CDP neighbours

Router# show cdp neighbours detail

Show CDP neighbours details

Router# show cdp entry <entry>

Show CDP entry

Router(Config)# interface serial 0/0

Router(Config-if)# no cdp enable

Turn off CDP per interface

Router(Config)# no cdp run

Stop CDP running altogether