

General

Command	Description	Displays As
> en	Enter Privileged Exec Mode	#
# config t	Enter Global Config Mode	(config)#
(config) # int {type} {number}	Enter Interface Config Mode	(config-if)#
(config) # vlan {number}	Enter VLAN Config Mode	(config-vlan)#
(config) # line con 0	Enter Console Line Config Mode	(config-line)#
(config) # line vty 0 15	Enter VTY Line Config Mode	(config-line)#
(config) # no ip dom lo	Stops Router Domain Lookup	
(config) # undebug all	Stops all Debugs	
# clock set {time} {date}	Sets manual Time/Date	
# show file systems	Lists available file systems	
# exit	Exits current mode/level	

Housekeeping

Command	Description
(config) # ho {name}	Set name of device
(config) # ena sec {password}	Set encrypted password for Priv Exec Mode
(config) # ser pass	Encrypts All Passwords
(config) # banner motd #{Banner}#	Creates Message banner
(config) # security pass min {number}	Sets min password length
(config) # login block-for {time} attempts {attempts} within {time}	Login failure wait time set
(config-line) # pass {password}	Sets password for Console Line
(config-line) # login	Makes passwords active, use after every password config

Housekeeping (cont)

(config-line) # exec-timeout {time}	Sets login timeout
(config-if) # shut no shut	Enables Disables interface
(config-if) # des {description}	Sets description of interface
# cop r s	Copies Running Config to the NVRAM

SSH Config

Command	Description
(config) # ip domain-name {Abxyz.com}	Sets Domain Name
(config) # cry key gen rsa general-keys mod 1024	Configs complexity of keys
(config) # username {name} secret {password}	Sets a UN & encrypted Pass
(config) # line vty 0 15	Configs which VTY lines to use
(config-line) # login local	Sets LOGIN
(config-line) # transport input ssh	*Defines transport potocol to SSH

IP Routing Config

Command	Description
(config) # ip route network-address subnet-mask {ip-address exit-intf}	Static Route Command
(config) # ip route 0.0.0.0 0.0.0.0 {ip-address exit-intf}	Default Static Route Command
(config) # ip route network-address subnet-mask {admin-distance}	Floating Static Route Command (Admin distance default value is 1)

VLAN Config

Command	Description
(config) # vlan {vlan-id}	Create a VLAN
(config-vlan) # name {vlan--name}	Specify a unique name to identify the VLAN
(config-vlan) # end	Return to the privileged EXEC mode
(config) # interface {interface_id}	Enter interface configuration mode

VLAN Config (cont)

(config-if) # switchport mode access	Set the port to access mode.
(config-if) # switchport access vlan <i>vlan_id</i>	Assign the port to a VLAN.
(config-if) # end	Return to the privileged EXEC mode.
(config) # show vlan brief	Display the contents of the vlan.dat file
(config-if) # mls qos trust [<i>cos</i> <i>device cisco-phone</i> <i>dscp</i> <i>ip-precedence</i>]	Set the trusted state of an interface
(config-if) # switchport voice vlan <i>vlan-#</i>	Assign a voice VLAN to a port
(config-if) # switchport mode trunk	Configure a switch port on one end of a trunk link
(config-if) # switchport trunk native <i>vlan #</i>	Configure native VLAN #

For a Catalyst switch, the **erase startup-config** command must accompany the **{(config) #delete vlan.dat}** command prior to reload to restore the switch to its factory default condition.

PAT Config

Command	Description
(config)# ip nat pool NAT-POOL-OVERLOAD 209.165.200.241 209.165.200.250 netmask 255.255.255.224	Define a pool of public IPv4 addresses 209.165.200.241 to 209.165.200.250 with pool name NAT-POOL-OVERLOAD.
(config)# access-list 3 permit 10.0.0.0 0.255.255.255	Configure ACL 3 to permit devices from 10.0.0.0/8 network to be translated by NAT.
(config)# ip nat inside source list 3 pool NAT-POOL-OVERLOAD overload	Bind NAT-POOL-OVERLOAD with ACL 3.
(config)# interface Serial0/0/0 R2(config-if)# ip nat inside	Configure the proper inside NAT interface.
R2(config)# interface Serial0/1/0 R2(config-if)# ip nat outside	Configure the proper outside NAT interface.

CDP Config

Command	Description
# show cdp	Display the status of CDP on R1.
R1# configure terminal R1(config)# cdp run R1(config)# interface s0/0/0 R1(config-if)# no cdp enable R1(config-if)# end	Enter Global Configuration mode globally on R1. Disable CDP on interface S0/0/0. Use end command to exit Global Configuration mode.
# show cdp neighbors	Display the list of CDP neighbors on R1.
# show cdp neighbors detail	Display more details from the list of CDP neighbors on R1.

Clock & NTP Config

Command	Description
# show clock detail	Display the clock
(config)# clock timezone PST -8 R1(config)# Clock summer-time PDT recurring	Set the clock time zone to PST (Pacific Standard Time), which is 8 hours later than GMT (-8). Set PDT (Pacific Daylight Time) to summer time recurring.
(config)# ntp server 209.165.200.225	Configure R1 to use an external public NTP server with an IP address of 209.165.200.225.
# show ntp associations	Verify that R1 is associated with the NTP server at IP address 209.165.200.225.

LLDP Config

Command	Description
# show lldp	Display the status of LLDP
(config)# lldp run R1(config)# interface s0/0/0 R1(config-if)# no lldp transmit	Enable LLDP globally on R1. Disable LLDP on interface S0/0/0.
# show lldp neighbors	Display the list of LLDP neighbors
# show lldp neighbors detail	Display more details from the list of LLDP neighbors



Shortcuts

Keys	Action
Tab	Completes current abbrv command
Up Arrow	Cycles thru previously used commands
?	Access HELP
Ctrl+Shift+6	Interupt
Ctrl+C	Exits Config
Ctrl+Z	Applies command, returns to Priv Exec

Display / Show Commands

Command	Description
# sho run	Displays Running Configs.
# sho access-l	Displays all ACL's.
# sho access-l {name/-number}	Displays only denoted ACL.
# sho ipv6 int	Displays interfaces on IPv6
# sho ip route	Displays all routes attached to router
# sho ip route static	Displays all static routes attached to router
#Sho ip route network	Displays routes only associated with that network
show ip nat translations	nat

Access Control Lists

Command	Description
(config) # access-list _ { deny permit remark } {source+wildcard}	Create ACL.
(config) # ip access-list standard {name}	Create Named ACL.
(config-if) # ip access-group { access-list-number access-list-name } { in out }	Attach ACL to an Interface.
(config-line) # access-class {number} { in out }	ACL for VTY.

Wildcard Determined by 255.255.255.255-Subnet mask (ex 255.255.255.255-255.255.255.128= Wildcard of 0.0.0.127)

Shortcuts; **host** = Wilcard of 255.255.255.255 **any** = Address & Wildcard of 0.0.0.0 0.0.0.0

DHCPv4 Config

Command	Description
(config) #ip dhcp excluded-address {low ip range} {high ip range} {single ip}	Excludes ip ranges, or single IP's.
(config) # ip dhcp pool {name}	Creates named DHCP pool
(dhcp-config) #net {ipv4net} {subnet}	Define Range of Addresses
(dhcp-config) #default-r {gateway}	Sets Default Gateway
(dhcp-config) #dns-s {DNS}	Sets DNS
(dhcp-config) #domain-n {Axyz.com}	Sets Domain
(config) #ip helper-address {ipv4net}	Sets DHCP Relay

DHCPv6 Config

Command	Description
(config-if) # ipv6 unicast-routing	Enable IPv6
(config-if) # ipv6 dhcp pool {name}	Name Pool
(config-if) # address prefix {prefix length} lifetime {infinite time}	Statefull Only
(config-if) # dns-s {IPv6DNS}	Set IPv6 DNS
(config-if) # domain-n {Axyz.com}	Set Domain
(config-if) # ipv6 dhcp server {name}	Set Server Name

See Note Below for Final CMD

(config-if) # ipv6 dhcp relay destination {ipv6net} Sets Router as a DHCPv6 Relay

debug ipv6 dhcp detail Displays debug details

SLAAC (config-if) # no ipv6 nd managed-config-flag (config-if) # no ipv6 nd other-config-flag Note: No other config required for SLAAC. Stateless DHCPv6 (config-inf) # ipv6 nd other-config-flag Statefull DHCPv6 (config-inf) # ipv6 nd managed-config-flag



RIP Config

Command	Description
(config) # router rip	
(config-router) # version 2	
(config-router) # no auto-summary	modify the default RIPv2 behavior of automatic summarization
(config) # show ip protocols	
(config) # network ip-address	
(config) # passive-interface	prevent the transmission of routing updates through a router interface, but still allow that network to be advertised to other routers.
(config-router) # ip route 0.0.0.0 0.0.0.0	propagate a default route in RIP
(config-router) # default-information originate	This instructs R1 to originate default information, by propagating the static default route in RIP updates.

NAT Config

Command	Description
(config)# ip nat inside source static 192.168.11.99 209.165.201.5	Configure the static translation with an inside local address of 192.168.11.99 and an inside global address of 209.165.201.5.
(config)# interface Serial-0/0/0 , (config-if)# ip nat inside	Configure the proper inside NAT interface.
R2(config)# interface Serial-0/1/0 , (config-if)# ip nat outside	Configure the proper outside NAT interface.
(config)# ip nat pool PUBLIC-POOL 209.165.200.241 209.165.200.250 netmask 255.255.255.224	Define a pool of public IPv4 addresses 209.165.200.241 to 209.165.200.250 with pool name PUBLIC-POOL.
R2(config)# access-list 2 permit 192.168.10.0 0.0.0.255	Configure ACL 2 to permit devices from 192.168.10.0/24 network to be translated by NAT.

NAT Config (cont)

R2(config)# ip nat inside source list 2 pool PUBLIC-POOL	Bind PUBLIC-POOL with ACL 2.
R2(config)# interface Serial0/0/0 R2(config-if)# ip nat inside	Configure the proper inside NAT interface.
R2(config)# interface Serial0/1/0 R2(config-if)# ip nat outside	Configure the proper outside NAT interface.
ip nat translation timeout	
clear ip nat translation *	
Top is Static Config	
Bottom is Dynamic Config	

SysLog Config

Command	Description
(config) # logging {address}	Configure the destination hostname or IPv4 address of the syslog.
(config) # logging trap {level}	Control the level of messages that will be sent
(config)# logging source-interface {interface}	Logging Source

