

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. Enable CDP 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.

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

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.



Shortcuts

Keys	Action
Tab	Completes current abbrv command
Up Arrow	Cycles thru previously used commands
?	Access HELP
Ctrl+Shift+6	Interrupt
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 & Wilcard 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 Serial0/0/0 , (config-if)# ip nat inside	Configure the proper inside NAT interface.
R2(config)# interface Serial0/1/0 , (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