Cisco IOS R&S Commands Cheat Sheet

by Cheetos via cheatography.com/55619/cs/14782/

Core Modes

Mode	Syntax	Description
User	N/A	Default landing space
Privileged *(from User)*	{ enable }	Turn on privileged commands.
Global *(from Privileged)*	{ configure terminal }	Configure from the terminal.
Interface *(from Global)*	{ interface <in ter fac e> <#/ #> }	Select an interface to configure.
	{ interface range <in ter fac e> <#/ #-#> }	Select a range of interfaces to configure.
Line *(from Global)*	{ line console <#> }	Configure primary terminal line.
	{ line vty <#> <#> }	Configure virtual terminal line.

Base Configuration

Mode	Syntax	Description
Global	* { no ip domain -lookup }	Configure no IP DNS hostname translation.
	{ hostname <na me> }	Configure system's network name.
	{ banner motd & <me ssa ge> & }	Configure a login MOTD banner.
	{ enable secret <pa ssw ord> }	Configure privileged level encrypted password.
	{ service passwo rd- enc ryption }	Encrypt system passwords.
Interface	{ ip address <ip> <su bne t> }	Configure IP address of an interface.
	{ no shutdown }	Configure interface port status up.
Line - Console	* { logging synchr onous }	Configure synchronised message output.
	{ password <pa ssw ord> }	Configure password.
	{ login }	Enable password checking.
Line - VTY	{ password <pa ssw ord> }	Configure password.
	{ login }	Enable password checking.

* Optional or alternative command(s).

Show Commands

Device & Mode	Syntax	Description
Universal - Privileged	{ show access -lists }	Display access lists
	{ show arp }	Display ARP table.
	{ show cdp }	Display CDP info.
	{ show clock }	Display system clock.
	{ show dhcp }	Display DHCP status.
	{ show flash }	Display flash file system info.
	{ show history }	Display session command history.

Sponsored by **Readable.com**
Measure your website readability!
https://readable.com

Show Commands (cont)

	{ show interfaces }	Display interface status and config.
	{ show ip interface brief }	Display brief summary of IP status and config.
	{ show ip dhcp <...> }	Display items in the DHCP database.
	{ show logging }	Display the contents of logging buffers.
	{ show port-s ecurity interface <in ter fac e> <#/ # > }	Display port security config.
	{ show runnin g-c onfig }	Display running config.
	{ show sessions }	Display info about Telnet connections.
	{ show startu p-c onfig }	Display start-up config.
	{ show ssh }	Display status of SSH server connections.
	{ show users }	Display info about virtual terminal lines.
	{ show version }	Display system hardware and software status.
Router - Privileged	{ show ip route }	Display IP routing table.
	{ show ip nat }	Display IP NAT info.
	{ show ip <bg p/e igr p/o spf /ri p> }	Display info on selected protocol.
	{ show protocols }	Display active network routing protocols.
Switch - Privileged	{ show dtp }	Display DTP info.
	{ show etherc hannel }	Display etherchannel info.
	{ show mac }	Display MAC config.
	{ show mac-ad dre ss- table }	Display MAC forwarding table.
	{ show vlan }	Display VTP VLAN status.
	{ show vtp }	Display VTP info.

To enable typing of privileged level commands in any mode, use { do <e.g. show comman d> }.

How To: Clear Device Configurations

Device & Mode	Syntax	Description
Universal - Privileged	{ erase startu p-c onfig }	Erase contents of config memory.
	{ write erase }	Erase NV memory.
Switch - Privileged	{ delete flash:vlan dat }	Delete the VLAN database.

Sponsored by **Readable.com**
Measure your website readability!
https://readable.com

How To: Configure ACLs

Mode	Syntax	Description
Global	* { access -list <#> <pe rmi t/d eny> <ip> <wc mask> }	Add an ACL entry.
	{ ip access -list <ty pe> <ac l_n ame> }	Configure named ACL.
	{ <pe rmi t/d eny> <ip> <wc mask> }	Specify packets to forward/reject.
	{ exit }	Return to Global mode.
	* { interface <in ter fac e> <#/ #> }	
	* { interface range <in ter fac e> <#/ #-#> }	
Interface	{ ip access -group <ac l_n ame> <in /ou t> }	Assign specified ACL to interface inboun-d/outbound traffic.
	{ line <li ne> <#> <#> }	
Line - VTY	{ access -class <AC L_n ame> <in /ou t> }	Assign specified ACL to line inbound/o-utbound traffic.
Global	{ ip access -list resequence <ac l_n ame> <st art _#> <in cre me n t_#> }	Configure ACL resequence.
	{ <en try _#> }	

* Optional or alternative command(s).

How To: Configure Default Route

Mode	Syntax	Description
Global	{ ip route 0.0.0.0 0.0.0.0 <is p_d efa ult _ga tew ay> }	
	{ ip defaul t-n etwork <is p_d efa ult _ga tew ay> }	

How To: Configure DHCP

Mode	Syntax	Description
Global	{ ip dhcp exclud ed- address <low ip> <high ip> }	Configure prevent DHCP from assigning certain addresses.
	{ ip dhcp pool <pool name> }	Configure DHCP address pools.
	{ network <ip> <su bne t> }	Specify network to provide DHCP service for.
	{ defaul t-r outer <ga teway ip> }	Configure default router (gateway).
	{ dns-server <dns ip> }	Configure DNS servers.
	{ exit }	
	{ interface <in ter fac e> <#/ #> }	
Interface	{ ip helper -ad dress <dh cp_ ser ver _ip> }	Configure DHCP relay.

The IP address range 169.254.#.# indicates Microsoft Automatic Private Addressing, which indicates a possible DHCP problem.
To release a DHCP assigned IP address, type { ipconfig /release } command in Windows CLI.
To renew a DHCP assigned IP address, type { ipconfig /renew } command in Windows CLI.

Sponsored by **Readable.com**
Measure your website readability!
https://readable.com

How To: Configure IPv6

Mode	Syntax	Description
Global	{ ipv6 unicas t-r outing }	Enable IPv6 unicast routing.
Interface	{ ipv6 address <gl oba l_p ref ix: sub net _id :in ter fac e_i d/m as k> }	Configure IPv6 address.

How To: Configure L3 Switching

Mode	Syntax	Description
Global	{ ip routing }	Enable routing on the switch.
	{ interface vlan <#> }	Select catalyst VLAN.
Interface	{ ip address <ip> <su bne t>}	Configure IP address of VLAN.
	{ no shutdown }	Configure interface port status up.

How To: Configure NAT

How To: Configure Port Security

Mode	Syntax	Description
Global	{ interface <in ter fac e> <#/ #> }	
	* { interface range <in ter fac e> <#/ #-#> }	
Interface	{ switchport mode access }	Configure interface port to access mode.
	{ switchport port-s ecurity }	Enable interface port security.
	{ switchport port-s ecurity mac-ad dress <?> }	Configure secure mac addresses.
	{ switchport port-s ecurity maximum <?> }	Configure maximum secure addresses.
	{ switchport port-s ecurity violation <?> }	Configure security violation mode.

* Optional or alternative command(s).

How To: Configure RIPv2

Mode	Syntax	Description
Global	{ router <pr oto col> }	Configure routing protocol.
	{ version <#> }	Configure version.
	{ network <ne twork ip> }	Specify network.
	* { no auto-s ummary }	Disable auto-summary.

* Optional or alternative command(s).

How To: Configure ROAS

Device & Mode	Syntax	Description
Router - Global	{ interface <in ter fac e> <#/ #.#> }	
Router - Interface	{ encaps ulation dot1q <vlan #> }	Configure IEEE 802.1Q.
	{ ip address <ip> <su bne t> }	Configure IP address.

Sponsored by **Readable.com**
Measure your website readability!
https://readable.com

How To: Configure ROAS (cont)

Switch - Global	{ interface <in ter fac e> <#/ #> }	
Switch - Interface	{ switchport trunk encaps ulation dot1q }	Configure trunking characteristics. *(older models)*
	{ switchport mode trunk }	Configure trunking mode of the interface.
	{ switchport nonego tiate }	Configure disable engagement in negotiation protocol.

Good practice to correlate VLAN- and sub-interface numbers.
The VLAN will have the first address on the sub-interface network.
VLAN members to use sub-interface IP address as default gateway.

How To: Configure SSH

Mode	Syntax	Description
Global	{ ip domain -name <do mai n> }	Define default domain.
	{ crypto key generate rsa }	Generate RSA crypto key.
	{ username <us er> secret <pa ssw ord> }	Establish User Name authentication.
Line - VTY	{ login local }	Enable local password checking.
	{ transport input <pr oto col s> }	Define transport protocols for line.

How To: Configure Static Route

Mode	Syntax	Description
Global	{ ip route <de sti nat ion> <su bne t> <ga tew ay> <ad _#> }	Configure static route and assign AD.

How To: Configure Switch Management Interface

Mode	Syntax	Description
Global	{ interface <vl an> <#> }	Select native VLAN.
	{ ip address <ip> <su bne t> }	Configure IP address of VLAN.
	{ no shutdown }	Configure interface port status up.

How To: Configure VLANs

Mode	Syntax	Description
Global	{ vlan <#> }	Create VLAN.
	{ name <na me> }	Configure VLAN name.
Interface	{ descri ption <de scr ipt ion> }	Configure interface description.
	{ switchport mode access }	Configure interface port to access only one VLAN
	{ switchport access vlan <#> }	Allocate interface port to VLAN.
	{ no shutdown }	Configure interface port status up.

Good practice to correlate VLAN- and interface numbers.

Sponsored by **Readable.com**
Measure your website readability!
https://readable.com