

# Cisco CLI Cheat Sheet

## Routing Protocols

| Command                                        | Description                                                                                                                                  |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>show ip bgp neighbors</b>                   | Displays detailed information about all BGP neighbors, including state, uptime, and received prefixes. <b>Example: show ip bgp neighbors</b> |
| <b>show ip ospf neighbors</b>                  | Lists all OSPF neighbors and their states; useful for verifying OSPF adjacencies. <b>Example: show ip ospf neighbors</b>                     |
| <b>show ip route</b>                           | Displays the IP routing table, showing all known routes and their sources (static, connected, dynamic). <b>Example: show ip route</b>        |
| <b>show ip protocols</b>                       | Summarizes active dynamic routing protocols and their parameters like networks and timers. <b>Example: show ip protocols</b>                 |
| <b>show ip bgp neighbors advertised-routes</b> | Displays the routes advertised to a specific BGP neighbor. <b>Example: show ip bgp neighbors 192.168.1.1 advertised-routes</b>               |

## Troubleshooting

| Command                            | Description                                                                                                               |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <b>ping &lt;destination&gt;</b>    | Sends ICMP Echo requests to test connectivity to a destination IP address. <b>Example: ping 8.8.8.8</b>                   |
| <b>tracert &lt;destination&gt;</b> | Traces the route packets take to a network host, useful for diagnosing routing issues. <b>Example: tracert google.com</b> |
| <b>show logging</b>                | Displays the system log messages; useful for debugging and historical event tracking. <b>Example: show logging</b>        |
| <b>show version</b>                | Shows detailed information about the device's software, hardware, uptime, and more. <b>Example: show version</b>          |

## Time and NTP

| Command                      | Description                                                                                                                           |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>show ntp status</b>       | Shows the synchronization status with NTP servers and the system clock state. <b>Example: show ntp status</b>                         |
| <b>show ntp associations</b> | Displays the association details with configured NTP servers, including delay and reachability. <b>Example: show ntp associations</b> |

## Interface Configuration

| Command                                                       | Description                                                                                                                    |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>show ip interface brief</b>                                | Displays a concise summary of all interfaces, including IP addresses and status. <b>Example: show ip interface brief</b>       |
| <b>interface &lt;interface-id&gt;</b>                         | Enters configuration mode for a specific interface.<br><b>Example: interface GigabitEthernet0/1</b>                            |
| <b>ip address &lt;ip-address&gt;<br/>&lt;subnet-mask&gt;</b>  | Assigns an IP address and subnet mask to the selected interface.<br><b>Example: ip address 192.168.1.1 255.255.255.0</b>       |
| <b>no shutdown</b>                                            | Enables an administratively down interface.<br><b>Example: no shutdown</b>                                                     |
| <b>shutdown</b>                                               | Disables an interface administratively.<br><b>Example: shutdown</b>                                                            |
| <b>description &lt;text&gt;</b>                               | Adds a description to the selected interface.<br><b>Example: description Link to ISP Router</b>                                |
| <b>show running-config interface<br/>&lt;interface-id&gt;</b> | Displays the active configuration of a specific interface.<br><b>Example: show running-config interface GigabitEthernet0/1</b> |

## Configuration Management

| Command                                                      | Description                                                                                                                        |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <b>show track brief</b>                                      | Summarizes all track objects and their current state, helpful for SLA and failover setups. <b>Example: show track brief</b>        |
| <b>copy usb0:&lt;filename&gt;<br/>flash:&lt;filename&gt;</b> | Copies a file from USB storage to flash memory.<br><b>Example: copy usb0:ios-image.bin flash:ios-image.bin</b>                     |
| <b>copy flash:&lt;filename&gt;<br/>startup-config</b>        | Copies a file from flash to startup-config to update boot settings.<br><b>Example: copy flash:backup-config.cfg startup-config</b> |
| <b>write erase</b>                                           | Erases the startup configuration, restoring the device to factory defaults after reload. <b>Example: write erase</b>               |
| <b>reload</b>                                                | Restarts the device; can be scheduled or immediate.<br><b>Example: reload</b>                                                      |

## Certificates & Security

| Command                                                                    | Description                                                                                                                                |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| <b>crypto key generate rsa<br/>general-keys modulus 2048</b>               | Generates RSA key pairs (general purpose) for securing SSH and VPNs.<br><b>Example: crypto key generate rsa general-keys modulus 2048</b>  |
| <b>crypto key generate rsa modulus<br/>2048 label &lt;hostname&gt;-CA</b>  | Creates labeled RSA key pairs for certificate authority purposes.<br><b>Example: crypto key generate rsa modulus 2048 label Router1-CA</b> |
| <b>no crypto pki certificate chain<br/>&lt;cert server hostname&gt;-CA</b> | Deletes the certificate chain for a specific trustpoint.<br><b>Example: no crypto pki certificate chain CA-Server</b>                      |
| <b>crypto pki authenticate<br/>&lt;cert server hostname&gt;-CA</b>         | Authenticates the device to a Certificate Authority for certificate issuance. <b>Example: crypto pki authenticate CA-Server</b>            |
| <b>show crypto pki certificates<br/>&lt;cert server hostname&gt;-CA</b>    | Displays installed certificates for a given trustpoint.<br><b>Example: show crypto pki certificates CA-Server</b>                          |



# VLAN Configuration

| Command                                           | Description                                                                                            |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| <b>show vlan brief</b>                            | Displays a list of VLANs and their associated ports.<br><b>Example: show vlan brief</b>                |
| <b>vlan &lt;vlan-id&gt;</b>                       | Creates or modifies a VLAN with the specified VLAN ID.<br><b>Example: vlan 10</b>                      |
| <b>name &lt;vlan-name&gt;</b>                     | Assigns a name to the VLAN for easier management and documentation.<br><b>Example: name Accounting</b> |
| <b>interface &lt;interface-id&gt;</b>             | Selects an interface for VLAN assignment.<br><b>Example: interface FastEthernet0/1</b>                 |
| <b>switchport mode access</b>                     | Configures an interface as an access port for a single VLAN.<br><b>Example: switchport mode access</b> |
| <b>switchport access<br/>vlan &lt;vlan-id&gt;</b> | Assigns the access port to a VLAN.<br><b>Example: switchport access vlan 10</b>                        |

## Cisco CLI — Best Practices



### Always double-check your command before pressing Enter

A mistyped command (like write erase) can cause outages. Use ? to preview available options and syntax in CLI.



### Use show commands liberally

before making changes to understand the current state.



### Configuration Tip

Save your configuration (copy running-config startup-config) after important changes — otherwise changes will be lost on reboot.