**EXEC Mode (after login, Switch>, then enable for Switch#)**

|  |  |
| --- | --- |
| Command | Description |
| enable | Enter Privileged EXEC |
| disable | Exit Privileged EXEC |
| show running-config | Display current config |
| show startup-config | View saved config |
| show interfaces | Interface details and status |
| show version | Switch OS version/info |
| show mac address-table | List learned MAC addresses |
| show vlan | VLAN/port assignments |
| show vlan brief | VLAN summary (not all models) |
| show arp | ARP table |
| show cdp neighbors | Neighbor Cisco devices |
| show ip interface brief | Quick IP/interface status |

**Global Configuration Mode (configure terminal)**

|  |  |
| --- | --- |
| Command | Usage |
| hostname <name> | Set switch name |
| enable secret <password> | Set privileged exec password |
| line console 0 | Console configuration |
| line vty 0 4 | Virtual terminal config |
| password <password> | Line password (used in line mode) |
| login | Enable password for line |
| banner motd #text# | Set MOTD banner |
| interface <type/num> | Select interface (e.g., FastEthernet0/1) |
| ip address <ip> <mask> | Assign IP (for VLAN interface) |
| no shutdown / shutdown | Enable/disable interface |
| description <text> | Label interface |

**VLAN/Port Configuration**

|  |  |
| --- | --- |
| Command | Description |
| vlan <vlan-id> | Create VLAN/enter VLAN config |
| name <vlan-name> | Name a VLAN (in VLAN config mode) |
| interface <type/num> | Port config mode |
| switchport mode access | Set port as access |
| switchport access vlan <vlan-id> | Assign to VLAN |
| switchport mode trunk | Set trunk mode |
| switchport trunk allowed vlan <list> | Allow VLANs on trunk |
| interface range ... | Configure multiple ports at once |

**Administration/Security**

|  |  |
| --- | --- |
| Command | Description |
| copy running-config startup-config | Save config |
| write memory | Save config (older models) |
| reload | Reboot switch |
| clock set <hh:mm:ss> <day> <month> <year> | Set clock |

**Monitoring & Maintenance**

|  |  |
| --- | --- |
| Command | Description |
| ping <ip-address> | Test network connectivity |
| show logging | View logs |
| show users | Show connected users |
| show spanning-tree | STP information |
| clear mac address-table | Flush MAC table |
| show port-security | View port security details |
| show interface status | List interface connected status |

**Specialized & Advanced**

|  |  |
| --- | --- |
| Command | Description |
| show interfaces trunk | Trunk interface details |
| show interface [type/num] | Detailed interface stats |
| show ip route | Routing table (L3 switches) |
| show controllers | Hardware/device info |
| show power inline | PoE status info |
| show spanning-tree vlan <id> | STP for specific VLAN |
| show port-security interface <if> | Port security for one port |

**Note:**  
This list covers most commands a network admin will use for Layer 2 Cisco switch configuration, operation, and troubleshooting. Each command typically has variations/subcommands depending on IOS version and switch model. For an exhaustive command list per model, consult Cisco’s official documentation or ? at the prompt.[[1]](#fn1)[[2]](#fn2)[[3]](#fn3)[[4]](#fn4)

Would you like detailed usage or examples for any specific category or task?Cisco switches provide hundreds of commands spanning several operational modes. Here is a broad, categorized list of essential and commonly used commands:

**EXEC Mode (User/Privileged, Switch>/Switch#)**

* enable — Enter Privileged EXEC mode
* disable — Exit Privileged EXEC mode
* show running-config — Display current active configuration
* show startup-config — Display saved configuration
* show interfaces — Show interface status and statistics
* show version — IOS version and device details
* show mac address-table — Displays MAC address table
* show vlan — Display VLAN assignments and info
* show ip interface brief — Show interface/IP status
* show cdp neighbors — Show connected Cisco devices
* show arp — Show ARP table

**Global Configuration Mode (configure terminal)**

* hostname <name> — Set switch hostname
* enable secret <password> — Set Privileged EXEC password
* line console 0 — Configure console line
* line vty 0 4 — Configure VTY lines for SSH/Telnet
* password <password> — Set line password
* login — Enable line password login
* banner motd #text# — Set login banner
* interface <type/num> — Port config submode

- `ip address <ip> <mask>` — Assign IP to SVI/management interface

* no shutdown / shutdown — Enable/disable interface
* description <text> — Add description to interface

**VLAN and Port Configuration**

* vlan <vlan-id> — Create VLAN/enter VLAN config mode
* name <vlan-name> — Name a VLAN
* switchport mode access — Set port as access port
* switchport access vlan <vlan-id> — Assign port to VLAN
* switchport mode trunk — Set port as trunk
* switchport trunk allowed vlan <list> — Allow VLANs over trunk
* interface range <type/num-start> - <num-end> — Multiple ports at once

**Management & Security**

* copy running-config startup-config — Save config
* write memory — Save config (older IOS)
* reload — Reboot switch

- `clock set <time> <date>` — Set system clock

* show port-security — View port security status
* show logging — View logging info
* show users — View connected users

**Monitoring & Troubleshooting**

* ping <ip-address> — Test connectivity
* show interface status — Show connected port status
* show spanning-tree — STP details
* show interfaces trunk — Trunk details
* clear mac address-table — Clear MAC table
* show controllers — Controller hardware status

**Tip:**  
Use ? at the prompt or append it to a command for a full list and inline help.

This list covers the major operational, configuration, and troubleshooting commands for Cisco Layer 2 switches. For a complete reference, always consult Cisco’s documentation for your model and IOS version.**Cisco IOS Router/Switch Operation Modes**

* 1. User EXEC Mode (User Mode)
  + Prompt: Router>
  + Purpose: Basic monitoring, limited troubleshooting (ping, viewing basic info).
  + Often called “user mode” or “user exec mode.”
  + Used for checking connectivity, basic status, and troubleshooting.
  + Minimal control—no configuration changes.
* 2. Privileged EXEC Mode (Privilege Mode)
  + Prompt: Router#
  + Entered with the enable command.
  + Purpose: More advanced monitoring, diagnostics, some system commands.
  + Can view all config, reload/reset device, copy/delete files, run advanced tests.
  + Necessary for accessing configuration mode.
  + Many important “show” commands (e.g., show running-config, show version).
* 3. Global Configuration Mode
  + Prompt: Router(config)#
  + Entered using configure terminal from Privileged EXEC mode.
  + Used for system-wide configuration changes (device name, passwords, routing, interfaces).
  + All config changes that impact device operations globally are made here.