**Cisco IOS Cheat Sheet**

*A quick-reference guide for common CLI commands*

**🔹 1. Basic Device Setup**

bash

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enable # Enter privileged EXEC mode

configure terminal # Enter global configuration mode

hostname NAME # Set device hostname

enable secret PASSWORD # Set encrypted privileged mode password

banner motd #MESSAGE# # Set login banner

**🔹 2. Interface Configuration**

bash

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interface GigabitEthernet0/0 # Access interface config

ip address 192.168.1.1 255.255.255.0 # Assign IP address

no shutdown # Enable interface

description Link\_to\_Switch # Add interface label

**🔹 3. VLAN and Switchport Setup (Layer 2)**

bash

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vlan 10 # Create VLAN

name Finance # Name VLAN

exit

interface fa0/1

switchport mode access

switchport access vlan 10 # Assign port to VLAN

interface fa0/24

switchport mode trunk # Configure trunk port

switchport trunk native vlan 99 # Set native VLAN

**🔹 4. Routing Configuration (Layer 3)**

**Static Routing:**

bash

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ip route 0.0.0.0 0.0.0.0 192.168.1.1 # Default route

ip route 192.168.2.0 255.255.255.0 10.0.0.2

**RIP:**

bash

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router rip

version 2

network 192.168.1.0

no auto-summary

**EIGRP:**

bash

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router eigrp 100

network 192.168.0.0

no auto-summary

**OSPF:**

bash

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router ospf 1

network 192.168.1.0 0.0.0.255 area 0

**🔹 5. DHCP Server (Router)**

bash

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ip dhcp pool LAN

network 192.168.1.0 255.255.255.0

default-router 192.168.1.1

dns-server 8.8.8.8

ip dhcp excluded-address 192.168.1.1 192.168.1.10

**🔹 6. NAT Configuration (PAT)**

bash

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access-list 1 permit 192.168.1.0 0.0.0.255

ip nat inside source list 1 interface g0/1 overload

interface g0/0

ip nat inside

interface g0/1

ip nat outside

**🔹 7. Security & Access Control**

**Set Console Password:**

bash

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line console 0

password cisco

login

**Set VTY (SSH/Telnet) Password:**

bash

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line vty 0 4

password cisco

login

transport input ssh

**Configure SSH:**

bash

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hostname R1

ip domain-name mydomain.com

crypto key generate rsa

username admin password cisco

line vty 0 4

login local

transport input ssh

**ACL Example:**

bash

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access-list 10 permit 192.168.1.0 0.0.0.255

interface g0/0

ip access-group 10 in

**🔹 8. Useful Show & Debug Commands**

bash

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show running-config # View current config

show ip interface brief # IP + interface status

show vlan brief # VLAN and port info

show mac address-table # Switch MAC table

show ip route # Routing table

show ip protocols # Routing protocol status

show arp # ARP table

ping 192.168.1.1 # Connectivity test

traceroute 8.8.8.8 # Path tracing

debug ip packet # Enable packet debugging