

Cisco Router Basic Configuration Reference



Basic Global Configuration

Command example	Description
enable	Enter Privileged Exec mode
configure terminal	Enter configuration mode
no <command>	Negate or remove a command
hostname rtr1	Set router name
ip domain-name <my-domain>	Assign a default DNS domain
ip name-server 8.8.8.8 8.8.4.4	Assign a list of DNS servers
no ip-domain lookup	Or Disable DNS entirely (your choice)
service password-encryption	Encrypt system passwords
enable secret <password>	Set password to enter privileged exec (enable) mode
user <username> password <password>	Create user and set its password (different from enable)
line vty 0 4	Configure first 5 virtual terminals
transport input ssh	Use SSH, disable telnet
login authentication default	Enable password checking and use the default authentication list
transport preferred none	Don't interpret bad commands as hostnames
crypto key generate rsa modulus 2048	Create a 2048-bit RSA key for SSH encryption
ip ssh time-out 120	Specify timeout interval for SSH connections in seconds
ip ssh authentication-retries 3	Limit number of authentication retries to 3
ip ssh version 2	Only support version 2 of the SSH protocol
no ip http server	Disable HTTP interface
access-list 99 permit 10.10.0.0 0.0.0.255	Only allow hosts in 10.10.0.0/24. Must be applied somewhere else
end or CTRL-Z	Leave configuration mode
ipv6 unicast-routing	
write memory	Save configuration to non-volatile RAM
show running-config	Show current operating configuration
show startup-config	Show config that is saved in non-volatile RAM

Text

Interface Configuration

Command example	Description
interface FastEthernet0/0	Select an interface to configure
description Local Network	Provide a description for this interface
ip address 10.2.3.4 255.255.255.0	Configure IPv4 address and subnet mask
ip access-group <number> <in out>	Apply access-list to traffic going into/out of this interface
no ip proxy-arp	Disable Proxy ARP
no ip redirects	Disable sending ICMP redirects on this interface
no ip directed-broadcast	Disable translation of directed broadcast to physical broadcast
ipv6 enable	Enable IPv6 on this interface
ipv6 address 2001:DB8::A::1/64	Configure IPv6 address
no shutdown	Activate this interface
exit	Exit interface configuration section
end	Exit configuration mode
show running interface Fast0/0	Verify interface configuration

Access Control (AAA)

Command example	Description
aaa new-model	Enable new access control commands and functions
aaa authentication enable default enable	Allow access to privileged mode by providing enable password
aaa authentication login default local group radius	Use local first, then RADIUS authentication
radius-server host 10.0.0.6	Add RADIUS server address
radius-server key MyLongSecretKey	Add RADIUS server key for encryption

Network Management

Command example	Description
ntp server pool.ntp.org	Specify server to synchronize with using Network Time Protocol
clock timezone <my timezone>	Select your time zone, e.g. "EST" for Eastern Standard Time
show clock	Verify time and date
show ntp status	Verify that clock is synchronized
snmp-server community NetManage RO 99	Set SNMP community and apply access list 99
snmp-server contact <net@mydomain>	Configure contact information to be retrieved via SNMP
snmp-server location Building A	Configure location of router to be retrieved via SNMP
snmp-server trap link ietf	Send SNMP traps regarding link up/down events
snmp-server enable traps envmon fan shutdown supply temperature status	Send traps for various important events
snmp-server host 10.0.0.5 version 2c NetManage	Send SNMP version 2c traps to server using community NetManage
cdp run	Enable Cisco Discovery Protocol
show cdp neighbors	Show neighbor devices discovered via CDP
lldp run	Enable Link Layer Discovery Protocol (IEEE standard)
show lldp neighbors	Show neighbor devices discovered via LLDP
logging buffered 16384 debugging	Specify buffer size and logging level
logging facility local3	Use local3 as the logging (Syslog) channel
logging trap debug	Set syslog server logging level
logging 10.0.0.5	IP address of the logging host
no logging console	Do not send logging information to console

Operation and Troubleshooting

Command example	Description
show ip/ipv6 interface brief	Show list of interfaces with IPv4/v6 addresses and their status
show interface Fast0/0	Show interface status and counters
show version	Show IOS version and other system details
show processes cpu	Show running processes and their CPU utilization
show log	Show contents of logging buffer
show ip arp	Show contents of ARP table
show ipv6 neighbors	Show IPv6 neighbor table (equivalent to ARP)
show ip route [A.B.C.D]	Show IPv4 routing table, with optional network or host address
show ipv6 route [X:X:X:X::X/<0-128>]	Show IPv6 routing table, with optional prefix
show environment	Display environmental status
show inventory	Show inventory of physical components (line cards, etc.)