

Networking Fundamentals: Cisco IOS Commands

device	area	environment	commands
router	static route	ip	ip route <i>net nmask {next-hop exit-interf} [dist] [permanent]</i>
		ipv6	ipv6 <i>prefix/prefix-len {next-hop exit-interf}</i>
router	dynamic route	router	router rip
			version 2
			no auto-summary
			network <i>net</i>
			passive-interface
			default-information originate
router & switch	initial configuration	global config	service password-encryption
			no ip domain-lookup
			login block-for <i>secs</i> attempts <i>n_of_atmpts</i> within <i>interval</i>
			security password min-length <i>len</i>
			enable secret <i>pwd</i>
		line	line console 0
			password <i>pwd2</i>
			login
			line vty 0 15
			password <i>pwd3</i>
			login
		router	line aux 0
			password <i>pwd4</i>
			login
switch	SVI	ip	ip default-gateway <i>gw_addr</i>
		vlan	vlan <i>id</i>
			name <i>nome</i>
		+ interface	interface vlan <i>id</i>
			ip address <i>addr netmask</i>
			no shutdown
		+ interface	interface <i>hw-interf</i>
			switchport mode access
			switchport access vlan <i>id</i>
router & switch	SSH	ip	hostname <i>hname</i>
			ip domain-name <i>dname.org</i>
			ip ssh version 2
		+ crypto	crypto key generate <i>rsa</i> general-keys modulus <i>1024</i>
		+ utente	username <i>luc</i> privilege <i>15</i> secret <i>pwd</i>
		+ vty	line vty 0 15
			login local
			transport input ssh
			exec-timeout <i>10</i>
switch	porte non usate	interface	interface range <i>type/1st_port-last_port</i>
			shutdown
switch	static secure MAC addr	interface	interface <i>interf</i>
			switchport mode access
			switchport port-security
			switchport port-security mac-address <i>mac</i>
			switchport port-security violation restrict
switch	ticky secure MAC addr	interface	interface <i>interf</i>
			switchport mode access
			switchport port-security
			switchport port-security maximum <i>2</i>
			switchport port-security mac-address sticky
			switchport port-security violation restrict
switch	VLAN	vlan	vlan <i>id</i>
			name <i>nome</i>
		+ interface	interface <i>interf</i>
			switchport mode {access trunk}
		mode access	switchport access vlan <i>id</i>
		mode trunk	switchport trunk native vlan <i>id</i>
		mode trunk	switchport trunk allowed vlan <i>id-list</i>
	voice VLAN	vlan	vlan <i>id</i>
			name <i>nome</i>
			vlan <i>id_voice</i>
			name <i>nome_voice</i>
		- interface	interface <i>interf</i>
			switchport mode access
			switchport access vlan <i>id</i>
			mls qos trust cos
			switchport voice vlan <i>id_voice</i>
router	Inter-VLAN routing Router-on-a-stick	subinterface	(configure trunk on switch as showed in switch/VLAN) interface <i>interf.subinterf</i>
			encapsulation dot1q <i>vlan_id</i> [native]
			ip address <i>addr netmask</i>
		+ interface	interface <i>interf</i>
			no shutdown
router	standard numeric ACL	access-list	access-list <i>id</i> {permit deny} <i>source wildcard</i>
		+ interface	interface <i>interf</i>
			ip access-group <i>id</i> {in out}
router	standard named ACL	ip	ip access-list {standard extended} <i>name</i>
		std named acl	{permit deny remark} <i>source wildcard</i>
		+ interface	interface <i>interf</i>

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			ip access-group <i>name</i> {in out}
router	VTY protection by ACL	line	line vty 0 15
			access-class <i>acl-id</i> {in out}
router	DHCP	ip	ip excluded-address <i>low</i> [<i>high</i>]
		dhcp pool	ip dhcp pool <i>name</i>
			network <i>net</i> <i>netmask</i>
			default-router <i>router</i> [<i>router2</i> ...]
			dns-server <i>dns</i> [<i>dns2</i> ...]
			domain-name <i>domain.org</i>
			netbios-name-server <i>nbs</i> [<i>nbs2</i> ...]
router	client DHCP	interface	interface <i>interf</i>
			ip address dhcp
router	DHCP relay agent	interface	interf <i>interf</i>
			ip helper-address <i>dhcp_srv</i>
router	SLAAC	ipv6	unicast-routing
		+ dhcp pool	ipv6 dhcp pool <i>name</i>
			domain-name <i>domain.org</i>
		+ interface	interface <i>interf</i>
			ipv6 address <i>addr/prefix_len</i>
			ipv6 dhcp server <i>name</i>
			ipv6 nd other-config-flag
router	DHCPv6 stateful server	ipv6	unicast-routing
		+ dhcp pool	ipv6 dhcp pool <i>name</i>
			address prefix <i>net/prefix_len</i> [lifetime { <i>time</i> infinite}]
			dns-server <i>dns</i>
			domain-name <i>domain.org</i>
		+ interface	interface <i>interf</i>
			ipv6 address <i>addr/prefix_len</i>
			ipv6 dhcp server <i>name</i>
			ipv6 nd managed-config-flag
router	DHCPv6 client	ipv6	unicast-routing
		+ interface	interface <i>interf</i>
			ipv6 enable
			ipv6 address dhcp
router	DHCPv6 relay agent	ipv6	unicast-routing
		+ interface	interface <i>interf</i>
			ipv6 dhcp relay destination <i>dhcp_srv</i>
router	static NAT	ip	ip nat inside source static <i>local</i> <i>global</i>
		+ interface	interface <i>interf</i>
			ip nat inside
			interface <i>interf_2</i>
			ip nat outside
router	dynamic NAT	ip	ip nat pool <i>name</i> <i>start_ip</i> <i>end_ip</i> {netmask <i>nmask</i> }
			access-list <i>id</i> permit <i>source</i> <i>wildcard</i>
			ip nat inside source list <i>id</i> pool <i>name</i>
		+ interface	interface <i>interf</i>
			ip nat inside
			interface <i>interf_2</i>
			ip nat outside
router	PAT (pool of addr.es)	ip	ip nat pool <i>name</i> <i>start_ip</i> <i>end_ip</i> {netmask <i>nmask</i> }
			access-list <i>id</i> permit <i>source</i> <i>wildcard</i>
			ip nat inside source list <i>id</i> pool <i>name</i> overload
		+ interface	interface <i>interf</i>
			ip nat inside
			interface <i>interf_2</i>
			ip nat outside
router	PAT (single addr.)	ip	access-list <i>id</i> permit <i>source</i> <i>wildcard</i>
			ip nat inside source list <i>id</i> interface <i>interf_2</i> overload
		+ interface	interface <i>interf</i>
			ip nat inside
			interface <i>interf_2</i>
			ip nat outside
router	port forward	ip	ip nat inside source static {tcp udp} <i>local</i> <i>local_port</i> <i>global</i> <i>global_port</i>
		+ interface	interface <i>interf</i>
			ip nat inside
			interface <i>interf_2</i>
			ip nat outside
router & switch	cisco discovery protocol	global config	cdp run
		interface	cdp enable
		enable	show cdp neighbors
router & switch	layer link discovery prot.	global config	lldp run
		interface	lldp transmit
		interface	lldp receive
		enable	show lldp neighbors
router & switch	manual time	enable	clock set <i>hh:mm:ss</i> <i>day</i> <i>month</i> <i>year</i>
router & switch	network time protocol	global config	ntp-server <i>srv</i> <i>addr</i>
router & switch	syslog with timestamp	global config	service timestamps log datetime
	syslog to server	global config	logging <i>syslog</i> <i>srv</i>
			logging trap <i>level</i>
			logging source-interface <i>interf</i>
router & switch	backup to TFTP	enable	copy running-config tftp
	restore from TFTP	enable	copy tftp running-config