

**show version**

Hardware and software info

**ping** *n.n.n.n*  
**traceroute** *n.n.n.n*  
**telnet** *n.n.n.n*

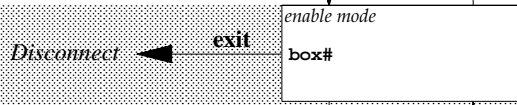
(Ctrl-6 to abort output)

# Cisco Router Basic Configuration

**no xxxxx...** to remove any setting  
 Type ? at any point for parameter help

**show int eth 0**  
**show int ser 0**  
**show ip route**  
**show arp**  
**show ip ospf** [*int* | *neighbor* | *database*]

Show status of ethernet 0  
 Show status of serial 0  
 Show IP forwarding table  
 Show ARP cache  
 Show OSPF state

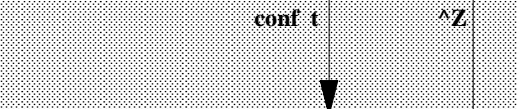


**show run**  
**show conf**  
**write mem**  
**reload**

Show currently running configuration  
 Show configuration which is in NVRAM  
 Write current configuration into NVRAM  
 Reboot the router

**clock set** *hh:mm:ss dd monthname yyyy*

Set system clock



**ip classless**  
**ip subnet-zero**  
**no ip domain-lookup**  
**service password-encryption**

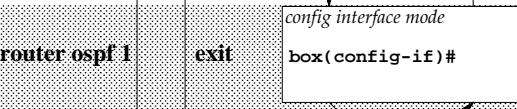
Enable CIDR variable-length prefixes [default in 12.0]  
 Also required to enable CIDR [default in 12.0]  
 Prevent traceroute from doing reverse DNS lookups  
 Obscure passwords when displaying configuration (*not secure!*)

☆ **ip route** *n.n.n.n m.m.m.m g.g.g.g*

Add static route to forwarding table: *network, netmask, next hop gateway*

**enable secret** *word*  
**hostname** *name*

Set the enable password (to restrict enable mode)  
 Set router name ("box" in this example)



**ip address** *n.n.n.n m.m.m.m*  
**no shutdown**  
**ip ospf cost** *100*

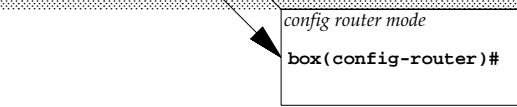
Set interface IP address and prefix length (netmask)  
 Enable interface (remove "administrative shutdown")  
 Assign OSPF cost to this interface

[*Ethernet only*]  
**arp timeout** *300*

Set ARP timeout to 300 seconds (default is 4 hours)

**no ip redirects**  
**no ip proxy-arp**  
 [*Serial only*]  
**ip unnumbered** *eth 0*  
**encap** *ppp*

Unnumbered: use the IP number from eth 0 as the local IP address on this int.  
 Set encapsulation to PPP (default is Cisco HDLC)



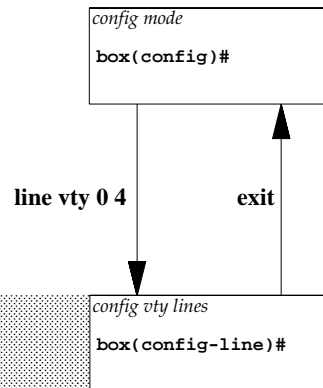
☆ **network** *n.n.n.n x.x.x.x area 0*

Speak OSPF on this network (*n.n.n.n* = network number, *x.x.x.x* is "wildmask" which is a netmask with 0 and 1 inverted; e.g. /28 wildmask is 0.0.0.15)

**redistribute connected subnets**  
**redistribute static subnets**  
**default-information originate**

Announce directly-connected networks (including those not talking OSPF)  
 Announce manually-inserted static routes, except default  
 Announce static default route

☆ Repeat command as necessary



**snmp community password ro [1-99]**  
**access-list 1-99 permit n.n.n.n x.x.x.x**

Enable read-only SNMP access (optional: limit to access list)  
 Add entry to basic access list - source IP address and wildmask

**ip cef [not 2500 series]**

Enable Cisco Express Forwarding - route caching and load-sharing

**clock timezone EST 1**  
**ntp server x.x.x.x**  
**logging buffered 16384 debugging**  
**service timestamps log datetime localtime**  
**service timestamps debug datetime localtime**

Set timezone/hours offset from GMT  
 Synchronise clock to ntp server  
 Allocate more logging memory  
 Enable "real" timestamps on log entries; otherwise you get time since last reboot. Use "show log" to view log entries.

**login**  
**password xxxxx**  
**login local**  
 ☆ **username xxxxx password yyyy**

Require password to access router via telnet

(alternative) Require username *and* password

**transport preferred none**  
**escape-character 3**

Prevent unknown commands from being interpreted as hostnames  
 Use Ctrl-C as interrupt character (instead of Ctrl-6)

**access-class 1-99 in**

Restrict telnet logins using access list