

Basic

```
hostname [hostname]  
no ip domain-lookup  
ip domain name [domain]  
security passwords min-length [length]
```

```
line [console 0 / vty 0 4]  
password [password]  
exec-timeout [inactivity-min] 0  
login  
logging synchronous
```

```
service password-encryption  
enable secret [password]  
banner motd #[message]#  
copy run start
```

```
ipv6 unicast-routing  
ipv6 address [ipv6-address / link-local-address] [- / link-local]
```

Static Route

```
show [ip / ipv6] route [static / network]
```

Default Static Route

```
ip route 0.0.0.0 0.0.0.0 [next-hop address / exit interface (ISP)]
```

Floating Router

```
ip route [network address] [subnet address] [next-hop address / exit interface] [AD]
```

ACL

```
show access-lists  
show ip interface [interface] | include access list
```

transport input telnet/ssh/all

Standard

ip access-list [1 - 99] [permit / deny] [destination / any]

ip access-list standard [name]

[permit / deny] [destination wildcard / any]

Extended

ip access-list [100 - 199] [permit / deny] [protocol] [source] [destination] [eq] [port number / keyword]

ip access-list extended [name]

[permit / deny] [protocol] [source wildcard-mask] [destination wildcard-mask] [eq] [port number / keyword]

Odd .1 0.0.0.254

Even .0 0.0.0.254

interface [interface]

ip access-group [ACL number / name] [in / out]

line vty 0 4

access-class [ACL number / name] in

OSPF

show ip ospf [interface]

show ip ospf neighbor

show ip ospf database

router ospf [process-id]

router-id [router-id]

network [network address] [wildcard mask] area 0

```
default-information originate  
passive-interface [interface]  
auto-cost reference-bandwidth [100/1000/100000]
```

```
interface [exit interface (ospf router)]  
ip ospf network point-to-point  
ip ospf hello-interval [seconds]  
ip ospf dead-interval [seconds]  
ip ospf priority [priority (multi access)]
```

GRE Tunnel

```
interface tunnel[number]  
ip address [ip address(tunnel interface)]  
tunnel source [exit interface]  
tunnel destination [destination ip address]  
ip route [destination network address] [subnet mask] [next-hop address]
```

DHCP

```
show ip dhcp binding  
show ip dhcp server statistics
```

```
[no] service dhcp
```

```
ipconfig/all
```

DHCP
 Static

```
ip dhcp excluded-address [start IP] [end IP]
```

```
ip dhcp pool [name]  
network [public network address] [subnet mask]  
default-router [ip address (default gateway)]
```

```
dns-server [server ip address]
```

```
interface [interface (in)]  
ip helper-address [next-hop address (opp)]
```

NAT

```
show ip nat translation  
show ip nat statistics
```

Static NAT

```
ip nat inside source static [inside local address] [inside global address]
```

Dynamic NAT

```
ip nat pool [pool name] [start inside global IP address] [end inside global IP address]  
netmask [subnet mask]
```

```
<ACL>
```

```
ip nat inside source list [ACL list number / name] pool [pool name] [overload]  
interface [interface]  
ip nat [inside / outside]
```

Network Management

```
show cdp  
show cdp interface  
show cdp neighbors [detail]  
show lldp neighbors [detail]
```

Global

```
[no] cdp run  
[no] lldp run
```

Specific

```
interface [interface]
```

```
[no] lldp transmit
```

```
[no] lldp receive
```

```
[no] lldp enable
```

```
[no] cdp transmit
```

```
[no] cdp receive
```

```
[no] cdp enable
```

Backup IOS

```
show file system
```

```
show flash
```

```
copy flash: tftp
```

```
<flash file name>
```

```
[server IP address]
```

Timestamp

```
show clock detail
```

```
show ntp associations
```

```
show ntp status
```

```
ntp server [server IP address]
```

```
service timestamps log datetime msec
```