CISCO COMMANDS.

1. Change Hostname
    - (config)#hostname (name)
2. Set Passwords to the lines.
    - (config)#line console 0
    - (config-line)#password (password)
    - (config-line)#login
    - (config-line)#line vty 0 15
    - (config-line)#password (password)
    - (config-line)#login
    - (config-line)#exit
3. Set Passwords to the Privilege Exec Mode.
    - Not encrypted password
    - (config)#enable password (password)
    - Encrypted password
    - (config)#enable secret (password)
4. To set the messages of the day.
    - (config)#banner motd “(messages)”
5. To Set and Save the Clock
    - (config)#clock set (hh:mm:ss)
    - (config)# clock read-calendar
    - #show clock <to view>
6. To set the Default Gateway
    - (config)#ip default-gateway (ip address)
7. To set the Username and Password
    - (config)#username (name) password (password)
8. To set the ip address on Interface vlan 1.
    - (config)#int vlan 1
    - (config-if)#ip address (ip address) (subnet)
    - (config-if)#no shutdown
    - (config-if)#exit
9. To set the ip address on GigabitEthernet
    - (config)#interface g 0/1 or 0/2 or serial.

- (config-if)# description Link to (network)
- (config-if)#ip address (ip address) (subnet)

10. To encrypt your password.
    - (config)#service password-encryption
11. To save your configurations
    - #copy run start <Also you can use (wr) that is the shortcut of copy run start.>
12. To do the ssh configuration.
    - (config)#ip domain-name (name)
    - (config)#crypto key generate rsa
    - (512):1024
    - (config)#username (name) password (password)
    - (config)#line vty 0 15
    - (config-line)#login local
    - (config-line)#transport input ssh
    - (config-line)#no password (password) <if asked to remove>
    - (config-line)#exit
    - (config)#ip ssh version 2
13. Configuring the Domain Name
    - (config)# ip name-server (ip address)
    - (config)# ip domain-name (name)
14. Configuring Switch Port Security
    - (config)#int (name)
    - (config-if)#switchport mode access
    - (config-if)#switchport port-security
    - (config-if)#switchport port-security maximum 1
    - (config-if)#switchport port-security mac-address sticky
    - (config-if)#switchport port security violation
    - (config-if)#switchport port-security aging
    - (config-if)# no shutdown <you do this to change the state to up because by default it set to the down state>
    - (config-if)#exit
    - (config)#exit

- #copy run start <to save>

15. To configure the ipv6 address of the vlan, gigabit, and serial
    - (config)#ipv6 unicast-routing <you have to use this command first before you configure the ipv6 address in your system>
    - (config)#Interface vlan 1
    - (config-if)#ipv6 address (ipv6 address/64)
    - (config-if)#ipv6 address (address) link-local
    - (config-if)#no shutdown
    - (config-if)#interface g0/1
    - (config-if)#ipv6 address (ipv6 address/64)
    - (config-if)#ipv6 address (address) link-local
    - (config-if)#no shutdown
    - (config-if)#interface g0/2
    - (config-if)#ipv6 address (ipv6 address/64)
    - (config-if)#ipv6 address (address) link-local
    - (config-if)#no shutdown
    - (config-if)#interface s0/0/1
    - (config-if)#ipv6 address (ipv6 address/64)
    - (config-if)#ipv6 address (address) link-local
    - (config-if)#no shutdown
    - <every interface is different and you're only going to config that interface if the packet tracer says to do so, but if you want you can do this configuration in your switch or router>
16. To create a vlan
    - (config)#vlan (vlan-id)
    - (config-vlan)#name (vlan-name)
    - (config-vlan)#exit
17. To create multiple vlans
    - (config)#vlan 100, 102, 105-107
18. Assign port to vlans
    - (config)#interface (interface-id)

- (config-if)#switchport mode access
- (config-if)#switchport access vlan (vlan-id)

19. Remove vlan assignment
    - (config-if)#no switchport access vlan (vlan-id)
20. Delete a vlan
    - (config)#no vlan (vlan-id)
21. Show vlan commands
    - Show vlan brief
    - Show vlan name (vlan-name)
    - Show interfaces vlan (vlan-id)
    - Show interfaces (interface-id) switchport
    - Show interfaces (interface-id) trunk
22. Configure a trunk
    - (config)#interface (interface-id)
    - (config-if)#switchport mode trunk
    - (config-if)#switchport trunk native vlan (vlan-id) <native vlan is the default vlan for example when you buy a new switch the native vlan is vlan 1, and everyone knows that vlan 1 is the default so you can change that vlan using this command>
    - (config-if)#switchport trunk allowed vlan (vlan-list)
23. Sub-Interface w/ dot1q 802.1 encapsulation
    - (config)#int (number) <main interface, ex. gig0/0>
    - (config)#int ip address (address)(subnet)
    - (config)#no shut
    - (config-if)#int (sub int, ex 1.4) <usually given>
    - (config-subif# encapsulation dot1q (number) <take the number from vlan given>
    - (config-subif)#ip address (address)(subnet)
    - (config)# no shut <commonly not needed because sub interfaces are up by default, and repeat process above if needed>
    - (config-subif)#int (interface) <connected to subinterfaces>

- (config-if)# no shut <this is needed in order for physical and subs to be up>

24. To Configure Static Routing
    - (config)#ip route (network-address)(subnet-mask)(ip address of exit interface or S0/0/0 or g0/1+ip address) <exit interface is the one that is face the internet or the serial port that is establishing a connection to the main router, also if you are using the GigabitEthernet port you also need to include the ip address of the port.>
25. To Configure RIP
    - (config)#router rip
    - (config-router)#version 2 <do this if you want to use rip version 2>
    - (config-router)#network (network-address)
    - (config-router)#no auto-summary <this command disables Auto Summarization>
    - (config-router)#passive-interface <This command prevent the transmission of routing updates through a router interface, but still allow that network to be advertised to other routers.>
    - (config-router)#default-information originate <This command instructs router's to originate default information, by propagating the static default route in RIP updates.>
26. To Configure OSPF
    - (config)#router ospf (process-id) <process-id's can be from 1-65535>
    - (config-router)#router-id (router-id ex. 1.1.1.1)
    - (config-router)#exit
    - (config)#interface loopback 0
    - (config-if)#ip address (ip add ex. 1.1.1.1)(subnet-mask) <The IPv4 address of the loopback interface should be configured using a 32-bit subnet mask (255.255.255.255).

This effectively creates a host route. A 32-bit host route does not get advertised as a route to other OSPF routers.>

- (config)#router ospf (process-id)
- (config-router)#network (interface-ip-address) (Wildcard-mask) area (area-id)
- (config-router)#passive-interface <This command prevent the transmission of routing updates through a router interface, but still allow that network to be advertised to other routers.>

27. To Configure Access Control List
    - Router(config)# access-list access-list-number { deny | permit | remark } (source) (source-wildcard)(log)
        - Ex. permit access
            - R1(config)# access-list (#) permit host (ip-address of the host)
            - R1(config)# access-list (#) permit (Network address) (Wildcard-mask)
        - Ex. deny access
            - R1(config)# access-list (#) deny host (ip-address of the host)
            - R1(config)# access-list (#) deny (Network address) (Wildcard-mask)
    - create an ACL group
        - Ip access-list {standard | extended} (name of the ACL group)
            - Router(config-std-nacl)# access-list access-list-number { deny | permit | remark } (source) (source-wildcard)(log)
            - Router(config-std-nacl)#remark (remark)<allows you to add a comment to the ACL group>
    - Commenting ACL
        - (config)#access-list (access-list_number) remark (remark)
    - Extended ACL

        - R1(config)# access-list (#) permit tcp any eq (port number)
            - Or
        - R1(config)# access-list (#) permit tcp any eq (protocol name)
    - Configuring extended ACL
        -
    - Router(config)# interface GigabitEthernet or Serial <it depends what interface you want to configure to have the access list that you create>
        - Router(config-if)# ip access-group { access-list-number | access-list-name } { in | out } <After you are in the interface that you want to configure you need to assign what access list this interface would be using and if is going to receive or send traffic through your network>
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28. Configuring Firewall
    - (config)# ip inspect name (name)
    - (config)# ip inspect name (name) (protocol)
    - (config)# int (interface)
    - (config)# ip inspect (name) out
29. Configuring NAT
    - (config)# access-list 1 permit (network) (wildcard)
    - (config)#ip nat inside source list 1 interface (interface) overload
    - (config)#int (interface)
    - (config-if)#ip nat outside
    - (config-if)# int (interface)
    - (config-if)# ip nat inside

- (config-if)#exit
- (config)# banner motd & (Insert banner required)&
- (config)# access-list (number) permit (protocol) any any
  (config)#int (interface)
- (config-if)#ip access-group (access list number) in

3. DHCP
   - (config)# lp dhcp pool (pool name as requested)
   - (dhcp-config)#dns-server (number)(subnet)
   - (dhcp-config)#network (number)(subnet)
     (dhcp-config)#default-router (number)
   - (config)#ip dhcp excluded-address (address) and/or
     (address)