|  | Cisco Packet Tracer commands collection | |
| --- | --- | --- |
|  | User Exec mode |  |
| User | Privilege Exec mode | en || enable |
| privilege | Global Configuration mode | Config t || configure terminal |
|  | Wherever we are, we return to privilege mode | Crtl + Z || Crtl + C || end |
|  | We return to a previous mode | exit |
| in the desired mode | undo | no <command-name> |
| privilege | View current settings in privilege mode | Show run || show running-config |
| privilege | View fixed settings in privilege mode | Show start || show start-config |
| privilege | Convert momentary settings to fixed settings in privilege mode | Copy run start |
| config | Execution of Exec mode commands in config mode | <command-name> do |
| privilege | Summary of interface status settings | Show ip interface brief || show ip int b |
| config | Go to interface mode | Int fa 0/0 || interface fastethernet 0/0 |
| privilege | see the lines | Show line |
| config | see the lines | Line ? |
| config | See the number and counts of each line | Line line\_name ? |
| line | set password on console line | en  config t  line console 0  password 1234  login |
| line | hiding password | Service password-encryption |
| line | delete password for new password | No service password-encryption  No password  No login |
| config | set password for privilege mode | Enable password 1234  No enable password /=/ |
| config | set password secretly | Enable secret 1234  No enable secret /=/ |
| Config & config-line | set pass on line vty for all users | Router(config)#enable secret 1234  Router (config)#line vty 0 15  Router(config-line)#password 456  Router(config-line)#login |
| Config | create users | Router(config)#username abolfazl password 123  Router(config)#username sajad secret 08965 |
| Config  ^  interface | connecting PC to router | Interface fastethernet 0/0  Ip address 192.168.1.10 255.255.255.0  ||  ip address default\_geteway\_address  + subnet\_mask  No shutdown |
|  | ping command | Ping default\_geteway\_address |
| privilege | ping command | Ping ip\_address\_computer |
|  | Activating Telnet for Router and Switch  1- Setting a password for the console line.  2- Setting a password for the enable or privileged mode.  3- Assigning an IP address to an interface.  4- Setting a password for the VTY line and enabling Telnet. | Switch> en  Switch# config terminal  Switch(config)# enable password 1234  Switch(config)# login  Switch(config)# int vlan 1  ||  Router(config)#int fa 0/0  Switch(config-if)# ip address 192.168.1.1 255.255.255.0  Switch(config-if)# no shutdown  Switch(config-if)# exit  Switch(config)# line console 0  Switch(config-line)# password 1234  Switch(config-line)# login  Switch(config-line)# exit  Switch(config)# line vty 0 15  Switch(config-line)# password 1234  Switch(config-line)# login  Switch(config-line)# transport input telnet |
|  | Enabling SSH:  1- Define hostname.  2- Set domain\_name.  3- Generate a key.  4- Determine the SSH version.  5- Create a user with privilege level 15.  6- Set a password for "enable" mode.  7- Use "login local" on VTY lines.  8- Allow "Transport input" using SSH.  9- Assign an IP address.  10- no shutdown | Router>en  Router#config t  Router(config)#hostname Router1  Router1(config)#ip domain\_name domain.com  Router1(config)#crypto key generate rsa  How many bits in the modulus [512]: 1024  Router1(config)#ip ssh ver 2  Router1(config)#username abolfazl privilege 15 password 1234  Router1(config)#enable password 1234  Router1(config)#line vty 0 15  Router1(config-line)#login local  Router1(config-line)#transport input ssh  Router1(config-line)#exit  Router1(config)#int fa 0/0  Router1(config-if)#ip address 192.168.1.1 255.255.255.0  Router1(config-if)#no shutdown  ssh –l abolfazl ip\_address\_router |
|  | L3 Switch  Two separate networks that cannot ping each other  VLAN 1  VLAN 2  By executing the "ip routing" command, computers in different VLANs can ping each other. | Switch>en  Switch#config t  Switch(config)#interface fastEthernet 0/1  Switch(config-if)#no switchport  Switch(config-if)#ip address 192.168.1.2 255.255.255.0  Switch(config-if)#no shutdown  Switch(config-if)#exit  Switch(config)#int fastEthernet 0/2  Switch(config-if)#no switchport  Switch(config-if)#ip address 192.168.2.2 255.255.255.0  Switch(config-if)#no shutdown  Switch(config-if)#exit  Switch(config)#ip routing |
|  | L2 Switch  Creating VLANs on the L2 switch  Now, to enable data exchange between the switch and the router and perform inter-VLAN routing, we enter the following command in the L2 switch:  ip default-gateway <router\_ip\_address>  If you are directly connected to the router, you can use the command:  default-gateway <router\_ip\_address> | Switch>en  Switch#config t  Switch(config)#int vlan 1  Switch(config-if)#ip address 192.168.1.1 255.255.255.0  Switch(config-if)#no shutdown  Switch(config-if)#exit  Switch(config)#do show ip int brief  Switch(config)#do show vlan b  VLAN Name Status Ports  ---- -------------------------------- --------- -------------------------------  1 default active Fa0/1, Fa0/2, Fa0/3, Fa0/4  Fa0/5, Fa0/6, Fa0/7, Fa0/8  Fa0/9, Fa0/10, Fa0/11, Fa0/12  Fa0/13, Fa0/14, Fa0/15, Fa0/16  Fa0/17, Fa0/18, Fa0/19, Fa0/20  Fa0/21, Fa0/22, Fa0/23, Fa0/24  Gig0/1, Gig0/2  Switch(config)#vlan 2  Switch(config-vlan)#name manage  Switch(config-vlan)#exit  Switch(config)#int vlan 2  Switch(config-if)#ip address 192.168.2.1 255.255.255.0  Switch(config-if)#no shutdown  Switch(config-if)#exit  Switch(config)#do show vlan brief  VLAN Name Status Ports  ---- -------------------------------- --------- -------------------------------  1 default active Fa0/1, Fa0/2, Fa0/3, Fa0/4  Fa0/5, Fa0/6, Fa0/7, Fa0/8  Fa0/9, Fa0/10, Fa0/11, Fa0/12  Fa0/13, Fa0/14, Fa0/15, Fa0/16  Fa0/17, Fa0/18, Fa0/19, Fa0/20  Fa0/21, Fa0/22, Fa0/23, Fa0/24  Gig0/1, Gig0/2  2 manage active |
|  | Inter-VLAN Routing using the Legacy method. | In switch =>  Switch>en  Switch#show vlan b  VLAN Name Status Ports  ---- -------------------------------- --------- -------------------------------  1 default active Fa0/1, Fa0/2, Fa0/3, Fa0/4  Fa0/5, Fa0/6, Fa0/7, Fa0/8  Fa0/9, Fa0/10, Fa0/11, Fa0/12  Fa0/13, Fa0/14, Fa0/15, Fa0/16  Fa0/17, Fa0/18, Fa0/19, Fa0/20  Fa0/21, Fa0/22, Fa0/23, Fa0/24  Gig0/1, Gig0/2  Switch#configure t  Switch(config)#vlan 10  Switch(config-vlan)#name IT  Switch(config-vlan)#exit  Switch(config)#vlan 20  Switch(config-vlan)#name programmer  Switch(config-vlan)#exit  Switch(config)#do show vlan brief  VLAN Name Status Ports  ---- -------------------------------- --------- -------------------------------  1 default active Fa0/1, Fa0/2, Fa0/3, Fa0/4  Fa0/5, Fa0/6, Fa0/7, Fa0/8  Fa0/9, Fa0/10, Fa0/11, Fa0/12  Fa0/13, Fa0/14, Fa0/15, Fa0/16  Fa0/17, Fa0/18, Fa0/19, Fa0/20  Fa0/21, Fa0/22, Fa0/23, Fa0/24  Gig0/1, Gig0/2  10 IT active  20 programmer active  Switch(config)#int range fa 0/1-2  Switch(config-if-range)#switchport mode access  Switch(config-if-range)#switchport access vlan 10  Switch(config-if-range)#int range fa 0/3-4  Switch(config-if-range)#switchport mode access  Switch(config-if-range)#switchport access vlan 20  Switch(config-if-range)#do show vlan brief  VLAN Name Status Ports  ---- -------------------------------- --------- -------------------------------  1 default active Fa0/5, Fa0/6, Fa0/7, Fa0/8  Fa0/9, Fa0/10, Fa0/11, Fa0/12  Fa0/13, Fa0/14, Fa0/15, Fa0/16  Fa0/17, Fa0/18, Fa0/19, Fa0/20  Fa0/21, Fa0/22, Fa0/23, Fa0/24  Gig0/1, Gig0/2  10 IT active Fa0/1, Fa0/2  20 programmer active Fa0/3, Fa0/4  Switch(config-if-range)#exit  Switch(config)#int fa 0/5  Switch(config-if)#switchport mode access  Switch(config-if)#switchport access vlan 10  Switch(config-if)#exit  Switch(config)#int fa 0/6  Switch(config-if)#switchport mode access  Switch(config-if)#switchport access vlan 20  Switch(config-if)#exit  Switch(config)#do show vlan brief  VLAN Name Status Ports  ---- -------------------------------- --------- -------------------------------  1 default active Fa0/7, Fa0/8, Fa0/9, Fa0/10  Fa0/11, Fa0/12, Fa0/13, Fa0/14  Fa0/15, Fa0/16, Fa0/17, Fa0/18  Fa0/19, Fa0/20, Fa0/21, Fa0/22  Fa0/23, Fa0/24, Gig0/1, Gig0/2  10 IT active Fa0/1, Fa0/2, Fa0/5  20 programmer active Fa0/3, Fa0/4, Fa0/6  In router=>  Router>en  Router#config t  Router(config)#int fa 0/0  Router(config-if)#ip address 192.168.10.10 255.255.255.0  Router(config-if)#no shutdown  Router(config-if)#exit  Router(config)#int fa 0/1  Router(config-if)#ip address 192.168.20.10 255.255.255.0  Router(config-if)#no shutdown |
|  | Inter-VLAN Routing using the router-on-a-stick method. | In router=>  Router>en  Router#config t  Router(config)#int fa 0/0.1  Router(config-subif)#encapsulation dot1q 10  Router(config-subif)#ip address 192.168.10.10 255.255.255.0  Router(config-subif)#exit  Router(config)#int fa 0/0.2  Router(config-subif)#encapsulation dot1q 20  Router(config-subif)#ip address 192.168.20.10 255.255.255.0  Router(config-subif)#exit  Router(config)#int fa 0/0  Router(config-if)#no shutdown  Router(config-if)#do show ip int b  FastEthernet0/0.1 192.168.10.10  FastEthernet0/0.2 192.168.20.10  In switch =>  Switch>en  Switch#show vlan b  VLAN Name Status Ports  ---- -------------------------------- --------- -------------------------------  1 default active Fa0/1, Fa0/2, Fa0/3, Fa0/4  Fa0/5, Fa0/6, Fa0/7, Fa0/8  Fa0/9, Fa0/10, Fa0/11, Fa0/12  Fa0/13, Fa0/14, Fa0/15, Fa0/16  Fa0/17, Fa0/18, Fa0/19, Fa0/20  Fa0/21, Fa0/22, Fa0/23, Fa0/24  Gig0/1, Gig0/2  Switch#config t  Switch(config)#vlan 10  Switch(config-vlan)#name IT  Switch(config-vlan)#exit  Switch(config)#vlan 20  Switch(config-vlan)#name programmer  Switch(config-vlan)#exit  Switch(config)#int range fa 0/1-2  Switch(config-if-range)#switchport mode access  Switch(config-if-range)#switchport access vlan 10  Switch(config-if-range)#exit  Switch(config)#int range fa 0/3-4  Switch(config-if-range)#switchport mode access  Switch(config-if-range)#switchport access vlan 20  Switch(config-if-range)#exit  Switch(config)#do show vlan b  VLAN Name Status Ports  ---- -------------------------------- --------- -------------------------------  1 default active Fa0/5, Fa0/6, Fa0/7, Fa0/8  Fa0/9, Fa0/10, Fa0/11, Fa0/12  Fa0/13, Fa0/14, Fa0/15, Fa0/16  Fa0/17, Fa0/18, Fa0/19, Fa0/20  Fa0/21, Fa0/22, Fa0/23, Fa0/24  Gig0/1, Gig0/2  10 IT active Fa0/1, Fa0/2  20 programmer active Fa0/3, Fa0/4  Switch(config)#int fa 0/5  Switch(config-if)#switchport trunk encapsulation dot1q  ^  % Invalid input detected at '^' marker.  Switch(config-if)#switchport mode trunk  Switch(config-if)#switchport trunk allowed vlan 10,20  Switch(config-if)#do show int trunk  Fa0/5 10,20  Fa0/5 10,20 |
|  | Inter-VLAN Routing using the trunking method. | Switch>en  Switch#show vlan b  VLAN Name Status Ports  ---- -------------------------------- --------- -------------------------------  1 default active Fa0/1, Fa0/2, Fa0/3, Fa0/4  Fa0/5, Fa0/6, Fa0/7, Fa0/8  Fa0/9, Fa0/10, Fa0/11, Fa0/12  Fa0/13, Fa0/14, Fa0/15, Fa0/16  Fa0/17, Fa0/18, Fa0/19, Fa0/20  Fa0/21, Fa0/22, Fa0/23, Fa0/24  Switch#config t  Switch(config)#vlan 10  Switch(config-vlan)#name IT  Switch(config-vlan)#exit  Switch(config)#vlan 20  Switch(config-vlan)#name programmer  Switch(config-vlan)#exit  Switch(config)#int range fa 0/1-2  Switch(config-if-range)#switchport mode access  Switch(config-if-range)#switchport access vlan 10  Switch(config-if-range)#exit  Switch(config)#int range fa 0/3-4  Switch(config-if-range)#switchport mode access  Switch(config-if-range)#switchport access vlan 20  Switch(config-if-range)#exit  Switch(config)#do show vlan b  VLAN Name Status Ports  ---- -------------------------------- --------- -------------------------------  1 default active Fa0/5, Fa0/6, Fa0/7, Fa0/8  Fa0/9, Fa0/10, Fa0/11, Fa0/12  Fa0/13, Fa0/14, Fa0/15, Fa0/16  Fa0/17, Fa0/18, Fa0/19, Fa0/20  Fa0/21, Fa0/22, Fa0/23, Fa0/24  Gig0/1, Gig0/2  10 IT active Fa0/1, Fa0/2  20 programmer active Fa0/3, Fa0/4  Switch(config)#int vlan 10  Switch(config-if)#ip address 192.168.10.10  255.255.255.0  Switch(config-if)#no shutdown  Switch(config-if)#exit  Switch(config)#int vlan 20  Switch(config-if)#ip address 192.168.20.10 255.255.255.0  Switch(config-if)#no shutdown  Switch(config-if)#exit  Switch(config-if)#ip routing |
|  |  | … |