|  |  |
| --- | --- |
| Command | Purpose |
| **enable** |  |
| **configure terminal** |  |
| **interface** *fastethernet/number* |  |
| **reload** |  |
| **hostname** *name* |  |
| **copy** *from-location to-location* |  |
| **copy running-config startup-config** |  |
| **copy startup-config running-config** |  |
| **write erase**  **erase startup-config** |  |
| **ip address** *ip-address mask* |  |
| **shutdown**  **no shutdown** |  |
| **ip default-gateway** *ip\_address* |  |
| **show running-config** |  |
| **description** *name-string* |  |
| **show running-config interface** *interface slot/number* |  |
| **show ip interface** *[type number]* |  |
| **ip name-server** *serverip-1 serverip-2* |  |
| **ping** *{hostname | system-address} [source source-address]* |  |
| **speed** *{10 | 100 | 1000 | auto}* |  |
| **duplex** *{auto | full | half}* |  |
| **cdp run**  **no cdp run** |  |
| **show mac address-table** |  |
| **show cdp** |  |
| **show cdp neighbors***[detail]* |  |
| **show interfaces** |  |
| **show interface status** |  |
| **show interfaces switchport** |  |
| **show interfaces trunk** |  |
| **show vlan**  **show vlan brief** |  |
| **show vtp status** |  |
| **ip route***network-number network-mask {ip-address | interface}* |  |
| **router rip** |  |
| **network** *ip-address* |  |
| **version 2** |  |
| **no auto-summary** |  |
| **default-information originate** |  |
| **passive-interface** *interface* |  |
| **show ip rip database** |  |
| **ip nat** *[inside | outside]* |  |
| **ip nat inside source** *{list{access-list-number | access-list-name}} interface type number[overload]* |  |
| **ip nat inside source static** *local-ip global-ip* |  |
| **vlan** |  |
| **switchport access vlan** |  |
| **switchport trunk encapsulation dot1q** |  |
| **switchport access** |  |
| **vlan vlan-id** *[name vlan-name]* |  |
| **switchport mode** *{ access | trunk }* |  |
| **switchport trunk** *{encapsulation { dot1q }* |  |
| **encapsulation dot1q vlan-id** |  |
| **ip address dhcp** |  |
| **ip dhcp pool name** |  |
| **domain-name** *domain* |  |
| **network** *network-number [mask]* |  |
| **ip dhcp excluded-address** *ip-address [last-ip-address]* |  |
| **ip helper-address** *address* |  |
| **default-router** *address[address2 ... address8]* |  |
| **password***pass-value* |  |
| **username** name **password** pass-value |  |
| **enable password** |  |
| **enable secre** |  |
| **service password-encryption** |  |
| **ip domain-name** *name* |  |
| **crypto key generate rsa** |  |
| **transport input** *{telnet | ssh}* |  |
| **access-list** *access-list-number {deny | permit} source [source-wildcard] [log]* |  |
| **access-class** |  |
| **ip access-list** *{standard | extended} {access-list-name | access-list-number}* |  |
| **permit source** *[source-wildcard]* |  |
| **deny source** *[source-wildcard]* |  |
| **ntp peer** *<ip-address>* |  |
| **switchport port-security** |  |
| **switchport port-security maximum maximum** |  |
| **switchport port-security mac-address** *{mac-addr | {sticky [mac-addr]}}* |  |
| **switchport port-security violation** *{shutdown | restrict | protect}* |  |
| **show port security** *[interface interface-id]* |  |
| **logging** *ip address* |  |
| **logging trap level** |  |
| **show logging** |  |
| **terminal monitor** |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| /32 | 255.255.255.255 | 0.0.0.0 | 1 | 1 |
| /31 | 255.255.255.254 | 0.0.0.1 | 2 | 2\* |
| /30 | 255.255.255.252 | 0.0.0.3 | 4 | 2 |
| /29 | 255.255.255.248 | 0.0.0.7 | 8 | 6 |
| /28 | 255.255.255.240 | 0.0.0.15 | 16 | 14 |
| /27 | 255.255.255.224 | 0.0.0.31 | 32 | 30 |
| /26 | 255.255.255.192 | 0.0.0.63 | 64 | 62 |
| /25 | 255.255.255.128 | 0.0.0.127 | 128 | 126 |
| /24 | 255.255.255.0 | 0.0.0.255 | 256 | 254 |
| /23 | 255.255.254.0 | 0.0.1.255 | 512 | 510 |
| /22 | 255.255.252.0 | 0.0.3.255 | 1,024 | 1,022 |
| /21 | 255.255.248.0 | 0.0.7.255 | 2,048 | 2,046 |
| /20 | 255.255.240.0 | 0.0.15.255 | 4,096 | 4,094 |
| /19 | 255.255.224.0 | 0.0.31.255 | 8,192 | 8,190 |
| /18 | 255.255.192.0 | 0.0.63.255 | 16,384 | 16,382 |
| /17 | 255.255.128.0 | 0.0.127.255 | 32,768 | 32,766 |
| /16 | 255.255.0.0 | 0.0.255.255 | 65,536 | 65,534 |
| /15 | 255.254.0.0 | 0.1.255.255 | 131,072 | 131,070 |
| /14 | 255.252.0.0 | 0.3.255.255 | 262,144 | 262,142 |
| /13 | 255.248.0.0 | 0.7.255.255 | 524,288 | 524,286 |
| /12 | 255.240.0.0 | 0.15.255.255 | 1,048,576 | 1,048,574 |
| /11 | 255.224.0.0 | 0.31.255.255 | 2,097,152 | 2,097,150 |
| /10 | 255.192.0.0 | 0.63.255.255 | 4,194,304 | 4,194,302 |
| /9 | 255.128.0.0 | 0.127.255.255 | 8,388,608 | 8,388,606 |
| /8 | 255.0.0.0 | 0.255.255.255 | 16,777,216 | 16,777,214 |
| /7 | 254.0.0.0 | 1.255.255.255 | 33,554,432 | 33,554,430 |
| /6 | 252.0.0.0 | 3.255.255.255 | 67,108,864 | 67,108,862 |
| /5 | 248.0.0.0 | 7.255.255.255 | 134,217,728 | 134,217,726 |
| /4 | 240.0.0.0 | 15.255.255.255 | 268,435,456 | 268,435,454 |
| /3 | 224.0.0.0 | 31.255.255.255 | 536,870,912 | 536,870,910 |
| /2 | 192.0.0.0 | 63.255.255.255 | 1,073,741,824 | 1,073,741,822 |
| /1 | 128.0.0.0 | 127.255.255.255 | 2,147,483,648 | 2,147,483,646 |
| /0 | 0.0.0.0 | 255.255.255.255 | 4,294,967,296 | 4,294,967,294 |