6.3.6 Switch Configuration Command List

The following table lists common switch configuration commands:

Command	Action
switch(config)#interface FastEthernet 0/14 switch(config)#interface GigabitEthernet 0/1	Moves to interface configuration mode
switch(config)#interface range fastethernet 0/14 - 24 switch(config)#interface range gigabitethernet 0/1 - 4 switch(config)#interface range fa 0/1 - 4 , 7 - 10 switch(config)#interface range fa 0/8 - 9 , gi 0/1 - 2	Moves to configuration mode for a range of interfaces
switch(config-if)#speed 10 switch(config-if)#speed 100 switch(config-if)#speed 1000 switch(config-if)#speed auto	Sets the port speed on the interface
switch(config-if)#duplex half switch(config-if)#duplex full switch(config-if)#duplex auto	Sets the duplex mode on the interface
switch(config-if)#no shutdown switch(config-if)#shutdown	Enables or disables the interface
switch#show interface status	Shows the interface status of all ports
switch#show ip interface brief	Shows the line and protocol status of all ports

The following are some facts about switch configuration:

- All switch ports are enabled (no shutdown) by default.
- Port numbering on some switches begins at 1, not 0. For example, **FastEthernet 0/1** is the first FastEthernet port on a switch.
- Through auto-negotiation, the 10/100/1000 ports configure themselves to operate at the speed of attached devices. If the attached ports do not support auto-negotiation, you can explicitly set the speed and duplex parameters.
- Some switches always use the *store-and-forward* switching method. On other models, you may be able to configure the switching method.
- If the speed and duplex settings are set to **auto**, the switch will use auto-MDIX to sense the cable type (crossover or straight-through) connected to the port and will automatically adapt itself to the cable type used. When you manually configure the speed or duplex setting, it disables auto-MDIX, so you need to be sure you use the correct cable.
- By default, the link speed and duplex configurations for Ethernet interfaces in Cisco devices are set using IEEE 802.3u auto-negotiation. The interface negotiates with remote devices to determine the correct settings. However, auto-negotiation can be disabled on the Cisco device and other Ethernet network hosts, and static values can be manually assigned. Devices with auto-negotiation enabled will try to negotiate link speed and duplexing but will get no response. When auto-negotiation fails, Cisco devices that have auto-negotiation enabled default to the following:
  - The interface will attempt to sense the link speed, if possible. If it cannot, the slowest link speed supported on the interface is used (usually 10 Mbps).
  - If the link speed selected is 10 Mbps or 100 Mbps, half-duplex is used. If it is 1000 Mbps, full-duplex is used.