

The basics of Cisco Switch Management - Part 1

In the command-line interface CLI (command-line interface) you can perform any type of configuration. So you can use the IOS command line interface.

***TipsMake.com* - Sometimes, you will have to configure a switch port or find the MAC address on each port. Maybe, this is not what you do on a daily basis and need a basic course on Cisco's Switch administration position. So, try to explore the basic steps of this position.**

Log in

Before you can administer the Switch, you need to know some basic information:

- What switch IP address? What is DNS?
- Can you login and password?
- Ethernet port of switch

One way to configure the switch is to configure it on the web interface. Basic configuration is not difficult and you do not need much help. In the command-line interface CLI (command-line interface) you can perform any type of configuration. Therefore, I recommend that you use the IOS command line interface. In this article we will take the basic steps of managing switches with the Cisco IOS command-line interface.

Show switch configuration

Just like on a router, the IOS command is used to display the switch configuration with all Ethernet ports. To know the configuration of the switch, just type **show running-config** as follows:



```
HappyRouter TERMSERVER on LAN - SecureCRT
File Edit View Options Transfer Script Window Help
SW#show running-config
Building configuration...

Current configuration : 2703 bytes
!
version 12.1
no service pad
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname SW1
!
ip subnet-zero
!
vtp domain [smartports]
vtp mode transparent
!
spanning-tree mode pvst
spanning-tree extend system-id
!
!
!
vlan 2
 name VLAN_Inside(2)
!
vlan 3
 name VLAN_Outside(3)
!
vlan 4
 name VLAN_A(4)
!
vlan 5
 name VLAN_B(5)
!
vlan 6
 name VLAN_6
!
vlan 10
 name VLAN_10
!
vlan 11
 name VLAN_BB1(11)
!
vlan 12-14,19
!
vlan 20
 name VLAN_20
!
vlan 22
!
Ready Telnet 68, 11 52 Rows, 72 Cols VT100 NUM
```

Show port status

Almost every time you switch to the switch, you must troubleshoot the switch port or change the switch port configuration. The quickest way to display the status of each switch port is to **show show interfaces status** :

```
SW1#show interfaces status
Port      Name      Status      Vlan      Duplex  Speed  Type
Fa0/1     Fa0/1     connected   1         a-half  a-10   10/100BaseTX
Fa0/2     Fa0/2     notconnect  1         auto    auto   10/100BaseTX
Fa0/3     Fa0/3     notconnect  1         auto    auto   10/100BaseTX
Fa0/4     Fa0/4     connected   1         a-full  a-100  10/100BaseTX
Fa0/5     Fa0/5     notconnect  1         auto    auto   10/100BaseTX
Fa0/6     Fa0/6     notconnect  1         auto    auto   10/100BaseTX
Fa0/7     Fa0/7     connected   131      a-full  a-100  10/100BaseTX
Fa0/8     Fa0/8     notconnect  131      auto    auto   10/100BaseTX
Fa0/9     Fa0/9     connected   131      a-full  a-100  10/100BaseTX
Fa0/10    Fa0/10    notconnect  131      auto    auto   10/100BaseTX
Fa0/11    Fa0/11    connected   131      a-full  a-100  10/100BaseTX
Fa0/12    Fa0/12    connected   131      a-half  a-10   10/100BaseTX
Fa0/13    Fa0/13    notconnect  1         auto    auto   10/100BaseTX
Fa0/14    Fa0/14    notconnect  1         auto    auto   10/100BaseTX
Fa0/15    Fa0/15    notconnect  1         auto    auto   10/100BaseTX
Fa0/16    Fa0/16    notconnect  1         auto    auto   10/100BaseTX
Fa0/17    Fa0/17    notconnect  1         auto    auto   10/100BaseTX
Fa0/18    Fa0/18    notconnect  1         auto    auto   10/100BaseTX
Fa0/19    Fa0/19    notconnect  1         auto    auto   10/100BaseTX
Fa0/20    Fa0/20    notconnect  1         auto    auto   10/100BaseTX
Fa0/21    Fa0/21    notconnect  1         auto    auto   10/100BaseTX
--More--
Ready                               Telnnet  46, 11  26 Rows, 80 Cols  VT100  NUM
```

This command is displayed: if the port is connected to the device, the VLAN is IN, displayed with the speed and model of the port. This is the fastest and best way to know the status of each switch port.

Change the speed and duplex of the interface

Interface Fa0 / 21 with the speed set to auto. However, this speed needs to be set to 10Mb / sec. To change the speed of the ports, go to interface configuration mode and use the **speed** command :

```
SW1#
SW1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
SW1(config)#int fa0/21
SW1(config-if)#speed 10
SW1(config-if)#
SW1(config-if)#
SW1(config-if)#
```

On this switch, the speed of 10/100 Ethernet ports is set to auto, 10 and 100. On the Gigabit Ethernet port you can only adjust the switch with the port speed being able or not able to detect the speed yourself. Once the speed is configured to 10Mb, you can check the interface Fa0 / 21 again like:

```
HappyRouter TERMSERVER on LAN - SecureCRT
File Edit View Options Transfer Script Window Help
SW1#
SW1#show interfaces fa0/21 status
Port      Name      Status      Vlan      Duplex  Speed Type
Fa0/21    Fa0/21    notconnect  1         auto    10   10/100BaseTX
SW1#
SW1#
SW1#
SW1#
Ready Telnet 39, 5 10 Rows, 80 Cols VT100 NUM
```

As you can see, the speed has been set to 10. To change the speed of both directions of the port, you perform the same step, but use the duplex command. Duplex can be set to **auto** , **full** or **half** .

Turn off and turn on interfaces

To enable or disable interfaces, you use the **no shutdown** / **shutdown** command in interface configuration mode. Here is an example:

```
HappyRouter TERMSERVER on LAN - SecureCRT
File Edit View Options Transfer Script Window Help
Enter configuration commands, one per line. End with CNTL/Z.
SW1(config)#int Fa0/1
SW1(config-if)#shutdown
1w4d: %LINK-5-CHANGED: Interface FastEthernet0/1, changed state to administrati
vely down
1w4d: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed
state to down
SW1(config-if)#
SW1(config-if)#
SW1(config-if)#
SW1(config-if)#
SW1(config-if)#
SW1(config-if)#no shutdown
1w4d: %LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to down
1w4d: %LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to up
1w4d: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed
state to up
SW1(config-if)#
SW1(config-if)#
SW1(config-if)#
SW1(config-if)#
SW1(config-if)#^Z
SW1#
1w4d: %SYS-5-CONFIG_I: Configured from console by console
Ready Telnet 34, 58 26 Rows, 78 Cols VT100 NUM
```

Note that when the port is shut down, the communication message appears telling you that the management status has been changed to **down** , the line protocol is also converted to **down** . When the port is turned on, the line protocol will switch to **up** .

Now you can display the interface status to see its status.

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