

Lab 8: Basic switch setup

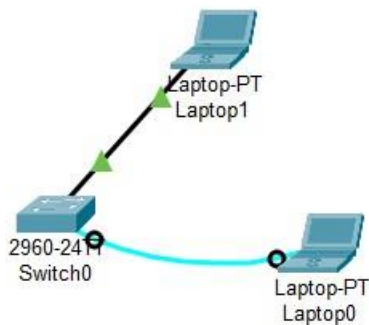
SOLVED BY 20ES062

Introduction

A new switch just purchased from Cisco contains no default configuration. You need to configure the switch with setup mode or from scratch using the command line interface (CLI) before connecting it in your network environment.

As a Cisco CCNA certified professional, it is very important to know the basic Cisco switch configuration commands to improve the performances and the security of the enterprise network.

Network diagram



Lab instructions

This lab will test your ability to configure basic settings such as hostname, motd banner, encrypted passwords, and terminal options on a Cisco Catalyst 2960 switch emulated in Packet Tracer 8.1.1.

1. Use the local laptop connect to the switch console and configure the laptop with the right parameters for console access to the Cisco 2960 Catalyst switch
2. Configure Switch hostname as LOCAL-SWITCH
3. Configure the message of the day as "Unauthorized access is forbidden"
4. Configure the password for privileged mode access as "cisco". The password must be md5 encrypted
5. Configure password encryption on the switch using the global configuration command
6. Configure CONSOLE access with the following settings :
 - Login enabled

- Password : ciscoconsole
- History size : 15 commands
- Timeout : 6'45"
- Synchronous logging

6. Configure TELNET access with the following settings :

- Login enabled
- Password : ciscotelnet
- History size : 15 commands
- Timeout : 8'20"
- Synchronous logging

7. Configure the IP address of the switch as 192.168.1.2/24 and its default gateway IP (192.168.1.1).

8. Test telnet connectivity from the other Laptop using the telnet client.

Lab solution

Configure Switch hostname as LOCAL-SWITCH

```
Switch>enable
Switch#configure terminal
Switch(config)#hostname LOCAL-SWITCH
```

Configure the message of the day as "Unauthorized access is forbidden"

```
Switch(config)#banner motd # Unauthorized access is forbidden#
```

Configure the password for privileged mode access as "cisco". The password must be md5 encrypted

```
Switch(config)#enable secret cisco
```

Configure password encryption on the switch using the global configuration command

Password encryption is an important setting for securing switch credentials as default behavior is saving clear-text passwords in the running-config. Although useful to avoid naive hacking, be advised that tools have been released to crack those passwords. Use the **service passwordencryption** command with additional security measures.

```
Switch(config)#service password-encryption
```

Configure CONSOLE access [...]

```
Switch(config)#line con 0
```

```
Switch(config-line)#password ciscoconsole Switch(config-line)#logging synchronous  
Switch(config-line)#login Switch(config-line)#history size 15 Switch(config-line)#exec-timeout 6  
45 Switch(config-line)#exit
```

Configure TELNET access [...]

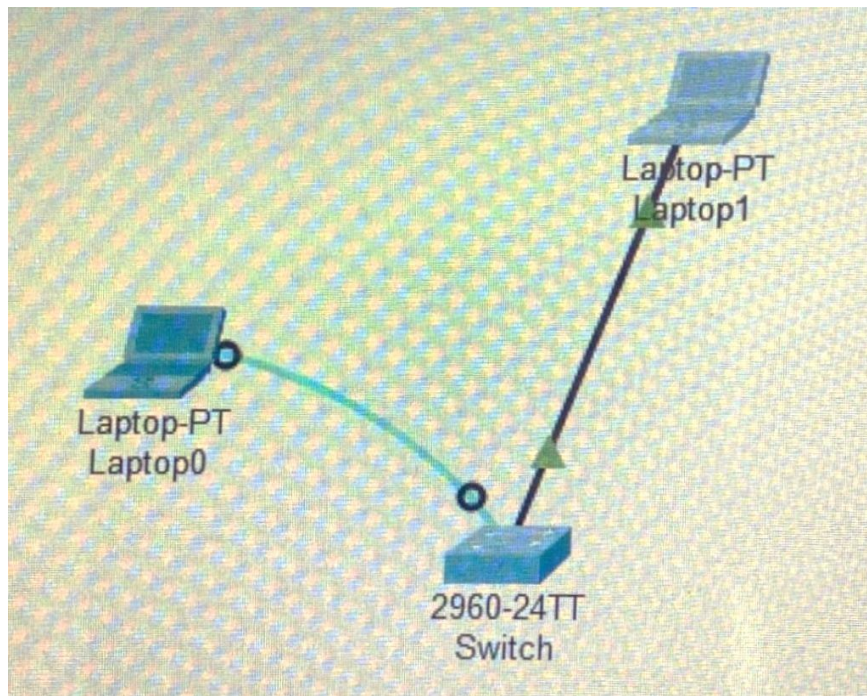
```
Switch(config)#line vty 0 15
```

```
Switch(config-line)#exec-timeout 8 20  
Switch(config-line)#password ciscotelnet  
Switch(config-line)#logging synchronous  
Switch(config-line)#login  
Switch(config-line)#history size 15  
Switch(config-line)#exit
```

Configure the IP address of the switch as 192.168.1.2/24 and it's default gateway IP (192.168.1.1).

```
Switch(config)#interface Vlan1
```

```
Switch(config-if)#ip address 192.168.1.2 255.255.255.0 Switch(config-if)#no shutdown  
Switch(config-line)#exit
```



```
SWITCH
Physical Config CLI Attributes
IOS Command Line Interface

Local-Switch>en
Password:
Password:
Local-Switch#en
Local-Switch#Local-Switch#
Local-Switch#terminal
% Incomplete command.
Local-Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Local-Switch(config)#hostname LOCAL-SWITCH
LOCAL-SWITCH(config)#enable secret cisco
LOCAL-SWITCH(config)#service password-encryption
LOCAL-SWITCH(config)#line con 0
LOCAL-SWITCH(config-line)#password ciscoconsole
LOCAL-SWITCH(config-line)#logging synchronous
LOCAL-SWITCH(config-line)#login
LOCAL-SWITCH(config-line)#history size 15
LOCAL-SWITCH(config-line)#exec-timeout 6 45
LOCAL-SWITCH(config-line)#exit
LOCAL-SWITCH(config)#line vty 0 15
LOCAL-SWITCH(config-line)#exec-timeout 8 20
LOCAL-SWITCH(config-line)#password ciscotelnet
LOCAL-SWITCH(config-line)#logging synchronous
LOCAL-SWITCH(config-line)#login
LOCAL-SWITCH(config-line)#history size 15
LOCAL-SWITCH(config-line)#exit
LOCAL-SWITCH(config)#interface Vlan1
LOCAL-SWITCH(config-if)#ip address 192.168.1.2 255.255.255.0
% Invalid input detected at '^' marker.
LOCAL-SWITCH(config-if)#ip address 192.168.1.2 255.255.255.0
% Invalid input detected at '^' marker.
LOCAL-SWITCH(config-if)#ip address 192.168.1.2 255.255.255.0
LOCAL-SWITCH(config-if)#no shutdown
LOCAL-SWITCH(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up
```

```
IOS Command Line Interface

% Invalid input detected at '^' marker.

LOCAL-SWITCH(config-if)#ip address 192.168.1.2 255.255.255.0
LOCAL-SWITCH(config-if)#no shutdown

LOCAL-SWITCH(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up

LOCAL-SWITCH(config-if)#exit
LOCAL-SWITCH(config)## Bad secrets

LOCAL-SWITCH(config)## Bad secrets

LOCAL-SWITCH(config)#interface Vlan 1
LOCAL-SWITCH(config-if)#ip address 192.168.1.2 255.255.255.0
LOCAL-SWITCH(config-if)#no shutdown
LOCAL-SWITCH(config-if)#exit
LOCAL-SWITCH(config)#

LOCAL-SWITCH con0 is now available

Press RETURN to get started.
```

```
Physical Config Desktop Programming Attributes
Command Prompt

Cisco Packet Tracer PC Command Line 1.0
C:\>telnet 192.168.1.2
Trying 192.168.1.2 ...
% Connection timed out; remote host not responding
C:\>telnet 192.168.1.2
Trying 192.168.1.2 ...
% Connection timed out; remote host not responding
C:\>telnet 192.168.1.2 255.255.255.0
Invalid Command.

C:\>telnet 192.168.1.2
Trying 192.168.1.2 ...
% Connection timed out; remote host not responding
C:\>telnet 192.168.1.2
Trying 192.168.1.2 ...Open

User Access Verification

Password:
% Password: timeout expired!

[Connection to 192.168.1.2 closed by foreign host]
C:\>telnet 192.168.1.2
Trying 192.168.1.2 ...Open

User Access Verification

Password:
Password:
LOCAL-SWITCH>
```