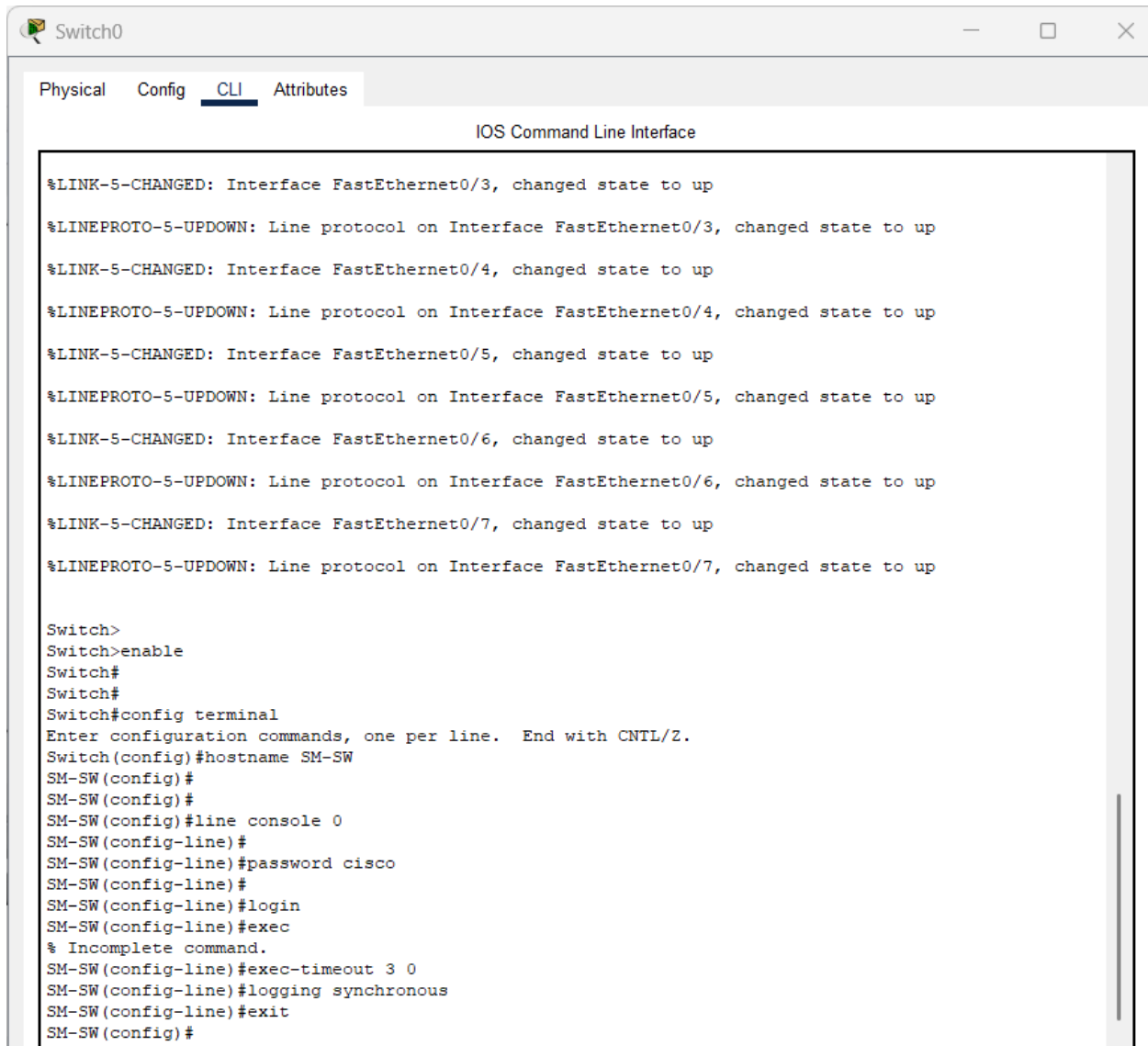


Configuration guide on Secure Network System Design

Switch on floor-1

Basic Settings: Configure fundamental device settings, including hostnames and console passwords,enable passwords and banner messages,password encryption and disable IP domain lookup



The screenshot shows a network switch CLI window titled "Switch0". The window has tabs for "Physical", "Config", "CLI", and "Attributes", with "CLI" selected. The main area is titled "IOS Command Line Interface" and displays a series of status messages and configuration commands. The status messages indicate that interfaces FastEthernet0/3 through FastEthernet0/7 have changed state to up, and Line Protocol on these interfaces has also changed state to up. The configuration commands show the user enabling the switch, setting the hostname to SM-SW, and configuring the console line with a password of cisco, login, exec, and exec-timeout of 3 0. The user then exits the configuration mode.

```
%LINK-5-CHANGED: Interface FastEthernet0/3, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/4, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/5, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/5, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/6, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/6, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/7, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/7, changed state to up

Switch>
Switch>enable
Switch#
Switch#
Switch#config terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname SM-SW
SM-SW(config)#
SM-SW(config)#
SM-SW(config)#line console 0
SM-SW(config-line)#
SM-SW(config-line)#password cisco
SM-SW(config-line)#
SM-SW(config-line)#login
SM-SW(config-line)#exec
% Incomplete command.
SM-SW(config-line)#exec-timeout 3 0
SM-SW(config-line)#logging synchronous
SM-SW(config-line)#exit
SM-SW(config)#
```

```
SM-SW(config)#
SM-SW(config)#
SM-SW(config)#enable password cisco
SM-SW(config)#
SM-SW(config)#
SM-SW(config)#banner motd &NO UNAUTHORISED ACCESS!!!&
SM-SW(config)#
SM-SW(config)#
SM-SW(config)#no ip domain lookup
```

SM-SW con0 is now available

Press RETURN to get started.

NO UNAUTHORISED ACCESS!!!

User Access Verification

Password:

SM-SW>en

Password:

SM-SW#config t

Enter configuration commands, one per line. End with CNTL/Z.

SM-SW(config)#

SM-SW(config)#username cisco password cisco

SM-SW(config)#ip domain-name cisco.com

SM-SW(config)#crypto key generate rsa generate-keys modulus 1024

% Invalid input detected at '^' marker.

SM-SW(config)#crypto key generate rsa general-keys modulus 1024

The name for the keys will be: SM-SW.cisco.com

% The key modulus size is 1024 bits

% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]

*Mar 1 9:20:49.88: %SSH-5-ENABLED: SSH 1.99 has been enabled

SM-SW(config)#

```
Switch0
Physical Config CLI Attributes
IOS Command Line Interface

User Access Verification

Password:

SM-SW>en
Password:
SM-SW#config t
Enter configuration commands, one per line. End with CNTL/Z.
SM-SW(config)#
SM-SW(config)#username cisco password cisco
SM-SW(config)#ip domain-name cisco.com
SM-SW(config)#crypto key generate rsa generate-keys modulus 1024
^
% Invalid input detected at '^' marker.

SM-SW(config)#crypto key generate rsa general-keys modulus 1024
The name for the keys will be: SM-SW.cisco.com

% The key modulus size is 1024 bits
% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]
*Mar 1 9:20:49.88: %SSH-5-ENABLED: SSH 1.99 has been enabled
SM-SW(config)#ip ssh version 2
SM-SW(config)#
SM-SW(config)#line vty 0 15
SM-SW(config-line)#
SM-SW(config-line)#
SM-SW(config-line)#login local
SM-SW(config-line)#
SM-SW(config-line)#transport input ssh
SM-SW(config-line)#
SM-SW(config-line)#exit
SM-SW(config)#
SM-SW(config)#
SM-SW(config)#
SM-SW(config)#do r
% Ambiguous command: "r"
SM-SW(config)#
SM-SW(config)#do wr
Building configuration...
[OK]
SM-SW(config)#
SM-SW(config)#
```

We created the access control rule to only allow the management network

```
SM-SW(config)#
SM-SW(config)#
SM-SW(config)#access list 1 permit 192.168.10.0 0.0.0.255
^
% Invalid input detected at '^' marker.

SM-SW(config)#access-list 1 permit 192.168.10.0 0.0.0.255
SM-SW(config)#access-list 1 deny an
SM-SW(config)#access-list 1 deny any
SM-SW(config)#
```

We need the append the rule on the VTY interface

```
SM-SW(config)#
SM-SW(config)#
SM-SW(config)#line vty 0 15
SM-SW(config-line)#
SM-SW(config-line)#access-class 1 in
SM-SW(config-line)#
SM-SW(config-line)#exit
SM-SW(config)#
SM-SW(config)#
SM-SW(config)#do wr
Building configuration...
[OK]
SM-SW(config)#
SM-SW(config)#
```
