

Securing Network Device

1. Console & Telnet Configuration
2. Enable Secret
3. Banner
4. Port Security
5. Storm Control
6. AAA
7. CDP
8. Service Password encryption
9. SSH
10. Security Password length
11. login block (enable login enhancement)
12. Telnet Block Using ACL
13. Privilege level

1. Enable Password: Limits access to the privileged EXEC mode.

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

2. Console Password: Limits device access to the console connection.

```
Router(config)#line console 0
```

```
Router(config-line)#password class
```

```
Router(config-line)#login
```

```
Router(config-line)#exit
```

3. VTY Password: Limit device access over Telnet.

```
Router(config)#line vty 0 4
```

```
Router(config-line)#pas
```

```
Router(config-line)#password cisco
```

```
Router(config-line)#login
```

```
Route(config-line)#exit
```

4. Configure AAA

```
Switch(config)#username admin privilege 15 secret <password>
```

```
Switch(config)# aaa new-model
```

```
Switch(config)#aaa authentication login default local
```

```
Switch(config)# line vty 0 4
```

```
Switch(config-line)# login authentication default
```

```
Switch(config-line)# end
```

5. User privilege

```
Switch(config)#privilege exec level 15 <keyword>
Switch(config)#enable secret level 15 <password>
Switch(config)#username admin privilege 15 secret <password>
Router(config)#username support privilege 1 secret cisco
Router(config)#privilege exec level 5 ping
Router(config)#enable secret level 5 cisco5
```

6. Enhanced Security for Virtual Logins

```
Switch(config)# ip access-list standard ACL-L2
switch(config)# remark Permit only AIUB IT Authority
switch(config)# permit <IP>
switch(config)# exit
switch(config)# login quiet-mode access-class ACL-L2
switch(config)#exit
```

7.1 Storm Control by Packet Rate

```
Switch(config-if)# storm-control broadcast level pps 20 10
Switch(config-if)# storm-control multicast level pps 100 50
Switch(config-if)# storm-control unicast level pps 100 50
Switch(config-if)# storm-control action shutdown
```

7.2 Storm Control by Bandwidth Ratio

```
Switch(config-if)# storm-control broadcast level 1 0.5
Switch(config-if)# storm-control multicast level 1 0.5
Switch(config-if)# storm-control unicast level 50 40
```

8.1 Disable CDP per port

```
Switch(config)# int fa0/1-24
Switch(config-if)# desc access port
Switch(config-if)# no cdp enable
Switch(config-if)# end
```

8.2 Disable CDP per Device

```
Switch(config)# no cdp run
```

9. Welcome Banner

```
Switch(config)# banner motd "This equipment is privately owned and access is logged by AIUB IT."
```

10. Service password encryption

```
R1(config)#service password-encryption
```

11. Configure SSH

```
R1(config)#ip domain-name test.com
R1(config)#crypto key generate rsa general-keys modulus 1024
R1(config)#username admin secret cisco
R1(config)#line vty 0 4
R1(config-line)#login local
R1(config-line)#transport input ssh
```

12. Configure login block

```
Router(config)#login block-for 120 attempts 5 within 60
```

13. Password length

```
R1(config)#security passwords min-length length
```