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## NETWORKING

### LEVEL 2

1. Imagine you're a student at a high school with a computer lab. The lab has several computers all connected to a Local Area Network (LAN) for shared resources like printers and internet access. One day, strange things start happening on the school's network: Some students can't access the printer anymore. 2. Others find their files mysteriously deleted or corrupted. 3. The teacher's computer seems sluggish and unresponsive. What security vulnerabilities might be allowing unauthorized access to the school's LAN, and how could these issues be prevented?

```
Command Prompt
C:\Users\Dinesh Kumar>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time=9ms TTL=64
Reply from 192.168.1.1: bytes=32 time=22ms TTL=64
Request timed out.
Reply from 192.168.1.1: bytes=32 time=31ms TTL=64

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 9ms, Maximum = 31ms, Average = 20ms

C:\Users\Dinesh Kumar>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time=16ms TTL=64
Reply from 192.168.1.1: bytes=32 time=66ms TTL=64
Reply from 192.168.1.1: bytes=32 time=16ms TTL=64
Reply from 192.168.1.1: bytes=32 time=12ms TTL=64

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 12ms, Maximum = 66ms, Average = 27ms
```

```
Command Prompt
C:\Users\HP>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:
Reply from 192.168.1.6: Destination host unreachable.
Reply from 192.168.1.6: Destination host unreachable.
Reply from 192.168.1.6: Destination host unreachable.
Reply from 192.168.1.6: Destination host unreachable.

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
C:\Users\HP>
```



```

switch9b5a85(config-if)#name
% missing mandatory parameter
switch9b5a85(config-if)#name doctor
switch9b5a85(config-if)#exit
switch9b5a85(config)#show doctor
% Unrecognized command
switch9b5a85(config)#do show ip interface

      IP Address      I/F      I/F Status      Type      Directed      Prec Redirect      Status
-----
10.10.14.4/24      vlan 1      UP/UP      Static      disable      No      enable      Valid

switch9b5a85(config)#interface vlan 03-Apr-2024 03:44:31 %LINK-W-Down: gil
03-Apr-2024 03:44:32 %LINK-I-Up: gil
03-Apr-2024 03:44:37 %STP-W-PORSTATUS: gil: STP status Forwarding
do show
% bad parameter value
switch9b5a85(config)#do show vlan
Created by: D-Default, S-Static, G-GVRP, R-Radius Assigned VLAN, V-Voice VLAN

Vlan      Name      Tagged Ports      UnTagged Ports      Created by
-----
1      doctor      gil-28,Pol-8      D

switch9b5a85(config)#interface vlan 2
switch9b5a85(config-if)#ip address 10.10.15.5 255.255.255.0
switch9b5a85(config-if)#int gi 5
switch9b5a85(config-if)#int gi 5
switch9b5a85(config-if)#switchport mode access
switch9b5a85(config-if)#switchport access vlan 2
switch9b5a85(config-if)#ip address 10.10.15.5 255.255.255.0
Duplicate IP subnet. Subnet 10.10.15.0 with mask 255.255.255.0 is in use by interface VLAN 2.
switch9b5a85(config-if)#name
% Unrecognized command
switch9b5a85(config-if)#interface vlan 2
switch9b5a85(config-if)#name
% missing mandatory parameter
switch9b5a85(config-if)#name administration
switch9b5a85(config-if)#do show ip interface

      IP Address      I/F      I/F Status      Type      Directed      Prec Redirect      Status
-----

```

3. You're the network administrator expanding the school network. You need to connect a new switch (Switch B) to the existing network switch (Switch A). However, there's a concern that an older device accidentally configured for bridging might be connected to an unused port on Switch B. Tasks: 1. Explain the potential risks if Switch B receives BPDUs (Bridge Protocol Data Units) on a port configured for normal operation. 2. How can PortFast be used on Switch B to expedite connection to Switch A and minimize downtime? 3. Why is it crucial to combine PortFast with BPDU Guard on the same port?

```
COM3 - PuTTY
04-Apr-2024 06:06:53 %LINK-I-Up: Vlan 3
switch9b65bc(config-if)#04-Apr-2024 06:07:05 %INIT-I-Startup: Cold Startup
ip
% Incomplete command
switch9b65bc(config-if)#ip address 10.10.14.4 255.255.255.0
switch9b65bc(config-if)#int gi 4
switch9b65bc(config-if)#switchport mode access
switch9b65bc(config-if)#switchport accesss vlan 3
% Wrong number of parameters or invalid range, size or characters entered
switch9b65bc(config-if)#switchport accesss vlan
% Wrong number of parameters or invalid range, size or characters entered
switch9b65bc(config-if)#switchport access vlan 3
switch9b65bc(config-if)#do show spanning-tree

Spanning tree enabled mode: RSTP
Default port cost method: long
Loopback guard: Disabled

Root ID    Priority: 12288
          Address: 24:6c:84:9b:5a:dc
          Cost: 20000
          Port: gi3
          Hello Time: 2 sec Max Age: 20 sec Forward Delay: 15 sec
Bridge ID  Priority: 32768
          Address: 24:6c:84:9b:65:bc
          Hello Time: 2 sec Max Age: 20 sec Forward Delay: 15 sec

Number of topology changes: 1 last change occurred: 00:03:56 ago
Times: hold: 1, topology change: 35, notification: 2
hello: 2, max age: 20, forward delay: 15

Interfaces
Name      State Prio.Nbr Cost    Sts  Role PortFast  Type
-----
gi1       enabled 128.1 2000000 Dsbl Dsbl No      -
gi2       enabled 128.2 2000000 Dsbl Dsbl No      -
gi3       enabled 128.3 20000    Frw Root No      P2P (RSTP)
gi4       enabled 128.4 2000000 Dsbl Dsbl No      -
gi5       enabled 128.5 2000000 Dsbl Dsbl No      -
gi6       enabled 128.6 2000000 Dsbl Dsbl No      -
gi7       enabled 128.7 2000000 Dsbl Dsbl No      -
gi8       enabled 128.8 2000000 Dsbl Dsbl No      -
gi9       enabled 128.9 2000000 Dsbl Dsbl No      -
gi10      enabled 128.10 2000000 Dsbl Dsbl No     -
gi11      enabled 128.11 2000000 Dsbl Dsbl No     -
```

```
COM3 - PuTTY
04-Apr-2024 06:06:53 %LINK-I-Up: Vlan 3
switch9b65bc(config-if)#04-Apr-2024 06:07:05 %INIT-I-Startup: Cold Startup
ip
% Incomplete command
switch9b65bc(config-if)#ip address 10.10.14.4 255.255.255.0
switch9b65bc(config-if)#int gi 4
switch9b65bc(config-if)#switchport mode access
switch9b65bc(config-if)#switchport accesss vlan 3
% Wrong number of parameters or invalid range, size or characters entered
switch9b65bc(config-if)#switchport accesss vlan
% Wrong number of parameters or invalid range, size or characters entered
switch9b65bc(config-if)#switchport access vlan 3
switch9b65bc(config-if)#do show spanning-tree

Spanning tree enabled mode: RSTP
Default port cost method: long
Loopback guard: Disabled

Root ID    Priority: 12288
          Address: 24:6c:84:9b:5a:dc
          Cost: 20000
          Port: gi3
          Hello Time: 2 sec Max Age: 20 sec Forward Delay: 15 sec
Bridge ID  Priority: 32768
          Address: 24:6c:84:9b:65:bc
          Hello Time: 2 sec Max Age: 20 sec Forward Delay: 15 sec

Number of topology changes: 1 last change occurred: 00:03:56 ago
Times: hold: 1, topology change: 35, notification: 2
hello: 2, max age: 20, forward delay: 15

Interfaces
Name      State Prio.Nbr Cost    Sts  Role PortFast  Type
-----
gi1       enabled 128.1 2000000 Dsbl Dsbl No      -
gi2       enabled 128.2 2000000 Dsbl Dsbl No      -
gi3       enabled 128.3 20000    Frw Root No      P2P (RSTP)
gi4       enabled 128.4 2000000 Dsbl Dsbl No      -
gi5       enabled 128.5 2000000 Dsbl Dsbl No      -
gi6       enabled 128.6 2000000 Dsbl Dsbl No      -
gi7       enabled 128.7 2000000 Dsbl Dsbl No      -
gi8       enabled 128.8 2000000 Dsbl Dsbl No      -
gi9       enabled 128.9 2000000 Dsbl Dsbl No      -
gi10      enabled 128.10 2000000 Dsbl Dsbl No     -
gi11      enabled 128.11 2000000 Dsbl Dsbl No     -
```



CUW4-P0111

Vlan	Name	Tagged Ports	Untagged Ports	Created by
1	doctor		gi1-4,gi17-28,Pol-8	D
2	administration		gi5	S
3	guest		gi6	S

```
switch9b5a85(config-if)#03-Apr-2024 03:56:07 %LINK-W-Down: gi1
03-Apr-2024 03:56:07 %LINK-W-Down: Vlan 1
03-Apr-2024 03:56:09 %LINK-W-Down: gi6
03-Apr-2024 03:56:09 %LINK-W-Down: Vlan 3
03-Apr-2024 03:56:27 %LINK-I-Up: gi3
03-Apr-2024 03:56:27 %LINK-I-Up: Vlan 1
03-Apr-2024 03:56:28 %LINK-W-Down: gi3
03-Apr-2024 03:56:28 %LINK-W-Down: Vlan 1
03-Apr-2024 03:56:31 %LINK-I-Up: gi3
03-Apr-2024 03:56:31 %LINK-I-Up: Vlan 1
03-Apr-2024 03:56:36 %STP-W-PORSTATUS: gi3: STP status Forwarding
03-Apr-2024 03:56:44 %LINK-I-Up: gi6
03-Apr-2024 03:56:44 %LINK-I-Up: Vlan 3
03-Apr-2024 03:56:49 %STP-W-PORSTATUS: gi6: STP status Forwarding
d
% Ambiguous command
switch9b5a85(config-if)#d
% Ambiguous command
switch9b5a85(config-if)#do show ip interface
```

IP Address	I/F	I/F Status	Type	Directed	Prec	Redirect	Status
		admin/oper		Broadcast			
10.10.14.4/24	vlan 1	UP/UP	Static	disable	No	enable	Valid
10.10.15.5/24	vlan 2	UP/DOWN	Static	disable	No	enable	Valid
10.10.16.6/24	vlan 3	UP/UP	Static	disable	No	enable	Valid

```
switch9b5a85(config-if)#ip routing
switch9b5a85(config-if)#ip routing
switch9b5a85(config-if)#ip riuting
% Unrecognized command
switch9b5a85(config-if)#ip routing
switch9b5a85(config-if)#03-Apr-2024 04:26:54 %AAA-I-DISCONNECT: User CLI session for user cisco over console , source 0.0.0.0 desti
et/SSH session may still be connected.
```

Console baud-rate auto detection is enabled, press Enter twice to complete the detection process



CUW4-P0111

Vlan	Name	Tagged Ports	Untagged Ports	Created by
1	doctor		gi1-4,gi17-28,Pol-8	D
2	administration		gi5	S
3	guest		gi6	S

```
switch9b5a85(config-if)#03-Apr-2024 03:56:07 %LINK-W-Down: gi1
03-Apr-2024 03:56:07 %LINK-W-Down: Vlan 1
03-Apr-2024 03:56:09 %LINK-W-Down: gi6
03-Apr-2024 03:56:09 %LINK-W-Down: Vlan 3
03-Apr-2024 03:56:27 %LINK-I-Up: gi3
03-Apr-2024 03:56:27 %LINK-I-Up: Vlan 1
03-Apr-2024 03:56:28 %LINK-W-Down: gi3
03-Apr-2024 03:56:28 %LINK-W-Down: Vlan 1
03-Apr-2024 03:56:31 %LINK-I-Up: gi3
03-Apr-2024 03:56:31 %LINK-I-Up: Vlan 1
03-Apr-2024 03:56:36 %STP-W-PORSTATUS: gi3: STP status Forwarding
03-Apr-2024 03:56:44 %LINK-I-Up: gi6
03-Apr-2024 03:56:44 %LINK-I-Up: Vlan 3
03-Apr-2024 03:56:49 %STP-W-PORSTATUS: gi6: STP status Forwarding
d
% Ambiguous command
switch9b5a85(config-if)#d
% Ambiguous command
switch9b5a85(config-if)#do show ip interface
```

IP Address	I/F	I/F Status	Type	Directed	Prec	Redirect	Status
		admin/oper		Broadcast			
10.10.14.4/24	vlan 1	UP/UP	Static	disable	No	enable	Valid
10.10.15.5/24	vlan 2	UP/DOWN	Static	disable	No	enable	Valid
10.10.16.6/24	vlan 3	UP/UP	Static	disable	No	enable	Valid

```
switch9b5a85(config-if)#ip routing
switch9b5a85(config-if)#ip routing
switch9b5a85(config-if)#ip riuting
% Unrecognized command
switch9b5a85(config-if)#ip routing
switch9b5a85(config-if)#03-Apr-2024 04:26:54 %AAA-I-DISCONNECT: User CLI session for user cisco over console , source 0.0.0.0 desti
et/SSH session may still be connected.
```

Console baud-rate auto detection is enabled, press Enter twice to complete the detection process



Command Prompt

```
Ping statistics for 10.10.16.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Users\HP>ping 10.10.16.5

Pinging 10.10.16.5 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 10.10.16.5:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Users\HP>
C:\Users\HP>
C:\Users\HP>ping 10.10.16.5

Pinging 10.10.16.5 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 10.10.16.5:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Users\HP>
ig) #no ip routing
ig) #no ip routing6~
```

Command Prompt

```
Ping statistics for 10.10.16.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Users\HP>ping 10.10.16.5

Pinging 10.10.16.5 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 10.10.16.5:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Users\HP>
C:\Users\HP>
C:\Users\HP>ping 10.10.16.5

Pinging 10.10.16.5 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 10.10.16.5:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Users\HP>
ig) #no ip routing
ig) #no ip routing6~
```

4. Imagine you're the network administrator for a growing company. To ensure redundancy and reliability, you've connected several switches in your network using additional cables between them. Initially, everything seems to be working smoothly. However, soon strange things start happening:

[illegible]

```

cisco>
cisco> enable
cisco#
cisco# configure terminal
Enter password:
Retype password:
Configuration mode
cisco(config)# username cisco password *****
Warning: The password must be at least 8 characters long.
Warning: The password must contain at least 3 of the following types: lowercase letters, uppercase letters, numeric digits or special characters.
Warning: A character can not be repeated consecutively more than 3 times.
Warning: The password cannot contain more than 2 sequential characters or numbers, or the reverse value of these sequences.
Warning: The password cannot contain the username or a reversed form of username.
Warning: The password cannot contain the manufacturer or product name or a reversed form of such.
Warning: The password cannot contain a password that is part of a predefined list of breached or dictionary based passwords.
cisco(config)#
cisco(config)# end
cisco# show running-config
Building configuration...

Current configuration : 600 bytes
!
enable password 7 2b780e
!
username cisco password 7 *****
!
line console 0
password 7 2b780e
login
!
end

```

```
switch2b780e(config)#
switch2b780e(config)#
switch2b780e(config)#spanning-tree
switch2b780e(config)#spanning-tree priority
% missing mandatory parameter
switch2b780e(config)#spanning-tree priority 487
parameter out of range, should be between 0 and 61440 in steps of 4096.
Allowed values are:
0 4096 8192 12288 16384 20480 24576 28672
32768 36864 40960 45056 49152 53248 57344 61440
switch2b780e(config)#spanning-tree priority 4096
switch2b780e(config)#
```

Interface	Mode	Priority	Desbl	Dsbl	No	Yes	P2P (RSTP)
gi12	enabled	2000000	Dsbl	Dsbl	No	-	-
gi13	enabled	2000000	Frw	Desg	Yes	-	-
gi14	enabled	2000000	Dsbl	Dsbl	No	-	-
gi15	enabled	2000000	Dsbl	Dsbl	No	-	-
gi16	enabled	2000000	Dsbl	Dsbl	No	-	-
gi17	enabled	2000000	Dsbl	Dsbl	No	-	-
gi18	enabled	2000000	Dsbl	Dsbl	No	-	-
gi19	enabled	2000000	Dsbl	Dsbl	No	-	-
gi10	enabled	2000000	Dsbl	Dsbl	No	-	-
gi11	enabled	2000000	Dsbl	Dsbl	No	-	-
gi12	enabled	2000000	Dsbl	Dsbl	No	-	-
gi13	enabled	2000000	Dsbl	Dsbl	No	-	-
gi14	enabled	2000000	Dsbl	Dsbl	No	-	-
gi15	enabled	2000000	Dsbl	Dsbl	No	-	-
gi16	enabled	2000000	Dsbl	Dsbl	No	-	-
gi17	enabled	2000000	Dsbl	Dsbl	No	-	-
gi18	enabled	2000000	Dsbl	Dsbl	No	-	-
gi19	enabled	2000000	Dsbl	Dsbl	No	-	-
gi20	enabled	2000000	Dsbl	Dsbl	No	-	-
gi21	enabled	2000000	Dsbl	Dsbl	No	-	-
gi22	enabled	2000000	Dsbl	Dsbl	No	-	-
gi23	enabled	2000000	Dsbl	Dsbl	No	-	-
gi24	enabled	2000000	Dsbl	Dsbl	No	-	-
gi25	enabled	2000000	Dsbl	Dsbl	No	-	-
gi26	enabled	2000000	Dsbl	Dsbl	No	-	-
gi27	enabled	2000000	Dsbl	Dsbl	No	-	-
gi28	enabled	2000000	Dsbl	Dsbl	No	-	-
Po1	enabled	128.1000	20000	Dsbl	Dsbl	No	-
Po2	enabled	128.1001	20000	Dsbl	Dsbl	No	-
Po3	enabled	128.1002	20000	Dsbl	Dsbl	No	-
Po4	enabled	128.1003	20000	Dsbl	Dsbl	No	-
Po5	enabled	128.1004	20000	Dsbl	Dsbl	No	-
Po6	enabled	128.1005	20000	Dsbl	Dsbl	No	-
Po7	enabled	128.1006	20000	Dsbl	Dsbl	No	-
Po8	enabled	128.1007	20000	Dsbl	Dsbl	No	-

5. You suspect there might be an RSTP issue on your network. Some users are reporting slow connections and connectivity drops. What tools can you use to diagnose potential RSTP



problems? Interpret the switch output from the "show spanning-tree" command. What information can help you identify potential issues? Describe some troubleshooting steps you can take to resolve common RSTP issues.

```
COMS - PuTTY
switch7b7c5d(config)#do show spanning-tree

Spanning tree enabled mode: Rapid-PVST
Default port cost method: long
Loopback guard: Disabled

VLAN 1
Root ID      Priority: 32768
              Address: 34:88:18:7b:7c:5d
              This switch is the root
              Hello Time: 2 sec Max Age: 20 sec Forward Delay: 15 sec

Name      State      Prio.Nbr      Cost      Sts      Role      PortFast      Type
-----
gi1       enabled    128.1         2000000    Blk      Dsbl      No            F2P (rpwst)
gi2       enabled    128.2         2000000    Blk      Dsbl      No            F2P (rpwst)
gi3       enabled    128.3         2000000    Blk      Dsbl      No            F2P (rpwst)
gi4       enabled    128.4         2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi5       enabled    128.5         2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi6       enabled    128.6         2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi7       enabled    128.7         2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi8       enabled    128.8         2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi9       enabled    128.9         2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi10      enabled    128.10        2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi11      enabled    128.11        2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi12      enabled    128.12        2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi13      enabled    128.13        2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi14      enabled    128.14        2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi15      enabled    128.15        2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi16      enabled    128.16        2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi17      enabled    128.17        2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi18      enabled    128.18        2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi19      enabled    128.19        2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi20      enabled    128.20        2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi21      enabled    128.21        2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi22      enabled    128.22        2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi23      enabled    128.23        2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi24      enabled    128.24        2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi25      enabled    128.25        2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi26      enabled    128.26        2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi27      enabled    128.27        2000000    Dsbl     Dsbl      No            F2P (rpwst)
gi28      enabled    128.28        2000000    Dsbl     Dsbl      No            F2P (rpwst)
Po1       enabled    128.1000      20000     Dsbl     Dsbl      No            F2P (rpwst)
Po2       enabled    128.1001      20000     Dsbl     Dsbl      No            F2P (rpwst)
Po3       enabled    128.1002      20000     Dsbl     Dsbl      No            F2P (rpwst)
Po4       enabled    128.1003      20000     Dsbl     Dsbl      No            F2P (rpwst)
Po5       enabled    128.1004      20000     Dsbl     Dsbl      No            F2P (rpwst)
```

6.You're the network administrator for a small office. The network consists of a switch with several devices connected, including workstations, printers, and a server. You've recently implemented Port Security to restrict unauthorized access.Explain the potential security risks if an unauthorized device is connected to a switch port. How can Port Security be used to mitigate these risks? Simulate an attacker attempting to connect an unauthorized device with a different MAC address to the same port.

```

switch77ebc0#conf t
switch77ebc0(config)#int range GigabitEthernet 1-5
switch77ebc0(config-if-range)#switchport mode access
switch77ebc0(config-if-range)#port
    security          Configure an interface to be a secure port
switch77ebc0(config-if-range)#port security
This action may take a few minutes
switch77ebc0(config-if-range)#port security
This action may take a few minutes
switch77ebc0(config-if-range)#port-security
% Unrecognized command
switch77ebc0(config-if-range)#port security
This action may take a few minutes
switch77ebc0(config-if-range)#port security
This action may take a few minutes
switch77ebc0(config-if-range)#port security
This action may take a few minutes
switch77ebc0(config-if-range)#26-Mar-2024 05:49:16 %LINK-W-Down:  gi12
26-Mar-2024 05:49:16 %LINK-W-Down:  Vlan 1
26-Mar-2024 05:49:22 %LINK-I-Up:  gi12
26-Mar-2024 05:49:22 %LINK-I-Up:  Vlan 1
26-Mar-2024 05:49:27 %STP-W-PORTSTATUS: gi12 of vlan 1: STP status Forwarding

```

7.You're the network administrator for a company with a critical server containing sensitive financial data. You want to ensure only authorized devices can access the server. How can MAC binding help secure the server?

```

switch7b7c5d#26-Mar-2024 05:28:18 %COPY-I-FILECOPY: Files Copy - source URL running-config destination URL flash://system/configuration/startup-config
26-Mar-2024 05:28:19 %COPY-N-TRAP: The copy operation was completed successfully
switch7b7c5d#show ip dhcp binding
DHCP server enabled.
The number of used (all types) entries is 1
The number of preallocated entries is 0
The number of allocated entries is 0
The number of expired entries is 0
The number of declined entries is 0
The number of static entries is 1
The number of dynamic entries is 0
The number of automatic entries is 0

```

IP address	Client Identifier	Lease expiration	Type	State
192.168.2.120	00:10:7f:00:00:00	Infinite	manual	allocated

```

switch7b7c5d#

```