

Troubleshooting Tip: Device on CBS 250 or 350 Series Switch not getting an IP Address after Firmware Upgrade

Objective

This article explains some of the default port security settings on the Cisco Business 250 and 350 switches. If you have a device on your network that is not receiving an IP address, you can view and change the settings to see if it corrects the issue.

Applicable Devices | Firmware Version

- CBS250 ([Data Sheet](#)) | 3.1 ([Download latest](#))
- CBS350 ([Data Sheet](#)) | 3.1 ([Download latest](#))
- CBS350-2X ([Data Sheet](#)) | 3.1 ([Download latest](#))
- CBS350-4X ([Data Sheet](#)) | 3.1 ([Download latest](#))

Introduction

It is important to run the latest version of the upgrade-firmware-if-needed when a new release comes out. In spring of 2021, version 3.1 for CBS 250 and 350 switches was released, changing the Port Security default behavior. These changes were made to improve endpoint security.

In earlier versions of the software, if you configured a port as locked, you would see the device that was attached to that locked port as a static Media Access Control (MAC) address. When you moved the device, the static MAC address was removed by default. That MAC address would be able to receive a DHCP address.

From version 3.1 moving forward, once a device has been locked and labeled as a static MAC address on a specific port, it will only be able to receive an IP address on that port. If you move the device to another port it will not be able to receive an IP address.

Long story short, if you lock a port with a MAC address attached to that port, and you move that device to another port, you need to unlock that port to release that MAC address.

View Port Security Settings

Step 1

Navigate to **Security > Port Security**.

- 1 Security
- RADIUS Client
- TCP/UDP Services
- 2 Port Security

Step 2

Look over the Interface Status of each port. This example shows the Interface Status as *Locked*.

Port Security Table



Filter: *Interface Type* equals to

Entry No.	Interface	Interface Status	Learning Mode	Max No. of Addresses Allowed	Action on Violation
1	GE1	Unlocked	Classic Lock	1	
2	GE2	Locked	Classic Lock	1	Discard
3	GE3	Unlocked	Classic Lock	1	

Step 3

Navigate to **MAC Address Tables > Static Addresses**.

- 1 MAC Address Tables
- 2 Static Addresses
- Dynamic Address Settings
- Dynamic Addresses

Step 4

You will see the MAC address of the device that you had assigned to the port.

Static Address Table

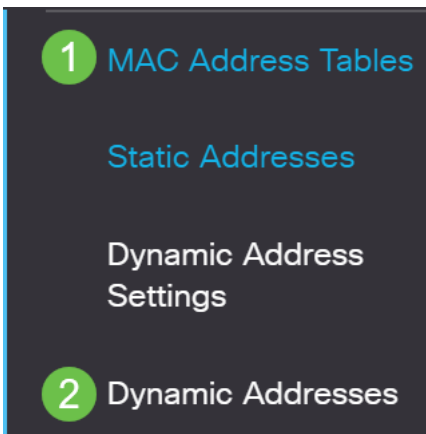


VLAN ID MAC Address

1 10:f9:20:12:86:ce

Step 5

To view the MAC addresses that are receiving a DHCP IP address, navigate to **MAC Address Tables > Dynamic Addresses**.



Step 6

The MAC addresses of devices listed are able to receive a DHCP IP address. Notice that the MAC address of the device is not listed. The MAC address, 10:f9:20:12:86:ce is not able to receive a DHCP IP address.

Dynamic Address Table

Clear Table

Filter: VLAN ID equals to (Range: 1 - 4094)

MAC Address equals to

Interface equals to Port LAG

VLAN ID	MAC Address	Interface
VLAN 1	00:00:5e:00:01:01	GE50
VLAN 1	00:08:7b:16:d6:c6	GE50
VLAN 1	04:62:73:c0:75:40	GE50

Edit Port Security Settings

Step 1

Navigate to **Security > Port Security**.

1 Security

RADIUS Client



TCP/UDP Services

2 Port Security

Step 2

Click on an Interface and click the **edit icon**.

Port Security Table

  **2**

Filter: *Interface Type* equals to

	Entry No.	Interface	Interface Status	Learning Mode	Max No. of Addresses Allowed
<input type="radio"/>	1	GE1	Unlocked	Classic Lock	1
1 <input type="radio"/>	2	GE2	Locked	Classic Lock	1
<input type="radio"/>	3	GE3	Unlocked	Classic Lock	1

Step 3

If you want to unlock the port, uncheck the **Lock** radio button. Click **Apply**.

Edit Port Security Interface Settings

X

Interface: Port GE2 LAG 1

Interface Status: **1** Lock

Learning Mode: Classic Lock
 Limited Dynamic Lock
 Secure Permanent
 Secure Delete on Reset

* Max No. of Addresses Allowed: 1 (Range: 0 - 256, Default: 1)

Action on Violation: Discard
 Forward
 Shutdown

Trap: Enable



* Trap Frequency: 10 sec (Range: 1 - 100000, Default: 10)

2

Step 4

The *Interface Status* should now show as unlocked.

Port Security Table

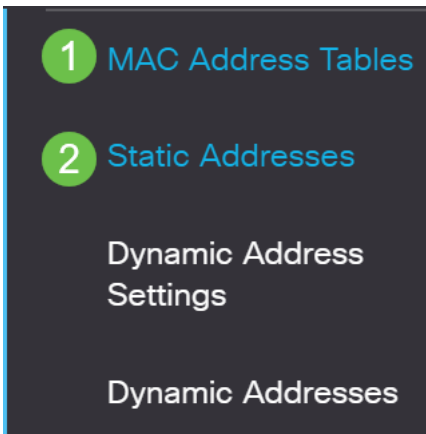
 

Filter: *Interface Type* equals to Port

	Entry No.	Interface	Interface Status	Learning Mode	Max No. of Addresses Allowed
<input type="radio"/>	1	GE1	Unlocked	Classic Lock	1
<input type="radio"/>	2	GE2	Unlocked	Classic Lock	1
<input type="radio"/>	3	GE3	Unlocked	Classic Lock	1

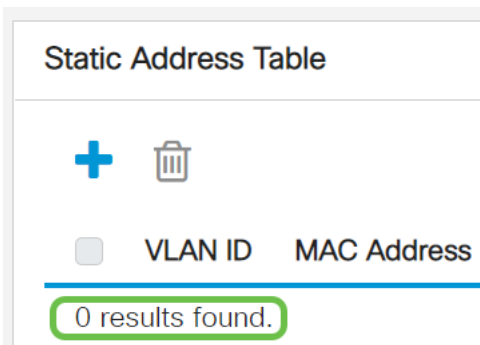
Step 5

Navigate to **MAC Address Tables > Static Addresses**.



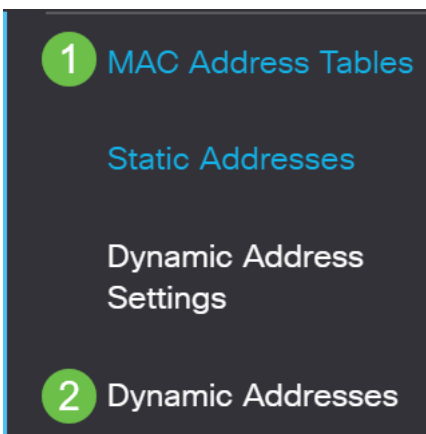
Step 6

The MAC address is no longer listed on the *Static Address Table*.



Step 7

Navigate to **MAC Address Tables > Dynamic Addresses**.



Step 8

The MAC addresses of devices listed are able to receive a DHCP IP address. Notice that the MAC address of the device is now listed on this page. This shows that the MAC address is now able to receive an IP address.

Dynamic Address Table

Clear Table

Filter: VLAN ID equals to (Range: 1 - 4094)

MAC Address equals to

Interface equals to Port LAG

VLAN ID	MAC Address	Interface
VLAN 1	00:00:5e:00:01:01	GE6
VLAN 1	00:08:7b:16:d6:c6	GE50
VLAN 1	04:62:73:c0:75:40	GE50
VLAN 1	10:f9:20:12:86:ce	GE50
VLAN 1	10:f9:20:12:86:d8	GE50

Step 9

Click the **save icon** to permanently save the configuration.



admin

English



Advanced



Conclusion

That's it! Your device should be able to receive a DHCP IP address.

Looking for more articles on your CBS250 or CBS350 switch? Check out any of the links below for more information!

[SNMP Settings](#) [SNMP Views](#) [SNMP Groups](#) [DHCP Image Upgrade](#) [Password Strength](#) [TCP and UDP Settings](#) [Port Security](#) [Time Settings](#) [Upgrade Firmware](#) [Smartport Best Practices](#) [Reset Switch](#) [Troubleshoot Smartports](#) [Troubleshoot Link Flapping](#) [Create VLANs](#)