

Configure Onboard Packet Capture in Catalyst 1200 and 1300 Switches using Web User Interface

Objective

The objective of this article is to show how to configure onboard packet capture (OPC) in Catalyst 1200 and 1300 switches using the web user interface (UI).

Applicable Devices | Software Version

- Catalyst 1200 Switches | 4.1.6.53
- Catalyst 1300 Switches | 4.1.6.53

Introduction

The OPC feature enhances troubleshooting capabilities on the device. When enabled, OPC will allocate up to a maximum of 20MB of memory for capturing packet data. This feature requires the configuration of a capture point that defines the behavior of an OPC instance. The capture point is used to define all the settings associated with an OPC instance.

A maximum of 4 capture points can be configured on a switch, however only one capture point may be active at a time. The data captured in memory can be saved to either the onboard flash if there is free space, or to an attached USB device like a USB flash drive. As OPC may consume considerable CPU resources, it is recommended to use it only as needed.

To configure this feature using the command line interface (CLI), refer to the article [Configure Onboard Packet Capture in Catalyst 1200 and 1300 Switches using CLI](#).

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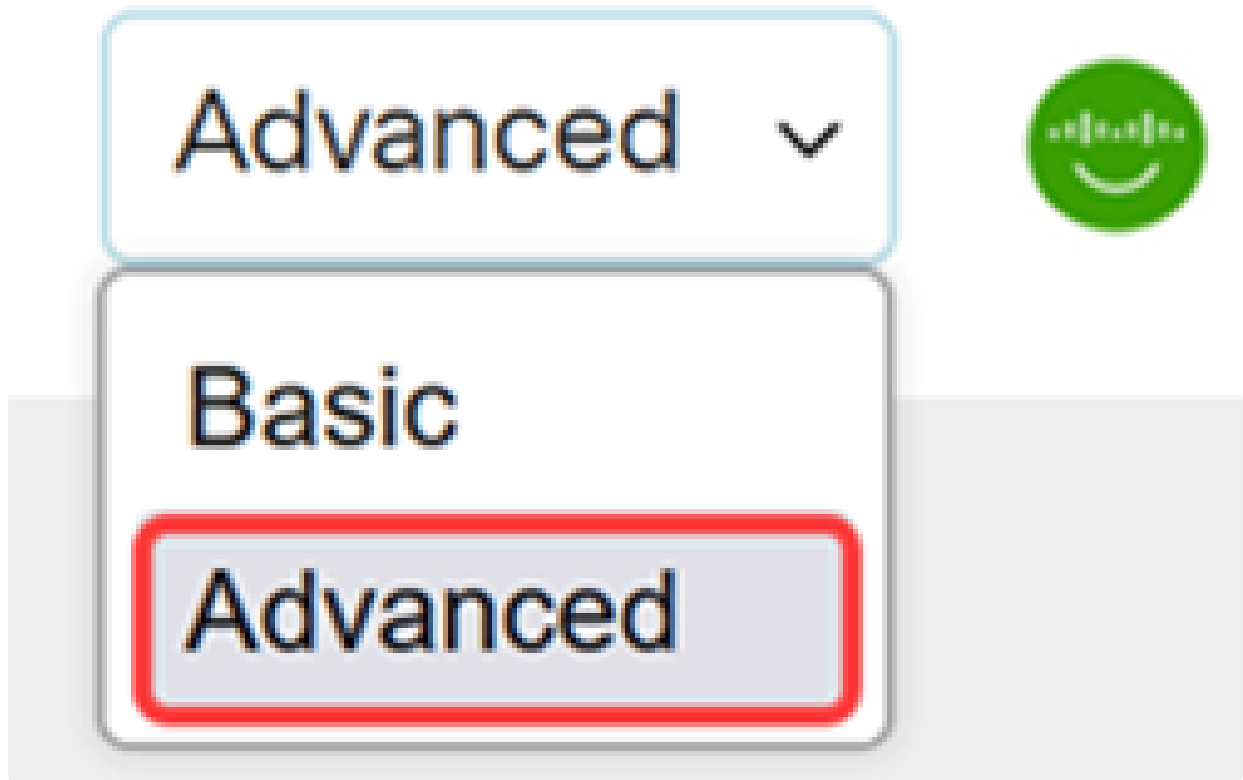
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Configure OPC

Step 1

Login to the Catalyst 1200 or 1300 switch and select **Advanced** mode from the drop-down

menu.



Step 2

Navigate to **Status and Statistics > Onboard Packet Capture > Capture Point Settings**.



Status and Statistics

1

System Summary

CPU Utilization

Port Utilization

Interface

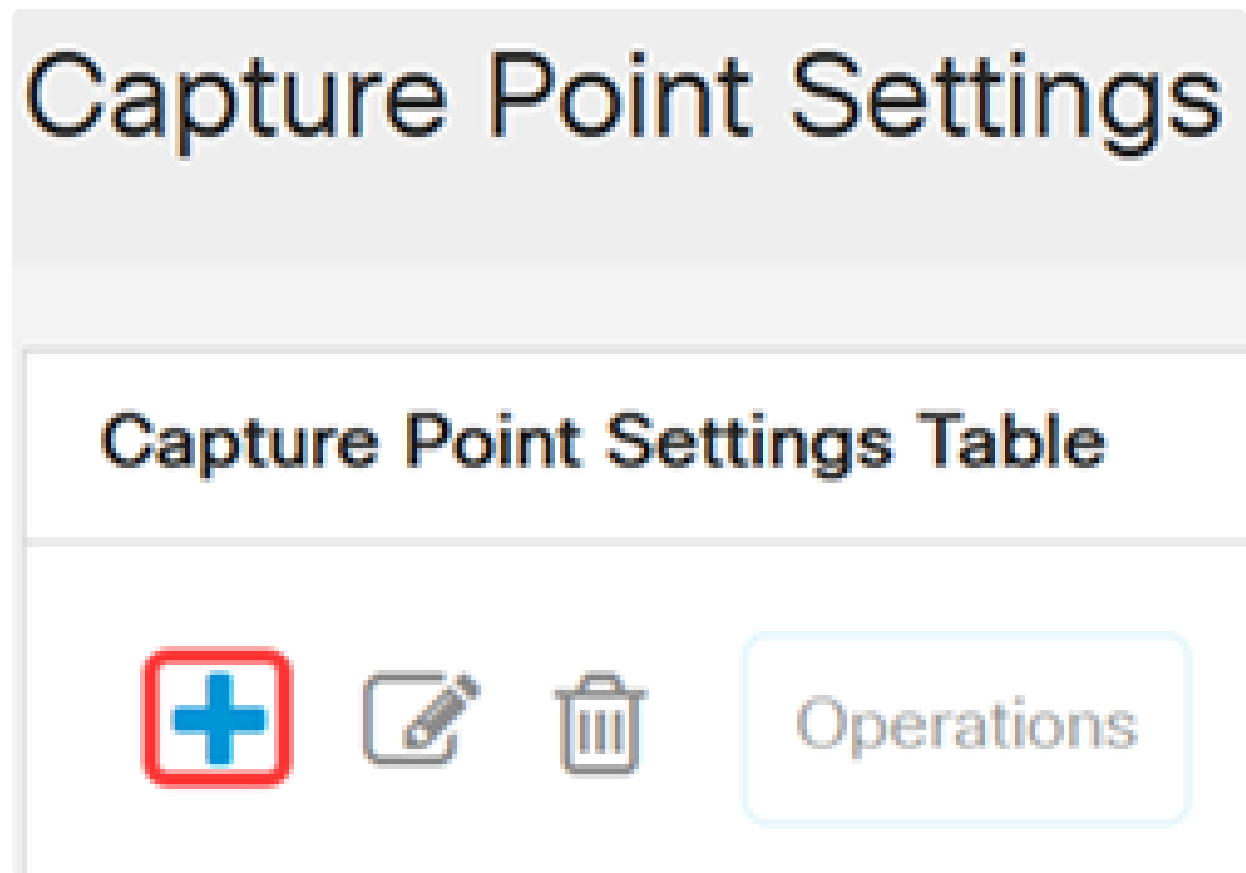
Etherlike

GVRP

802.1x EAP

Step 3

Click **Add** to add a capture point.



Step 4

Configure the following capture point settings.

- Capture point name
- Buffer Mode - Define the capture mode to one of the following:
 - 1 Linear - capture will be terminated when the capture buffer is full.
 - 2 Circular - the capture wraps up when the buffer is full and rewrite the packets in the beginning of the buffer.
- Buffer Size: Define the size of the capture buffer in MB. The buffers for all capture points cannot exceed 20MB.
- Interface - only the Control Plane (CPU) interface is supported.
- Capture Direction - define the direction of the traffic to capture: both inbound and outbound traffic (both), only inbound traffic (in) or only outbound traffic (out).

Click **Apply**.

Add Capture Point

X


Capture Point Name: (5/32 characters used)

Buffer Mode: ☒ Linear ☐ Circular

Buffer Size (MB): (Range: 1 - 20, Default: 5)

Interface:

Capture Direction: ☒ Both ☐ In ☐ Out



Step 5




To edit or delete a capture point, select the capture point and click *Edit* or *Delete*.

Capture Point Settings						
Capture Point Settings Table						
<div><div><div><div><div></div></div><div><div></div></div></div><div><div></div></div><div><div></div></div></div><div>Operations</div></div>						
<input checked="" type="checkbox"/>	Name	Interface	Capture Direction	Buffer Mode	Buffer Size (MB)	State
<div>1<input checked="" type="checkbox"/></div>	Test1	Control Plane (CPU)	Both	Linear	5	Inactive

Starting and Stopping the Capture

Step 1

To activate a capture point, select the desired capture point from the table and click the **Operations** button.

Capture Point Settings Table						
			Operations			
<input checked="" type="checkbox"/>	Name	Interface	Capture Direction	Buffer Mode	Buffer Size (MB)	State
<input checked="" type="checkbox"/>	Test1	Control Plane (CPU)	Both	Linear	5	Inactive

Step 2

In the *Capture Point Operation* window select **Activate** and click **Apply**. The state of the capture point in the Capture Point Settings Table is set to *Active*.

Capture Point Operations

X

Capture Point Name: Test1

Capture Point Operation: ☒ **Activate** 1

☐ Deactivate

2

Step 3

To deactivate an active capture point, select an active capture point and click **Operations**. Under the Capture Point Operation field, select **Deactivate** and click **Apply**. The state of the capture point in the Capture Point Settings Table is set to *Inactive*.

Capture Point Operations

X

Capture Point Name: Test1

Capture Point Operation: ☐ Activate

☒ Deactivate **1**

2

Apply

Close

Buffer File Operation

The captured packets are stored in a memory buffer. To copy the packets to a nonvolatile memory for further debugging perform the following steps:

Step 1

Navigate to **Status and Statistics > Onboard Packet Capture > Buffer File Operation.**

▼ Status and Statistics

1

System Summary

CPU Utilization

Port Utilization

Interface

Etherlike

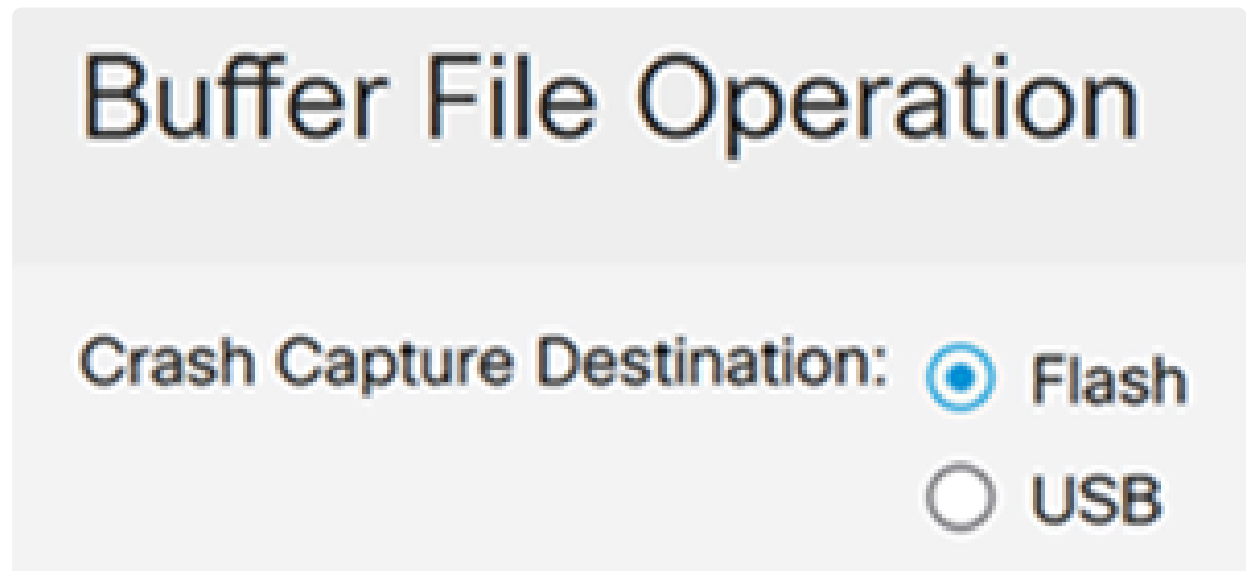
GVRP

QoS 1 - 510

Step 2

If the device crashes during a capture, the packets are saved automatically to a nonvolatile memory. Select the destination device for saving the crash report.

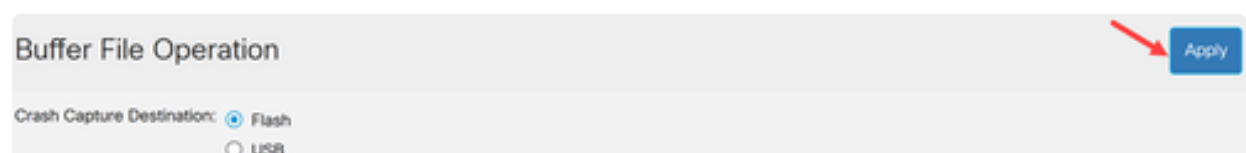
- Flash - to save the file to the device flash (Default)
- USB - to save the file to a USB storage device connected to the switch



The image shows a dialog box titled "Buffer File Operation". Inside the dialog, there is a section labeled "Crash Capture Destination:". Below this label, there are two radio button options: "Flash" and "USB". The "Flash" option is selected, indicated by a blue dot in the center of the radio button.

Step 3

Click **Apply** to save the configuration for the Crash Capture Destination.



The image shows the same "Buffer File Operation" dialog box as in Step 2. In the top right corner of the dialog, there is a blue button labeled "Apply". A red arrow points to this button, indicating that it should be clicked to save the configuration.

Step 4

To manually export one of the capture point buffers, navigate to the Export Capture section and configure the following:

- *Capture Point Name* - Select the capture point that you want to export.
- *Capture File Name* - Define a name for the exported file.
- *Export Destination* - Select the destination device for saving the file:

- 1 Flash – do save the file to the device flash.

2

USB – to save the device to a USB storage device connected to the device.

Export Capture

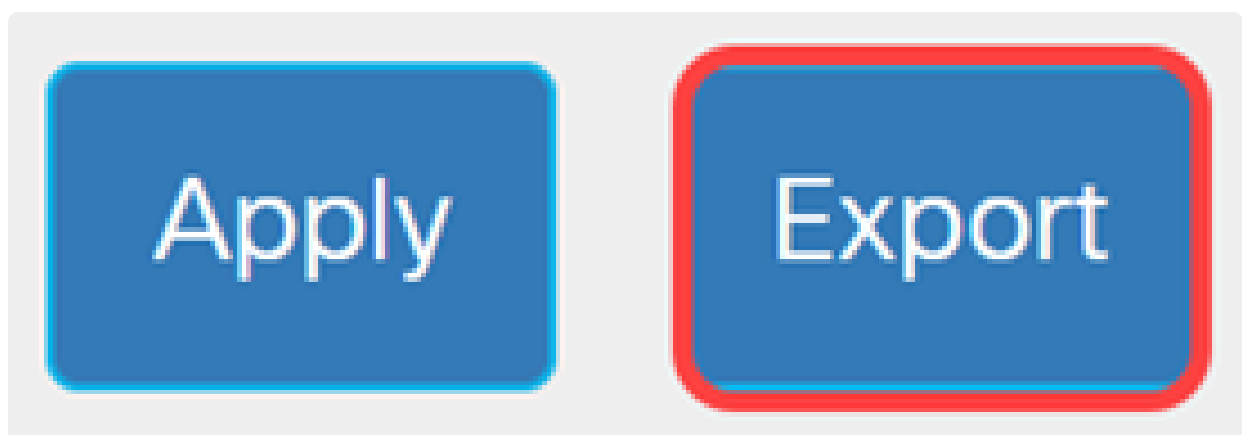
Capture Point Name:

✦ Capture File Name: (0/63 characters used)

Export Destination: ☒ Flash ☐ USB

Step 5

To export the Capture Point file, click **Export**.



Buffer Statistics

The *Buffer Statistics* page displays information relating to a specific Capture Point. To view the capture buffer statistics, complete the following steps.

Step 1

Navigate to **Status and Statistics > Onboard Packet Capture > Buffer Statistics**.

▼ Status and Statistics

1

System Summary

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Etherlike

GVRP

802.1x EAP

Step 2

In the *Capture Point Name* field, select the capture buffer from the drop-down list to view the statistics.

Buffer Statistics

Capture Point Name:

Test1 ▾

Step 3

Select the *Refresh Rate* from the following options:

- No Refresh
- 15 sec
- 30 sec
- 60 sec

Refresh Rate:

☒ No Refresh

☐ 15 sec

☐ 30 sec

☐ 60 sec

Note:

Refresh rate will not have any impact if the selected capture point is not active.

Step 4

The following statistics will be displayed:

- Buffer State - Active or Inactive
- Buffer Mode - Linear or circular
- Buffer Size (KB) - The size of the buffer in Kilobytes
- Captured Packets - The number of the packet captures
- Buffer Used (KB) - The actual buffer size that is used
- Packet Capture Rate per Second - The packet per second rate of the traffic that was captured.
- Packets Dropped - The number of packets that were dropped during the capture session.

Buffer Statistics

Buffer State:	Active
Buffer Mode:	Linear
Buffer Size (KB):	20480
Captured Packets:	2607
Buffer Used (KB):	768
Packet Capture Rate per Second:	17
Packets Dropped:	0

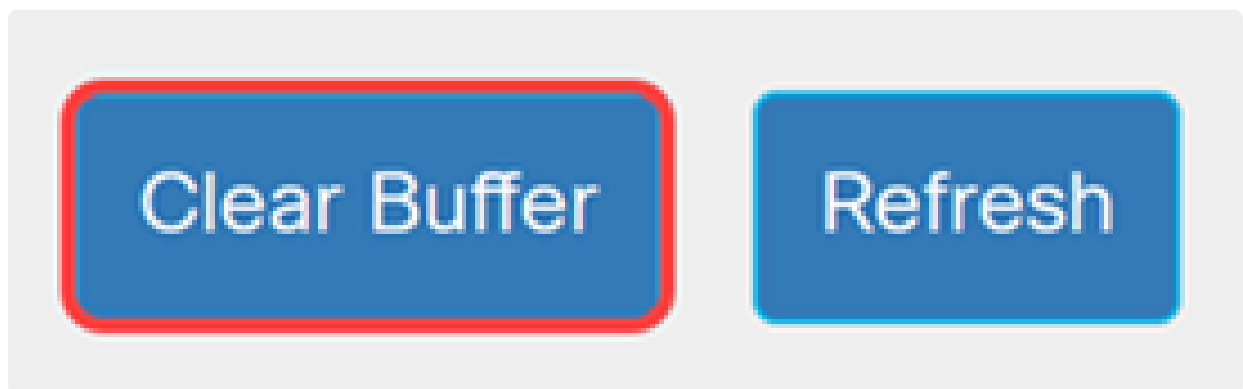
Step 5

To manually refresh the information, click **Refresh**.



Step 6

To clear the buffer, click **Clear Buffer**.



Conclusion

It's as simple as that. Now you know all about configuring and using OPC in Catalyst 1200 and 1300 switches.

For more information, check out the [Catalyst 1200 Admin Guide](#) and [Catalyst 1300 Admin Guide](#).

Looking for more articles on your Catalyst 1200 and 1300 switch? Go through the product support link below for more information!

[Cisco Catalyst 1200 Series Support Page](#)

[Cisco Catalyst 1300 Series Support Page](#)