

SG500XG-8F8T-K9-NA: Lots of Dropped Packets

Date Identified

June 15, 2017

Date Resolved

July 14, 2017

Products Affected

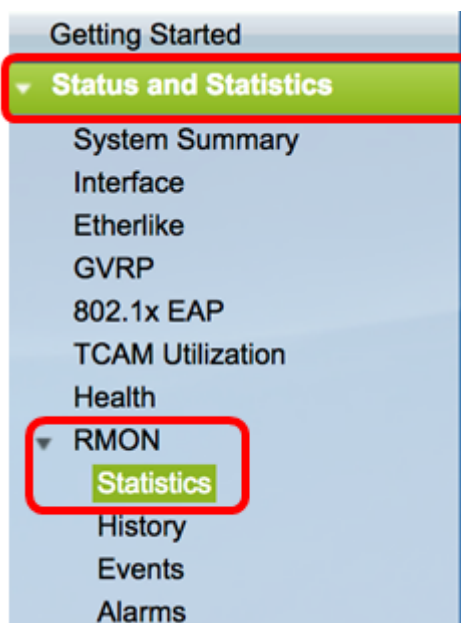
SG500XG-8F8T-K9-NA	1.4.7.06

Problem Description

There are lots of dropped events on the RMON statistics of interfaces in an SG500XG where a UCS220 device is connected.

To view the port statistics if there are dropped packets, follow the steps below:

Step 1. Log in to the switch web-based utility and go to **Status and Statistics > RMON > Statistics**.



Step 2. In the Interface section, click on the Unit/Slot drop-down menu to choose the specific unit if your switch belongs to a stack.

Interface: Unit/Slot 1/1

Note: In this example, 1/1 is chosen indicating that the switch is the first unit in the stack and is on the first slot.

Step 3. Click the Port drop-down menu to choose the specific port that you want to view.

Unit/Slot 1/1 Port GE3

Note: In this example, Port GE3 is chosen.

Step 4. (Optional) Click a radio button to choose the Refresh Rate. This would allow the page to refresh automatically based on the interval you have set.

Refresh Rate: No Refresh
 15 sec
 30 sec
 60 sec

Note: In this example, 15 sec is chosen indicating that the page will refresh automatically every 15 seconds.

Step 5. Check the statistics displayed to verify if there are dropped events in the chosen interface.

Bytes Received:	59132631
Drop Events:	595
Packets Received:	314438
Broadcast Packets Received:	1240
Multicast Packets Received:	294151
CRC & Align Errors:	0
Undersize Packets:	0
Oversize Packets:	0
Fragments:	0
Jabbers:	0
Collisions:	0

Note: In this example, the statistics show that there are 595 events dropped.

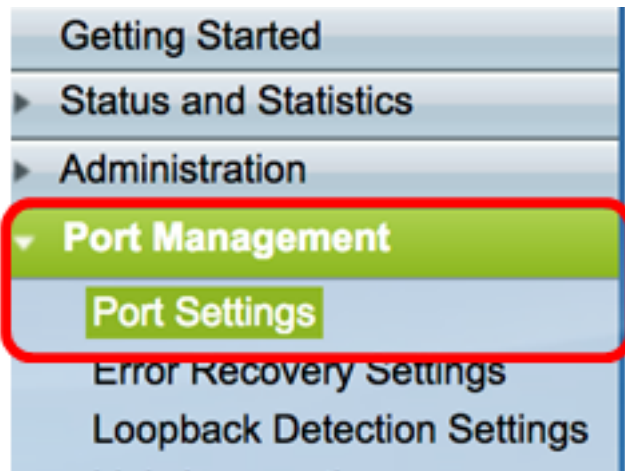
Next Steps

Do a packet capture on the problematic port using Wireshark. Follow the steps below:

Enable Auto Negotiation

Enabling Auto negotiation allows the port to advertise its transmission speed, duplex mode, and Flow control abilities to the port link partner.

Step 1. Log in to the switch web-based utility and go to **Port Management > Port Settings**.



Step 2. Under the Port Setting Table, click on the radio button of the port where dropped events are found and click **Edit**.

Port Setting Table											
Filter: Interface Type equals to Port of Unit 1/1 <input type="button" value="Go"/>											
Entry No.	Port	Description	Port Type	Operational Status	Link Status	Time Range		Port Speed	Duplex Mode	LAG	Protection State
						Name	State				
<input type="radio"/>	1	GE1	1000M-Copper	Up	Enabled			1000M	Full		Unprotected
<input type="radio"/>	2	GE2	1000M-Copper	Down	Enabled						Unprotected
<input checked="" type="radio"/>	3	GE3	1000M-Copper	Up	Enabled			1000M	Full		Unprotected
<input type="radio"/>	4	GE4	1000M-Copper	Down	Enabled						Unprotected
<input type="radio"/>	5	GE5	1000M-Copper	Up	Enabled			1000M	Full		Unprotected
<input type="radio"/>	6	GE6	1000M-Copper	Down	Enabled						Unprotected
<input type="radio"/>	7	GE7	1000M-Copper	Down	Enabled						Unprotected
<input type="radio"/>	8	GE8	1000M-Copper	Up	Enabled			1000M	Full		Unprotected
<input type="radio"/>	9	GE9	1000M-Copper	Up	Enabled			1000M	Full		Unprotected
<input type="radio"/>	10	GE10	1000M-Copper	Up	Enabled			1000M	Full		Unprotected
<input type="radio"/>	11	GE11	1000M-Copper	Down	Enabled						Unprotected
<input type="radio"/>	12	GE12	1000M-Copper	Down	Enabled						Unprotected
<input type="radio"/>	50	XG2	10G-FiberOptics	Down	Enabled						Unprotected

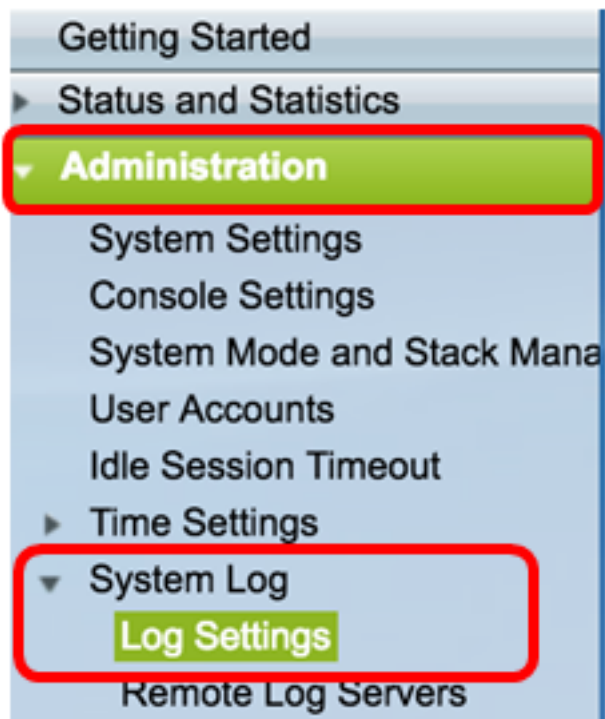
Note: In this example, Port GE3 is chosen.

Step 3. In the Edit Port Setting window, check the **Enable** checkbox for Auto Negotiation then click **Apply**.

Auto Negotiation:	<input checked="" type="checkbox"/> Enable	Operational Auto Negotiation:	Enable
Administrative Port Speed:	<input type="radio"/> 10M <input type="radio"/> 100M <input checked="" type="radio"/> 1000M	Operational Port Speed:	1000M
Administrative Duplex Mode:	<input type="radio"/> Half <input checked="" type="radio"/> Full	Operational Duplex Mode:	Full
Auto Advertisement:	<input checked="" type="checkbox"/> Max Capability <input type="checkbox"/> 10 Half <input type="checkbox"/> 10 Full <input type="checkbox"/> 100 Half <input type="checkbox"/> 100 Full <input type="checkbox"/> 1000 Full	Operational Advertisement:	10 Half 10 Full 100 Half 100 Full 1000 Full
Preference Mode:	<input checked="" type="radio"/> Slave <input type="radio"/> Master		
Neighbor Advertisement:	10 Half 10 Full 100 Half 100 Full 1000 Full		
Back Pressure:	<input type="checkbox"/> Enable		
Flow Control:	<input type="radio"/> Enable <input checked="" type="radio"/> Disable <input type="radio"/> Auto-Negotiation		
MDI/MDIX:	<input type="radio"/> MDIX <input type="radio"/> MDI <input checked="" type="radio"/> Auto	Operational MDI/MDIX:	MDIX
Protected Port:	<input type="checkbox"/> Enable		
	Member in LAG:		
<input checked="" type="button" value="Apply"/> <input type="button" value="Close"/>			

Enable Log Settings

Step 1. Go to **Administration > System Log > Log Settings**.



Step 2. Under Log Settings, check the Logging **Enable** check box.

Log Settings

Logging: Enable

Syslog Aggregator: Enable

Step 3. Set the Originator Identifier to None by clicking on the radio button.

Originator Identifier: None

Hostname

IPv4 Address

IPv6 Address

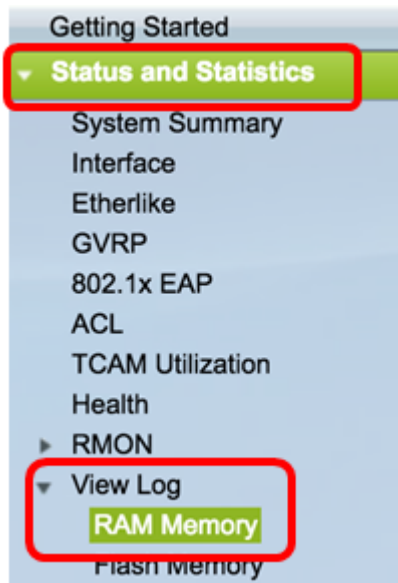
User Defined

Step 4. Under RAM and Flash Memory Logging, check all the check boxes except for Debug and then click **Apply**.

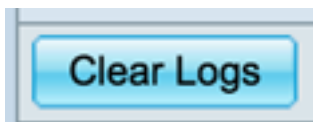
RAM Memory Logging	Flash Memory Logging
Emergency: <input checked="" type="checkbox"/>	Emergency: <input checked="" type="checkbox"/>
Alert: <input checked="" type="checkbox"/>	Alert: <input checked="" type="checkbox"/>
Critical: <input checked="" type="checkbox"/>	Critical: <input checked="" type="checkbox"/>
Error: <input checked="" type="checkbox"/>	Error: <input checked="" type="checkbox"/>
Warning: <input checked="" type="checkbox"/>	Warning: <input checked="" type="checkbox"/>
Notice: <input checked="" type="checkbox"/>	Notice: <input checked="" type="checkbox"/>
Informational: <input checked="" type="checkbox"/>	Informational: <input checked="" type="checkbox"/>
Debug: <input type="checkbox"/>	Debug: <input type="checkbox"/>

Clear Logs on the RAM and Flash

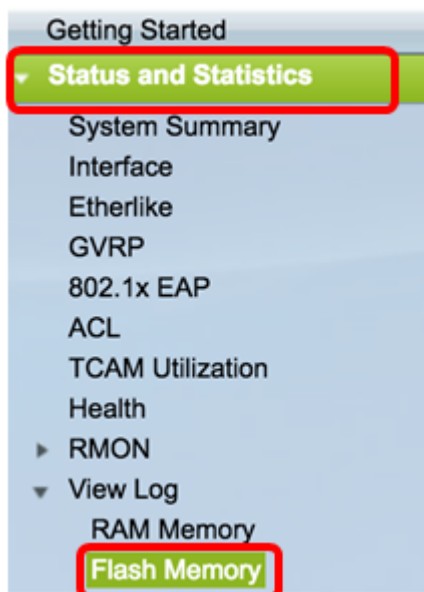
Step 1. Go to **Status and Statistics > View Log > RAM Memory**.



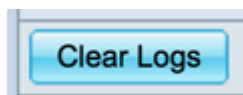
Step 2. Click the **Clear Logs** button under the RAM Memory Log Table.



Step 3. Go to **Flash Memory**.

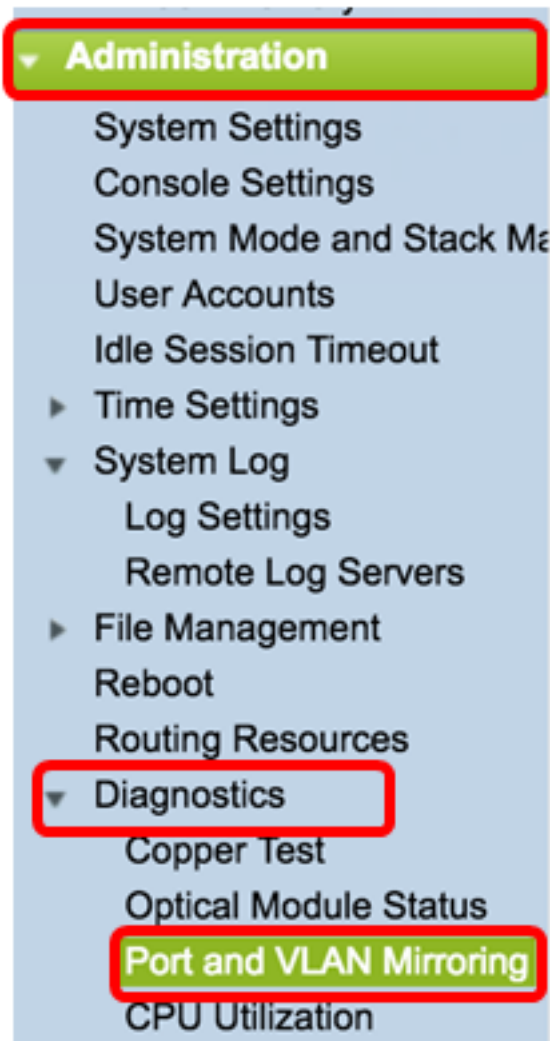


Step 4. Click the **Clear Logs** button under the Flash Memory Log Table.



Add Port and VLAN Mirroring

Step 1. Go to **Administration > Diagnostics > Port and VLAN Mirroring**.



Step 2. Under the Port and VLAN Mirroring Table, click on **Add**.



Step 3. In the Add Port and VLAN Mirroring window, click on the Destination Port drop-down menu to choose the port where the computer that is running Wireshark is connected.

Destination Port: Unit/Slot Port

Note: In this example, Port GE1 is chosen.

Step 4. Click on the Source Port drop-down menu to choose the port where the dropped events are found.

Destination Port: Unit/Slot 1/1 Port GE1

Source Interface: Unit/Slot 1/1 Port **GE3**

Note: In this example, Port GE3 is chosen.

Step 5. Click on the **Tx and Rx** radio button to choose the Type and then click **Apply**.

Type: Rx Only
 Tx Only
 Tx and Rx

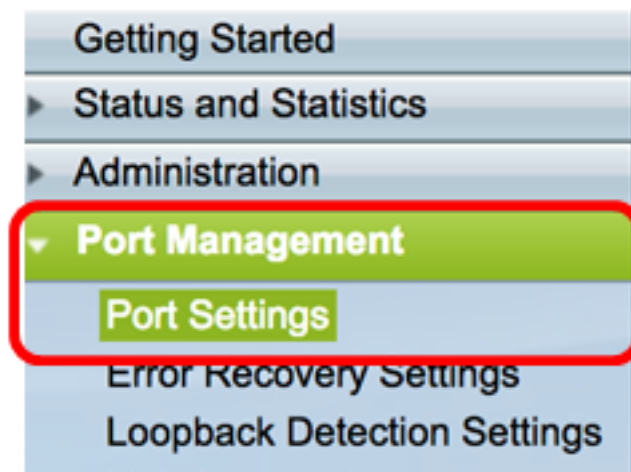
Apply Close

Step 6. Launch the capture on the computer running Wireshark.

Resolution

Enable Flow Control. To do this, follow the steps below:

Step 1. Log in to the switch web-based utility and go to **Port Management > Port Settings**.



Step 2. Under the Port Setting Table, click on the radio button of the port where dropped events are found and click **Edit**.

Port Setting Table												
Filter: Interface Type equals to Port of Unit 1/1 <input type="button" value="Go"/>												
Entry No.	Port	Description	Port Type	Operational Status	Link Status	Time Range		Port Speed	Duplex Mode	LAG	Protection State	
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<input type="radio"/>	2	GE2	1000M-Copper	Down	Enabled						Unprotected	
<input checked="" type="radio"/>	3	GE3	1000M-Copper	Up	Enabled			1000M	Full		Unprotected	
<input type="radio"/>	4	GE4	1000M-Copper	Down	Enabled						Unprotected	
<input type="radio"/>	5	GE5	1000M-Copper	Up	Enabled			1000M	Full		Unprotected	
<input type="radio"/>	6	GE6	1000M-Copper	Down	Enabled						Unprotected	
<input type="radio"/>	7	GE7	1000M-Copper	Down	Enabled						Unprotected	
<input type="radio"/>	8	GE8	1000M-Copper	Up	Enabled			1000M	Full		Unprotected	
<input type="radio"/>	9	GE9	1000M-Copper	Up	Enabled			1000M	Full		Unprotected	
<input type="radio"/>	10	GE10	1000M-Copper	Up	Enabled			1000M	Full		Unprotected	
<input type="radio"/>	11	GE11	1000M-Copper	Down	Enabled						Unprotected	
<input type="radio"/>	12	GE12	1000M-Copper	Down	Enabled						Unprotected	
<input type="radio"/>	50	XG2	10G-FiberOptics	Down	Enabled						Unprotected	

Copy Settings...

Note: In this example, Port GE3 is chosen.

Step 3. In the Edit Port Setting window, check the **Enable** checkbox for Flow Control then click **Apply**.

Neighbor Advertisement: 10 Half 10 Full 100 Half 100 Full 1000 Full

Back Pressure: Enable

Flow Control: Enable
 Disable
 Auto-Negotiation

MDI/MDIX: MDIX Operational MDI/MDIX:
 MDI
 Auto

Protected Port: Enable

Member in LAG:

Step 4. Click the blinking  button to permanently save the settings.