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Extreme Flow Optimizer 2.1.3

Release Notes v1.0

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Document history

Version	Summary of changes	Publication date
1.0	Initial Release	February, 2019

Preface

Contacting Extreme Technical Support

As an Extreme customer, you can contact Extreme Technical Support using one of the following methods: 24x7 online or by telephone. OEM customers should contact their OEM/solution provider.

If you require assistance, contact Extreme Networks using one of the following methods:

- GTAC (Global Technical Assistance Center) for immediate support
- Phone: 1-800-998-2408 (toll-free in U.S. and Canada) or +1 408-579-2826. For the support phone number in your country, visit: www.extremenetworks.com/support/contact.
- Email: support@extremenetworks.com. To expedite your message, enter the product name or model number in the subject line.
- GTAC Knowledge - Get on-demand and tested resolutions from the GTAC Knowledgebase, or create a help case if you need more guidance.
- The Hub - A forum for Extreme customers to connect with one another, get questions answered, share ideas and feedback, and get problems solved. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.
- Support Portal - Manage cases, downloads, service contracts, product licensing, and training and certifications.

Before contacting Extreme Networks for technical support, have the following information ready:

- Your Extreme Networks service contract number and/or serial numbers for all involved Extreme Networks products
- A description of the failure
- A description of any action(s) already taken to resolve the problem
- A description of your network environment (such as layout, cable type, other relevant environmental information)
- Network load at the time of trouble (if known)
- The device history (for example, if you have returned the device before, or if this is a recurring problem)
- Any related RMA (Return Material Authorization) numbers

Extreme resources

Visit the Extreme website to locate related documentation for your product and additional Extreme resources.

White papers, data sheets, and the most recent versions of Extreme software and hardware manuals are available at www.extremenetworks.com. Product documentation for all supported releases is available to registered users at www.extremenetworks.com/support/documentation.

Document feedback

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You can provide feedback in two ways:

- Use our short online feedback form at http://www.extremenetworks.com/documentation-feedback-pdf/
- Email us at internalinfodev@extremenetworks.com

Provide the publication title, part number, and as much detail as possible, including the topic heading and page number if applicable, as well as your suggestions for improvement.

Legacy information

The references to Brocade SDN Controller and Brocade ICX devices in this document are in the context of legacy Flow Optimizer product support of those products. However, please note that Brocade ICX is now a trademark of Ruckus Networks and Brocade SDN Controller is a trademark of Lumina Networks.

Product Overview

Extreme Flow Optimizer enables organizations to manage runtime network policy related to threat management and flow optimization to proactively increase network efficiency, agility, improve resource utilization, mitigate network attacks and significantly reduce network congestion. The Extreme Flow Optimizer is an, open, policy-based Automation and Software-Defined Networking (SDN) solution that detects and manages large Layer 2 through Layer 4 flows in service provider and enterprise networks. Organizations can optimize their network infrastructure through proactive monitoring, planning, and establishing policies that can, in turn, manage large traffic flows in an automated fashion.

New Features in Extreme Flow Optimizer 2.1.3

- Support to handle reading SNMP data for IP Address sent in both string as well as in hex format

System Requirements and Installation

Please refer to the 'Getting Started' section of the Extreme Flow Optimizer User Guide for Operating System, Memory and Hard Disk Drive requirements, and Installation instructions.

Current path upgrade information

- Upgrade from R2.0.0 to R2.1.3
- Upgrade from R2.1.0 to R2.1.3
- Upgrade from R2.1.1 to R2.1.3
- Upgrade from R2.1.2 to R2.1.3

Device Platform & Hardware Support Requirements

Platform	Software
MLX series	NI 06.1.00a
VDX (6940, 6740)	NOS 7.2.0a
SLX (9850, 9540)	SLX-OS 17r.1.01ad , 18r.1.0aa, 18r.2.0
SLX (9140, 9240)	SLX-OS 17s.1.02a
ODL Controller	Nitrogen SR 1
Extreme Workflow Composer	StackStorm 2.6.1, EWC 1.2.1, NE 1.2.1

For OpenDayLight (ODL) Nitrogen SR1 download & installation, please visit:

https://nexus.opendaylight.org/content/repositories/public/org/opendaylight/integration/karaf/0.7.1/

For VDX support, following software needs to be installed as prerequisite for Extreme Flow Optimizer:

Stackstorm 2.6.1, Network Essentials Automation Suite 1.2.1, EWC 1.2.1 (DC Fabric suite)

For Extreme Workflow Composer OVA installation, please visit:

https://ewc-docs.extremenetworks.com/solutions/dcfabric/install.html.

https://extremeportal.force.com/ExtrLogin?startURL=%2FExtrProductLanding%3Fpf%3DAutomation

For Stackstorm for Network Essentials Automation Suite, please visit:

https://exchange.stackstorm.org/#Network

Feature Support Matrix

OpenFlow Port Actions

Actions	MLX/SLX9850/SLX9540		SLX9140 SLX9240	VDX6740 VDX6940
	Ingress Port	Generic Flow	Ingress Port	Ingress Port
Drop	Yes	Yes	Yes	Yes
Redirect	Yes	Yes	No	No
Redirect to Multiple Ports	Yes	Yes	No	No
Meter (Drop) with NORMAL	Yes	No	No	No
Meter (Remark) with	Yes	No	No	No
Mirror & NORMAL	Yes	No	No	No
Mirror & NORMAL + Meter	Yes	No	No	No

VLAN Tagged Actions

Actions	MLX/SLX 9850/SLX9540	
	Ingress Port	Generic Flow
Drop	Yes	Yes
Redirect	Yes	Yes
Redirect to Multiple Ports	Yes	Yes
Meter (Drop) with NORMAL	Yes	No
Meter (Remark) with	Yes	No
Mirror & NORMAL	Yes	No
Mirror & NORMAL + Meter	Yes	No

Untagged Port Actions (Hybrid Port)

Actions	MLX series	
	Ingress Port	Generic Flow
Drop	Yes	Yes
Redirect	Yes	Yes
Redirect to Multiple Ports	Yes	Yes
Meter (Drop, Remark) with	Yes	No
Mirror & NORMAL	Yes	No
Mirror & NORMAL + Meter	Yes	No

Extreme Flow Optimizer Scale support

On a host server with 8 core processors, 32 GB RAM and 1 TB HDD space, Extreme Flow Optimizer has been validated to support the following scale:

Total monitored traffic at sFlow sampling rate of 8K	300 Gbps
Total number of steady state learned flows (learned flows - includes active and inactive flows)	110000
Max Tenants for TFR	2000

Table 1

Limitations

Overall traffic graphs:

The Overall traffic graphs in dashboard may inaccurately show dips in the graph, line-rate fluctuations etc., when the flows exceed the maximum Extreme Flow Optimizer capacity and graceful handling starts dropping the incoming packets. This will result in some visible data loss, whenever Extreme Flow Optimizer is dropping excess flows. Flow Optimizer will issue a warning in Events to inform the user about the degraded visibility.

For MLX devices:

- **Applying mitigation action from Learned Flows tab for Untagged Traffic:** Due to a limitation in the sFlow samples, the VLAN ID is populated in the Learned Flows tab incorrectly for untagged traffic. You must manually change the radio button for Layer 2 Field: VLAN, from "Tagged" to "Untagged" before applying the mitigation action by clicking "Add".
- **Destination MAC address not supported for Custom Profiles and User Defined Flows for MLX devices:** For Layer 3 traffic due to a limitation on MLX hardware, the Destination MAC included in the sFlow sample is incorrect. Hence you should not define Layer 2 Field: Destination MAC as a matching field for Custom Profiles when dealing with Layer 3 traffic.
- **Applying mitigation action from Learned Flows tab for MLX devices:** For Layer 3 traffic due to a limitation on MLX hardware, the Destination MAC included in the sFlow sample is incorrect. Hence you must manually delete the prepopulated Layer 2 Field: Destination MAC, before applying the mitigation action by clicking "Add".

For VDX6740/6940 & SLX9140/9240 EWC devices:

- DROP action is achieved via Layer 2 & Layer 3 ACLs. Extreme Flow Optimizer persists information on these ACLs. So, it is imperative that all ACL management is done via Extreme Flow Optimizer. If there are preexisting ACLs on the device ports, then ACLs cannot be applied from Extreme Flow Optimizer as a result the action cannot be performed. Tampering with the created ACLs from some other interface like CLI will result in error when subsequent DROPs are done via Extreme Flow Optimizer. Please make sure that there are no pre-existing ACL configurations on the device while managing those devices via Extreme Flow Optimizer.

Known Issues in Release 2.1.3

Defect ID: DEFECT000654157 (SDN-2170)	
Technical Severity: Major	**Probability:** Medium
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.1.0	**Technology:** Learned Flows
Symptom: "The learned flows tab becomes empty intermittently" or "Learned flows are not exported in csv file" though the flows are going through the devices.	
Condition: EFO is receiving flows at its max capacity, able to process it and proceeds with persistence; As a result, WUI is not updated correctly; however, EFO is taking right actions.	
Workaround: None.	

Defect ID: DEFECT000654159 (SDN-2209)	
Technical Severity: Major	**Probability:** Medium
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.1.0	**Technology:** Device registration
Symptom: Large flows in dashboard is taking more time to display/load.	
Condition: This may happen intermittently when there are high-scale of incoming flows.	
Workaround: Refresh the page.	

Defect ID: DEFECT000654160 (SDN-2213)	
Technical Severity: Major	**Probability:** Medium
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.1.0	**Technology:** Device registration
Symptom: At times, the EFO web client logs out to the login page.	
Condition: This happens very rarely when the web client fails to auto-refresh in time vowing to high scale of data.	
Workaround: Users would need to re-launch EFO.	

Defect ID: DEFECT000654165 (SDN-2216)	
Technical Severity: Major	**Probability:** Medium
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.0.0	**Technology:** Device registration

Symptom: Historical data is taking more time to load and sometimes browser became unresponsive and error is displayed in browser.
Condition: With high scale of unique flows in EFO, it takes more time to fetch & render historical data.
Workaround: Refresh the page.

Defect ID: DEFECT000654742 (SDN-2241)	
Technical Severity: Major	**Probability:** High
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.1.0	**Technology:** Device registration
Symptom: Devices page reload takes too long and throws CLI command failed, java security Signature Exception error. Sometimes after moving to Devices page and trying to register a device immediately, a signature exception message is seen.	
Condition: This happens when EFO server is busy getting information from EWC. The client does not adequately show the progress bar and hence appears ready to take on user input.	
Workaround: Refresh the page, wait for a bit and then retry.	

Defect ID: DEFECT000654711 (SDN-2251)	
Technical Severity: Major	**Probability:** High
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.1.0	**Technology:** VDX Drop support
Symptom: EFO GUI does not display the dropped traffic count when custom flow with drop action is created.	
Condition:	
Workaround: Use profile for drop.	

Defect ID: DEFECT000627151	
Technical Severity: Medium	**Probability:** Medium
Product: Extreme Flow Optimizer	**Technology Group:** Flow Management
Reported in Release: Extreme Flow Optimizer1.4.0	**Technology:** Flow Identification
Symptom: The ingress VLAN ID is incorrect for sFlow packets from VDX.	
Condition: In the sFlow Extended Switch Data session, both the incoming and outgoing VLAN ID are misplaced. And for untagged VLAN traffic, there is no 802.1Q information in sFlow.	

Defect ID: DEFECT000654843	
Technical Severity: Major	**Probability:** High
Product: Extreme Flow Optimizer	**Technology Group:** Flow Management
Reported in Release: Extreme Flow Optimizer2.1.0	**Technology:** Flow Mitigation

Symptom: Custom profiles for single node VDX devices with will not be migrated post-upgrade from EFO 2.0.0 to EFO 2.1.0.
Condition:
Workaround: User is required to delete such custom profiles before upgrade and recreate in EFO2.1.0.

Defect ID: (SDN-2315)	
Technical Severity: Major	**Probability:** Medium
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.1.1	**Technology:** Profile / UDF
Symptom: Breakout port number is not displayed correctly when configuring Profiles/Custom Flows.	
Condition: EFO displays the interfaces list in Node Picker dialog in this format: Physical Port [Logical Name]. For breakout ports, the interface details are not displayed properly, where the ':' in the Physical port will be stripped off while displayed in the GUI.	
Workaround: Refer the Logical Name for interfaces for proper breakout port number.	

Defect ID: (SDN-2295)	
Technical Severity: Major	**Probability:** Medium
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.1.1	**Technology:** Settings
Symptom: EFO is unresponsive when SDN controller is not reachable.	
Condition: If invalid details for SDN Controller/EWC Controller is entered in the UI, EFO page is unresponsive for around 2 minutes after which error message is shown in the UI.	
Workaround: There is no workaround for this. Just takes some more time to reflect the status.	

Defect ID: (SDN-2293)	
Technical Severity: Major	**Probability:** Medium
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.1.1	**Technology:** Events
Symptom: UDF successfully deleted message is not shown when UDF mitigation is failed for any of the device.	
Condition: If the UDF action is created and it is failed on one of the devices while deploying, then while performing a delete of that particular UDF, it shows the failed device in the Events page.	
Workaround: There is no workaround for this.	

Defect ID: (SDN-2325)	
Technical Severity: Major	**Probability:** Medium
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.1.1	**Technology:** Profiles
Symptom: RTBH Attack is getting removed from L&P tab after sometime, even though the attack is active and enabled.	
Condition: Once a RTBH Attack is deployed, the respective Attack does not show up in the UI after some time, attack does not get closed by itself.	
Workaround: User has to confirm if the DDOS attack has dropped and he has to delete the RTBH profile.	

Defect ID: (SDN-2333)	
Technical Severity: Major	**Probability:** Medium
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.1.1	**Technology:** Profiles
Symptom: Unable to create successful RTBH action for both MLX and SLX for IPV6 based Destination address.	
Condition: If RTBH action is created based on Destination IPV6 address, it fails for both MLX & SLX.	
Workaround: There is no workaround, only alternative way is to use IPV4 address to achieve RTBH for MLX & SLX.	

Defect ID: (SDN-2334)	
Technical Severity: Major	**Probability:** Medium
Product: Extreme Flow Optimizer	**Technology Group:** SDN
Reported in Release: Extreme Flow Optimizer2.1.2	**Technology:** Openflow
Symptom: Unable to perform EFO actions for MLX and SLX devices.	
Condition: When ODL controller/MLX is restarted/reloaded, Openflow connection is flapping continuously between switch/router and controller.	
Workaround: Remove openflow configuration on MLX and reconfigure the config back. Restart ODL controller.	

Resolved Issues with code changes in Release 2.1.2

Defect ID: DEFECT000654743 (SDN-2245)	
Technical Severity: Major	**Probability:** High
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.1.0	**Technology:** Device registration
Symptom: Able to register Avalanche SLX 9540 through EWC	
Condition: VDX 6740 & 6940, SLX 9140, 9240 are supported via EWC. Other flavors of VDX, SLX or MLX are not yet supported.	
Workaround: None.	

Defect ID: DEFECT000654710 (SDN-2252)	
Technical Severity: Normal	**Probability:** High
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.1.0	**Technology:** VDX Drop support
Symptom: EFO custom flow creates L3 ACL with host keyword (for single host) even though mask /24 is specified.	
Condition: Mask is not supported in this release. It is defaulted to /32. This will be enhanced in next release.	
Workaround: None.	

Defect ID: DEFECT000654705 (SDN-2253)	
Technical Severity: Major	**Probability:** High
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.1.0	**Technology:** VDX Drop support
Symptom: EFO - Changing the threshold value of NTP reflection profile to 4000 & enabling it makes the Total traffic count to 2Mbps.	
Condition:	
Workaround: None	

Defect ID: DEFECT000654744 (SDN-2176)	
Technical Severity: Major	**Probability:** High
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.1.0	**Technology:** Device registration
Symptom: For EWC controller Devices are getting added in the list even SNMP communication failed. Also, not able to delete the device from the UI.	
Condition: None.	
Workaround: Check and fix SNMP credentials.	

Defect ID: (SDN-2288)	
Technical Severity: Major	**Probability:** Medium
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.1.1	**Technology:** Events
Symptom:	

For default profile changing interfaces is not removing ACL rule from the existing interface and assign it to new interface.
Condition: EWC related device: If the default profile is edited while relevant large flows are in progress, ACLs are not removed from old interface in the device.
Workaround: Deactivate the profile. Wait till the profile is deactivated in the UI, edit the profile to update new interfaces and then activate the profile.

Defect ID: (SDN-2296)	
Technical Severity: Major	**Probability:** Medium
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.1.1	**Technology:** Profiles
Symptom: Flow 2 is not removed successfully when disabling the bidirectional profile, though Flow 1 is removed.	
Condition: If a Bidirectional profile is created, and if we deactivate the profile, only one flow will be removed from the devices. Other flow had to be manually removed.	
Workaround: There is no workaround to achieve through Bidirectional Profile. But creating 2 unidirectional profiles should help out.	

Defect ID: (SDN-2327)	
Technical Severity: Major	**Probability:** Medium
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.1.1	**Technology:** BlackList Flows
Symptom: Empty physical ports in BlackList Node Picker for SLX 9240.	
Condition: EFO displays empty physical ports in BlackList Node Picker dialog if the device selected is SLX 9240. Other areas like Profiles / Custom Flows, it works perfectly fine.	
Workaround: There is no workaround at this moment for BlackList feature.	

Defect ID: (SDN-2360)	
Technical Severity: Major	**Probability:** Medium
Product: Extreme Flow Optimizer	**Technology Group:** Infrastructure
Reported in Release: Extreme Flow Optimizer2.1.3	**Technology:** Profile / UDF
Symptom: Failure to provision OpenFlow rules when triggered via Profiles or UDF creation.	
Condition: When default TCAM profile is enabled in Avalanche, then if the match criteria for flow provisioning contains either of the source mac or destination mac, then the OpenFlow flow creation fails.	
Workaround: There is no workaround at this moment.	