ExtremeXOS v33.5.2 Release Notes

New Features, Improvements, and Known Issues

9039393-01 Rev AB
December 2025

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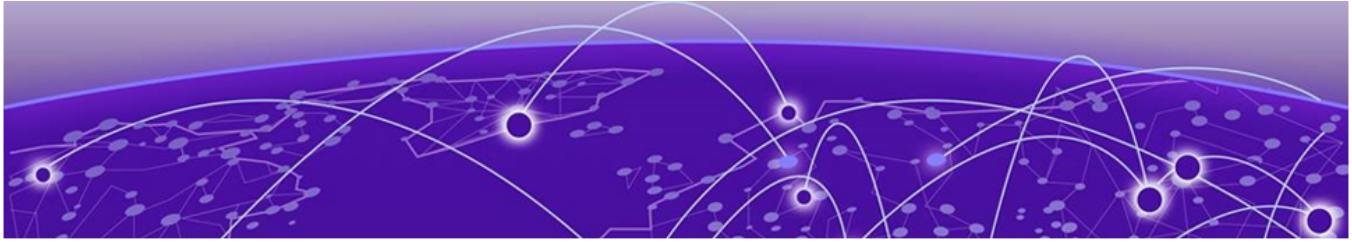

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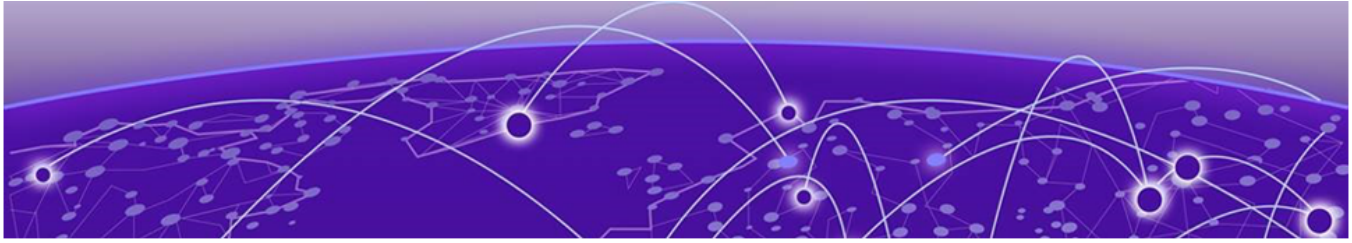


Abstract

This release note for ExtremeXOS version 33.5.2, published by Extreme Networks, Inc., released in December 2025, provides new feature and software information, scaling limits, and open and known deficiences and resolved issues in version 33.5.2. The document provides details on hardware and software compatibility, default settings, image file names, supported platforms, and guidance for upgrading. Additionally, it outlines limits for various licenses and features in the software. The document details changes and corrections for features supported in this version. Furthermore, the release notes highlight known behaviors and limitations in the system architecture, and they list numerous resolved issues across different patches, including improvements in security profile operation. The document serves as a comprehensive resource for technical readers seeking detailed insights into the functionality, compatibility, and performance improvements of the specified software version.

Preface

Read the following topics to learn about:

- The meanings of text formats used in this document.
- Where you can find additional information and help.
- How to reach us with questions and comments.

Conventions

To help you better understand the information presented in this guide, the following topics describe the formatting conventions used for notes, text, and other elements.

Text Conventions

Unless otherwise noted, information in this document applies to all supported environments for the products in question. Exceptions, like command keywords associated with a specific software version, are identified in the text.

When a feature, function, or operation pertains to a specific hardware product, the product name is used. When features, functions, and operations are the same across an entire product family, such as Extreme Networks switches, the product is referred to as *the switch*.

Table 1: Notes and warnings

Icon	Notice type	Alerts you to...
	Tip	Helpful tips and notices for using the product
	Note	Useful information or instructions
	Important	Important features or instructions

Table 1: Notes and warnings (continued)

Icon	Notice type	Alerts you to...
	Caution	Risk of personal injury, system damage, or loss of data
	Warning	Risk of severe personal injury

Table 2: Text

Convention	Description
`screen displays`	This typeface indicates command syntax, or represents information as it is displayed on the screen.
The words *enter* and *type*	When you see the word *enter* in this guide, you must type something, and then press the Return or Enter key. Do not press the Return or Enter key when an instruction simply says *type*.
Key names	Key names are written in boldface, for example **Ctrl** or **Esc**. If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: Press **Ctrl**+**Alt**+**Del**
Words in italicized type	Italics emphasize a point or denote new terms at the place where they are defined in the text. Italics are also used when referring to publication titles.
NEW!	New information. In a PDF, this is searchable text.

Table 3: Command syntax

Convention	Description
bold text	Bold text indicates command names, keywords, and command options.
italic text	Italic text indicates variable content.
`[ ]`	Syntax components displayed within square brackets are optional. Default responses to system prompts are enclosed in square brackets.
`{ x | y | z }`	A choice of required parameters is enclosed in curly brackets separated by vertical bars. You must select one of the options.
x | **y**	A vertical bar separates mutually exclusive elements.
< >	Nonprinting characters, such as passwords, are enclosed in angle brackets.

Table 3: Command syntax (continued)

Convention	Description
...	Repeat the previous element, for example, *member*[*member*...].
\	In command examples, the backslash indicates a “soft” line break. When a backslash separates two lines of a command input, enter the entire command at the prompt without the backslash.

Platform-Dependent Conventions

Unless otherwise noted, all information applies to all platforms supported by software, which are the following:

- ExtremeSwitching® switches
- SummitStack™

When a feature or feature implementation applies to specific platforms, the specific platform is noted in the heading for the section describing that implementation in the command documentation (see the Extreme Documentation page at). In many cases, although the command is available on all platforms, each platform uses specific keywords. These keywords specific to each platform are shown in the Syntax Description and discussed in the Usage Guidelines sections.

Terminology

When features, functionality, or operation is specific to a device family, such as ExtremeSwitching, the family name is used. Explanations about features and operations that are the same across all product families simply refer to the product as the *device*.

Send Feedback

The User Enablement team at Extreme Networks has made every effort to ensure that this document is accurate, complete, and easy to use. We strive to improve our documentation to help you in your work, so we want to hear from you. We welcome all feedback, but we especially want to know about:

- Content errors, or confusing or conflicting information.
- Improvements that would help you find relevant information.
- Broken links or usability issues.

To send feedback, email us at Product-Documentation@extremenetworks.com.

Provide as much detail as possible including the publication title, topic heading, and page number (if applicable), along with your comments and suggestions for improvement.

Help and Support

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

Extreme Portal

Search the GTAC (Global Technical Assistance Center) knowledge base; manage support cases and service contracts; download software; and obtain product licensing, training, and certifications.

The Hub

A forum for Extreme Networks customers to connect with one another, answer questions, and share ideas and feedback. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.

Call GTAC

For immediate support: (800) 998 2408 (toll-free in U.S. and Canada) or 1 (408) 579 2800. For the support phone number in your country, visit www.extremenetworks.com/support/contact.

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

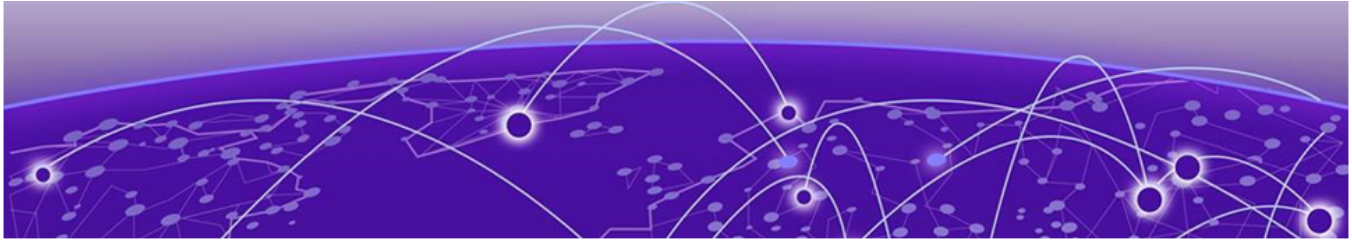
- Your Extreme Networks service contract number, or serial numbers for all involved Extreme Networks products
- A description of the failure
- A description of any actions already taken to resolve the problem
- A description of your network environment (such as layout, cable type, other relevant environmental 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

Subscribe to Product Announcements

You can subscribe to email notifications for product and software release announcements, Field Notices, and Vulnerability Notices.

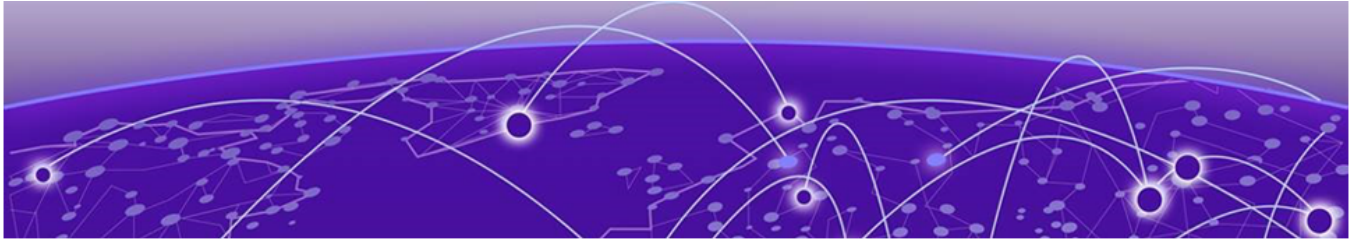
1. Go to The Hub.
2. In the list of categories, expand the **Product Announcements** list.
3. Select a product for which you would like to receive notifications.
4. Select **Subscribe**.
5. To select additional products, return to the **Product Announcements** list and repeat steps 3 and 4.

You can modify your product selections or unsubscribe at any time.



Overview

These release notes document ExtremeXOS added features and resolved software deficiencies for the title version.



Security Information

The following section covers important security information.

Linux Kernel

This version of ExtremeXOS uses Linux Kernel 5.10 for X465 and X695 series switches, and Linux Kernel 4.14 for all other switches.

OpenSSL Version

This version of ExtremeXOS uses FIPS openssl-fips-3.0.10.

Upgrading ExtremeXOS

For instructions about upgrading ExtremeXOS software, see *Software Upgrade and Boot Options* in *ExtremeXOS v33.5.1 User Guide*.

An ExtremeXOS core image (.xos file) must be downloaded and installed on the alternate (non-active) partition. If you try to download to an active partition, the system displays the following error message: `Error: Image can only be installed to the non-active partition.` An ExtremeXOS modular software package (.xmod file) can still be downloaded and installed on either the active or alternate partition.

Note

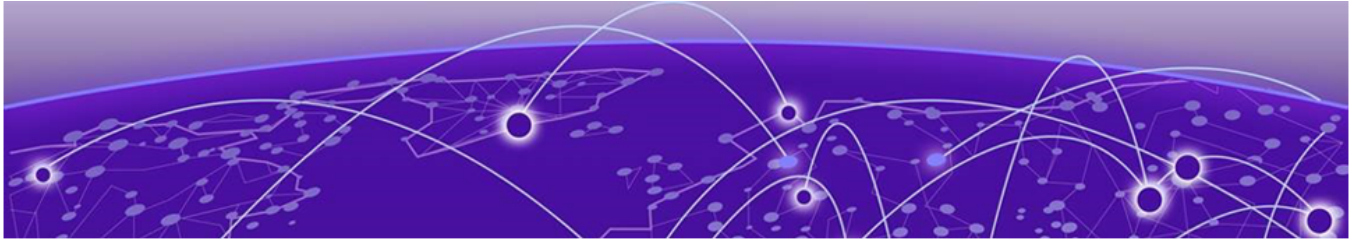
New ExtremeSwitching X435 PoE switches with a Giga device MCU part (switch default ships with supported EXOS versions from the factory) will prevent the switch downgrade to older EXOS versions.

The following error message is displayed during the downgrades to older versions:

```
Error: Failed to download image - summitlite_arm-31.6.1.3.xos does not
include compatible PoE microcontroller support. See the User Guide for
information on installing a newer software release. See the
Hardware/Software Compatibility and Recommendation Matrices to verify the
supported releases.
```

The switch can be identified for the inclusion of the Giga device MCU by checking the PoE firmware revision (5.0 or later) by entering the `show inline-power stats` command (line four):

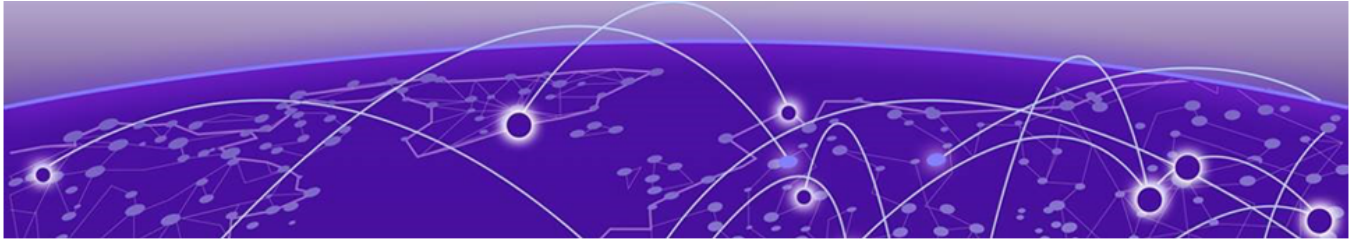
```
# show inline-power stats
Inline-Power Slot Statistics
Firmware status               : Operational
Firmware revision             : 5.0.0b4
Total ports powered           : 3
Total ports awaiting power    : 20
Total ports faulted           : 0
Total ports disabled          : 1
```



Newly Purchased Switches Require Software Upgrade

Newly delivered switches typically have pre-GA (general availability) ExtremeXOS software installed. You should promptly upgrade the software to the latest version available by visiting the Extreme Portal.

For information about upgrading the ExtremeXOS software, see the *ExtremeXOS Upgrade Process* topic in the *Software Upgrade and Boot Options* chapter of the *ExtremeXOS v33.5.1 User Guide*.



Default ExtremeXOS® Settings

The following table shows the default settings for ExtremeXOS starting with version 31.4, and shows any changes that have been made to these settings and in what version these changes were made.

Table 4: Default ExtremeXOS Settings

Feature	31.4 and earlier	31.5	31.6 and later
Account Lockout	After 3 consecutive login failures, account is locked for 5 minutes. [a]		
AVB	Disabled.		
BFD Strict Session Protection	Disabled.		
BGP	Disabled.		
Bluetooth	Enabled.		
BOOTP Relay	Disabled.		
CDP	Enabled.		
Configuration auto save	Disabled.		
Clear-flow	Disabled.		
Diagnostics	Admin level privileges required to show diagnostics. [a]		
DHCP	Disabled.		
DNS Cache Resolver and Analytics	Disabled.		
IPFIX	Disabled.		
IP NAT	Disabled.		
EAPS	Disabled.		
EDP	Enabled on management port.		
ELRP	Disabled.		
ESRP	Disabled.		

[a] If you choose enhanced security mode when initially setting up the switch or after running `unconfigure switch all`.

Table 4: Default ExtremeXOS Settings (continued)

Feature	31.4 and earlier	31.5	31.6 and later
Extended Edge Switching (VPEX)	Disabled.		
ExtremeCloud IQ	Enabled		
FEC	Disabled.		Enabled on Native 25Gb ports.
Identity Management	Disabled.		
IGMP	Enabled, set to IGMPv2 compatibility mode.		
IGMP Snooping	Enabled.		
Image Integrity Check	Disabled.		
IP Route Compression	Enabled.		
ISIS	Disabled.		
LLDP	Enabled.		
Log	Admin level privileges required to show log. [a]		
Logging memory buffer	Generate an event when the logging memory buffer exceeds 90% of capacity. [a]		
MAC Security	Disabled.		
MLD	Disabled.		
MLD Snooping	Disabled.		
MPLS	Disabled.		
MSRP	Disabled.		
MSTP	Enabled.		
NetLogin	All types of authentication are disabled.		
NTP	Disabled.		
ONEPolicy	Disabled.		
Policy rule model	Hierarchical (Unless upgrading from 30.5 with a saved configuration set to access list.)		
OpenFlow	Not supported.		
OSPF	Disabled.		

Table 4: Default ExtremeXOS Settings (continued)

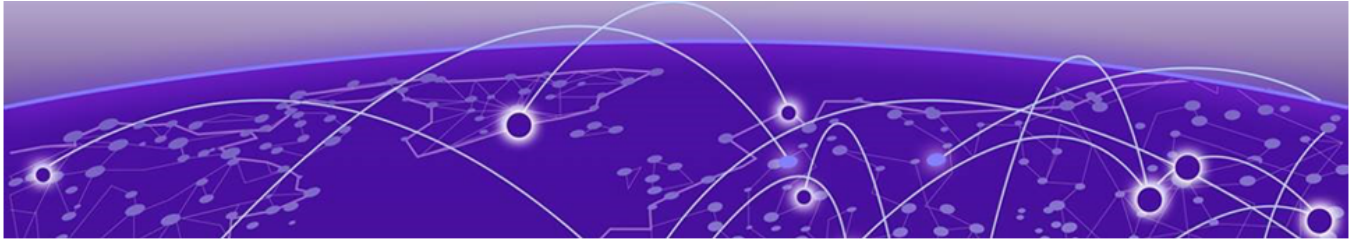
Feature	31.4 and earlier	31.5	31.6 and later
OVSDB	Disabled.		
Passwords	Plain text password entry not allowed. [a]		
PIM	Disabled.		
PIM Snooping	Disabled.		
PoE Fast PoE Perpetual PoE	Enabled. Disabled. Disabled.		
RADIUS	Disabled for both switch management and network login.		
RIP	Disabled.		
RMON	Disabled. However, even in the disabled state, the switch responds to RMON queries and sets for alarms and events.		
sFlow	Disabled.		
SNMP server	Disabled. [a]		
SSH	Disabled.		
Stacking-support	Disabled, except for X450-G2, X465.		
Stacking auto-discovery	Enabled.		
STP	Enabled.		
Syslog	Disabled.		
TACACS	Disabled.		
Telnet	Disabled. [a]		Enabled.
VPEX IP Multicast Replication	Controlling Bridge		
VPLS	All newly created VPLS instances are enabled.		
Watchdog	Enabled.		
Web HTTP server	Enabled. [a]		
Web HTTPS server	Enabled. [a]		

Image File Names

You can identify the appropriate image or module for your platform based on the file name prefix of the image.

Table 5: Image Types (Prefixes)

Switches	Image File Type (Prefix)
X465	`x465-` Example: `x465-33.3.1.21.xos`
X695	`onie-` Example: `onie-33.1.1.31.xos` **Note:** These image files use the Open Network Install Environment (ONIE).
X440-G2, X450-G2, and X460-G2	`summitX-` Example: `summitX-33.1.1.31.xos`
X435	`summitlite_arm-` Example: `summitlite_arm-30.5.0.102.xos`



New and Corrected Features

This section lists the new and corrected features supported in this software version:

Enhanced VLAN Probe with DNS and L2 Service Support

Version 33.5.2 adds a comprehensive network service debugging agent (VLAN Probe) that validates end-to-end connectivity from the client perspective, independent of switch configuration.

Issue: The previous VLAN Probe implementation had significant limitations:

- Could not run if a static IP was configured on the VLAN
- Could not run if DHCP client was already in use on the VLAN
- Limited ability to test extended services like DNS resolution
- Only tested from switch management perspective, not client perspective

Resolution: A new NOS-level VLAN/Service Probe feature provides comprehensive network validation that operates independently from switch configuration, simulating actual client connectivity.

Key Enhancements:

Independent Operation:

- Operates completely separate from switch configuration
- Works even when VLAN has static IP configured
- Works even when DHCP client is already in use on the VLAN
- Works regardless of routing configuration on the VLAN
- Uses distinct MAC address (Locally Administered Address) to avoid conflicts

Multiple VLAN Support:

- Probe multiple VLANs simultaneously
- Single VLAN or multiple VLANs (by ID)
- Single L2 Service ID or multiple L2 Service IDs (Fabric Engine only)

Flexible Configuration:

- Probe can use static IP/Gateway configuration
- Probe can obtain configuration via DHCP

Comprehensive Testing Capabilities:

The probe performs end-to-end validation including:

1. **DHCP Validation**: Obtains IP address via DHCP and reports DHCP-provided configuration
2. **Gateway Verification**: Checks gateway status via ARP
3. **Connectivity Testing**: Initiates ping
4. **DNS Resolution**: Tests DNS functionality using DHCP-provided DNS server
5. **Configuration Reporting**: Displays IP address, gateway, and DNS server information

Diagnostic Results:

- IP address (DHCP-assigned or static)
- Gateway address and reachability status (via ARP)
- DNS server address
- DNS operational status
- Ping/traceroute results with timing information

Platform and API Support:

- Works on both ExtremeXOS and Fabric Engine platforms
- NOS-API support for programmatic access
- Can be initiated from Device 360 (Device View) in ExtremeCloud IQ
- Can be initiated from the Wired Object Inspector in ExtremeCloud IQ
- High-level alignment with Fabric Engine service probe for simplified cloud implementation
- IPv4 support (IPv6 planned for future release)

Client Perspective Testing: All probe operations simulate actual client behavior:

- ARP requests sourced from the user-defined VLAN/Service
- DNS communication uses the DNS server obtained from DHCP
- DNS queries use UDP with the source DHCP address and user-defined VLAN
- Uses distinct MAC address to accurately represent client connectivity
- Tests are independent of switch management interface configuration

Supported Platforms

All platforms

PIM MLAG Rendezvous Point Enhancements

Version 33.5.2 adds support for configuring MLAG peers as PIM Rendezvous Points (RP), removing a limitation in multicast deployments.

Issue: Prior to this release, MLAG peers could not be configured as PIM RP (Rendezvous Point), limiting multicast routing design flexibility in high-availability MLAG topologies.

Resolution: MLAG peers can now be configured as PIM RP with full support for Candidate Bootstrap Router (CBSR) and Candidate RP (CRP) roles in PIM Sparse Mode environments.

Key Capabilities:

- MLAG peers can be configured as CBSR (Candidate Bootstrap Router) and CRP (Candidate RP)
- Automatic synchronization of multicast receiver information learned via PIM joins between MLAG peers
- One MLAG peer is elected as BSR/RP while the other serves as backup with candidacy
- Automatic failover: when the elected MLAG peer fails, the backup peer becomes the new BSR/RP
- Supported on Default VR and user-defined VRs

Configuration:

```
configure pim cbsr vlan <vlan_name>
configure pim crp vlan <vlan_name> <policy>
```

Both MLAG peers must be configured as CBSR and CRP for the feature to function properly. The existing BSR and RP election mechanisms operate normally in MLAG environments without modification.

Scope:

- Applicable to IPv4 PIM Sparse Mode (SM) only
- Supported in MLAG topologies

Not Applicable For:

- IPv4 PIM Snooping
- IPv4 PIM Dense Mode (DM)
- IPv6 PIM features (any mode)
- W-MLAG topologies

Usage Details: The feature leverages PIM synchronization between MLAG peers to share multicast receiver information learned through PIM joins. This synchronization, implemented as part of the PIM MLAG Transit solution, ensures consistent multicast state across the MLAG pair.

Supported Platforms

All platforms.

Support for Mirrored Packet Truncation

Version 33.5.2 adds the ability to truncate mirrored packets to reduce bandwidth and storage requirements for packet analysis.

Issue: In high-volume networks with encrypted traffic, mirrored packets contained large amounts of unreadable payload data that was not useful for analysis, creating excessive load on monitoring systems and hindering real-time troubleshooting.

Resolution: A new mirror configuration option enables packet truncation, capturing essential header information while discarding unnecessary payload data.

Changes:

- New truncation option available in mirror configuration
- Mirrored packets can be limited to the initial portion of the packet, preserving headers for analysis
- Reduces mirrored traffic volume without sacrificing diagnostic capability
- Particularly beneficial for encrypted traffic analysis where payload inspection is not feasible

Use Case: Network operators using SPAN technology for packet analysis can now:

- Reduce clutter in monitoring systems
- Improve real-time troubleshooting performance
- Decrease storage requirements for captured traffic
- Focus on header-based analysis without payload overhead

Supported Platform

The X695 platform.

Modified CLI Commands

The **`configure mirror`**, **`create mirror`**, and **`enable mirror`** commands add the **`truncate-payload`** [**`enable`** | **`disable`**] options.

ZTP and ZTC Fabric Attach Enhancements

Version 33.5.2 adds enhancements to Zero Touch Provisioning (ZTP) and Zero Touch Configuration (ZTC) to support large-scale SD-WAN fabric deployments without Network Access Control (NAC) intervention.

Issue: Large fabric SD-WAN deployments with Fabric Engine cores and Switch Engine access switches required fully zero-touch deployment capabilities. Existing ZTP and ZTC implementations had gaps preventing this deployment model.

Resolution: Multiple enhancements have been implemented to enable seamless zero-touch fabric deployments:

ZTP Enhancements:

- Fabric Attach message authentication is now enabled by default.
- New authentication mode visibility in CLI output.

ZTC Enhancements:

- Dynamic VLANs created for FA management are automatically added to default STP domain (s0)
- Automatic fallback management VLAN configuration: when no mgmt-VLAN TLV is received from FA server LLDP communication, the management VLAN defaults to VLAN 4048 with I-SID 15999999 and automatically issues a DHCP request
- FA clients without message authentication keys can now interoperate with servers that have authentication keys enabled

New CLI Capability: The **`show fabric attach`** command now includes authentication mode information to help administrators understand the current authentication state:

```
show fabric attach ports 2:20-2:23 authentication

Port       Authentication  Mode
---------  --------------  ----
2:20       Disabled        S
2:21       Enabled         S
2:22       Enabled         D
2:23       Auto            U
```

Authentication Modes:

- **(S) Static**: Authentication mode explicitly configured by administrator
- **(D) Dynamic**: Authentication mode automatically changed based on server state
- **(U) Unconfigured/Auto**: Authentication mode not yet configured or modified (default state)

The system intelligently adapts authentication settings based on server configuration while preserving user-configured settings when present. When no configuration exists and no neighboring server dictates authentication requirements, ports operate in "Auto" mode.

Supported Platforms

All platforms

ExtremeCloud IQ Agent Support

This version of ExtremeXOS supports ExtremeCloud IQ. For network administrators looking for unified management of access points, switches, and routers, ExtremeCloud IQ is a cloud-driven network management application that:

- Simplifies network operations through an easy to use and intuitive interface, including minimal touch onboarding of devices.
- Provides ultimate flexibility in deployment choice, cloud platform choice, and OS choice.
- Offers unlimited data duration for more informed networking decisions.

Important
Check the ExtremeCloud IQ release notes to ensure support for your version has been added before upgrading.

This release supports device discovery, basic monitoring, visibility into homogenous stacking, and the ability to configure an optional user-defined virtual router (VR) and server address for ExtremeCloud IQ agent to connect to. These values are used instead of any auto-detected values.

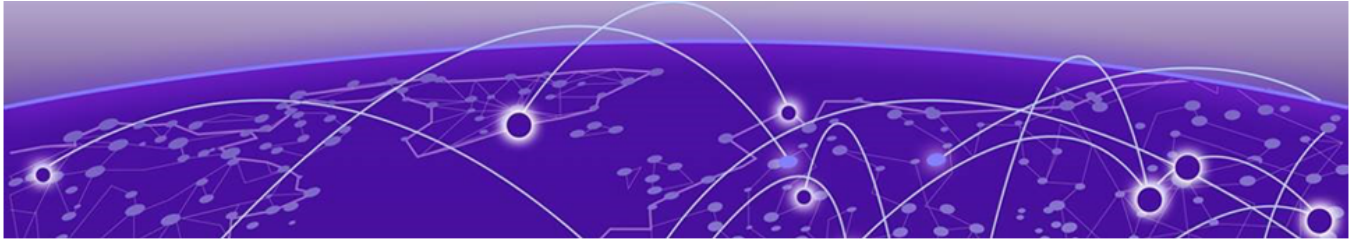
For more information about ExtremeCloud IQ, go to https://www.extremenetworks.com/support/documentation/extremecloud-iq/.

Table 6: Supported Platforms

Switch Series	Switch Models
X435	X435-8T-4S X435-8P-4S X435-8P-2T-W X435-24T-4S X435-24P-4S
X440-G2	X440-G2-24P-10GE4 X440-G2-48P-10GE4 X440-G2-12T-10GE4 X440-G2-12P-10GE4 X440-G2-24T-10GE4 X440-G2-48T-10GE4

Table 6: Supported Platforms (continued)

Switch Series	Switch Models
X450-G2	X450-G2-24P-10GE X450-G2-48P-10GE X450-G2-24P-GE4 X450-G2-48P-GE4
X460-G2	X460-G2-24P-10GE4 X460-G2-48P-10GE4 X460-G2-16MP-32P-10GE4 X460-G2-24P-48HP-10GE4
X465	X465-48P X465-24MU-24W X465-24W X465-48W X465-24MU



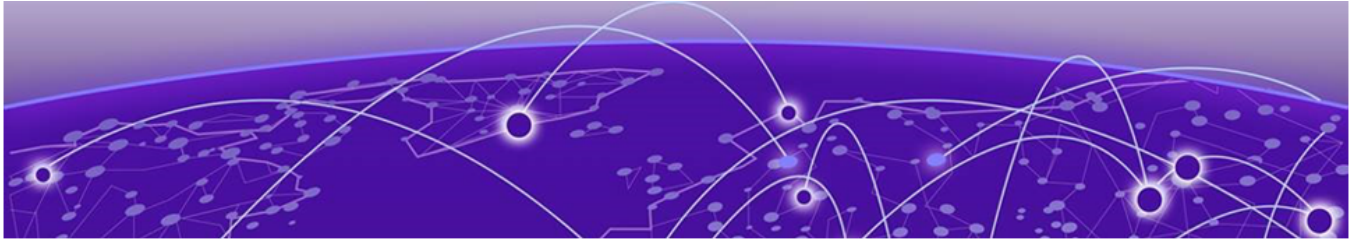
Extreme Hardware/Software Compatibility and Recommendation Matrices

ExtremeXOS and Switch Engine Software Support provides information about the minimum version of ExtremeXOS software required to support switches.

The Extreme Optics Compatibility website displays supported hardware platforms, technical specifications, and usage considerations for pluggable optical devices (transceivers and cables) used in all Extreme Networks operating environments. To access the site, open https://optics.extremenetworks.com/EXOS/ in a web browser.

To find the recommended ExtremeXOS versions for specific hardware platforms, see *ExtremeXOS and Switch Engine Release Recommendations*.

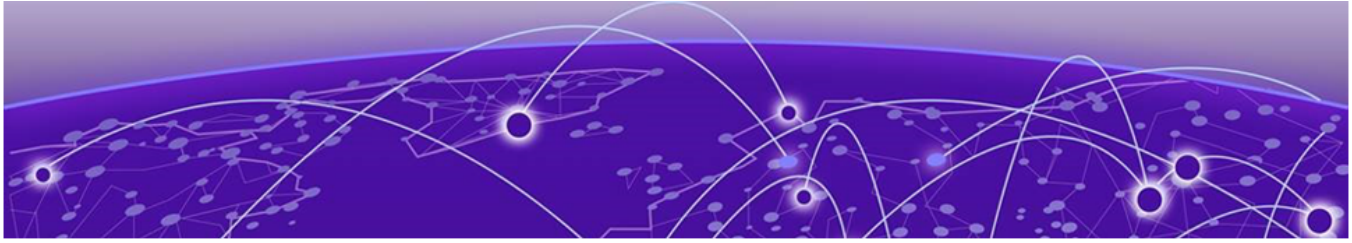
The latest versions of this and other ExtremeXOS guides are at: www.extremenetworks.com/documentation/.



Compatibility with Extreme Management Center

ExtremeXOS is compatible with the version of Extreme Management Center shown in this table: http://emc.extremenetworks.com/content/common/releasenotes/extended_firmware_support.htm.

This version was tested with ExtremeCloud IQ Site Engine versions 25.11.10.48.

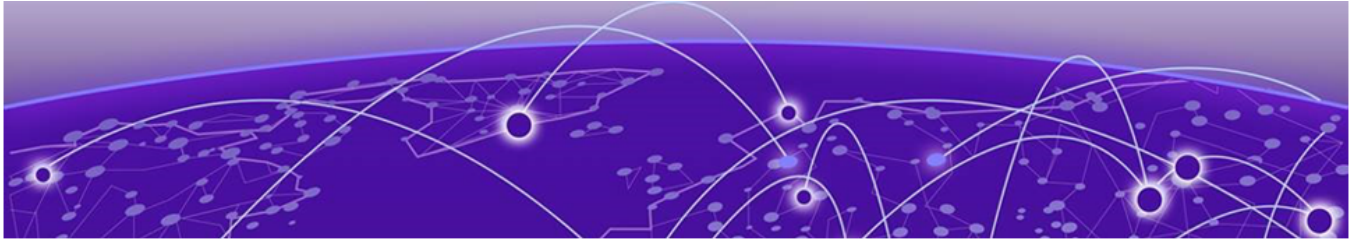


Supported MIBs

The Extreme Networks management information bases (MIBs) are located on the Extreme Portal in the Downloads section. Log in to the Extreme Portal to view and download.

When you provide your serial number or agreement number, the MIBs are available under each release.

For detailed information on which MIBs and SNMP traps are supported, see the *Extreme Networks Proprietary MIBs* and *MIB Support Details* sections in the *ExtremeXOS v33.5.1 User Guide*.



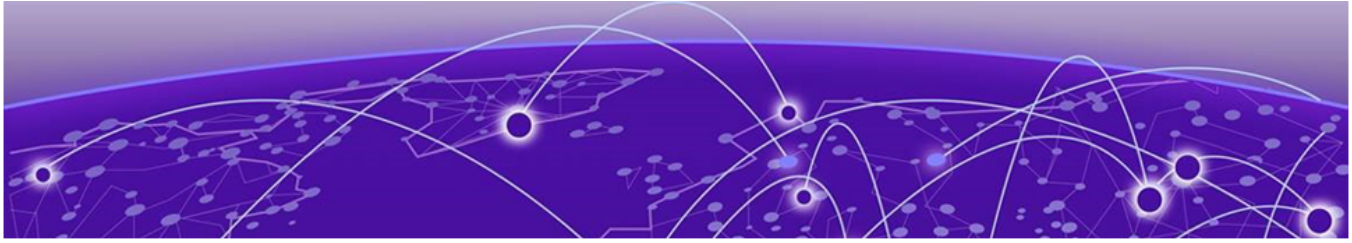
Tested Third-Party Products

The following third-party products have been tested.

Tested RADIUS Servers

The following RADIUS servers are fully tested:

- Microsoft—Internet Authentication Server
- Meetinghouse
- FreeRADIUS



Extreme Switch Security Assessment

DoS Attack Assessment

Tools used to assess DoS attack vulnerability:

- Network Mapper (NMAP)

ICMP Attack Assessment

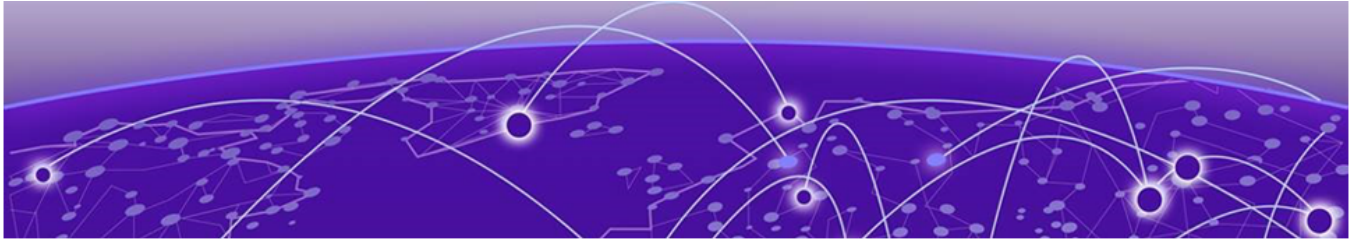
Tools used to assess ICMP attack vulnerability:

- SSPing
- Twinge
- Nuke
- WinFreeze

Port Scan Assessment

Tools used to assess port scan assessment:

- Nessus



Limits

This chapter summarizes the supported limits in this version of the software.

Limits Overview

The limits data is grouped by license level that contains the associated features:

- Value Edge License Limits on page 32
- Edge License Limits on page 45
- Advanced Edge License Limits on page 71
- Core License Limits on page 80

Non-universal switches include the following license levels:

Switch Category	Switches	Applicable License Levels
Non-universal switches	X435 *, X440-G2, X450-G2, X460-G2, X465, X695	Value Edge *, Edge, Advanced Edge, Core
Note: * The X435 is the only switch that supports the Value Edge license level. **Note:** X590, X620-X (fiber), and X690 are not supported in this version.		

The following figure illustrates that each license level builds on the features of the license level below it. For example, the Advanced Edge license includes all of the features in the Edge license, plus the features in the Advance Edge license level.

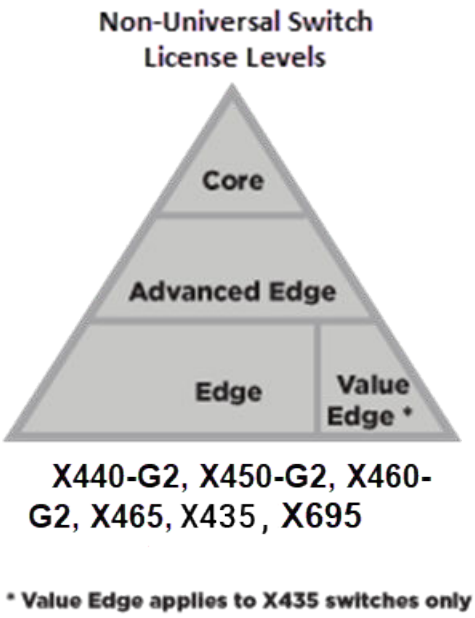


Figure 1: License Levels for non-Universal Switches

For more information about licenses, see *ExtremeXOS v33.5.1 Licensing Guide*.

The following tables summarize tested metrics for a variety of features, as measured in a per-system basis unless otherwise noted. These limits may change, but represent the current status. The contents of this table supersede any values mentioned in the ExtremeXOS books.

The scaling and performance information shown in the following tables is provided for the purpose of assisting with network design. It is recommended that network architects and administrators design and manage networks with an appropriate level of network scaling “head room.” The scaling and performance figures provided have been verified using specific network topologies using limited switch configurations. There is no guarantee that the scaling and performance figures shown are applicable to all network topologies and switch configurations and are provided as a realistic estimation only. If you experience scaling and performance characteristics that you feel are sufficiently below what has been documented, contact Extreme Networks technical support for additional assistance.

The route limits shown in the following tables for IPv4 and IPv6 routing protocols are software limits only. The actual hardware limits may be higher or lower than the software limits, based on platform. The hardware limits for specific platforms are specified as "IPv4/IPv6 routes (LPM entries in hardware)" in the following tables.

In the architecture, Layer-2, Layer-3, and multicast packet forwarding and filtering operations take place on the controlling bridge. The controlling bridge switch and attached BPEs (V400 Virtual Port Extenders) constitute a single, extended switch system. Therefore, the system assumes the scale and limits from the specific controlling bridge model in use. For applicable limits, see the following tables for the controlling bridge you are using.

Value Edge License Limits

The following table shows supported limits for features in the Value Edge License.

Table 7: Supported Limits for Value Edge License

Metric	Product	Limit
AAA (local)—maximum number of admin and local user accounts.	ExtremeSwitching X435	16
Access lists (meters)—maximum number of meters.	ExtremeSwitching X435	512 ingress
Access lists (policies)—suggested maximum number of lines in a single policy file.	ExtremeSwitching X435	300,000
Access lists (policies)—maximum number of rules in a single policy file.[a]	ExtremeSwitching X435	1,024 ingress
Access lists (slices)—number of ACL slices.	ExtremeSwitching X435	8 ingress only
ACL Per Port Meters—number of meters supported per port.	ExtremeSwitching X435	8
ACL port ranges	ExtremeSwitching X435	32
Meters Packets-Per-Second Capable	ExtremeSwitching X435	Yes
AVB (audio video bridging)—maximum number of active streams.	ExtremeSwitching X435	512
BOOTP/DHCP relay—maximum number of BOOTP or DHCP servers per virtual router.	ExtremeSwitching X435	8
BOOTP/DHCP relay—maximum number of BOOTP or DHCP servers per VLAN.	ExtremeSwitching X435	8
BOOTP/DHCP relay—maximum number of DHCPv4/v6 relay agents.	ExtremeSwitching X435	30
Connectivity fault management (CFM)—maximum number or CFM domains.	ExtremeSwitching X435	8
CFM—maximum number of CFM associations.	ExtremeSwitching X435	256
CFM—maximum number of CFM up end points.	ExtremeSwitching X435	32

Table 7: Supported Limits for Value Edge License (continued)

Metric	Product	Limit
CFM—maximum number of CFM down end points.	ExtremeSwitching X435	32
CFM—maximum number of CFM remote end points per up/down end point.	ExtremeSwitching X435	2,000
CFM—maximum number of dot1ag ports.	ExtremeSwitching X435	128
CFM—maximum number of CFM segments.	ExtremeSwitching X435	1,000
CFM—maximum number of MIPs.	ExtremeSwitching X435	256
DHCPv6 Prefix Delegation Snooping—Maximum number of DHCPv6 prefix delegation snooped entries.	ExtremeSwitching X435	30 (with static routes)
DHCP snooping entries—maximum number of DHCP snooping entries.	ExtremeSwitching X435	30
Dynamic ACLs—maximum number of ACLs processed per second. **Note:** Limits are load-dependent.	ExtremeSwitching X435 with 50 DACLs with 500 DACLs	10 5
EAPS domains—maximum number of EAPS domains.	ExtremeSwitching X435	4
EAPSv1 protected VLANs—maximum number of protected VLANs.	ExtremeSwitching X435	1,000
ERPS domains—maximum number of ERPS domains with or without CFM configured.	ExtremeSwitching X435	4
ERPSv1 protected VLANs—maximum number of protected VLANs.	ExtremeSwitching X435	1,000
ELSM (vlan-ports)—maximum number of VLAN ports.	ExtremeSwitching X435	2,000
Forwarding rate—maximum L3 software forwarding rate.	ExtremeSwitching X435	7,844 pps
FDB (unicast blackhole entries)—maximum number of unicast blackhole FDB entries.	ExtremeSwitching X435	16,019

Table 7: Supported Limits for Value Edge License (continued)

Metric	Product	Limit
FDB (multicast blackhole entries)—maximum number of multicast blackhole FDB entries.	ExtremeSwitching X435	16,384
FDB (maximum L2 entries)—maximum number of MAC addresses.	ExtremeSwitching X435	16,384 [g]
FDB (maximum L2 entries)—maximum number of multicast FDB entries.	ExtremeSwitching X435	512
Identity management—maximum number of Blacklist entries.	ExtremeSwitching X435	512
Identity management—maximum number of Whitelist entries.	ExtremeSwitching X435	512
Identity management—maximum number of roles that can be created.	ExtremeSwitching X435	64
Identity management—maximum role hierarchy depth allowed.	ExtremeSwitching X435	5
Identity management—maximum number of attribute value pairs in a role match criteria.	ExtremeSwitching X435	16
Identity management—maximum number of child roles for a role.	ExtremeSwitching X435	8
Identity management—maximum number of policies/dynamic ACLs that can be configured per role.	ExtremeSwitching X435	8
Identity management—maximum number of LDAP servers that can be configured.	ExtremeSwitching X435	8
Identity management—maximum number of Kerberos servers that can be configured.	ExtremeSwitching X435	20
Identity management—maximum database memory size.	ExtremeSwitching X435	512

Table 7: Supported Limits for Value Edge License (continued)

Metric	Product	Limit
Identity management—recommended number of identities per switch. **Note:** Number of identities per switch is for a default identity management database size (512 Kbytes) across all platforms.	ExtremeSwitching X435	100
Identity management—recommended number of ACL entries per identity. **Note:** Number of ACLs per identity, based on system ACL limitation.	ExtremeSwitching X435	20
Identity management—maximum number of dynamic ACL entries configured as an individual dynamic rule, or as an ACL entry in a policy file.	ExtremeSwitching X435	500
IGMP snooping per VLAN filters—maximum number of VLANs supported in per-VLAN IGMP snooping mode.	ExtremeSwitching X435	500
IGMPv2 subscriber—maximum number of IGMPv2 subscribers per port.[n]	ExtremeSwitching X435	2,500
IGMPv2 subscriber—maximum number of IGMPv2 subscribers per switch.[n]	ExtremeSwitching X435	12,500
IGMPv3 maximum source per group—maximum number of source addresses per group.	ExtremeSwitching X435	250
IGMPv3 subscriber—maximum number of IGMPv3 subscribers per port.[n]	ExtremeSwitching X435	1,000
IGMPv3 subscriber—maximum number of IGMPv3 subscribers per switch.[n]	ExtremeSwitching X435	10,000

Table 7: Supported Limits for Value Edge License (continued)

Metric	Product	Limit
IP ARP entries in software—maximum number of IP ARP entries in software. **Note:** Might be limited by hardware capacity of FDB (maximum L2 entries).	ExtremeSwitching X435	20,424
IPv4 ARP entries in hardware with minimum LPM routes—maximum recommended number of IPv4 ARP entries in hardware, with minimum LPM routes present. Assumes number of IP route reserved entries is 100 or less.	ExtremeSwitching X435	509 [h]
IPv4 ARP entries in hardware with maximum LPM routes—maximum recommended number of IPv4 ARP entries in hardware, with maximum LPM routes present. Assumes number of IP route reserved entries is “maximum.”	ExtremeSwitching X435	500 [h]
IPv4 remote hosts in hardware with zero LPM routes—maximum recommended number of IPv4 remote hosts (hosts reachable through a gateway) in hardware when LPM routing is not used. Assumes number of IP route reserved entries is 0, and number of IPv4 ARP entries present is 100 or less.	ExtremeSwitching X435	3,100 [h]
IPv4 routes—maximum number of static IPv4 routes in software (combination of unicast and multicast routes).	ExtremeSwitching X435	32
IPv4 routes (LPM entries in hardware)— number of IPv4 routes in hardware.	ExtremeSwitching X435	32
IPv6 addresses on an interface—maximum number of IPv6 addresses on an interface.	ExtremeSwitching X435	15
IPv6 addresses on a switch—maximum number of IPv6 addresses on a switch.	ExtremeSwitching X435	15

Table 7: Supported Limits for Value Edge License (continued)

Metric	Product	Limit
IPv6 host entries in hardware—maximum number of IPv6 neighbor entries in hardware.	ExtremeSwitching X435	500
IPv6 routes in software—maximum number of static IPv6 routes in software.	ExtremeSwitching X435	16
IPv6 routes (LPM entries in hardware)—maximum number of IPv6 routes in hardware.	ExtremeSwitching X435	16
IP router interfaces—maximum number of VLANs performing IPv4 and/or IPv6 routing. Excludes sub-VLANs.	ExtremeSwitching X435	30
IP unicast static routes—maximum number of permanent IP unicast routes.	ExtremeSwitching X435	32
IP multinetting (secondary IP addresses)—maximum number of secondary IP addresses per VLAN.	ExtremeSwitching X435	30
Jumbo frames—maximum size supported for jumbo frames, including the CRC.	ExtremeSwitching X435	9,216
Layer-2 IPMC forwarding caches—(IGMP/MLD/PIM snooping) in mac-vlan mode. **Note:** • The internal lookup table configuration used is "l2-and-l3". • IPv6 and IPv4 L2 IPMC scaling is the same for this mode. • Layer-2 IPMC forwarding cache limits—(IGMP/MLD/PIM snooping) in mixed-mode are the same.	ExtremeSwitching X435	5,000

Table 7: Supported Limits for Value Edge License (continued)

Metric	Product	Limit
Layer-3 IPv4 Multicast—maximum number of <S,G,V> entries installed in the hardware (IP multicast compression enabled). Note: • Limit value is the same for MVR senders, PIM Snooping entries. PIM SSM cache, IGMP senders, PIM cache. • Assumes source-group-vlan mode as look up key. • Layer 3 IPMC cache limit in mixed mode also has the same value.	ExtremeSwitching X435	1,500
Layer-3 IPv6 Multicast—maximum number of <S,G,V> entries installed in the hardware (IP multicast compression enabled). Note: • Limit value is the same for MLD sender per switch, PIM IPv6 cache. • Assumes source-group-vlan mode as lookup key.	ExtremeSwitching X435	700
Load sharing—maximum number of load sharing groups. Note: The actual number of load-sharing groups that can be configured is limited by the number of physical ports present in the switch or SummitStack.	ExtremeSwitching X435	8
Load sharing—maximum number of ports per load-sharing group.	ExtremeSwitching X435 (standalone only)	8
Logged messages—maximum number of messages logged locally on the system.	ExtremeSwitching X435	20,000

Table 7: Supported Limits for Value Edge License (continued)

Metric	Product	Limit
MAC-based security—maximum number of MAC-based security policies.	ExtremeSwitching X435	1,024
MAC Locking—Maximum number of MAC locking stations that can be learned on a port.	ExtremeSwitching X435	64 (static MAC locking stations) 600 (first arrival MAC locking stations)
Meters—maximum number of meters.	ExtremeSwitching X435	512
Maximum mirroring instances.	ExtremeSwitching X435	1 (egress)
Mirroring (filters)—maximum number of mirroring filters. **Note:** This is the number of filters across all the active mirroring instances.	ExtremeSwitching X435	128
Mirroring, one-to-many (filters)—maximum number of one-to-many mirroring filters. **Note:** This is the number of filters across all the active mirroring instances.	ExtremeSwitching X435	128
Mirroring, one-to-many (monitor port)—maximum number of one-to-many monitor ports.	ExtremeSwitching X435	1
Multicast listener discovery (MLD) snooping per-VLAN filters—maximum number of VLANs supported in per-VLAN MLD snooping mode.	ExtremeSwitching X435	63
Multicast listener discovery (MLD)v1 subscribers—maximum number of MLDv1 subscribers per port.[n]	ExtremeSwitching X435	2,500
Multicast listener discovery (MLD)v1 subscribers—maximum number of MLDv1 subscribers per switch.[n]	ExtremeSwitching X435	12,500

Table 7: Supported Limits for Value Edge License (continued)

Metric	Product	Limit
Multicast listener discovery (MLD)v2 subscribers—maximum number of MLDv2 subscribers per port.[n]	ExtremeSwitching X435	2,000
Multicast listener discovery (MLD)v2 subscribers—maximum number of MLDv2 subscribers per switch.[n]	ExtremeSwitching X435	10,000
Multicast listener discovery (MLD)v2 maximum source per group—maximum number of source addresses per group.	ExtremeSwitching X435	200
Network Login—maximum number of clients being authenticated on MAC-based VLAN enabled ports.	ExtremeSwitching X435	1,024
Network Login—maximum number of dynamic VLANs.	ExtremeSwitching X435	1,024
Network Login VLAN VSAs—maximum number of VLANs a client can be authenticated on at any given time.	ExtremeSwitching X435	10
Network Service Identifiers (NSI)/VLAN mappings—maximum number of VLANs to NSI mappings.	ExtremeSwitching X435	94
ONEPolicy Roles/Profiles—maximum number of policy roles/profiles.	ExtremeSwitching X435	63
ONEPolicy Rules per Role/Profile—maximum number of rules per role/policy.	ExtremeSwitching X435	IPv4 Rules: 128 L2 Rules: 56
ONEPolicy Authenticated Users per Switch—maximum number of authenticated users per switch with TCI-Overwrite disabled. **Note:** The maximum values assume 75% utilization of VLAN-XLATE hash table.	ExtremeSwitching X435	192

Table 7: Supported Limits for Value Edge License (continued)

Metric	Product	Limit
ONEPolicy Authenticated Users per Port per Switch — maximum number of authenticated users per port per switch with TCI overwrite disabled. **Note:** The maximum values assume 75% utilization of VLAN-XLATE hash table.	ExtremeSwitching X435	187
ONEPolicy Permit/Deny Traffic Classification Rules Types—total maximum number of unique permit/deny traffic classification rules types (system/stack).	ExtremeSwitching X435	184
ONEPolicy Permit/Deny Traffic Classification Rules Types—maximum number of unique IPv4 permit/deny traffic classification rules (typesipsource / ipdest / ipfrag / udpsourceportIP / udpdestportIP / tcpsourceportIP / tcpdestportIP / ipttl / iptos / iptype).	ExtremeSwitching X435	128
ONEPolicy Permit/Deny Traffic Classification Rules Types—maximum number of unique Layer 2 permit/deny traffic classification rules (ethertype/port).	ExtremeSwitching X435	56
Policy-based routing (PBR) redundancy—maximum number of flow-redirects.	ExtremeSwitching X435	256 [o]
Policy-based routing (PBR) redundancy—maximum number of next hops per each flow-direct.	ExtremeSwitching X435	32 [o]
Private VLANs—maximum number of subscribers. Assumes a minimum of one port per network and subscriber VLAN.	ExtremeSwitching X435	15

Table 7: Supported Limits for Value Edge License (continued)

Metric	Product	Limit
Private VLANs—maximum number of private VLANs with an IP address on the network VLAN. **Note:** This limit is dependent on the maximum number of private VLANs in an L2-only environment if the configuration has tagged and translated ports.	ExtremeSwitching X435	15
Private VLANs—maximum number of private VLANs in an L2-only environment.	ExtremeSwitching X435	15
Route policies—suggested maximum number of lines in a route policy file.	ExtremeSwitching X435	10,000
Spanning Tree (maximum STPDs)—maximum number of Spanning Tree Domains on port mode EMISTP.	ExtremeSwitching X435	16
Spanning Tree PVST+—maximum number of port mode PVST domains. **Note:** For all platforms, the maximum number of active ports per PVST domain depends on the maximum number of spanning tree ports supported on given platform. For example, on a switch that supports 256 PVST domains (maximum) and 4,096 STP ports (maximum), the maximum number of active ports per PVST domain would be 16 ports (4,096 ÷ 256).	ExtremeSwitching X435	128
Spanning Tree—maximum number of multiple spanning tree instances (MSTI) domains.	ExtremeSwitching X435	16
Spanning Tree—maximum number of VLANs per MSTI. **Note:** Maximum number of 10 active ports per VLAN when all 100 VLANs are in one MSTI.	ExtremeSwitching X435	100

Table 7: Supported Limits for Value Edge License (continued)

Metric	Product	Limit
Spanning Tree—maximum number of VLANs on all MSTP instances.	ExtremeSwitching X435	256
Spanning Tree (802.1d domains)—maximum number of 802.1d domains per port.	ExtremeSwitching X435	1
Spanning Tree (number of ports)—maximum number of ports including all Spanning Tree domains.	ExtremeSwitching X435	1,024
Spanning Tree (maximum VLANs)—maximum number of STP-protected VLANs (dot1d and dot1w).	ExtremeSwitching X435	256
SSH (number of sessions)—maximum number of simultaneous SSH sessions.	ExtremeSwitching X435	8
Static MAC multicast FDB entries—maximum number of permanent multicast MAC entries configured into the FDB.	ExtremeSwitching X435	1,024
Syslog servers—maximum number of simultaneous Syslog servers that are supported.	ExtremeSwitching X435	16
Syslog targets—maximum number of configurable Syslog targets.	ExtremeSwitching X435	16
Telnet (number of sessions)—maximum number of simultaneous Telnet sessions.	ExtremeSwitching X435	8
Virtual routers—maximum number of user-created virtual routers that can be created on a switch.	ExtremeSwitching X435	16 (local-only VRs)
Virtual router forwarding (VRFs)—maximum number of VRFs that can be created on a switch. **Note:** * Subject to other system limitations.	ExtremeSwitching X435	16 (local-only VRFs)

Table 7: Supported Limits for Value Edge License (continued)

Metric	Product	Limit
VLAN aggregation—maximum number of port-VLAN combinations on any one superVLAN and all of its subVLANs.	ExtremeSwitching X435	1,000
VLANs—includes all VLANs.	ExtremeSwitching X435	4,094
VLANs (Layer 2)—maximum number of Layer 2 VLANs.	ExtremeSwitching X435	4,094
VLANs (Layer 3)—maximum number of VLANs performing IPv4 and/or IPv6 routing. Excludes sub-VLANs.	ExtremeSwitching X435	IPv4: 30 IPv6: 15
VLANs (maximum active port-based)—maximum active ports per VLAN when 1,000 VLANs are configured with default license.	ExtremeSwitching X435	28
VLAN Port Interfaces (VPIF)—maximum number of VLAN port interfaces.	ExtremeSwitching X435	4,090
VLANs (maximum active protocol-sensitive filters)—number of simultaneously active protocol filters in the switch.	ExtremeSwitching X435	16
VLAN translation—maximum number of translation VLANs. Assumes a minimum of one port per translation and member VLAN.	ExtremeSwitching X435	15
VLAN translation—maximum number of translation VLAN pairs with an IP address on the translation VLAN. **Note:** This limit is dependent on the maximum number of translation VLAN pairs in an L2-only environment if the configuration includes tagged and translated ports.	ExtremeSwitching X435	15
VLAN translation—maximum number of translation VLAN pairs in an L2-only environment.	ExtremeSwitching X435	15

Table 7: Supported Limits for Value Edge License (continued)

Metric	Product	Limit
VMAN CEP—maximum number of CVIDs.	ExtremeSwitching X435	192
XML requests—maximum number of XML requests per second. Note: Limits are dependent on load and type of XML request. These values are dynamic ACL data requests.	ExtremeSwitching X435	10 with 100 DACLs

Edge License Limits

The following table shows supported limits for features in the Edge License.

Note
X590, X620-X (fiber), and X690 are not supported in this version.

Table 8: Supported Limits for Edge License

Metric	Product	Limit
AAA (local)—maximum number of admin and local user accounts.	All platforms, except X435	16
Access lists (meters)—maximum number of meters.	ExtremeSwitching X440-G2	1,024 ingress 256 egress
	ExtremeSwitching X450-G2, X460-G2	1,024 ingress 512 egress
	ExtremeSwitching X465	2,048 ingress 512 egress
	ExtremeSwitching X695	6,000 ingress 2,000 egress
Access lists (policies)—suggested maximum number of lines in a single policy file.	All platforms, except X435	300,000
Access lists (policies)—maximum number of rules in a single policy file.[a]	ExtremeSwitching X460-G2, X450-G2	4,096 ingress 1,024 egress
	ExtremeSwitching X440-G2	2,048 ingress 512 egress
	ExtremeSwitching X465, X695	8,192 ingress 1,024 egress

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
Access lists (policies)—maximum number of rules in a single policy file in first stage (VFP).	ExtremeSwitching X450-G2, X460-G2, X465	2,048 ingress only
	ExtremeSwitching X695	1,024 ingress only
	ExtremeSwitching X440-G2	512 ingress only
Access lists (slices)—number of ACL slices.	ExtremeSwitching X460-G2, X450-G2	16 ingress 4 egress
	ExtremeSwitching X465, X695	12 ingress 4 egress
	ExtremeSwitching X440-G2	8 ingress 4 egress
Access lists (slices)—number of ACL slices in first stage (VFP).	ExtremeSwitching X450-G2, X460-G2, X465, X440-G2, X695	4 ingress only
ACL Per Port Meters—number of meters supported per port.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	16
ACL port ranges.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	32
Meters Packets-Per-Second Capable.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	Yes
AVB (audio video bridging)—maximum number of active streams.	ExtremeSwitching X450-G2, X460-G2, X440-G2	1,024
	ExtremeSwitching X465, X695	4,096
BFD sessions (Software Mode)—maximum number of BFD sessions.	ExtremeSwitching X460-G2, X450-G2, X440-G2, X465, X695 (default timers—1 sec)	512
	ExtremeSwitching X460-G2, X450-G2, X440-G2, X465, X695 (minimal timers—100 msec)	10 [C]
BFD IPv4 sessions (Hardware Assisted)—maximum number of IPv4 BFD sessions.	ExtremeSwitching X460-G2, X465, X695	900 (PTP not enabled) 425 (PTP enabled) 256 (with 3 ms transmit interval)
BFD IPv6 sessions (Hardware Assisted)—maximum number of IPv6 BFD sessions.	ExtremeSwitching X460-G2, X465, X695	425 (PTP not enabled)
BOOTP/DHCP relay—maximum number of BOOTP or DHCP servers per virtual router.	ExtremeSwitching X460-G2, X450-G2, X440-G2, X465, X695	8

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
BOOTP/DHCP relay—maximum number of BOOTP or DHCP servers per VLAN.	ExtremeSwitching X460-G2, 450-G2, X440-G2, X465, X695	8
BOOTP/DHCP relay—maximum number of DHCPv4/v6 relay agents	ExtremeSwitching X460-G2, X450-G2, X440-G2, X465, X695	4,000
Connectivity fault management (CFM)—maximum number or CFM domains. **Note:** With Advanced Edge license or higher.	ExtremeSwitching X460-G2, X450-G2, X440-G2, X465, X695	8
CFM—maximum number of CFM associations. **Note:** With Advanced Edge license or higher.	ExtremeSwitching X460-G2, X450-G2, X440-G2, X465, X695	256
CFM—maximum number of CFM up end points. **Note:** With Advanced Edge license or higher.	ExtremeSwitching X460-G2, X450-G2, X440-G2, X465, X695	32
CFM—maximum number of CFM down end points. **Note:** With Advanced Edge license or higher.	ExtremeSwitching X460-G2, X450-G2, X440-G2, X465, X695 ExtremeSwitching X460-G2	32 256 (non-load shared ports) 32 (load shared ports)
CFM—maximum number of CFM remote end points per up/down end point. **Note:** With Advanced Edge license or higher.	ExtremeSwitching X460-G2, X450-G2, X440-G2, X465, X695	2,000
CFM—maximum number of dot1ag ports. **Note:** With Advanced Edge license or higher.	ExtremeSwitching X460-G2, X450-G2, X440-G2, X465, X695	128

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
CFM—maximum number of CFM segments. **Note:** With Advanced Edge license or higher.	ExtremeSwitching X460-G2, X450-G2, X440-G2, X465, X695	1,000
CFM—maximum number of MIPs. **Note:** With Advanced Edge license or higher.	ExtremeSwitching X460-G2, X450-G2, X440-G2, X465, X695	256
CLEAR-Flow—total number of rules supported. The ACL rules plus CLEAR-Flow rules must be less than the total number of supported ACLs.	ExtremeSwitching X460-G2, X450-G2 ExtremeSwitching X440-G2 ExtremeSwitching X465, X695	4,094 1,024 8,192
Data Center Bridging eXchange (DCBX) protocol Type Length Value (TLVs)—maximum number of DCBX application TLVs.	ExtremeSwitching X460-G2, X450-G2, X440-G2, X465, X695	8
DHCPv6 Prefix Delegation Snooping—Maximum number of DHCPv6 prefix delegation snooped entries.	ExtremeSwitching X460-G2, X450-G2, X440-G2, X465, X695	256 (with underlying protocol RIPng) 128 (with underlying protocol OSPFv3) 1,024 (with static routes)
DHCP snooping entries—maximum number of DHCP snooping entries.	ExtremeSwitching X460-G2, X450-G2, X440-G2, X465, X695	2,048
Dynamic ACLs—maximum number of ACLs processed per second. **Note:** Limits are load-dependent.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695 with 50 DACLs with 500 DACLs	 10 5

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
EAPS domains—maximum number of EAPS domains. **Note:** An EAPS ring that is being spatially reused cannot have more than four configured EAPS domains. **Note:** You can increase the number of domains by upgrading to the Advanced Edge license.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	4
EAPSv1 protected VLANs—maximum number of protected VLANs.	ExtremeSwitching X450-G2, X460-G2, X440-G2-24T/P	1,000
	ExtremeSwitching X465, X695	2,000
ERPS domains—maximum number of ERPS domains with or without CFM configured. **Note:** You can increase the number of domains by upgrading to the Advanced Edge license.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	4
ERPSv1 protected VLANs—maximum number of protected VLANs.	ExtremeSwitching X465, X695	2,000
	ExtremeSwitching X450-G2, X460-G2, X440-G2-24T/P	1,000
ERPSv2 protected VLANs—maximum number of protected VLANs.	ExtremeSwitching X450-G2, X460-G2, X465, X695	2,000
	ExtremeSwitching X440-G2-24T/P	500
ELSM (vlan-ports)—maximum number of VLAN ports.	ExtremeSwitching X450-G2, X460-G2, X465, X695	5,000
	ExtremeSwitching X440-G2-24T/P	4,000
Extended Edge Switching maximum BPEs—maximum number of attached bridge port extenders (BPEs).	ExtremeSwitching X465	48
Extended Edge Switching maximum cascade ports—maximum number of upstream ports on bridge port extenders (BPEs).	ExtremeSwitching X465	2 on V400-24 and V300 models 4 on V400-48 models

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
Extended Edge Switching maximum tiers—maximum number of cascade levels (tiers) of bridge port extenders (BPEs).	ExtremeSwitching X465	4 (except for V300-8P-2T-W, which support 1 tier)
Extended Edge Switching maximum ring BPEs—maximum number of bridge port extenders (BPEs) in a ring topology.	ExtremeSwitching X465	8
Extended Edge Switching maximum VLANs—maximum number of VLANs - Includes all VLANs	ExtremeSwitching X465	4,094
Extended Edge Switching VLAN+ port memberships—maximum number of VLAN+ (extended) port memberships.	ExtremeSwitching X465	12,000 in hash mode (default) 131,000 in port-group mode
Forwarding rate—maximum L3 software forwarding rate.	ExtremeSwitching X440-G2	6,460 pps
	ExtremeSwitching X450-G2	16,000 pps
	ExtremeSwitching X465	28,497 pps
	ExtremeSwitching X460-G2	17,000 pps
	ExtremeSwitching	18,162 pps
	ExtremeSwitching X695	34,813 pps
FDB (unicast blackhole entries)—maximum number of unicast blackhole FDB entries.	ExtremeSwitching X460-G2	49,152[f]
	ExtremeSwitching X450-G2	34,816[f]
	ExtremeSwitching X440-G2	16,384[f]
	ExtremeSwitching X465	278,528[f]
	ExtremeSwitching X695	294,912 [f]
FDB (multicast blackhole entries)—maximum number of multicast blackhole FDB entries.	ExtremeSwitching X460-G2, X450-G2, X440-G2	1,024
	ExtremeSwitching X465, X695	4,096
FDB (maximum L2 entries)—maximum number of MAC addresses.	ExtremeSwitching X460-G2	98,300[g]
	ExtremeSwitching X450-G2	68,000[g]
	ExtremeSwitching X440-G2	16,384
	ExtremeSwitching X465, X695	278,528[g]
	ExtremeSwitching X695	294,912 [g]

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
FDB (maximum L2 entries)—maximum number of multicast FDB entries.	ExtremeSwitching X465, X695	4,096
	ExtremeSwitching X450-G2, X460-G2, X440-G2	1,024
Identity management—maximum number of Blacklist entries.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	512
Identity management—maximum number of Whitelist entries.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	512
Identity management—maximum number of roles that can be created.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	64
Identity management—maximum role hierarchy depth allowed.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	5
Identity management—maximum number of attribute value pairs in a role match criteria.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	16
Identity management—maximum number of child roles for a role.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	8
Identity management—maximum number of policies/dynamic ACLs that can be configured per role.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	8
Identity management—maximum number of LDAP servers that can be configured.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	8
Identity management—maximum number of Kerberos servers that can be configured.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	20
Identity management—maximum database memory size.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	512

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
Identity management—recommended number of identities per switch. **Note:** Number of identities per switch is for a default identity management database size (512 Kbytes) across all platforms.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	100
Identity management—recommended number of ACL entries per identity. **Note:** Number of ACLs per identity, based on system ACL limitation.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	20
Identity management—maximum number of dynamic ACL entries configured as an individual dynamic rule, or as an ACL entry in a policy file.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	500
IGMP snooping per VLAN filters—maximum number of VLANs supported in per-VLAN IGMP snooping mode.	ExtremeSwitching X460-G2, X695 ExtremeSwitching X450-G2 ExtremeSwitching X440-G2 ExtremeSwitching X465	1,500 2,048 1,000 4,000
IGMPv1/v2 SSM-map entries—maximum number of IGMPv1/v2 SSM mapping entries.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	500
IGMPv1/v2 SSM-map entries—maximum number of sources per group in IGMPv1/v2 SSM mapping entries.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	50
IGMPv2 subscriber—maximum number of IGMPv2 subscribers per port.[n]	ExtremeSwitching X465, X695, X460-G2, X450-G2 ExtremeSwitching X440-G2	4,000 3,500
IGMPv2 subscriber—maximum number of IGMPv2 subscribers per switch.[n]	ExtremeSwitching X460-G2, X450-G2 ExtremeSwitching X440-G2 ExtremeSwitching X465, X695	20,000 17,500 45,000

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
IGMPv3 maximum source per group—maximum number of source addresses per group.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	250
IGMPv3 subscriber—maximum number of IGMPv3 subscribers per port.[n]	ExtremeSwitching X440-G2	3,500
	ExtremeSwitching X460-G2, X450-G2, X465, X695	4,000
IGMPv3 subscriber—maximum number of IGMPv3 subscribers per switch.[n]	ExtremeSwitching X460-G2, X450-G2	20,000
	ExtremeSwitching X440-G2	17,500
	ExtremeSwitching X465, X695	45,000
IP ARP entries in software—maximum number of IP ARP entries in software. **Note:** Might be limited by hardware capacity of FDB (maximum L2 entries).	ExtremeSwitching X460-G2	57,344 (up to)[h]
	ExtremeSwitching X450-G2	47,000 (up to)[h]
	ExtremeSwitching X440-G2	20,480
	ExtremeSwitching X465	157,694 (up to) [h]
	ExtremeSwitching X695	184,318 (up to) [h]
IPv4 ARP entries in hardware with minimum LPM routes—maximum recommended number of IPv4 ARP entries in hardware, with minimum LPM routes present. Assumes number of IP route reserved entries is 100 or less.	ExtremeSwitching X460-G2	50,000 (up to)[h]
	ExtremeSwitching X450-G2	39,000 (up to)[h]
	ExtremeSwitching X440-G2	1,000
	ExtremeSwitching X465	119,000 (up to) [h]
	ExtremeSwitching X695	146,000 (up to) [h]
IPv4 ARP entries in hardware with maximum LPM routes—maximum recommended number of IPv4 ARP entries in hardware, with maximum LPM routes present. Assumes number of IP route reserved entries is "maximum."	ExtremeSwitching X460-G2	43,000 (up to)[h]
	ExtremeSwitching X450-G2	29,000 (up to)[h]
	ExtremeSwitching X440-G2	1,000
	ExtremeSwitching X465	109,000 (up to) [h]
	ExtremeSwitching X695	125,000 (up to) [h]
IP flow information export (IPFIX)—number of simultaneous flows.	ExtremeSwitching X460-G2	2,048 ingress 2,048 egress
	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	N/A

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
IPv4 remote hosts in hardware with zero LPM routes—maximum recommended number of IPv4 remote hosts (hosts reachable through a gateway) in hardware when LPM routing is not used. Assumes number of IP route reserved entries is 0, and number of IPv4 ARP entries present is 100 or less.	ExtremeSwitching X460-G2	73,000 [h]
	ExtremeSwitching X450-G2	61,000 (up to) [h]
	ExtremeSwitching X440-G2	3,500
	ExtremeSwitching X465	216,000 (up to) [h]
	ExtremeSwitching X695	241,000 (up to) [h]
IPv4 routes—maximum number of IPv4 routes in software (combination of unicast and multicast routes), including static and from all routing protocols.	ExtremeSwitching X460-G2, X450-G2, X440-G2	25,000
	ExtremeSwitching X465, X695	131,000
IPv4 routes (LPM entries in hardware)— number of IPv4 routes in hardware.	ExtremeSwitching X460-G2	12,000
	ExtremeSwitching X450-G2	16,000
	ExtremeSwitching X465, X695	131,000 [q]
	ExtremeSwitching X440-G2	480
IPv6 6in4 tunnel—maximum number of IPv6 6in4 tunnels.	ExtremeSwitching X450-G2, X460-G2, X465, X695	255
	ExtremeSwitching X440-G2	N/A
IPv6 6to4 tunnel—maximum number of IPv6 6to4 tunnels.	ExtremeSwitching X450-G2, X460-G2, X465, X695	1 (per virtual router)
	ExtremeSwitching X440-G2	N/A
IPv6 addresses on an interface—maximum number of IPv6 addresses on an interface.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	255
IPv6 addresses on a switch—maximum number of IPv6 addresses on a switch.	ExtremeSwitching X460-G2, X450-G2, X465, X695	2,048
	ExtremeSwitching X440-G2	510
IPv6 host entries in hardware—maximum number of IPv6 neighbor entries in hardware.	ExtremeSwitching X460-G2,	22,000 [h]
	ExtremeSwitching X450-G2	12,000 [h]
	ExtremeSwitching X440-G2	1,000
	ExtremeSwitching X465	24,500 [s]
	ExtremeSwitching X695	57,000 [h]

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
IPv6 routes in software—maximum number of IPv6 routes in software, including static routes and routes from all routing protocols.	ExtremeSwitching X450-G2, X460-G2, X440-G2	25,000
	ExtremeSwitching X465, X695	65,000 [q]
IPv6 routes (LPM entries in hardware)—maximum number of IPv6 routes in hardware.	ExtremeSwitching X460-G2	6,000
	ExtremeSwitching X450-G2	8,000
	ExtremeSwitching X465, X695	65,000 [q]
	ExtremeSwitching X440-G2	240
IPv6 routes with a mask greater than 64 bits in hardware—maximum number of such IPv6 LPM routes in hardware.	ExtremeSwitching X465, X695	8,192 [r]
	ExtremeSwitching X440-G2	1,024
	ExtremeSwitching X450-G2, X460-G2	2,048
IPv6 route sharing in hardware—route mask lengths for which ECMP is supported in hardware.	ExtremeSwitching X460-G2, X450-G2	0–64 >64 single path only
	ExtremeSwitching X465, X695	0–128 [r]
	ExtremeSwitching X440-G2	Not supported
IP router interfaces—maximum number of VLANs performing IPv4 and/or IPv6 routing. Excludes sub-VLANs.	ExtremeSwitching X460-G2,X450-G2, X465, X695	2,048
	ExtremeSwitching X440-G2	510
IP multicast static routes—maximum number of permanent multicast IP routes.	ExtremeSwitching X460-G2, X450-G2, X465, X695	1,024
IP unicast static routes—maximum number of permanent IP unicast routes.	ExtremeSwitching X460-G2, X450-G2, X465, X695	1,024
	ExtremeSwitching X440-G2	480

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
IP route sharing (maximum gateways)—Configurable maximum number of gateways used by equal cost multipath OSPF, BGP, IS-IS, static routes, or L2VPNs. Static routes, OSPF, and BGP are limited to 64 ECMP gateways per destination, while IS-IS is limited to 8. L2VPNs are limited to 16 LSPs per pseudowire on platforms that support 32 gateways, and 64 LSPs per pseudowire on platforms that support 64 gateways.	ExtremeSwitching X460-G2, X450-G2, X465, X695	2, 4, 8, 16, 32, or 64
	ExtremeSwitching X440-G2	N/A

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
IP route sharing (total combinations of gateway sets)—maximum number of combinations of sets of adjacent gateways used by multipath OSPF, BGP, IS-IS, or static routes.	ExtremeSwitching X460-G2, X450-G2	
	if maximum gateways is 2	1,022
	if maximum gateways is 4	1,022
	if maximum gateways is 8	510
	if maximum gateways is 16 (default)	254
	if maximum gateways is 32	126
	if maximum gateways is 64	62
	ExtremeSwitching X465, X695	
	if maximum gateways is 2	4,094
	if maximum gateways is 4	4,094
	if maximum gateways is 8	2,046
	if maximum gateways is 16 (default)	1,022
	if maximum gateways is 32	510
	if maximum gateways is 64	254
	Note: The values here represent the maximum attainable ECMP groups of which, due to the RIOT feature, half are reserved for overlay and half for underlay routing. For more information about RIOT, see *ExtremeXOS v33.5.1 User Guide*.	
	ExtremeSwitching X870	
	if maximum gateways is 2	2,046
	if maximum gateways is 4	2,046
	if maximum gateways is 8	2,046
	if maximum gateways is 16 (default)	1,022
	if maximum gateways is 32	510
	if maximum gateways is 64	254
	ExtremeSwitching X440-G2	N/A
IP multinetting (secondary IP addresses)—maximum number of secondary IP addresses per VLAN.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	255
Jumbo frames—maximum size supported for jumbo frames, including the CRC.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	9,216

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
Layer-2 IPMC forwarding caches—(IGMP/MLD/PIM snooping) in mac-vlan mode. **Note:** • The internal lookup table configuration used is "l2-and-l3". • IPv6 and IPv4 L2 IPMC scaling is the same for this mode. • Layer-2 IPMC forwarding cache limits—(IGMP/MLD/PIM snooping) in mixed-mode are the same.	ExtremeSwitching X695 ExtremeSwitching X460-G2 ExtremeSwitching X450-G2 ExtremeSwitching X440-G2 ExtremeSwitching X465	73,000 24,000 14,000 5,000 67,000
Layer-3 IPv4 Multicast—maximum number of <S,G,V> entries installed in the hardware (IP multicast compression enabled). **Note:** • Limit value is the same for MVR senders, PIM Snooping entries. PIM SSM cache, IGMP senders, PIM cache. • Assumes source-group-vlan mode as look up key. • Layer 3 IPMC cache limit in mixed mode also has the same value.	ExtremeSwitching X460-G2 ExtremeSwitching X450-G2 ExtremeSwitching X440-G2 ExtremeSwitching X465 ExtremeSwitching X695	26,000 21,000 1,500 93,000 104,000
Layer-3 IPv6 Multicast—maximum number of <S,G,V> entries installed in the hardware (IP multicast compression enabled). **Note:** • Limit value is the same for MLD sender per switch, PIM IPv6 cache. • Assumes source-group-vlan mode as lookup key.	ExtremeSwitching X460-G2 ExtremeSwitching X450-G2 ExtremeSwitching X440-G2 ExtremeSwitching X465 ExtremeSwitching X695	14,000 10,000 700 48,000 52,000

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
Load sharing—maximum number of load sharing groups. **Note:** The actual number of load-sharing groups that can be configured is limited by the number of physical ports present in the switch or SummitStack.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	128
Load sharing—maximum number of ports per load-sharing group.	For standalone and stacked: ExtremeSwitching X440-G2 For standalone: ExtremeSwitching X460-G2, X450-G2, X465, X695 For stacked: ExtremeSwitching X460-G2, X450-G2, X465, X695	8 32 64
Logged messages—maximum number of messages logged locally on the system.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	20,000
MAC-based security—maximum number of MAC-based security policies.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	1,024
MAC Locking—Maximum number of MAC locking stations that can be learned on a port.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	64 (static MAC locking stations) 600 (first arrival MAC locking stations)
Meters—maximum number of meters supported.	ExtremeSwitching X460-G2, X450-G2, X440-G2 , X465, X695	2,048

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
Maximum mirroring instances.	ExtremeSwitching X450-G2, X460-G2, X465, X695 **Note:** Only two or four mirroring instances will be active at a time, depending on the mirroring filter added to it. There are four hardware resource slots. Each single instance uses one such slot, while each ingress plus egress instance uses two slots. You can use a total of four slots, while there are no more than two egress instances. The maximum possible combination for mirroring instances: 1. 4 ingress 2. 3 ingress + 1 egress 3. 2 ingress + 2 egress 4. 2 (ingress + egress) 5. 1 (ingress + egress) + 2 ingress 6. 1 (ingress + egress) + 1 egress + 1 ingress	16 (including default mirroring instance)
	ExtremeSwitching X440-G2 **Note:** For stacks containing X440-G2, maximum supported egress mirror instances is 1.	1 (egress)
Mirroring (filters)—maximum number of mirroring filters. **Note:** This is the number of filters across all the active mirroring instances.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	128
Mirroring, one-to-many (filters)—maximum number of one-to-many mirroring filters. **Note:** This is the number of filters across all the active mirroring instances.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	128
Mirroring, one-to-many (monitor port)—maximum number of one-to-many monitor ports.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	16

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
MLAG ports—maximum number of MLAG ports allowed. **Note:** The number of MLAG ports that can be configured is limited by the number of physical ports present in the system.	ExtremeSwitching X695	61
	ExtremeSwitching X440-G2, X450-G2	51
	ExtremeSwitching X460-G2	53
	ExtremeSwitching	35
	ExtremeSwitching X465	55
	Stacking	480
MLAG peers—maximum number of MLAG peers allowed.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	2
Multicast listener discovery (MLD) snooping per-VLAN filters—maximum number of VLANs supported in per-VLAN MLD snooping mode.	ExtremeSwitching X460-G2	768
	ExtremeSwitching X450-G2	508
	ExtremeSwitching X440-G2	256
	ExtremeSwitching X465, X695	1,500
Multicast listener discovery (MLD)v1 subscribers—maximum number of MLDv1 subscribers per port.[n]	ExtremeSwitching X450-G2, X460-G2	4,000
	ExtremeSwitching X440-G2	3,500
	ExtremeSwitching X465, X695	4,000
Multicast listener discovery (MLD)v1 subscribers—maximum number of MLDv1 subscribers per switch.[n]	ExtremeSwitching X460-G2, X450-G2, X440-G2	10,000
	ExtremeSwitching X465, X695	45,000
Multicast listener discovery (MLD)v2 subscribers—maximum number of MLDv2 subscribers per port.[n]	ExtremeSwitching X460-G2, X450-G2	4,000
	ExtremeSwitching X440-G2	3,500
	ExtremeSwitching X465, X695	4,000
Multicast listener discovery (MLD)v2 subscribers—maximum number of MLDv2 subscribers per switch.[n]	ExtremeSwitching X460-G2, X450-G2, X440-G2	10,000
	ExtremeSwitching X465, X695	45,000
Multicast listener discovery (MLD)v2 maximum source per group—maximum number of source addresses per group.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	200

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
Multicast listener discovery (MLD) SSM-map entries—maximum number of MLD SSM mapping entries.	ExtremeSwitching X450-G2, X460-G2, X465, X695	500
	ExtremeSwitching X440-G2	50
Multicast listener discovery (MLD) SSM-MAP entries—maximum number of sources per group in MLD SSM mapping entries.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	50
Network Login—maximum number of clients being authenticated on MAC-based VLAN enabled ports.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	1,024
Network Login—maximum number of clients being authenticated with policy mode enabled with TCI overwrite enabled.	ExtremeSwitching X450-G2, X460-G2, X465	1,024
	ExtremeSwitching X695	512
	ExtremeSwitching X440-G2	256
Network Login—maximum number of dynamic VLANs.	ExtremeSwitching X460-G2, X450-G2, X465, X695	2,000
	ExtremeSwitching X440-G2	1,024
Network Login VLAN VSAs—maximum number of VLANs a client can be authenticated on at any given time.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	10
Network Service Identifiers (NSI)/VLAN mappings—maximum number of VLANs to NSI mappings.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	94
Network Address Translation (NAT) VLANs—maximum number of NAT VLANs.	ExtremeSwitching X465, X695	4
Network Address Translation (NAT) Sessions—number of NAT sessions supported (non twice-NAT).	ExtremeSwitching X465, X695	1,023
Node Alias—maximum number of entries per slot.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	8,192

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
ONEPolicy Dynamic ACL Rules—maximum number of Dynamic ACLs supported via RADIUS VSA 232 per user in Access-List mode.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	64
ONEPolicy Roles/Profiles—maximum number of policy roles/profiles.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	63
ONEPolicy Rules per Role/Profile—maximum number of rules per role/policy.	ExtremeSwitching X450-G2, X460-G2	IPv6 rules: 256 IPv4 rules: 256 L2 Rules: 184 MAC Rules: 256
	ExtremeSwitching X440-G2	IPv6 and Mac Rules: 0 Ipv4 Rules: 256 (per switch) L2 Rules: 184 (per switch)
	ExtremeSwitching X465, X695	IPv4 Rules: 512 IPv6 Rules: 512 MAC Rules: 512 L2 Rules: 440
ONEPolicy Authenticated Users per Switch—maximum number of authenticated users per switch only with TCI-Overwrite enabled.	ExtremeSwitching X450-G2, X460-G2, X465	1,024
	ExtremeSwitching X695	512
	ExtremeSwitching X440-G2	256
	Stacking	Depends on the stack nodes, but the maximum is 65,535.
ONEPolicy Authenticated Users per Switch—maximum number of authenticated users per switch with TCI-Overwrite disabled. **Note:** The maximum values assume 75% utilization of VLAN-XLATE hash table.	X465	24,576
	ExtremeSwitching X460-G2, X695	12,288
	ExtremeSwitching X450-G2	6,144
	ExtremeSwitching X440-G2	1,536
	Stacking	1,536–65,534

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
ONEPolicy Authenticated Users per Port per Switch — maximum number of authenticated users per port per switch with TCI overwrite disabled. **Note:** The maximum values assume 75% utilization of VLAN-XLATE hash table.	ExtremeSwitching X450-G2 ExtremeSwitching X460-G2, X695 ExtremeSwitching X465 ExtremeSwitching X440-G2	6,144 12,288 24,576 1,536
ONEPolicy Authenticated Users per Port per Switch — maximum number of authenticated users per port with only with TCI-Overwrite enabled.	ExtremeSwitching X450-G2, X460-G2, X465 ExtremeSwitching X695 ExtremeSwitching X440-G2	1,024 512 256
ONEPolicy Permit/Deny Traffic Classification Rules Types—total maximum number of unique permit/deny traffic classification rules types (system/stack).	ExtremeSwitching X450-G2, X460-G2 ExtremeSwitching X440-G2 ExtremeSwitching X465, X695	952 440 1,976
ONEPolicy Permit/Deny Traffic Classification Rules Types—maximum number of unique MAC permit/deny traffic classification rules types (macsource/macdest).	ExtremeSwitching X450-G2, X460-G2 ExtremeSwitching X440-G2 ExtremeSwitching X465, X695	256 N/A 512
ONEPolicy Permit/Deny Traffic Classification Rules Types—maximum number of unique IPv6 permit/deny traffic classification rules types (ipv6dest).	ExtremeSwitching X450-G2, X460-G2 ExtremeSwitching X440-G2 ExtremeSwitching X465, X695	256 N/A 512
ONEPolicy Permit/Deny Traffic Classification Rules Types—maximum number of unique IPv4 permit/deny traffic classification rules (typesipsource / ipdest / ipfrag / udpsourceportIP / udpdestportIP / tcpsourceportIP / tcpdestportIP / ipttl / iptos / iptype).	ExtremeSwitching X450-G2, X460-G2, X440-G2, ExtremeSwitching X465, X695	256 512

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
ONEPolicy Permit/Deny Traffic Classification Rules Types—maximum number of unique Layer 2 permit/deny traffic classification rules (ethertype/port).	ExtremeSwitching X450-G2, X460-G2	184
	ExtremeSwitching X440-G2	184
	ExtremeSwitching X465, X695	440
OnePolicy Maximum number of rules supported in AccessList mode—maximum number of rules in AcessList mode.	ExtremeSwitching X450-G2, X460-G2	3,000
	ExtremeSwitching X440-G2	952
	ExtremeSwitching X695	3,512
	ExtremeSwitching X435	440
Policy-based routing (PBR) redundancy—maximum number of flow-redirects.	ExtremeSwitching X450-G2, X460-G2, X440-G2 , X465, X695	256 [o]
Policy-based routing (PBR) redundancy—maximum number of next hops per each flow-direct.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	32 [o]
Private VLANs—maximum number of subscribers. Assumes a minimum of one port per network and subscriber VLAN.	ExtremeSwitching X460-G2	53
	ExtremeSwitching X450-G2	51
	ExtremeSwitching X440-G2	47
	ExtremeSwitching X695	71
	ExtremeSwitching X465	31
Private VLANs—maximum number of private VLANs with an IP address on the network VLAN. **Note:** This limit is dependent on the maximum number of private VLANs in an L2-only environment if the configuration has tagged and translated ports.	ExtremeSwitching X460-G2, X465, X695	1,024
	ExtremeSwitching X450-G2	510
	ExtremeSwitching X440-G2	255
Private VLANs—maximum number of private VLANs in an L2-only environment.	ExtremeSwitching X460-G2, X465, X695	1,280
	ExtremeSwitching X450-G2	597
	ExtremeSwitching X440-G2	255
Route policies—suggested maximum number of lines in a route policy file.	ExtremeSwitching X460-G2, X440-G2, X465, X695	10,000

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
RIP Learned Routes—maximum number of RIP routes supported without aggregation.	ExtremeSwitchingX460-G2, X440-G2, X465, X695	10,000
RIP interfaces on a single router—recommended maximum number of RIP routed interfaces on a switch.	ExtremeSwitching X460-G2, X450-G2, X465, X695	256
	ExtremeSwitching X440-G2	128
RIPng learned routes—maximum number of RIPng routes.	ExtremeSwitching X460-G2, X450-G2, X465, X695	3,000
	ExtremeSwitching X440-G2	N/A
Spanning Tree (maximum STPDs)—maximum number of Spanning Tree Domains on port mode EMISTP.	ExtremeSwitching X450-G2, X460-G2, X465, X695	64
	ExtremeSwitching X440-G2	32
Spanning Tree PVST+—maximum number of port mode PVST domains. **Note:** For all platforms, the maximum number of active ports per PVST domain depends on the maximum number of spanning tree ports supported on given platform. For example, on a switch that supports 256 PVST domains (maximum) and 4,096 STP ports (maximum), the maximum number of active ports per PVST domain would be 16 ports (4,096 ÷ 256).	ExtremeSwitching X460-G2, X450-G2, X440-G2	128
	ExtremeSwitching X465, X695	384
Spanning Tree—maximum number of multiple spanning tree instances (MSTI) domains.	ExtremeSwitching X450-G2, X460-G2, X465, X695	64
	ExtremeSwitching X440-G2,	32
Spanning Tree—maximum number of VLANs per MSTI. **Note:** Maximum number of 10 active ports per VLAN when all 500 VLANs are in one MSTI.	ExtremeSwitching X460-G2, X450-G2, X465, X695	600
	ExtremeSwitching X440-G2	256

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
Spanning Tree—maximum number of VLANs on all MSTP instances.	ExtremeSwitching X460-G2, X450-G2, X465, X695	1,024
	ExtremeSwitching X440-G2	512
Spanning Tree (802.1d domains)—maximum number of 802.1d domains per port.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	1
Spanning Tree (number of ports)—maximum number of ports including all Spanning Tree domains.	ExtremeSwitching X450-G2, X460-G2, X465, X695	4,096
	ExtremeSwitching X440-G2	2,048
Spanning Tree (maximum VLANs)—maximum number of STP-protected VLANs (dot1d and dot1w).	ExtremeSwitching X460-G2, X450-G2, X465, X695	1,024
	ExtremeSwitching X440-G2	600
SSH (number of sessions)—maximum number of simultaneous SSH sessions.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	8
Static MAC multicast FDB entries—maximum number of permanent multicast MAC entries configured into the FDB.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	1,024
Syslog servers—maximum number of simultaneous Syslog servers that are supported.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	16
Syslog targets—maximum number of configurable Syslog targets.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	16
Telnet (number of sessions)—maximum number of simultaneous Telnet sessions.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	8
Virtual routers—maximum number of user-created virtual routers that can be created on a switch.	ExtremeSwitching X460-G2, X450-G2, X465, X695	63
	ExtremeSwitching X440-G2	16 (local-only VRs)

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
Virtual router forwarding (VRFs)—maximum number of VRFs that can be created on a switch. **Note:** * Subject to other system limitations.	ExtremeSwitching X460-G2,X450-G2, X465, X695 ExtremeSwitching X440-G2	960 * 16 (local-only VRFs)
Virtual router protocols per VR—maximum number of routing protocols per VR.	ExtremeSwitching X460-G2,X450-G2, X465, X695 ExtremeSwitching X440-G2	8 N/A
Virtual router protocols per switch—maximum number of VR protocols per switch.	ExtremeSwitching X460-G2,X450-G2, X465, X695 ExtremeSwitching X440-G2	64 N/A
VLAN aggregation—maximum number of port-VLAN combinations on any one superVLAN and all of its subVLANs.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	1,000
VLANs—includes all VLANs. **Note:** Only 4,092 user-configurable VLANs are supported. (VLAN 1 is the default VLAN, and 4,095 is the management VLAN, and you may not configure them.)	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	4,094
VLANs (Layer 2)—maximum number of Layer 2 VLANs.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	4,094
VLANs (Layer 3)—maximum number of VLANs performing IPv4 and/or IPv6 routing. Excludes sub-VLANs.	ExtremeSwitching X460-G2,X450-G2, X465, X695 ExtremeSwitching X440-G2	2,048 510
VLAN Port Interfaces (VPIF)—maximum number of VLAN port interfaces.	ExtremeSwitching X440-G2, X450-G2, X460-G2 ExtremeSwitching X465, X695	65,536 131,585

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
VLANs (maximum active port-based)—maximum active ports per VLAN when 4,094 VLANs are configured with the default license.	ExtremeSwitching X465, X695	32
	ExtremeSwitching X440-G2	28
	ExtremeSwitching X460-G2	26
	ExtremeSwitching X450-G2	29
VLANs (maximum active protocol-sensitive filters)—number of simultaneously active protocol filters in the switch.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	16
VLAN translation—maximum number of translation VLANs. Assumes a minimum of one port per translation and member VLAN.	ExtremeSwitching X460-G2	53
	ExtremeSwitching X450-G2	51
	ExtremeSwitching X440-G2	47
	ExtremeSwitching X695	71
	ExtremeSwitching X465	31
VLAN translation—maximum number of translation VLAN pairs with an IP address on the translation VLAN. **Note:** This limit is dependent on the maximum number of translation VLAN pairs in an L2-only environment if the configuration includes tagged and translated ports.	ExtremeSwitching X465, X695	1,024
	ExtremeSwitching X450-G2	512
	ExtremeSwitching X440-G2	255
VLAN translation—maximum number of translation VLAN pairs in an L2-only environment.	ExtremeSwitching X450-G2, X460-G2, X465, X695	2,046
	ExtremeSwitching X440-G2	255
VMAN CEP—maximum number of CVIDs. **Note:** With 75% hash table utilization.	ExtremeSwitching X440-G2	1,500
	ExtremeSwitching X450-G2	6,000
	ExtremeSwitching X460-G2,	12,000
	ExtremeSwitching X465	24,000

Table 8: Supported Limits for Edge License (continued)

Metric	Product	Limit
XML requests—maximum number of XML requests per second. Note: Limits are dependent on load and type of XML request. These values are dynamic ACL data requests.	ExtremeSwitching X460-G2, X450-G2, X440-G2, X465, X695	10 with 100 DACLs
XNV authentication—maximum number of VMs that can be processed (combination of local and network VMs).	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2, X440-G2	2,048 1,024
XNV database entries—maximum number of VM database entries (combination of local and network VMs).	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	16,000
XNV database entries—maximum number of VPP database entries (combination of local and network VPPs).	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	2,048
XNV dynamic VLAN—Maximum number of dynamic VLANs created (from VPPs /local VMs).	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	2,048
XNV local VPPs—maximum number of XNV local VPPs.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	2,048 ingress 512 egress
XNV policies/dynamic ACLs—maximum number of policies/dynamic ACLs that can be configured per VPP.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	8 ingress 4 egress
XNV network VPPs—maximum number of XNV network VPPs. p	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	2,048 ingress 512 egress

Advanced Edge License Limits

The following table shows supported limits for features in the Advanced Edge License.

Note
X590, X620-X (fiber), and X690 are not supported in this version.

Table 9: Supported Limits for Advanced Edge License

Metric	Product	Limit
BGP auto-peering— maximum number of auto-peering nodes and VTEPs.	ExtremeSwitching, X465, X695	64
BGP auto-peering attached IPv4 hosts— maximum number of attached IPv4 hosts.	ExtremeSwitching, X465, X695	64,000
BGP auto-peering attached IPv6 hosts— maximum number of attached IPv6 hosts.	ExtremeSwitching, X465, X695	8,000
BGP auto-peering ECMP— maximum number of equal cost multipath for auto-peering. **Note:** * Subject to the limitation imposed by the number of physical ports on a switch.	ExtremeSwitching, X465, X695	16*
BGP auto-peering maximum IPv4 prefixes with ECMP— Maximum number of IPv4 Network prefixes with ECMP.	ExtremeSwitching, X465, X695	64,000
BGP auto-peering maximum IPv6 prefixes with ECMP— Maximum number of IPv6 Network prefixes with ECMP.	ExtremeSwitching, X465, X695	8,000
BGP auto-peering MLAG peers—maximum MLAG peers per AutoBGP node.	ExtremeSwitching, X465, X695	1
BGP auto-peering VRFs— maximum number of VRFs.	ExtremeSwitching, X465, X695	64
BGP auto-peering EVPN instances—maximum EVPN instances.	ExtremeSwitching, X465, X695	1,024

Table 9: Supported Limits for Advanced Edge License (continued)

Metric	Product	Limit
EAPS domains—maximum number of EAPS domains. **Note:** An EAPS ring that is being spatially reused cannot have more than four configured EAPS domains.	ExtremeSwitching, X465, X695	128
	ExtremeSwitching X450-G2, X460-G2	64
	ExtremeSwitching X440-G2	32
EAPSv2 protected VLANs—maximum number of protected VLANs.	ExtremeSwitching X450-G2, X460-G2, X440-G2	500
	ExtremeSwitching, X465, X695	2,000
ERPS domains—maximum number of ERPS domains without CFM configured.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	32
ERPS domains—maximum number of ERPS domains with CFM configured.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	32
ERPSv1 protected VLANs—maximum number of protected VLANs.	ExtremeSwitching X450-G2, X460-G2, X465, X695	2,000
	ExtremeSwitching X440-G2	1,000
ERPSv2 protected VLANs—maximum number of protected VLANs.	ExtremeSwitching X450-G2, X460-G2, X465, X695	2,000
	ExtremeSwitching X440-G2	500
ESRP groups—maximum number of ESRP groups	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	32
ESRP domains—maximum number of ESRP domains.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	64
ESRP L2 VLANs—maximum number of ESRP VLANs without an IP address configured.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	1,000
ESRP L3 VLANs—maximum number of ESRP VLANs with an IP address configured.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	511
ESRP (maximum ping tracks)—maximum number of ping tracks per VLAN.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	8
ESRP (IP route tracks)—maximum IP route tracks per VLAN.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	8
ESRP (VLAN tracks)—maximum number of VLAN tracks per VLAN.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	1

Table 9: Supported Limits for Advanced Edge License (continued)

Metric	Product	Limit
L2 VPN: VCCV (pseudowire Virtual Circuit Connectivity Verification) VPNs per switch—maximum number of VCCV enabled VPLS VPNs.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2, X440-G2	16 N/A
L2 VPN: VPLS MAC addresses—maximum number of MAC addresses learned by a switch.	ExtremeSwitching, X465, X695 ExtremeSwitching X460-G2 ExtremeSwitching X450-G2, X440-G2	140,000 55,000 N/A
L2 VPN: VPLS VPNs—maximum number of VPLS virtual private networks per switch.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2, X440-G2	1,023 N/A
L2 VPN: VPLS peers—maximum number of VPLS peers per VPLS instance.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2, X440-G2	64 N/A
L2 VPN: LDP pseudowires—maximum number of pseudowires per switch.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2, X440-G2	7,000 N/A
L2 VPN: static pseudowires—maximum number of static pseudowires per switch.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2, X440-G2	7,000 N/A
L2 VPN: Virtual Private Wire Service (VPWS) VPNs—maximum number of virtual private networks per switch.	ExtremeSwitching, X465, X695 ExtremeSwitching X460-G2 ExtremeSwitching X450-G2, X440-G2	4,090 1,023 N/A
MPLS RSVP-TE interfaces—maximum number of interfaces.	ExtremeSwitching X460-G2, X465, X695, ExtremeSwitching X450-G2, X440-G2	32 N/A
MPLS RSVP-TE ingress LSPs—maximum number of ingress LSPs.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2, X440-G2	2,000 N/A
MPLS RSVP-TE egress LSPs—maximum number of egress LSPs.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2, X440-G2	2,000 N/A
MPLS RSVP-TE transit LSPs—maximum number of transit LSPs.	ExtremeSwitching X460-G2, ExtremeSwitching, X465, X695 ExtremeSwitching X450-G2, X440-G2	2,000 4,000 N/A
MPLS RSVP-TE paths—maximum number of paths.	ExtremeSwitching X460-G2 ExtremeSwitching, X465, X695 ExtremeSwitching X450-G2, X440-G2	1,000 2,000 N/A

Table 9: Supported Limits for Advanced Edge License (continued)

Metric	Product	Limit
MPLS RSVP-TE profiles—maximum number of profiles.	ExtremeSwitching X460-G2	1,000
	ExtremeSwitching, X465, X695	2,000
	ExtremeSwitching X450-G2, X440-G2	N/A
MPLS RSVP-TE EROs—maximum number of EROs per path.	ExtremeSwitching X460-G2, X465, X695	64
	ExtremeSwitching X450-G2, and ExtremeSwitching X440-G2	N/A
MPLS LDP peers—maximum number of MPLS LDP peers per switch.	ExtremeSwitching X460-G2, X465, X695	128
	ExtremeSwitching X450-G2, X440-G2	N/A
MPLS LDP adjacencies—maximum number of MPLS LDP adjacencies per switch.	ExtremeSwitching X460-G2	50
	ExtremeSwitching, X465, X695	64
	ExtremeSwitching X450-G2, X440-G2	N/A
MPLS LDP ingress LSPs—maximum number of MPLS LSPs that can originate from a switch.	ExtremeSwitching X460-G2, X465, X695	2,048
	ExtremeSwitching X450-G2, X440-G2	N/A
MPLS LDP-enabled interfaces—maximum number of MPLS LDP configured interfaces per switch.	ExtremeSwitching X460-G2, X465, X695	128
	ExtremeSwitching X450-G2, X440-G2	N/A
MPLS LDP transit LSPs—maximum number of MPLS transit LSPs per switch.	ExtremeSwitching X460-G2, X465, X695	4,000
	ExtremeSwitching X450-G2, X440-G2	N/A
MPLS LDP egress LSPs—maximum number of MPLS egress LSPs that can terminate on a switch.	ExtremeSwitching X460-G2, X465, X695	4,000
	ExtremeSwitching X450-G2, X440-G2	N/A
MPLS static egress LSPs—maximum number of static egress LSPs.	ExtremeSwitching X460-G2	7,116
	ExtremeSwitching, X465, X695	8,000
	ExtremeSwitching X450-G2, X440-G2	N/A
MPLS static ingress LSPs—maximum number of static ingress LSPs.	ExtremeSwitching X460-G2, X465, X695	4,000
	ExtremeSwitching X450-G2, X440-G2	N/A
MPLS static transit LSPs—maximum number of static transit LSPs	ExtremeSwitching X460-G2, X465, X695	4,000
	ExtremeSwitching X450-G2, X440-G2	N/A
OSPFv2/v3 ECMP—maximum number of equal cost multipath OSPFv2 and OSPFv3.	ExtremeSwitching X460-G2, X450-G2, X465, X695	64
	ExtremeSwitching X440-G2	N/A

Table 9: Supported Limits for Advanced Edge License (continued)

Metric	Product	Limit
OSPFv2 areas—as an ABR, how many OSPF areas are supported within the same switch.	ExtremeSwitching X460-G2, X465, X695	8
	ExtremeSwitching X450-G2, X440-G2	4
OSPFv2 external routes—recommended maximum number of external routes contained in an OSPF LSDB.	ExtremeSwitching, X465, X695	10,000
	ExtremeSwitching X460-G2	5,000
	ExtremeSwitching X450-G2, X440-G2	2,400
OSPFv2 inter- or intra-area routes—recommended maximum number of inter- or intra-area routes contained in an OSPF LSDB with one ABR in OSPF domain.	ExtremeSwitching, X465, X695	2,000
	ExtremeSwitching X460-G2	2,000
	ExtremeSwitching X450-G2, X440-G2	1,000
OSPFv2 inter-vr or leaking routes—recommended maximum number of inter-vr routes contained in an OSPF LSDB.	ExtremeSwitching, X465, X695, X460-G2	2,000
	ExtremeSwitching X450-G2, X440-G2	1,000
OSPFv2 interfaces—recommended maximum number of OSPF interfaces on a switch (active interfaces only).	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	4
OSPFv2 links—maximum number of links in the router LSA.	ExtremeSwitching X460-G2, X465, X695	400
	ExtremeSwitching X450-G2, X440-G2	4
OSPFv2 neighbors—maximum number of supported OSPF adjacencies.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	4
OSPFv2 routers in a single area—recommended maximum number of routers in a single OSPF area.	ExtremeSwitching, X465, X695	100
	ExtremeSwitching X460-G2	50
	ExtremeSwitching X450-G2, X440-G2	4
OSPFv2 virtual links—maximum number of supported OSPF virtual links.	ExtremeSwitching X460-G2, X465, X695	32
	ExtremeSwitching X450-G2, X440-G2	4
OSPFv3 areas—as an ABR, the maximum number of supported OSPFv3 areas.	ExtremeSwitching, X465, X695	100
	ExtremeSwitching X460-G2	16
	ExtremeSwitching X450-G2, X440-G2	4
OSPFv3 external routes—recommended maximum number of external routes.	ExtremeSwitching X460-G2, X465, X695	10,000
	ExtremeSwitching X450-G2, X440-G2	1,200

Table 9: Supported Limits for Advanced Edge License (continued)

Metric	Product	Limit
OSPFv3 inter- or intra-area routes—recommended maximum number of inter- or intra-area routes.	ExtremeSwitching, X465, X695	4.000
	ExtremeSwitching X460-G2	3,000
	ExtremeSwitching X450-G2, X440-G2	500
OSPFv3 interfaces—maximum number of OSPFv3 interfaces (active interfaces only).	ExtremeSwitching X460-G2, X450-G2, X440-G2, X465, X695	4
OSPFv3 neighbors—maximum number of OSPFv3 neighbors.	ExtremeSwitching X450-G2, X460-G2,X440-G2, X465, X695	4
OSPFv3 virtual links—maximum number of OSPFv3 virtual links supported.	ExtremeSwitching X460-G2, X465, X695	16
	ExtremeSwitching X450-G2, X440-G2	4
PIM IPv4 (maximum interfaces)—maximum number of PIM active interfaces.	ExtremeSwitching X460-G2, X450-G2,X440-G2, X465, X695	4
PIM IPv4 Limits—maximum number of multicast groups per dynamic rendezvous point.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	180
PIM IPv4 Limits—maximum number of multicast groups per static rendezvous point.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	3,000 (depends on policy file limits)
PIM IPv4 Limits—maximum number of multicast sources per group.	ExtremeSwitching X460-G2, X450-G2, X465, X695	5,000
	ExtremeSwitching X440-G2	1,500
PIM IPv4 Limits—maximum number of dynamic rendezvous points per multicast group.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	145
PIM IPv4 Limits—static rendezvous points.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	32
PIM IPv6 (maximum interfaces)—maximum number of PIM active interfaces.	ExtremeSwitching X460-G2, X450-G2,X440-G2, X465, X695	4
PIM IPv6 Limits—maximum number of multicast sources per group.	ExtremeSwitching X460-G2, X465, X695	1,750
	ExtremeSwitching X450-G2	1,500
	ExtremeSwitching X440-G2	550

Table 9: Supported Limits for Advanced Edge License (continued)

Metric	Product	Limit
PIM IPv6 Limits—maximum number of multicast groups per dynamic rendezvous point.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	70
PIM IPv6 Limits—maximum number of multicast groups per static rendezvous point.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	3,000 (depends on policy file limits)
PIM IPv6 Limits—maximum number of dynamic rendezvous points per multicast group.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	64
PIM IPv6 Limits—maximum number of secondary addresses per interface.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	70
PIM IPv6 Limits—static rendezvous points.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	32
Port-specific VLAN tags—maximum number of port-specific VLAN tags.	ExtremeSwitching X460-G2, X465 ExtremeSwitching X450-G2, X440-G2, X695	1,023 N/A
Port-specific VLAN tags—maximum number of port-specific VLAN tag ports.	ExtremeSwitching X460-G2, X465 ExtremeSwitching X450-G2, X440-G2, X695	4,000 N/A
VLAN Port Interfaces (VPIF)—maximum number of VLAN port interfaces.	ExtremeSwitching X460-G2 ExtremeSwitching X465, X695	65,536 131,585
VRRP (v2/v3-IPv4) (maximum instances)—maximum number of VRRP instances for a single switch, with Advanced Edge license or higher. **Note:** These limits are applicable for Fabric Routing configuration also. **Note:** Number of groups configured should not exceed the number of individual VRs supported (that is, in normal mode) for that platform type.	**Normal Mode (as individual VRs):** ExtremeSwitching X460-G2, X450-G2, X465, X695 ExtremeSwitching X440-G2 **Scaled Mode (with groups):** ExtremeSwitching X460-G2, X450-G2,X465, X695 ExtremeSwitching X440-G2	 511 128 2,048 128

Table 9: Supported Limits for Advanced Edge License (continued)

Metric	Product	Limit
VRRP (v3-IPv6) (maximum instances)—maximum number of VRRP instances for a single switch, with Advanced Edge or Base license, or higher. (VRRP-VRRPv3-IPv6) **Note:** These limits are applicable for Fabric Routing configuration also. **Note:** Number of groups configured should not exceed the number of individual VRs supported (that is, in normal mode) for that platform type.	**Normal Mode (as individual VRs):**	
	ExtremeSwitching X460-G2, X450-G2,X465, X695	511
	ExtremeSwitching X440-G2	128
	Scaled Mode (with groups):	
	ExtremeSwitching X460-G2, X450-G2,X465, X695	2,048
	ExtremeSwitching X440-G2	128
VRRP (v2/v3-IPv4/IPv6) (maximum VRID)—maximum number of unique VRID numbers per switch.	ExtremeSwitching X460-G2, X450-G2 X440-G2,X465, X695 **Note:** With Advanced Edge license or higher.	255
VRRP (v2/v3-IPv4/IPv6) (maximum VRIDs per VLAN)—maximum number of VRIDs per VLAN.	ExtremeSwitching X460-G2, X450-G2 X440-G2,X465, X695 **Note:** With Advanced Edge license or higher.	255
VRRP (v2/v3-IPv4/IPv6) (maximum ping tracks)—maximum number of ping tracks per VLAN.	ExtremeSwitching X450-G2, X460-G2, X440-G2,X465, X695 **Note:** With Advanced Edge license or higher.	8
VRRP (maximum ping tracks)—maximum number of ping tracks per VRRP Instance under 128 VRRP instances, with Advanced Edge license or higher.	ExtremeSwitching X450-G2, X460-G2, X440-G2,X465, X695	8 (20 centisecond or 1 second hello interval)
VRRP (v3-IPv6) (maximum ping tracks)—maximum number of ping tracks per VRRP Instance under 128 VRRP instances, with Advanced Edge license or higher.	ExtremeSwitching X450-G2, X460-G2, X440-G2,X465, X695	8 (20 centisecond or 1 second hello interval)

Table 9: Supported Limits for Advanced Edge License (continued)

Metric	Product	Limit
VRRP (v2/v3-IPv4/IPv6) (maximum iproute tracks)—maximum number of IP route tracks per VLAN.	ExtremeSwitching X450-G2, X460-G2, X440-G2, X465, X695	8
VRRP (v2/v3-IPv4/IPv6)—maximum number of VLAN tracks per VLAN.	ExtremeSwitching X450-G2, X460-G2, X440-G2,X465, X695	8
VXLAN—maximum virtual networks. **Note:** Every VPLS instance/ PSTag VLAN reduces this limit by 1. **Note:** Assumption is all BUM (broadcast/unknown-unicast/multicast) FDB entries are pointing to the same set of RTEPs when all VNETs use explicit flooding. Depends on whether all VNETs use standard or explicit and the number of tenant VLAN ports.	ExtremeSwitchingX465, X695 ExtremeSwitching X460-G2, X450-G2, X440-G2	2,048–4,000 N/A
VXLAN—maximum tenant VLANs plus port combinations **Note:** Every (VPLS/PSTag VLAN) + port reduces the limit by 1.	ExtremeSwitchingX465, X695 ExtremeSwitching X460-G2, X450-G2, X440-G2	4,096 N/A
VXLAN—maximum static MAC to IP bindings. **Note:** Every FDB entry configured reduces this limit by 1.	ExtremeSwitchingX465, X695 ExtremeSwitching X460-G2, X450-G2, X440-G2	64,000 N/A
VXLAN—maximum RTEP IP addresses	ExtremeSwitchingX465, X695 ExtremeSwitching X460-G2, X450-G2, X440-G2	512 N/A
VXLAN—maximum virtual networks with dynamic learning and OSPF extensions for VXLAN	ExtremeSwitchingX465, X695 ExtremeSwitching X460-G2, X450-G2, X440-G2	4,000 N/A
VXLAN—or replicator role, maximum number of attached leafs per switch.	ExtremeSwitching X465, X695	256

Core License Limits

The following table shows supported limits for features in the Core License.

Note
X590, X620-X (fiber), and X690 are not supported in this version.

Table 10: Supported Limits for Core License

Metric	Product	Limit
Anycast RP Using PIM—maximum number of IPv4 Anycast RP set per VR.	ExtremeSwitching X440-G2, X450-G2, X460-G2, X465, X695	32
Anycast RP Using PIM—maximum number of IPv6 Anycast RP set per VR.	ExtremeSwitching X440-G2, X450-G2, X460-G2, X465, X695	32
Anycast RP Using PIM—RP peers per Anycast RP set.	ExtremeSwitching X440-G2, X450-G2, X460-G2, X465, X695	10
BGP (aggregates)—maximum number of BGP aggregates.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2	256 204
BGP (networks)—maximum number of BGP networks.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2	1,024 820
BGP (peers)—maximum number of BGP peers. **Note:** With default keepalive and hold timers. **Note:** Each BGPv4/BGPv6 peer handles a maximum of 50 routes. **Note:** ECMP should not be enabled for BGP.	ExtremeSwitching X460-G2 ExtremeSwitching , X465, X695 ExtremeSwitching X450-G2	128 300 100
BGP (peer groups)—maximum number of BGP peer groups.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2	64 50
BGP (policy entries)—maximum number of BGP policy entries per route policy.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2	256 204
BGP (policy statements)—maximum number of BGP policy statements per route policy.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2	1,024 820
BGP multicast address-family routes—maximum number of multicast address-family routes.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2	25,000 20,000

Table 10: Supported Limits for Core License (continued)

Metric	Product	Limit
BGP (unicast address-family routes)—maximum number of unicast address-family routes.	ExtremeSwitching X460-G2, X465, X695 (at default)	25,000
	ExtremeSwitching X465 (with ALPM enabled)	100,000
	ExtremeSwitching X450-G2	20,000
BGP (non-unique routes)—maximum number of non-unique BGP routes.	ExtremeSwitching X460-G2, X465, X695	25,000
	ExtremeSwitching X450-G2	20,000
BGP ECMP—maximum number of equal cost paths per multipath for BGP and BGPv6.	ExtremeSwitching X460-G2, X465, X695	2, 4, 8, 16, 32, or 64
	ExtremeSwitching X450-G2	64
BGPv6 (unicast address-family routes)—maximum number of unicast address family routes.	ExtremeSwitching X460-G2	6,000
	ExtremeSwitching, X465, X695	10,000
	ExtremeSwitching X450-G2	4,800
BGPv6 (non-unique routes)—maximum number of non-unique BGP routes.	ExtremeSwitching X460-G2	18,000
	ExtremeSwitching X465, X695	24,000
	ExtremeSwitching X450-G2	14,000
EVPN EVI instances—maximum number of EVI instances.	ExtremeSwitching X465, X695	1,024
EVPN LAGs—maximum number of LAGs.	ExtremeSwitching X465, X695	128
GRE Tunnels—maximum number of GRE tunnels.	ExtremeSwitching X460-G2, X450-G2, X465, X695	255
	ExtremeSwitching X440-G2	N/A
IS-IS adjacencies—maximum number of supported IS-IS adjacencies.	ExtremeSwitching X460-G2, X465, X695	128
	ExtremeSwitching X450-G2	N/A
IS-IS ECMP—maximum number of equal cost paths per multipath for IS-IS.	ExtremeSwitching X460-G2, X465, X695	2, 4, or 8
	ExtremeSwitching X450-G2	N/A
IS-IS interfaces—maximum number of interfaces that can support IS-IS.	ExtremeSwitching X460-G2, X465, X695	255
	ExtremeSwitching X450-G2	N/A
IS-IS routers in an area—recommended maximum number of IS-IS routers in an area.	ExtremeSwitching X460-G2, X465, X695	256
	ExtremeSwitching X450-G2	N/A
IS-IS route origination—recommended maximum number of routes that can be originated by an IS-IS node.	ExtremeSwitching X460-G2, X465, X695	20,000
	ExtremeSwitching X450-G2	N/A

Table 10: Supported Limits for Core License (continued)

Metric	Product	Limit
IS-IS IPv4 L1 routes in an L1 router—recommended maximum number of IS-IS Level 1 routes in a Level 1 IS-IS router.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2	25,000 N/A
IS-IS IPv4 L2 routes—recommended maximum number of IS-IS Level 2 routes.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2	25,000 N/A
IS-IS IPv4 L1 routes in an L1/L2 router—recommended maximum number of IS-IS Level 1 routes in an L1/L2 IS-IS router.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2	20,000 N/A
IS-IS IPv6 L1 routes in an L1 router—recommended maximum number of IS-IS Level 1 routes in a Level 1 IS-IS router.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2	10,000 N/A
IS-IS IPv6 L2 routes—recommended maximum number of IS-IS Level 2 routes.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2	10,000 N/A
IS-IS IPv6 L1 routes in an L1/L2 router—recommended maximum number of IS-IS Level 1 routes in a L1/l2 router.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2	10,000 N/A
IS-IS IPv4/IPv6 L1 routes in an L1 router—recommended maximum number of IS-IS Level 1 routes in a Level 1 IS-IS router. The numbers documented are based on 50% IPv4 routes and 50% IPv6 routes.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2	20,000 N/A
IS-IS IPv4/IPv6 L2 routes in an L2 router—recommended maximum number of IS-IS Level 2 routes in a Level 2 IS-IS router. The numbers documented are based on 50% IPv4 routes and 50% IPv6 routes.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2	20,000 N/A

Table 10: Supported Limits for Core License (continued)

Metric	Product	Limit
IS-IS IPv4/IPv6 L1 routes in an L1/L2 router—recommended maximum number of IS-IS Level 1 routes in a Level 1/Level2 IS-IS router. The numbers documented are based on 50% IPv4 routes and 50% IPv6 routes.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2	20,000 N/A
MSDP active peers—maximum number of active MSDP peers.	ExtremeSwitching X450-G2, X460-G2, X465, X695	64
MSDP SA cache entries—maximum number of entries in SA cache.	ExtremeSwitching X465, X695 ExtremeSwitching X450-G2 ExtremeSwitching X460-G2	14,000 8,000 10,000
MSDP maximum mesh groups—maximum number of MSDP mesh groups.	ExtremeSwitching X450-G2, X460-G2, X465, X695	16
OSPFv2/v3 ECMP—maximum number of equal cost multipath OSPFv2 and OSPFv3.	ExtremeSwitching X460-G2, X450-G2, X465, X695	64
OSPFv2 areas—as an ABR, how many OSPF areas are supported within the same switch.	ExtremeSwitching X450-G2, X460-G2, X465, X695	8
OSPFv2 external routes—recommended maximum number of external routes contained in an OSPF LSDB.	ExtremeSwitching, X465, X695 ExtremeSwitching X460-G2 ExtremeSwitching X450-G2	10,000 5,000 4,000
OSPFv2 inter- or intra-area routes—recommended maximum number of inter- or intra-area routes contained in an OSPF LSDB with one ABR in OSPF domain.	ExtremeSwitching, X465, X695 ExtremeSwitching X460-G2 ExtremeSwitching X450-G2	4,000 2,000 1,600
OSPFv2 inter-vr or leaking routes—recommended maximum number of inter-vr routes contained in an OSPF LSDB.	ExtremeSwitching, X465, X695, X460-G2 ExtremeSwitching X450-G2, X440-G2	2,000 1,000
OSPFv2 interfaces—recommended maximum number of OSPF interfaces on a switch (active interfaces only).	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2	400 320

Table 10: Supported Limits for Core License (continued)

Metric	Product	Limit
OSPFv2 links—maximum number of links in the router LSA.	ExtremeSwitching X460-G2, X465, X695	400
	ExtremeSwitching X450-G2	320
OSPFv2 neighbors—maximum number of supported OSPF adjacencies.	ExtremeSwitching X460-G2, X465, X695	128
	ExtremeSwitching X450-G2	96
OSPFv2 routers in a single area—recommended maximum number of routers in a single OSPF area.	ExtremeSwitching X465, X695	100
	ExtremeSwitching X460-G2	50
	ExtremeSwitching X450-G2	40
OSPFv2 virtual links—maximum number of supported OSPF virtual links.	ExtremeSwitching X460-G2, X465, X695	32
	ExtremeSwitching X450-G2	25
OSPFv3 areas—as an ABR, the maximum number of supported OSPFv3 areas.	ExtremeSwitching X465, X695	100
	ExtremeSwitching X460-G2	16
	ExtremeSwitching X450-G2	12
OSPFv3 external routes—recommended maximum number of external routes.	ExtremeSwitching X460-G2, X465, X695	10,000
	ExtremeSwitching X450-G2	7,500
OSPFv3 inter- or intra-area routes—recommended maximum number of inter- or intra-area routes.	ExtremeSwitching X465, X695	4.000
	ExtremeSwitching X460-G2	3,000
	ExtremeSwitching X450-G2	500
OSPFv3 interfaces—maximum number of OSPFv3 interfaces (active interfaces only).	ExtremeSwitching X460-G2, X465, X695	256
	ExtremeSwitching X450-G2	192
OSPFv3 neighbors—maximum number of OSPFv3 neighbors.	ExtremeSwitching X460-G2, X465, X695	64
	ExtremeSwitching X450-G2	48
OSPFv3 virtual links—maximum number of OSPFv3 virtual links supported.	ExtremeSwitching X460-G2, X465, X695	16
	ExtremeSwitching X450-G2	12
PIM IPv4 (maximum interfaces)—maximum number of PIM active interfaces.	ExtremeSwitching X450-G2, X460-G2, X465, X695	255
PIM IPv4 Limits—maximum number of multicast groups per dynamic rendezvous point.	ExtremeSwitching X450-G2, X460-G2, X465, X695	180
PIM IPv4 Limits—maximum number of multicast groups per static rendezvous point.	ExtremeSwitching X450-G2, X460-G2, X465, X695	3,000 (depends on policy file limits)

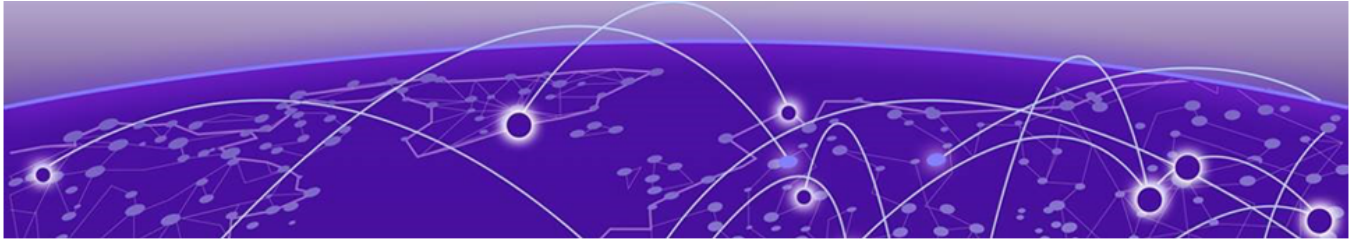
Table 10: Supported Limits for Core License (continued)

Metric	Product	Limit
PIM IPv4 Limits—maximum number of multicast sources per group.	ExtremeSwitching X450-G2, X460-G2, X465, X695	5,000
PIM IPv4 Limits—maximum number of dynamic rendezvous points per multicast group.	ExtremeSwitching X450-G2, X460-G2, X465, X695	145
PIM IPv4 Limits—static rendezvous points.	ExtremeSwitching X450-G2, X460-G2, X465, X695	32
PIM IPv6 (maximum interfaces)—maximum number of PIM active interfaces.	ExtremeSwitching X450-G2, X460-G2, X465, X695	255
PIM IPv6 Limits—maximum number of multicast sources per group.	ExtremeSwitching X460-G2, X465, X695 ExtremeSwitching X450-G2	1,750 1,500
PIM IPv6 Limits—maximum number of multicast groups per dynamic rendezvous point.	ExtremeSwitching X450-G2, X460-G2, X465, X695	70
PIM IPv6 Limits—maximum number of multicast groups per static rendezvous point.	ExtremeSwitching X450-G2, X460-G2, X465, X695	3,000 (depends on policy file limits)
PIM IPv6 Limits—maximum number of dynamic rendezvous points per multicast group.	ExtremeSwitching X450-G2, X460-G2, X465, X695	64
PIM IPv6 Limits—maximum number of secondary addresses per interface.	ExtremeSwitching X450-G2, X460-G2, X465, X695	70
PIM IPv6 Limits—static rendezvous points.	ExtremeSwitching X450-G2, X460-G2, X465, X695	32

Notes for Limits Tables

[a] The table shows the total available. When installing ACL rules bound to a set of ports, rules are replicated for each port if there are ACL counters and counter compression is not enabled, or if the ports are extended ports.
[c] When there are BFD sessions with minimal timer, sessions with default timer should not be used.
[f] Effective capacity varies based on actual MAC addresses and VLAN IDs used and hash algorithm selected.

[g] Based on "configure forwarding internal-tables more l2".
[h] Based on "configure forwarding internal-tables more l3-and-ipmc".
[j] The limit depends on setting configured with configure iproute reserved-entries.
[m] The IPv4 and IPv6 multicast entries share the same hardware tables, so the effective number of IPv6 multicast entries depends on the number of IPv4 multicast entries present and vice versa.
[n] If IGMP and MLD are simultaneously configured on the switch, the number of effective subscribers supported are lessened accordingly.
[o] The total of all PBR next hops on all flow redirects should not exceed 4,096.
[p] The number of XNV authentications supported based on system ACL limitations.
[q] Based on "configure forwarding internal-tables more routes".
[r] Based on `configure forwarding internal-tables more routes ipv6-mask-length 128`.
[s] Based on `configure forwarding internal-tables more l3-and-ipmc` or `configure forwarding internal-tables l2-and-l3`.



Open Issues, Known Behaviors, and Resolved Issues

This chapter lists open software issues, limitations in ExtremeXOS and Switch Engine system architecture (known issues), and resolved issues in ExtremeXOS and Switch Engine.

Open Issues in this Version

There are no open issues for supported features found in this version.

Known Behaviors

The following table lists limitations in system architecture that have yet to be resolved.

Table 11: Known Issues, Platform-Specific, and Feature Change Requests (CRs) in 33.5.1

Defect Number	Description
EXOS-37941	On platforms with limited IFP slice support, hardware installation of policy access-lists may fail depending on the configured slice mode, processor type, and match criteria. In `ipv4-ipv6-double-shared` mode, only basic match fields (e.g., destination IP, L4 destination port, Ethernet type) are reliably supported. For extended match criteria (e.g., source IP, L4 source port, TTL, TOS), use `ipv4-ipv6-double-separate` mode. Similarly, in `ipv4-single-ipv6-double` mode, IPv6 access-lists may be constrained if the platform does not support double-wide slices. Affected platforms include: X435, X440-G2, X450-G2, X460-G2
EXOS-37972	IPv6 destination address cannot be combined with L4 source port (or range) or ethernet type in the same DACL for role-based users.
EXOS-38279	Changing the authentication protocol order does not affect the web-redirect URL received using RADIUS. The web-redirect URL received via the protocol client that was authenticated first will be used irrespective of the precedence configured. This may result in unexpected redirect behavior regardless of protocol prioritization

Resolved Issues in ExtremeXOS 33.5.2

The following issues were resolved in ExtremeXOS 33.5.2. Version 33.5.2 includes all fixes up to and including versions 31.6, 31.7, 32.1, 32.2, 32.3, 32.4, 32.5, 32.6.x, 32.7.x, 33.2.1, 33.3.1, 33.4.1, and 33.5.1.

Table 12: Resolved Issues, Platform-Specific, and Feature Change Requests (CRs) in 33.5.2

Defect Number	Description
General	
CFD-13870	XMLC process crash occurred when events were queued and disabling xml-notification.
CFD-14240	During hive_agent initialization, the configuration dirty bit is set.
CFD-14677	High CPU consumption was seen after node reboot in stacking with MLAG configuration.
CFD-14909	Error was seen during the ports auto move when policy was enabled.
CFD-14969	The SNMPMaster process crashes while loading a configuration file created in the older SNMP stack and containing a hexadecimal trap-receiver configuration.
CFD-15179	A LAG member port is not removed from Fabric Attach Auto-LAG even after it is administratively disabled.
CFD-15313	The HAL process crashes occasionally while reprogramming FDB and Netlogin entries
CFD-15365	The dirty bit is set even after the configuration is saved.
CFD-15623	The password of a new account is sent in clear text to the syslog server when "cli config-logging expansion" is enabled.
CDD-15638	EDP process crash occurs due to telemetry processing of the new CDP neighbor.
EXOS-38561	**ZTP+: Switch reboots when license configurations are not acknowledged:** Switches could reboot during ZTP+ transactions if license configurations were not acknowledged due to lost connectivity with ExtremeCloud IQ Site Engine. This behavior has been corrected to prevent reboot when the configuration block contains only license-related settings. Field Notice: https://community.extremenetworks.com/t5/extremecloud-iq-site-engine/fn-2025-519-fabric-switch-engine-reboots-due-to-lost/ba-p/120591

Resolved Issues in ExtremeXOS 33.5.1

The following issues were resolved in ExtremeXOS 33.5.1. Version 33.5.1 includes all fixes up to and including versions 31.6, 31.7, 32.1, 32.2, 32.3, 32.4, 32.5, 32.6.x, 32.7.x, 33.2.1, 33.3.1, and 33.4.1.

Table 13: Resolved Issues, Platform-Specific, and Feature Change Requests (CRs) in 33.5.1

Defect Number	Description
General	
CFD-10413	Formericaoe optics on the X695 switch triggered a VCC voltage high warning.
CFD-11314	The switch fails to be discovered automatically on ExtremeCloud IQ Site Engine when connected to an uplink with multiple tagged VLANs, and the VLAN interface used for ZTP is not the one with the lowest VLAN ID.
CFD-12943	ELRP fails to detect loops when the protocol filter "IP" is configured.
CFD-14128	The HAL process crashes randomly when a VXLAN network port with IGMP multicast entries flaps.
CFD-14267	The **`install image inactive`** command sometimes fails to copy the image to the inactive partition.
CFD-14367	The MACSec link goes down after a link flap between a switch using an LRM-MACSec adapter and a switch that natively supports MACSec.
CFD-14368	IGMP snooping entries are removed from a port when STP edge-safeguard is enabled.
CFD-14371	The system fails to remove ports from the PVLAN subscriber VLAN after auto-move.
CFD-14390	The **`show ospfv3 lsdb stats all`** command was executed, but it does not exist.
CFD-14430	The AAA process crashes while handling a RADIUS access-reject packet that contains vendor-specific attributes.
CFD-14440	FDB entries are dropped when a VPLS session with a name exactly 32 characters long goes down and comes back up.
CFD-14484	The Licmgr process crashes continuously, causing stack switches to enter a reboot loop.
CFD-14488	CRC values do not appear in the **`show tech`** output.
CFD-14633	Pressing 'q' fails to interrupt the CLI output of the **`show port forward-error correction`** command.
CFD-14685	The system does not allow configuration of a DHCP address range for VLANs whose names start with "mgmt".
CFD-14772	The system does not remove the policy after disabling BGP export.

Table 13: Resolved Issues, Platform-Specific, and Feature Change Requests (CRs) in 33.5.1 (continued)

Defect Number	Description
CFD-14870	The AAA process crashes when the VR used to access the TACACS server is deleted.
CFD-15100	On the FA proxy, the FA server port is occasionally removed from some VLANs when the ISC port comes up after the MLAG peer switch reboots.
EXOS-37683	An error message appears: "`Failed to open the file /etc/snmp/extr_userinfo.cfg for reading`" while deleting SNMP users.
Extended Edge Switching	
CFD-14450	POE commands are not displayed when VPEX is enabled with V400 on the X465-24XE.
SummitStack	
CFD-13944	In Chalet, the system incorrectly displays ports as tagged in a VLAN, even though they are added as untagged on the switch.
CFD-14055	The FDB process crashes, causing the switch to reset.
CFD-14251	The system returns the error "`configuration reply is too big`" when attempting to delete multiple ports in a stack associated with admin profiles.
CFD-14306	The HAL process occasionally crashes while unconfiguring slots in a stack, especially when ACLs are configured.