



Extreme 9920 Software Scale Matrix

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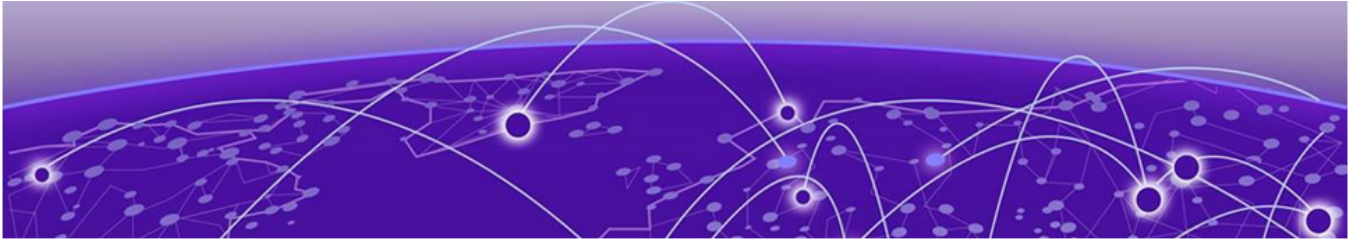


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Preface

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.

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 ExtremeSwitching switches or SLX routers, the product is referred to as *the switch* or *the router*.

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
	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 <i>enter</i> and <i>type</i>	When you see the word <i>enter</i> 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 <i>type</i> .
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.
<i>italic</i> 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.
...	Repeat the previous element, for example, <i>member</i> [<i>member</i> ...].
\	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.

Documentation and Training

Find Extreme Networks product information at the following locations:

[Current Product Documentation](#)

[Release Notes](#)

[Hardware and software compatibility](#) for Extreme Networks products

[Extreme Optics Compatibility](#)

[Other resources](#) such as white papers, data sheets, and case studies

Extreme Networks offers product training courses, both online and in person, as well as specialized certifications. For details, visit www.extremenetworks.com/education/.

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 2826. 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.

Send Feedback

The Information Development 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, do either of the following:

- Access the feedback form at <https://www.extremenetworks.com/documentation-feedback/>.
- Email us at documentation@extremenetworks.com.

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



What's New in this Document

The following table describes changes to this guide for the Extreme 9920 software, release 21.1.1.0

Table 4: Summary of changes

Feature	Description	Link
Scale Matrix	The following scalability enhancements are supported: <ul style="list-style-type: none">• Transport tunnels• Ingress group<ul style="list-style-type: none">◦ Transport tunnels◦ Non-transport tunnels• VXLAN mirrors	Scalability Matrix on page 9

For more information about this release, see the [Extreme 9920 Software Release Notes, 21.1.1.0](#).



Scalability Matrix

The following table summarizes scale limitations for the NPB application forwarding features.

Table 5: Scalability matrix

Feature	Sub-Group	Product Scale	Description
Port Channel	NA	32	<ul style="list-style-type: none"> No. of ports in a LAG: 64 LAG members: 2048 LAG groups: 32 (with 64 members each LAG group)
Transport Tunnel (only IPv4)	NA	1000	<ul style="list-style-type: none"> dest vtep: 1000 Inner SAP TCAM: 2000
Non-Transport Tunnel	NA	2000	
Ingress Group	Physical ports and port channels	256	<ul style="list-style-type: none"> No. of ingress groups on physical port or port channel depends on physical ports. Limit: 256
	Transport tunnels only	1000	<ul style="list-style-type: none"> dest vtep: 1000 Inner SAP: 2000 Limit: 1000
	Non-transport tunnels only	2000	<ul style="list-style-type: none"> Max inner SAP: 2000 TCAM: Max 1000 entries for overlapping or shared entries across features
Route-map or route-map instances	NA	4000	<ul style="list-style-type: none"> No route-map entries in hardware and limit depends on ACL rules No. of ACLs: 9500 No. of route-maps: 10K No. of ingress groups: 2K <p>The route-maps are attached to ingress groups. Each route-map can have only one ingress group instance and each instance can have only one ACL. So only 8K route-maps are supported.</p>
Ingress ACL	MAC	1500	<ul style="list-style-type: none"> If the ACL is attached to a route-map which is attached to an ingress group, the entries are programmed to hardware (TCAM). If an ACL contains x no. of rule entries that are attached to y no. of route-maps, then $x * y$ denotes the consumed TCAM space.
	IPv4	6000	
	IPv6	2000	

Table 5: Scalability matrix (continued)

Feature	Sub-Group	Product Scale	Description
Ingress Range support: <ul style="list-style-type: none"> IP packet length Source L4 port Destination L4 port L4 port range 		128	Maximum length range match: 128.
Egress Group	NA	<ul style="list-style-type: none"> 128 (no replication) 126 (replication) 	<ul style="list-style-type: none"> If replication is not enabled, egress group acts as a container and does not consume anything from hardware. Replication requires at least two egress groups/objects. If replication is enabled, egress group consumes one SFC entry for each group. <p>Max. no. of unique egress objects + max. no. of egress-groups with replication cannot exceed 128.</p> <p>Examples:</p> <ul style="list-style-type: none"> Max. no. of egress group/object (with two same egress objects across all egress-groups): 126. max no. of egress group/object (with unique egress object per egress-group): 42
Egress	NA	128	<ul style="list-style-type: none"> Egress objects limit depends on the SFC table which supports 128 entries. The SFC table is used by egress group with replication enabled. If replication is not configured, the maximum no. of egress objects allowed is 128.
Egress ACL	MAC	128	<ul style="list-style-type: none"> If the ACL is attached to a listener policy which is attached to an egress object, the entries are programmed to hardware (TCAM). If an ACL contains x no. of rule entries that are attached to y no. of listener policies, then $x * y$ denotes the consumed TCAM space.
	IPv4	128	
	Pv6	128	
Egress Range support <ul style="list-style-type: none"> IP packet length Source L4 port Destination L4 port L4 port range 		128	The maximum length range match is 128 ACL rules.

Table 5: Scalability matrix (continued)

Feature	Sub-Group	Product Scale	Description
Listener Policy	NA	128	<ul style="list-style-type: none">No listener policy entries in hardware and limit depends on ACL rules.Egress ACLs: 384 <p>Each listener policy can have only one instance and each instance can have only one ACL and each ACL can have only one rule. The listener policy is attached to egress objects and the maximum no. of egress objects supported is 128.</p>
Tunnel Origination	NA	128	<ul style="list-style-type: none">Hardware supports 512 tunnel origination which is attached to egress objects.Egress objects limit: 128
Onboard PCAP Sessions	NA	10	Limited to 10 as AHA requirement is 10.
VXLAN Mirrors	NA	250	When configured, a copy of the full untagged VXLAN frame is mirrored to the configured egress port without any header termination.