



# Junos OS VPN Integration into an SRC Configuration



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*Junos OS VPN Integration into an SRC Configuration*

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# Table of Contents

	About the Documentation . . . . .	vii
	Documentation and Release Notes . . . . .	vii
	Supported Platforms . . . . .	vii
	Documentation Conventions . . . . .	vii
	Documentation Conventions . . . . .	viii
	Documentation Feedback . . . . .	x
	Requesting Technical Support . . . . .	x
	Self-Help Online Tools and Resources . . . . .	xi
	Opening a Case with JTAC . . . . .	xi
<b>Part 1</b>	<b>Configuration</b>	
<b>Chapter 1</b>	<b>Configuration Tasks . . . . .</b>	<b>3</b>
	Before You Add a Junos OS VPN to the SRC Configuration . . . . .	3
	Adding VPNs for Retailers and Enterprises . . . . .	4
	Verifying and Updating Configuration of Extranets for VPNs . . . . .	5
	Locating and Removing Inactive Subscriptions to a VPN . . . . .	7
<b>Chapter 2</b>	<b>Configuration Statements . . . . .</b>	<b>9</b>
	Configuration Statements for Adding VPNs and Extranet Clients . . . . .	9
<b>Part 2</b>	<b>Index</b>	
	Index . . . . .	13



# List of Tables

<b>About the Documentation</b> .....	<b>vii</b>
Table 1: Notice Icons .....	viii
Table 2: Notice Icons .....	ix
Table 3: Text Conventions .....	ix



# About the Documentation

- Documentation and Release Notes on page vii
- Supported Platforms on page vii
- Documentation Conventions on page vii
- Documentation Feedback on page x
- Requesting Technical Support on page x

## Documentation and Release Notes

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To obtain the most current version of all Juniper Networks<sup>®</sup> technical documentation, see the product documentation page on the Juniper Networks website at <http://www.juniper.net/techpubs/>.

If the information in the latest release notes differs from the information in the documentation, follow the product Release Notes.

Juniper Networks Books publishes books by Juniper Networks engineers and subject matter experts. These books go beyond the technical documentation to explore the nuances of network architecture, deployment, and administration. The current list can be viewed at <http://www.juniper.net/books>.

## Supported Platforms

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For the features described in this document, the following platforms are supported:







- C Series

## Documentation Conventions

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Table 1 on page viii defines notice icons used in this guide.

Table 1: Notice Icons

Icon	Meaning	Description
	Informational note	Indicates important features or instructions.
	Caution	Indicates a situation that might result in loss of data or hardware damage.
	Warning	Alerts you to the risk of personal injury or death.
	Laser warning	Alerts you to the risk of personal injury from a laser.
	Tip	Indicates helpful information.
	Best practice	Alerts you to a recommended use or implementation.

## Documentation Conventions

Table 1 on page viii defines the notice icons used in this guide. Table 3 on page ix defines text conventions used throughout this documentation.



Table 2: Notice Icons







Icon	Meaning	Description
	Informational note	Indicates important features or instructions.
	Caution	Indicates a situation that might result in loss of data or hardware damage.
	Warning	Alerts you to the risk of personal injury or death.
	Laser warning	Alerts you to the risk of personal injury from a laser.
	Tip	Indicates helpful information.
	Best practice	Alerts you to a recommended use or implementation.

Table 3: Text Conventions

Convention	Description	Examples
<b>Bold text like this</b>	<ul style="list-style-type: none"> <li>Represents keywords, scripts, and tools in text.</li> <li>Represents a GUI element that the user selects, clicks, checks, or clears.</li> </ul>	<ul style="list-style-type: none"> <li>Specify the keyword <b>exp-msg</b>.</li> <li>Run the <b>install.sh</b> script.</li> <li>Use the <b>pkgadd</b> tool.</li> <li>To cancel the configuration, click <b>Cancel</b>.</li> </ul>
<b>Bold text like this</b>	Represents text that the user must type.	<b>user@host# set cache-entry-age</b> <i>cache-entry-age</i>
Fixed-width text like this	Represents information as displayed on your terminal's screen, such as CLI commands in output displays.	<pre>nic-locators {   login {     resolution {       resolver-name /realms/         login/A1;       key-type LoginName;       value-type SaeId;     }   } }</pre>
Regular sans serif typeface	<ul style="list-style-type: none"> <li>Represents configuration statements.</li> <li>Indicates SRC CLI commands and options in text.</li> <li>Represents examples in procedures.</li> <li>Represents URLs.</li> </ul>	<ul style="list-style-type: none"> <li><b>system ldap server{</b> <b>stand-alone;</b></li> <li>Use the <b>request sae modify device failover</b> <b>command</b> with the <b>force</b> option</li> <li><b>user@host# ...</b></li> <li><a href="http://www.juniper.net/techpubs/software/management/sdx/api-index.html">http://www.juniper.net/techpubs/software/management/sdx/api-index.html</a></li> </ul>

Table 3: Text Conventions (*continued*)

<i>Italic sans serif typeface</i>	Represents variables in SRC CLI commands.	<code>user@host# set local-address local-address</code>
Angle brackets	In text descriptions, indicate optional keywords or variables.	Another runtime variable is <gfwif>.
Key name	Indicates the name of a key on the keyboard.	Press Enter.
Key names linked with a plus sign (+)	Indicates that you must press two or more keys simultaneously.	Press Ctrl + b.
<i>Italic typeface</i>	<ul style="list-style-type: none"> <li>Emphasizes words.</li> <li>Identifies book names.</li> <li>Identifies distinguished names.</li> <li>Identifies files, directories, and paths in text but not in command examples.</li> </ul>	<ul style="list-style-type: none"> <li>There are two levels of access: <i>user</i> and <i>privileged</i>.</li> <li><i>SRC-PE Getting Started Guide</i>.</li> <li><i>o=Users, o=UMC</i></li> <li>The <i>/etc/default.properties</i> file.</li> </ul>
Backslash	At the end of a line, indicates that the text wraps to the next line.	<code>Plugin.radiusAcct-1.class=\ net.juniper.smgmt.sae.plugin\ RadiusTrackingPluginEvent</code>
Words separated by the   symbol	Represent a choice to select one keyword or variable to the left or right of this symbol. (The keyword or variable may be either optional or required.)	<code>diagnostic   line</code>

## Documentation Feedback

We encourage you to provide feedback, comments, and suggestions so that we can improve the documentation. You can provide feedback by using either of the following methods:

- Online feedback rating system—On any page of the Juniper Networks TechLibrary site at <http://www.juniper.net/techpubs/index.html>, simply click the stars to rate the content, and use the pop-up form to provide us with information about your experience. Alternately, you can use the online feedback form at <http://www.juniper.net/techpubs/feedback/>.
- E-mail—Send your comments to [techpubs-comments@juniper.net](mailto:techpubs-comments@juniper.net). Include the document or topic name, URL or page number, and software version (if applicable).

## Requesting Technical Support

Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active J-Care or Partner Support Service support contract, or are covered under warranty, and need post-sales technical support, you can access our tools and resources online or open a case with JTAC.

- JTAC policies—For a complete understanding of our JTAC procedures and policies, review the *JTAC User Guide* located at <http://www.juniper.net/us/en/local/pdf/resource-guides/7100059-en.pdf>.
- Product warranties—For product warranty information, visit <http://www.juniper.net/support/warranty/>.
- JTAC hours of operation—The JTAC centers have resources available 24 hours a day, 7 days a week, 365 days a year.

## Self-Help Online Tools and Resources

For quick and easy problem resolution, Juniper Networks has designed an online self-service portal called the Customer Support Center (CSC) that provides you with the following features:

- Find CSC offerings: <http://www.juniper.net/customers/support/>
- Search for known bugs: <http://www2.juniper.net/kb/>
- Find product documentation: <http://www.juniper.net/techpubs/>
- Find solutions and answer questions using our Knowledge Base: <http://kb.juniper.net/>
- Download the latest versions of software and review release notes: <http://www.juniper.net/customers/csc/software/>
- Search technical bulletins for relevant hardware and software notifications: <http://kb.juniper.net/InfoCenter/>
- Join and participate in the Juniper Networks Community Forum: <http://www.juniper.net/company/communities/>
- Open a case online in the CSC Case Management tool: <http://www.juniper.net/cm/>

To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) Tool: <https://tools.juniper.net/SerialNumberEntitlementSearch/>

## Opening a Case with JTAC

You can open a case with JTAC on the Web or by telephone.

- Use the Case Management tool in the CSC at <http://www.juniper.net/cm/>.
- Call 1-888-314-JTAC (1-888-314-5822 toll-free in the USA, Canada, and Mexico).

For international or direct-dial options in countries without toll-free numbers, see <http://www.juniper.net/support/requesting-support.html>.



## PART 1

# Configuration

- [Configuration Tasks on page 3](#)
- [Configuration Statements on page 9](#)



## CHAPTER 1

# Configuration Tasks

- [Before You Add a Junos OS VPN to the SRC Configuration on page 3](#)
- [Adding VPNs for Retailers and Enterprises on page 4](#)
- [Verifying and Updating Configuration of Extranets for VPNs on page 5](#)
- [Locating and Removing Inactive Subscriptions to a VPN on page 7](#)

### **Before You Add a Junos OS VPN to the SRC Configuration**

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For SRC configurations that support routers running Junos OS, you can add VPNs and extranets for retailers and enterprises.

For C Series Controllers, you add VPNs through the CLI and can manage the VPNs through an enterprise portal that runs on another system.

Before you can add a VPN to an SRC configuration, you must configure the VPN. Before you configure the VPN, make sure that in the routing scheme in the VPN:

- All members in the VPN can reach other.
- No changes are needed as members are added to and removed from the VPN.

If a VPN is used as an intranet, you can ensure that the routing scheme meets these requirements by configuring either:

- Static routes in the VPN
- Appropriate routing protocols

If the VPN is exported as an extranet, some members of the VPN may use private or conflicting address schemes. In addition, if the VPN has a large number of potential members, configuring static routing or routing protocols for all potential members may not be a manageable proposition. In these last two cases, we recommend that you use public addresses in the VPN and have VPN members implement Network Address translation (NAT) for traffic destined for the VPN.

VPNs use private IP addresses. If, however, enterprises that you administer export VPNs to extranet clients, you must ensure that the extranet clients can reach the IP addresses that the VPNs use. To implement an address scheme that allows all subscribers who have access to a VPN, we recommend that you implement NAT on the device running

Junos OS. IT managers in the retailers and enterprises who own the VPNs can then map private IP addresses in the VPNs to public IP addresses, which extranet clients can reach.

Before you can reference a Junos OS VPN from the SRC configuration:

1. Create one routing instance in each router where VPN members access the VPN.
2. Make sure that each routing instance in the VPN has the same name as the VPN. The VPN represents the collection of the routing instances, the VPN members, and the connections between those routing instances within the VPN. All routing instances share a VPN ID, which you use to add VPNs to an SRC configuration.
3. Connect the VPN through a tunnel such as an MPLS label-switched path or IP Security tunnel.

**Related  
Documentation**

- *NAT Address Management Portal Overview*
- *Assigning IP Addresses*

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## Adding VPNs for Retailers and Enterprises

When you add a VPN to the SRC configuration, you are creating a VPN configuration object that represents a VPN that is already configured in the network. You can add a VPN for a retailer or for an enterprise.

Before you add a VPN to the configuration, obtain the identifier for the VPN. This identifier is the name of the routing instances on a device running Junos OS that implements the VPN.

To add a VPN to subscriber configuration for a retailer or an enterprise:

1. From configuration mode, access the configuration statement that configures the VPN.

```
[edit]
user@host# edit subscribers retailer name vpn vpn-id
```

or

```
[edit]
user@host# edit subscribers retailer name subscriber-folder folder-name enterprise
name vpn vpn-id
```

where *vpn-id* is the name of the routing instances on a device running Junos OS that implements the VPN.

2. (Optional) Provide a name to identify the VPN as it appears in other SRC components, such as the Enterprise Manager Portal or other login pages.

```
[edit subscribers retailer name vpn vpn-id ]
user@host# edit display-name display-name
```



For example, to label the VPN as one used for video conferences with corporate partners:

```
[edit subscribers retailer name vpn vpn-id ]
user@host# edit display-name "Partner Video Conference"
```

- (Optional) Add a description of the VPN.

```
[edit subscribers retailer name vpn vpn-id ]
user@host# edit description description
```

For example:

```
[edit subscribers retailer name vpn vpn-id ]
user@host# edit description "VPN for video conference with partners"
```

- Verify that the configuration is correct. For example:

```
[edit subscribers retailer Acme vpn 1234]
user@host# show
display-name "Partner Video Conference";
description "VPN for video conference with partners.";
```

#### Related Documentation

- [Configuration Statements for Adding VPNs and Extranet Clients on page 9](#)
- [Verifying and Updating Configuration of Extranets for VPNs on page 5](#)
- [Before You Add a Junos OS VPN to the SRC Configuration on page 3](#)
- [Locating and Removing Inactive Subscriptions to a VPN on page 7](#)

## Verifying and Updating Configuration of Extranets for VPNs

From the SRC CLI, you can correct errors in extranet configuration when these errors result from directory or portal errors. In the extranet configuration, an extranet client of an object must be imported by that object.

In the SRC configuration for a subscriber that is the client of an extranet client, you specify a VPN for the imported extranet client. Typically, you add the extranet client and specify the imported extranet from the Enterprise Manager Portal. You can use the SRC CLI to verify the configuration and to make updates to the existing configuration.

To view information about extranet configuration and update it:

- From configuration mode, access the configuration statement that represents the configuration for the VPN.

```
[edit]
user@host# edit subscribers retailer name vpn vpn-id
```

or

```
[edit]
user@host# edit subscribers retailer name subscriber-folder folder-name enterprise
name vpn vpn-id
```

where *vpn-id* is the name of the routing instances on a device running Junos OS that implements the VPN.

- View the configuration for the VPN. For example:

```
[edit subscribers retailer Acme vpn 1234]
user@host# show
extranet-client [ "enterpriseName=Acme, ou=local, retailername=default, o=Users,
o=umc" "enterpriseName=WidgetCo, ou=local, retailername=default, o=Users,
o=UMC "];
```

- (Optional) Change or add the distinguished name (DN) of a retailer or an enterprise that is an extranet client of this VPN.

```
[edit subscribers retailer name vpn vpn-id ]
user@host# set extranet-client extranet-client
```

For example:

```
[edit subscribers retailer name vpn vpn-id ]
user@host# set extranet-client
enterpriseName=Acme2,ou=local,retailername=default, o=Users, o=umc
```

- (Optional) Change or add extranets to be imported by specifying the DN of the extranet.

```
[edit subscribers retailer name vpn vpn-id ]
user@host# set imported-extranets imported-extranets
```

You can specify one or more extranets.

- Verify that the updated configuration is correct.

```
[edit subscribers retailer name vpn
vpn-id
]
user@host# show
[edit subscribers retailer Acme vpn 1234]
user@host# show
extranet-client [ "enterpriseName=Acme, ou=local, retailername=default, o=Users,
o=umc" "enterpriseName=Acme2, ou=local, retailername=default, o=Users,
o=umc""enterpriseName=WidgetCo, ou=local, retailername=default, o=Users, o=UMC
"];
```

#### Related Documentation

- [Before You Add a Junos OS VPN to the SRC Configuration on page 3](#)
- [Configuration Statements for Adding VPNs and Extranet Clients on page 9](#)
- [Adding VPNs for Retailers and Enterprises on page 4](#)
- [Locating and Removing Inactive Subscriptions to a VPN on page 7](#)

## Locating and Removing Inactive Subscriptions to a VPN

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When an IT manager cancels the export of a VPN, the Enterprise Manager Portal automatically deactivates any active subscriptions to that VPN for the associated extranet client. If an IT manager cancels the export of a VPN at the same time that the extranet client activates a subscription to this VPN, there is a remote possibility that the Enterprise Manager portal will maintain the active subscription.

We recommend that you periodically check for and deactivate these types of invalid subscriptions to prevent this type of invalid subscription.

### **Related Documentation**

- [Before You Add a Junos OS VPN to the SRC Configuration on page 3](#)
- [Adding VPNs for Retailers and Enterprises on page 4](#)
- [Verifying and Updating Configuration of Extranets for VPNs on page 5](#)



## CHAPTER 2

# Configuration Statements

- [Configuration Statements for Adding VPNs and Extranet Clients on page 9](#)

## Configuration Statements for Adding VPNs and Extranet Clients

---

Use the following configuration statements to add VPNs and extranet clients at the **[edit]** hierarchy level.

```
subscribers retailer name vpn vpn-id {
  description description ;
  display-name display-name ;
  extranet-client [ extranet-client ... ];
  imported-extranet [ imported-extranet ...];
}
subscribers retailer name subscriber-folder folder-name enterprise name vpn vpn-id {
  description description ;
  display-name display-name ;
  extranet-client [ extranet-client ... ];
  imported-extranet [ imported-extranet ...];
}
```

For detailed information about each configuration statement, see the *SRC PE CLI Command Reference*.

### Related Documentation

- [Adding VPNs for Retailers and Enterprises on page 4](#)



## PART 2

# Index

- [Index on page 13](#)





# Index

## C

conventions	
notice icons.....	viii
text.....	viii
customer support.....	x
contacting JTAC.....	x

## D

documentation	
comments on.....	x

## M

manuals	
comments on.....	x

## N

NAT (Network Address Translation)	
VPNs.....	3
notice icons.....	viii

## P

protocols	
routing.....	3
public addresses, VPNs.....	3

## R

routing instances	
VPNs.....	3
routing scheme.....	3

## S

static routing.....	3
support, technical	See technical support

## T

technical support	
contacting JTAC.....	x
text conventions.....	viii

## V

validating	
VPNs.....	7
virtual private networks. See VPNs	
VPNs (virtual private networks)	
adding	
SRC CLI.....	4
configuration requirements.....	3
configuration statements.....	9
extranet clients, modifying	
SRC CLI.....	5
invalid subscriptions.....	7
modifying.....	5
routing schemes.....	3
using NAT.....	3
validating.....	7

