

Managing the SRC Diameter Server



Modified: 2016-05-25

Juniper Networks, Inc.
1133 Innovation Way
Sunnyvale, California 94089
USA
408-745-2000
www.juniper.net

Copyright © 2016, Juniper Networks, Inc. All rights reserved.

Juniper Networks, Junos, Steel-Belted Radius, NetScreen, and ScreenOS are registered trademarks of Juniper Networks, Inc. in the United States and other countries. The Juniper Networks Logo, the Junos logo, and JunosE are trademarks of Juniper Networks, Inc. All other trademarks, service marks, registered trademarks, or registered service marks are the property of their respective owners.

Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.

Managing the SRC Diameter Server

Copyright © 2016, Juniper Networks, Inc.
All rights reserved.

The information in this document is current as of the date on the title page.

YEAR 2000 NOTICE

Juniper Networks hardware and software products are Year 2000 compliant. Junos OS has no known time-related limitations through the year 2038. However, the NTP application is known to have some difficulty in the year 2036.

END USER LICENSE AGREEMENT

The Juniper Networks product that is the subject of this technical documentation consists of (or is intended for use with) Juniper Networks software. Use of such software is subject to the terms and conditions of the End User License Agreement ("EULA") posted at <http://www.juniper.net/support/eula.html>. By downloading, installing or using such software, you agree to the terms and conditions of that EULA.

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 |
| Part 1 | Overview | |
| Chapter 1 | Software Features Overview | 3 |
| | SRC Component Overview | 3 |
| Part 2 | Configuration | |
| Chapter 2 | Configuration Tasks for the SRC Diameter Server | 9 |
| | Configuring the Diameter Application (SRC CLI) | 9 |
| | Configuring the Diameter Application Properties | 9 |
| | Configuring the Diameter Client Properties | 12 |
| | Configuring the Diameter Server Properties | 13 |
| | Configuring Logging Destinations | 13 |
| | Configuring Diameter Peers (SRC CLI) | 14 |
| Part 3 | Index | |
| | Index | 19 |

List of Tables

| | | |
|------------------|---|------------|
| | About the Documentation | vii |
| | Table 1: Notice Icons | viii |
| | Table 2: Notice Icons | ix |
| | Table 3: Text Conventions | ix |
| Part 1 | Overview | |
| Chapter 1 | Software Features Overview | 3 |
| | Table 4: Descriptions of SRC Components | 3 |

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

To obtain the most current version of all Juniper Networks® 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

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

- C Series

Documentation Conventions

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 |
|-----------------------------|---|---|
| Bold text like this | <ul style="list-style-type: none"> Represents keywords, scripts, and tools in text. Represents a GUI element that the user selects, clicks, checks, or clears. | <ul style="list-style-type: none"> Specify the keyword exp-msg. Run the install.sh script. Use the pkgadd tool. To cancel the configuration, click Cancel. |
| Bold text like this | Represents text that the user must type. | user@host# set cache-entry-age <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"> Represents configuration statements. Indicates SRC CLI commands and options in text. Represents examples in procedures. Represents URLs. | <ul style="list-style-type: none"> system ldap server{ stand-alone; Use the request sae modify device failover command with the force option user@host# ... http://www.juniper.net/techpubs/software/management/sdx/api-index.html |

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"> Emphasizes words. Identifies book names. Identifies distinguished names. Identifies files, directories, and paths in text but not in command examples. | <ul style="list-style-type: none"> There are two levels of access: <i>user</i> and <i>privileged</i>. <i>SRC-PE Getting Started Guide</i>. <i>o=Users, o=UMC</i> The <i>/etc/default.properties</i> file. |
| 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. 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

Overview

- [Software Features Overview on page 3](#)

CHAPTER 1

Software Features Overview

- [SRC Component Overview on page 3](#)

SRC Component Overview

The SRC software is a dynamic system. It contains many components that you use to build a subscriber management environment. You can use these tools to customize and extend the SRC software for your use and to integrate the SRC software with other systems. The SRC software also provides the operating system and management tools for C Series Controllers.

[Table 4 on page 3](#) gives a brief description of the components that make up the SRC software.

Table 4: Descriptions of SRC Components

| Component | Description |
|--|---|
| Server Components | |
| Service activation engine (SAE) | <ul style="list-style-type: none">• Authorizes, activates, and deactivates subscriber and service sessions by interacting with systems such as Juniper Networks routers, cable modem termination system (CMTS) devices, RADIUS servers, and directories.• Collects accounting information about subscribers and services from routers, and stores the information in RADIUS accounting servers, flat files, and other accounting databases.• Provides plug-ins and application programming interfaces (APIs) for starting and stopping subscriber and service sessions and for integrating with systems that authorize subscriber actions and track resource usage. |
| Subscriber Information Collector (SIC) | The SIC listens for RADIUS accounting events from IP edge devices (accounting clients) and forwards them to a remote AAA server, allowing the SRC software to gain increased subscriber awareness. Additionally, the SIC can optionally edit accounting events before routing them. |
| Juniper Policy Server (JPS) | Acts as a policy decision point (PDP) and policy enforcement point (PEP) that manages the relationships between application managers and CMTS devices in a PCMM environment. |
| Network information collector (NIC) | Collects information about the state of the network and can provide a mapping from a given type of network data to another type of network data. |
| Redirect Server | Redirects HTTP requests received from IP Filter to a captive portal page. |

Table 4: Descriptions of SRC Components *(continued)*

| Component | Description |
|---|--|
| 3GPP Gateway | The SRC Third-Generation Partnership Project (3GPP) gateway is a Diameter-based component in the SRC software, which provides integration with 3GPP Policy and Charging Control environments, to provide fixed-mobile convergence (FMC). The SRC 3GPP gateway provides Gx-based integration with the Policy and Charging Rules Function (PCRF). The SRC 3GPP gateway uses the northbound Gx interface to mediate between the PCRF and Juniper Networks routers like the E Series Broadband Services routers and MX Series routers. The northbound Gx interface on the SRC 3GPP gateway communicates with the PCRF using the Diameter protocol. |
| 3GPP Gy | The SRC 3GPP Gy is a Diameter-based component in the SRC software, which provides Gy-based integration with the Online Charging System (OCS), to provide FMC. The SRC 3GPP Gy uses the northbound Gy interface to handle charging-related information between the OCS and Juniper Networks routers like the E Series Broadband Services routers and MX Series routers. The northbound Gy interface communicates with the OCS using the Diameter protocol. |
| Web Application Service | The SRC software includes a Web application server that hosts the Web Services Gateway and the Volume Tracking Application (SRC VTA). In production environments, this application server is designed to host only these applications. However, you can load your own applications into this server for testing or demonstration purposes. |
| Web Services Gateway | Allows a gateway client—an application that is not part of the SRC network—to interact with SRC components through a Simple Object Access Protocol (SOAP) interface. The Web Services Gateway provides the Dynamic Service Activator which allows a gateway client to dynamically activate and deactivate SRC services for subscribers and to run scripts that manage the SAE. |
| Repository | |
| Directory | The SRC software includes the Juniper Networks database, which is a built-in Lightweight Directory Access Protocol (LDAP) directory for storing all SRC data including services, policies, and small subscriber databases. For large subscriber databases, you must supply your own directory. |
| SRC Configuration and Management Tools | |
| SRC command line interface (CLI) | Provides a way to configure the SRC software on a C Series Controller from a Junos OS–like CLI. The SRC CLI includes the policies, services, and subscribers CLI, which has separate access privileges. |
| C-Web interface | Provides a way to configure, monitor, and manage the SRC software on a C Series Controller through a Web browser. The C-Web interface includes a policies, services, and subscribers component, which has separate access privileges. |
| Simple Network Management Protocol (SNMP) agent | Monitors system performance and availability. It runs on all the SRC hosts and makes management information available through SNMP tables and sends notifications by means of SNMP traps. |
| Service Management Applications (Run on external system) | |
| IMS Services Gateway | Integrates into an IP multimedia system (IMS) environment. The SRC software provides a Diameter protocol-based interface that allows the SRC software to integrate with services found on the application layer of IMS. |

Table 4: Descriptions of SRC Components *(continued)*

| Component | Description |
|---|--|
| SRC Programming Interfaces | |
| NETCONF API | Allows you to configure or request information from the NETCONF server on a C Series Controller that runs the SRC software. Applications developed with the NETCONF API run on a system other than a C Series Controller. |
| CORBA plug-in service provider interface (SPI) | Tracks sessions and enables linking the rest of the service provider's operations support system (OSS) with the SRC software so that the OSS can be notified of events in the life cycle of SAE sessions. Hosted plug-ins only. |
| CORBA remote API | Provides remote access to the SAE core API. Applications that use these extensions to the SRC software run on a system other than a C Series Controller. |
| NIC access API | Performs NIC resolutions. Applications that use these extensions to the SRC software run on a system other than a C Series Controller. |
| SAE core API | Controls the behavior of the SRC software. Applications that use these extensions to the SRC software run on a system other than a C Series Controller. |
| Script services | Provides an interface to call scripts that supply custom services such as provisioning policies on a number of systems across a network. |
| VTA API | The Volume Tracking Application (VTA) API is a Simple Object Access Protocol (SOAP) interface that allows developers to create gateway clients and that administrators use to manage VTA subscribers and sessions. The SRC Web Services Gateway allows a gateway client—an application that is not part of the SRC network—to interact with SRC components, such as the VTA, through a SOAP interface. |
| Authorization and Accounting Applications | |
| AAA RADIUS servers | Authenticates subscribers and authorizes their access to the requested system or service. Accepts accounting data—time active and volume of data sent—about subscriber and service sessions. RADIUS servers run on a system other than a C Series Controller. |
| SRC Admission Control Plug-In (SRC ACP) | Authorizes and tracks subscribers' use of network resources associated with services that the SRC application manages. |
| Flat file accounting | Stores tracking data to accounting flat files that can be made available to external systems that send the data to a rating and billing system. |
| Volume Tracking Application | <p>The SRC Volume Tracking Application (SRC VTA) is an SRC component that allows service providers to track and control the network usage of subscribers and services. You can control volume and time usage on a per-subscriber or per-service basis. This level of control means that service providers can offer tiered services that use volume as a metric, while also controlling abusive subscribers and applications.</p> <p>When a subscriber or service exceeds bandwidth limits (or quotas), the SRC VTA can take actions including imposing rate limits on traffic, sending an e-mail notification, or charging extra for additional bandwidth consumed.</p> |
| Demonstration Applications (available on the Juniper Networks Website) | |

Table 4: Descriptions of SRC Components *(continued)*

| Component | Description |
|---------------------------------------|---|
| Enterprise Audit Plug-In | Defines a callback interface, which receives events when IT managers complete specified operations. |
| Enterprise Manager Portal | <p>Allows service providers to provision services for enterprise subscribers on routers running JunosE or Junos OS and allows IT managers to manage services.</p> <p>Enterprise Manager Portal can be used with NAT Address Management Portal to allow service providers to manage public IP addresses for use with NAT services on routers running Junos OS and to allow IT managers to make requests about public IP addresses through the Enterprise Manager Portal.</p> |
| Monitoring Agent application | Integrates IP address managers, such as a DHCP server or a RADIUS server, into an SRC-managed network so that the SAE is notified about subscriber events. The Monitoring Agent application runs on a Solaris platform. |
| Residential service selection portals | Provides a framework for building Web applications that allow residential and enterprise subscribers to manage their own network services. It comes with several full-featured sample Web applications that are easy to customize and suitable for deployment. The Residential service selection portals run on a Solaris platform. |
| Sample enterprise service portal | Lets service providers supply an interface to their business customers for managing and provisioning services. |

Related Documentation • *SRC Product Description*

PART 2

Configuration

- [Configuration Tasks for the SRC Diameter Server on page 9](#)

CHAPTER 2

Configuration Tasks for the SRC Diameter Server

- [Configuring the Diameter Application \(SRC CLI\) on page 9](#)
- [Configuring Diameter Peers \(SRC CLI\) on page 14](#)

Configuring the Diameter Application (SRC CLI)

You can configure the properties of the application, client, server, and logging destination of the SRC Diameter application.

Perform the following tasks to configure these properties:

- [Configuring the Diameter Application Properties on page 9](#)
- [Configuring the Diameter Client Properties on page 12](#)
- [Configuring the Diameter Server Properties on page 13](#)
- [Configuring Logging Destinations on page 13](#)

Configuring the Diameter Application Properties

The SRC software supports Diameter application properties such as Juniper Networks Session Resource Control (JSRC) and southbound Gx interface. JSRC and southbound Gx interface communicate with the Service Activation Engine (SAE) (remote SRC peer).

Use the following configuration statements to configure the properties for the Diameter application:

```
system diameter {  
  java-heap-size java-heap-size;  
  java-new-size java-new-size;  
  java-garbage-collection-options java-garbage-collection-options;  
  protocol [(tcp | sctp)...];  
  local-address [local-address...];  
  port port;  
  origin-host origin-host;  
  origin-realm origin-realm;  
  diameter-server-timeout diameter-server-timeout;  
  active-peers;  
  debug-mode;  
  load-balancing-mode (failover | round-robin);  
}
```

```
transaction-processing-log (log-no-messages | log-severe-messages |
    log-normal-messages | log-debug-messages);
packet-trace-log (log-no-messages | log-severe-messages | log-normal-messages |
    log-debug-messages);
peer-state-machine-log (log-no-messages | log-severe-messages | log-normal-messages
    | log-debug-messages);
configuration-log (log-no-messages | log-severe-messages | log-normal-messages |
    log-debug-messages);
}
```

To configure the Diameter application:

1. From configuration mode, access the statement for the Diameter application.

```
user@host# edit system diameter
```



NOTE: The `java-*` options have default values that should not be changed unless directed by Juniper Networks Technical Assistance Center (JTAC).

2. If you encounter problems caused by lack of memory, change the maximum memory size available to the Java Runtime Environment (JRE).

```
[edit system diameter]
user@host# set java-heap-size java-heap-size
```

3. Configure the amount of space available to the JRE when the Diameter server starts.

```
[edit system diameter]
user@host# set java-new-size java-new-size
```

4. Configure the garbage collection functionality of the Java Virtual Machine.

```
[edit system diameter]
user@host# set java-garbage-collection-options java-garbage-collection-options
```

5. Specify the protocol for the transport connection.

```
[edit system diameter]
user@host# set protocol [(tcp | sctp) ...]
```

6. (Optional) Specify the local IP addresses that remote peers can use to reach this server.

```
[edit system diameter]
user@host# set local-address [local-address...]
```

7. (Optional) Specify the port for the server.

```
[edit system diameter]
user@host# set port port
```

8. (Optional) Specify the fully qualified domain name (FQDN) used to identify this host to its Diameter peers.

```
[edit system diameter]
user@host# set origin-host origin-host
```

9. (Optional) Specify the realm used to identify this host to its Diameter peers.

```
[edit system diameter]
```

```
user@host# set origin-realm origin-realm
```

The Diameter realm should be configured to the domain name of the origin host. For example, if the FQDN of the host is host.juniper.net, then the realm should be juniper.net.

10. (Optional) Configure the timeout value until which the Diameter server holds unsolicited requests such as Point to Point Protocol (PPP) and Abort Session Request (ASR), and waits for a matching response such as Push Profile Answer (PPA) and Abort Session Answer (ASA). The server discards the responses received after the specified time. The value range is 1–65,565 seconds. The preferred value is 10–30 seconds. By default, the value is set to 25 seconds.

```
[edit system diameter]
```

```
user@host# set diameter-server-timeout diameter-server-timeout
```



NOTE: `diameter-server-timeout` and `reply-timeout` under the `[edit shared sae group configuration driver]` hierarchy should be configured with the same value.

11. (Optional) Specify whether the peer connection is in active mode.

```
[edit system diameter]
```

```
user@host# set active-peers
```



NOTE:

- Active mode means that the SRC software actively tries to connect to the peer. Make sure the peer you are connecting to supports active peers. The MX Series router does not support active peers. The SRC software can still be configured, but the connection attempts will not work.
- If the peer connection is configured to be in active mode, you must configure the remote peer address for all Diameter peers by using the `address` option under the `[edit shared network diameter peer name]` hierarchy.

12. (Optional) Specify whether the peer connection is in debug mode.

```
[edit system diameter]
```

```
user@host# set debug-mode
```

13. (Optional) Configure the load-balancing mode for peer selection when forwarding a request message.

```
[edit system diameter]
```

```
user@host# set load-balancing-mode (failover | round-robin)
```

14. (Optional) Configure the log level for the transaction processing log.

```
[edit system diameter]
```

```
user@host# set transaction-processing-log log-level
```

where *log-level* is one of the following:

- **log-no-messages**—Do not log any messages.
- **log-severe-messages**—Log only severe messages.
- **log-normal-messages**—Log only normal messages.
- **log-debug-messages**—Log only debug messages.

15. (Optional) Configure the log level for the packet tracing log.

```
[edit system diameter]
user@host# set packet-trace-log log-level
```

where *log-level* is one of the following:

- **log-no-messages**—Do not log any messages.
- **log-severe-messages**—Log only severe messages.
- **log-normal-messages**—Log only normal messages.
- **log-debug-messages**—Log only debug messages.

16. (Optional) Configure the log level for the peer state machine log.

```
[edit system diameter]
user@host# set peer-state-machine-log log-level
```

where *log-level* is one of the following:

- **log-no-messages**—Do not log any messages.
- **log-severe-messages**—Log only severe messages.
- **log-normal-messages**—Log only normal messages.
- **log-debug-messages**—Log only debug messages.

17. (Optional) Configure the log level for the configuration log.

```
[edit system diameter]
user@host# set configuration-log log-level
```

where *log-level* is one of the following:

- **log-no-messages**—Do not log any messages.
- **log-severe-messages**—Log only severe messages.
- **log-normal-messages**—Log only normal messages.
- **log-debug-messages**—Log only debug messages.

Configuring the Diameter Client Properties

This procedure configures the client-side adapter of the SRC Diameter server, which handles client connections. Configuration should be necessary only if you encounter performance problems.

Use the following statements to configure the properties for the Diameter client:


```
system diameter client {  
    threads threads;  
    keep-alive-time keep-alive-time;  
}
```

To configure the Diameter client properties:

1. From configuration mode, access the statement for the Diameter client.

```
user@host# edit system diameter client
```

2. (Optional) Specify the number of threads to use.

```
[edit system diameter client]  
user@host# set threads threads
```

3. (Optional) Specify the time to wait for new commands.

```
[edit system diameter client]  
user@host# set keep-alive-time keep-alive-time
```

Configuring the Diameter Server Properties

Use the following statements to configure the properties for the Diameter server:

```
system diameter server {  
    threads threads;  
    keep-alive-time keep-alive-time;  
}
```

To configure the Diameter server properties:

1. From configuration mode, access the statement for the Diameter server.

```
user@host# edit system diameter server
```

2. (Optional) Specify the minimum number of threads to use.

```
[edit system diameter server]  
user@host# set threads threads
```

3. (Optional) Specify the time to wait for new commands.

```
[edit system diameter server]  
user@host# set keep-alive-time keep-alive-time
```

Configuring Logging Destinations

Use the following configuration statements to configure logging destinations for Diameter:

```
system diameter logger name ...  
  
system diameter logger name file {  
    filter filter;  
    filename filename;
```

```
    rollover-filename rollover-filename;  
    maximum-file-size maximum-file-size;  
}
```

To configure logging destinations to store log messages in a file:

1. From configuration mode, access the statement that configures the name and type of logging destination.

```
user@host# edit system diameter logger name file
```

2. Specify the properties for the logging destination.

```
[edit system diameter logger name file]  
user@host# set ?
```

For more information about configuring properties for the logging destination, see *Configuring Logging Destinations to Store Messages in a File (SRC CLI)*.

Related Documentation

- *SRC CLI Commands to Monitor the SRC Diameter Server*
- To manage services for JSRC peers on MX Series routers, see *Managing Services on MX Series Routers Using the Diameter Application*.

Configuring Diameter Peers (SRC CLI)

Use the following configuration statements to configure the Diameter peers:

```
shared network diameter peer name {  
    protocol [(tcp | sctp)...];  
    address [address...];  
    enforce-source-address;  
    local-address local-address;  
    connect-timeout connect-timeout;  
    watchdog-timeout watchdog-timeout;  
    state-machine-timeout state-machine-timeout;  
    reconnect-timeout reconnect-timeout;  
    port port;  
    origin-host origin-host;  
    incoming-queue-limit incoming-queue-limit;  
    active-peer;  
}
```



NOTE: When you commit the Diameter peer configuration, keep in mind the following conditions:

- The origin host, remote peer address, or both should be specified for the Diameter peer.
- If the enforce source address is configured for the Diameter peer, the remote peer address should be specified for the Diameter peer.
- If the peer connection is configured to be in active mode for a particular Diameter peer or globally for all Diameter peers by using the **active-peers** option under the **[edit system diameter]** hierarchy, the remote peer address should be specified for the Diameter peers.

To configure the Diameter peer:

1. From configuration mode, access the statements for the peer.

```
user@host# edit shared network diameter peer name
```

The peer name must be unique.

2. Specify the protocol for the transport connection.

```
[edit shared network diameter peer name]
```

```
user@host# set protocol [(tcp | sctp) ...]
```

3. (Optional) Specify the addresses of the remote peer. If SCTP is the transport protocol, you can specify multiple addresses. If TCP is the transport protocol, you can specify only a single address.

```
[edit shared network diameter peer name]
```

```
user@host# set address [address ...]
```

4. (Optional) Specify whether the remote peer must connect from one of the IP addresses listed by the **address** option.

```
[edit shared network diameter peer name]
```

```
user@host# set enforce-source-address
```

5. (Optional) Specify the local address of the peer.

```
[edit shared network diameter peer name]
```

```
user@host# set local-address local-address
```

6. (Optional) Specify the maximum amount of time allowed for the Diameter peer to respond to a connection request.

```
[edit shared network diameter peer name]
```

```
user@host# set connect-timeout connect-timeout
```

7. (Optional) Specify the watchdog timeout used for the connection to the remote peer.

```
[edit shared network diameter peer name]
```

```
user@host# set watchdog-timeout watchdog-timeout
```

8. (Optional) Specify the Diameter state machine timeout.

```
[edit shared network diameter peer name]
```

```
user@host# set state-machine-timeout state-machine-timeout
```

9. (Optional) Specify the time interval between connection attempts when the peer is in the disconnected state.

```
[edit shared network diameter peer name]  
user@host# set reconnect-timeout reconnect-timeout
```

10. (Optional) Specify the port for the client.

```
[edit shared network diameter peer name]  
user@host# set port port
```

11. (Optional) Specify the identifier for the endpoint that the peer presents during connection establishment.

```
[edit shared network diameter peer name]  
user@host# set origin-host origin-host
```

12. (Optional) Specify the number of messages allowed on the incoming message queue for a peer.

```
[edit shared network diameter peer name]  
user@host# set incoming-queue-limit incoming-queue-limit
```

13. (Optional) Specify whether the peer connection is in active mode.

```
[edit shared network diameter peer name]  
user@host# set active-peer
```



NOTE: Active mode means that the SRC software actively tries to connect to the peer. Make sure the peer you are connecting to supports active peers. The MX Series router does not support active peers. The SRC software can still be configured, but the connection attempts will not work.

**Related
Documentation**

- [Configuring the Diameter Application \(SRC CLI\) on page 9](#)
- [Viewing SRC Diameter Server State \(SRC CLI\)](#)

PART 3

Index

- [Index on page 19](#)

Index

C

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

D

| | |
|-----------------------|----|
| Diameter | |
| peers | |
| configuring..... | 14 |
| directory | |
| description..... | 4 |
| directory server..... | 4 |
| documentation | |
| comments on..... | x |

L

| | |
|---|--|
| LDAP (Lightweight Directory Access Protocol). See | |
| directory; directory server | |

M

| | |
|------------------|---|
| manuals | |
| comments on..... | x |

N

| | |
|-------------------|------|
| notice icons..... | viii |
|-------------------|------|

S

| | |
|--|---|
| SRC components | |
| description..... | 3 |
| support, technical See technical support | |

T

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

