

# SRC PE Software Release Notes

Release 4.3.0  
January 2014  
Revision 3

These release notes cover Release 4.3.0 of the Juniper Networks Session and Resource Control (SRC) portfolio. The SRC software runs on C Series Controllers. If the information in these release notes differs from the information found in the published documentation set, follow these release notes.

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## Release Overview

If the information in your current release notes differs from the information found in the other documentation sources, follow the *SRC PE Release Notes*.

### Before You Start

Before you use your new software, read these *Release Notes* in their entirety, especially the section *Known Problems and Limitations*. You need the following documentation to fully understand all the features available in Release 4.3.0:

- These *SRC 4.3.0 Release Notes*, which describe the changes between Releases 4.2.0 and 4.3.0.
- The 4.3.0 SRC Policy Engine (SRC PE) software documentation set, which provides detailed information about features available in Release 4.3.x.

If the information in your current release notes differs from the information found in the other documentation sources, follow the *Release Notes*.

### Documentation

The SRC 4.3.x SRC PE core documentation set consists of several manuals and is available only in electronic format. Refer to the following table to help you decide which document to use.

Task	Related Documentation
Install the C Series Controller.	<i>C Series Controllers C3000 and C5000 Hardware Guide</i>  <i>C Series Controllers C2000 and C4000 Hardware Guide</i>
Get up and running quickly.	<i>C3000 and C5000 Quick Start Guide</i>  <i>C2000 and C4000 Quick Start Guide</i>
Learn about the general operation of the SRC software.	<i>SRC PE Getting Started Guide</i>
Perform basic configuration of a C Series Controller.	<i>SRC PE Getting Started Guide</i>
Use the SRC CLI.	<i>SRC PE CLI User Guide</i>
Use the License Manager and directory events.	<i>SRC PE Getting Started Guide</i>
Use the SAE, Juniper Networks routers, NIC, ACP, SSR, and SIC.	<i>SRC PE Network Guide</i>
Use the SNMP agent and logging utilities.	<i>SRC PE Monitoring and Troubleshooting Guide</i>
Integrate external network devices into the SRC network.	<i>SRC PE Network Guide</i>

Task	Related Documentation
Work with SRC services and policies.	<i>SRC PE Services and Policies Guide</i>
Work with SRC subscribers and subscriptions.	<i>SRC PE Subscribers and Subscriptions Guide</i>
Use the enterprise portals.	<i>SRC Sample Applications Guide</i>
Use the residential portal.	<i>SRC Sample Applications Guide</i>
Use the C-Web interface to configure the SRC software.	<i>SRC PE C-Web Interface Configuration Guide</i>
Get specific information about commands and statements for: <ul style="list-style-type: none"> <li>• CLI and system</li> <li>• Juniper Networks database</li> <li>• SAE</li> <li>• Network Information Collector (NIC)</li> <li>• Session State Registrar (SSR)</li> <li>• Subscriber Information Collector (SIC)</li> <li>• SNMP agent</li> <li>• SRC Admission Control Plug-In (SRC ACP)</li> <li>• Volume Tracking Application (VTA)</li> <li>• SRC License Management</li> <li>• COS Naming Service</li> </ul>	<i>SRC PE CLI Command Reference, Volume 1</i>
Get specific information about commands and statements for: <ul style="list-style-type: none"> <li>• Services</li> <li>• Policies</li> <li>• Subscribers</li> <li>• Redirect server</li> <li>• External Subscriber Monitor</li> <li>• Application Server</li> <li>• Dynamic Service Activator</li> <li>• IP Multimedia Subsystem (IMS)</li> <li>• Diameter application</li> <li>• Juniper Policy Server (JPS)</li> </ul>	<i>SRC PE CLI Command Reference, Volume 2</i>

The entire documentation set, including the release notes, in PDF format is available on the Juniper Networks Web site:

<http://www.juniper.net/techpubs/software/management/src/>

## SRC Software

The SRC software for C Series Controllers is preinstalled on the device and available on the USB storage device supplied with the platform.

You can also download the SRC software and the product release notes from the Juniper Networks Web site at:

<https://www.juniper.net/support/csc/swdist-erx/src.html>

## Release Highlights

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Highlights include the following product enhancements:



**NOTE:** The SRC software runs on the C Series Controllers—a range of hardware platforms. The SRC 4.3.0 software contains the features found in the SRC 4.2.0 release plus the features listed in this section. The SRC 4.3.0 software may contain references to Release 7.9.0, which refers to the SAE version.

### Third-Generation Partnership Project (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 Gx interface to mediate between the PCRF and Juniper Networks routers like the E Series Broadband Services routers and MX Series routers. The Gx interface on the SRC 3GPP gateway communicates with the PCRF using the Diameter protocol.

### SRC VTA SOAP Interface

The SRC Volume Tracking Application (SRC VTA) API is a Simple Object Access Protocol (SOAP) interface that allows developers to create gateway clients and that administrators use to manage SRC 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 SRC VTA, through a SOAP interface.

### Logrotate Log File Management Utility

Logrotate is a log file management utility that allows you to manage the large number of log files the SRC software generates. Logrotate is essential for managing the disk space on the C Series Controller.

You can use logrotate to regularly rotate log files by removing the oldest log files from your system and creating new log files. You can rotate files based on age or size. You can rotate log files daily, weekly, monthly, or yearly. Logrotate can also be used to compress log files. Logrotate usually runs automatically through the Cron utility.

### Aggregate Rate-Limiting for JunosE Dual-Stack Subscribers (IPv4 and IPv6)

You can rate-limit traffic flow based on a common external rate-limit profile. This is accomplished by defining higher-level *external parent groups* and *hierarchical policy parameters*. An external parent group is a hierarchical rate-limit profile, which you define

externally to a policy list so that it may be globally accessed by all classify-traffic conditions and internal parent groups within a policy list. Each external parent group can have an associated rate-limit profile and also have a reference to another external parent group.



**NOTE:** The SRC software supports hierarchical rate-limiting for dual-stack (IPv4 and IPv6) PPP and static interfaces on E Series routers. The SRC software does not support external parent groups on E Series router L2TP interfaces, or on any other SRC software-supported routers.

## Next-Hop Policies for JunosE IPv6 Traffic

Next-hop policies are now supported for JunosE IPv6 traffic.

## Option for SIC to Delete SSR Record Upon Receiving an Accounting-Stop Message

To conserve resource space in the SSR database, you can enable the **remove-stopped-sessions** option. When you enable this option, user session entries are deleted from the SSR database when the SIC receives an Accounting-Stop message.

## Configuration Wizards

The SRC software includes configuration wizards to simplify configuring the most common configuration scenarios. Each configuration wizard uses an XML definition file that generates a specific configuration scenario.

The fair usage on MX Series routers configuration wizard creates a simple SRC VTA configuration. In the default configuration created by the wizard, each SRC VTA subscriber is initialized with a certain amount of periodic quota but no purchased quota. The SAE maps all subscribers to a single subscriber profile, which has both high-speed and low-speed service subscriptions. The high-speed service, called MXQuotaInternet, operates at 10 Mbps and is activated when the subscriber logs in. The MXQuotaInternet service continues to run until the subscriber's quota is exhausted. When the quota is exhausted, the subscriber is switched to the low-speed service called MXQuotaLowSpeed, which operates at 256 Kbps.

## System Software Recovery on a C Series Controller

You can now recover system software by using the USB storage device supplied with the C Series Controller. For more information about recovering or installing system software on a C Series Controller by using the USB storage device supplied by Juniper Networks, see *Recovering or Installing System Software on a C Series Controller by Using the USB Storage Device Supplied by Juniper Networks* (available only with SRC Release 4.5 and later).

**NOTE:**

- Using the read-only USB storage device supplied by Juniper Networks, you can only recover the system software; whereas, by using the read/write USB storage device, you can create an installation medium and back up the system configuration.
- To determine whether the USB storage device you received from Juniper Networks is a read-only or read/write device, contact Juniper Networks Technical Assistance Center (JTAC).

## Features Not Fully Qualified

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The SRC Release 4.3.x documentation set describes some features that are present in the code but that have not yet been fully qualified by Juniper Networks. These features will be fully tested and supported in a future release. We expect these features to operate as documented; however, if you use any of these features before they have been fully qualified, it is your responsibility to ensure that the feature operates correctly in your targeted configuration.

The following features are present but not fully qualified in this release.

### JPS

- Juniper Policy Server (JPS)

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.

Contact the Juniper Networks Technical Assistance Center (JTAC) for information about qualification of this feature.

**Reference:** TIC 13313

### DMI

- Using the SRC Device Management Interface (DMI) driver and Junos Space, the SRC software can manage DMI devices connected to routers running Junos software. This feature is supported only for demonstration purposes.

## Upgrading the System Software

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To upgrade the system software to Release 4.3.0 from a release earlier than Release 3.2.0, you must resize the disk to support additional components and the Juniper Networks database before upgrading the software.

To upgrade the software:

1. Enter the **request system install package IPMupgrade url *url*** command, where ***url*** is the path to the image file.

This command resizes the disk of the C Series Controller and requires the C Series Controller to reboot twice.

2. Enter the **request system upgrade url *url*** command to upgrade the system software.

## Upgrading the System Software When Running the VTA Component

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You must use this procedure to upgrade the system software from Release 4.2.x to Release 4.3.x and when running the SRC VTA. Review this procedure carefully before starting your upgrade and follow the procedure exactly as described.

### Critical Requirements

When you are running the SRC VTA on Release 4.2.x software and you are upgrading to Release 4.3.x software, you must ensure the following requirements are met:

1. Ensure SAEs are not sending events to VTAs, and ensure the VTA queues are empty, before upgrading the application servers and VTAs. (You can do this by deleting the Release 4.3.x ejb-adaptor's **application-server-url** property and then waiting until the VTAs finish processing events in their queues.)
2. Ensure VTAs are restarted after the application servers and VTAs are upgraded and before the SAEs resume sending events.
3. Do not send events from Release 4.2 SAEs to Release 4.3 VTAs. Upgrade all the SAEs either before or at the same time as you upgrade the first application server and VTA, but not after.

### Upgrade Procedure

Follow this procedure to upgrade your system software.

#### Upgrade the SAEs

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For each C Series Controller running an SAE:

1. Upgrade the C Series Controller from Release 4.2 to Release 4.3
2. Do not change the ejb-adaptor configuration.

Upon restarting, the Release 4.3 SAE will resume sending events to either a single Release 4.2 VTA instance, or a clustered Release 4.2 VTA through a clustered EJB, depending on the value of the **application-server-url** property.

#### Stop Sending Events

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After you upgrade all the SAEs:



1. Delete the ejb-adaptor property application-server-url and commit the configuration.  
The SAEs will now have no VTA to talk to, and will put all events into their fail-queues on disk.

### Upgrade the VTAs and Resume Sending Events

For the C Series Controllers running both an application server and VTA:

1. Wait until the VTA queues are all empty.
2. Upgrade the C Series Controllers from Release 4.2 to Release 4.3.  
In the unusual case that a durable queue has been configured, that is the **persistent** configuration attribute under the **[edit shared vta group name queue]** configuration hierarchy is set, ensure that the empty durable queue is deleted before upgrading the system.
3. Restart the VTA (this is critical) on each C Series Controller, or if the application server is clustered, on one of the C Series Controller after all of them are upgraded.
4. Add the IP address of every VTA system to the ejb-adaptor's application-server-url property and commit the configuration. The SAEs will begin sending events to the Release 4.3 VTAs again.



**NOTE:** This software upgrade includes some critical changes to the application server's Hornet-Q configuration as well as to the VTA. If not upgrading the entire system, ensure that both the VTA component and the application-server component are upgraded at the same time.

## Recovering Passwords for the Juniper Networks Database

The documentation does not disclose the default passwords that the Juniper Networks database uses. If you need access to these passwords or need to recover a password, contact Juniper Networks Technical Assistance Center (JTAC) for assistance.

## Migrating SDX Data to a Juniper Networks Database

If you have an existing SDX installation and want to migrate your data from the directory storing the SDX data to the Juniper Networks database on an SRC platform, contact Juniper Networks Professional Services.

## Migrating Solaris-Based VTAs to the SRC VTA Running on the C Series Controller

To run both Solaris-based VTAs and SRC VTAs (running SRC Release 4.3 or later) in the same SRC network, the Solaris-based VTAs must be running a minimum of SRC Release 4.1 software.

If you have Solaris-based VTAs running and want to migrate to the SRC 4.3 VTA, contact Juniper Networks Professional Services for assistance in the migration.

## Known Behavior

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This section describes certain SRC software behaviors and related issues to emphasize how the system works.

### ACP

- ANCP update information from two routers might conflict.

ACP uses the NasPortId as a unique identifier for ANCP update information stored in the remote update database. However, the NasPortId is only unique within a router so ANCP update information from two routers can conflict with each other and cause one update to overwrite the other.

**Reference:** TIC 16592

### Aggregate Services

- If you use aggregate services and specify a primary username for a subscriber reference expression, note that the configuration scenarios provided with the NIC do not provide a mapping from a primary username to the managing SAE. Consider using the login name instead. If you want to use the primary username as the subscriber reference expression for a fragment service, contact Juniper Networks Professional Services for assistance with setting up the NIC configuration to resolve the primary username to locate the managing SAE.

**Reference:** None

### Configuration Backups

- Save configurations in XML format for proper loading.

You must save configurations in XML format using the **save** command. Other formats, such as configurations saved in text format or the output of the **display set** command, may not load properly.

**Reference:** TIC 16244

### Configuration Updates

- When you use the **load merge**, **load override**, or **load replace** command at any hierarchy level, the command loads all the configuration in the specified file.

If you want to load the configuration for a specified hierarchy level:

- Ensure that the file contains the **sdx:current=true** text to identify the level at which the configuration is to be loaded.
- Run a **load** command with the **relative** option at the level at which you want to update the configuration.

If a file contains configuration statements other than those at and below the level identified by **sdx:current=true**, the command disregards the other statements.

If you enter a **load** command with the **relative** option and the file does not contain the text **sdx:current=true**, you receive a message indicating that the configuration cannot be loaded.

**Reference:** None

## Console Authentication

- Logging in after entering the wrong password the first time.

If you enter the wrong username/password combination when you log into the console, you are prompted for the LDAP password. This request is for the same password that you should have entered on your first try.

**Reference:** TIC 14193

## Juniper Networks Database

- Recommendations for use of multiple primary Juniper Networks databases.

We recommend that you configure two to four Juniper Networks databases as primary databases in a community. If you plan to use more than two Juniper Networks databases in a primary role and expect to have frequent updates to the Juniper Networks database, we recommend that you test your application scenario with a projected traffic load. For assistance testing your application scenario, contact Juniper Networks Professional Services or JTAC.

**Reference:** None

- Deleting statements on platforms running a secondary Juniper Networks database.

When you delete statements from the CLI for a Juniper Networks database assigned a secondary role, you can receive a message for **ContextNotEmptyException** such as:

```
[edit]
root@golem# commit
javax.naming.ContextNotEmptyException:
ou=local,retailerName=ldapcommret1,o=users,o=UMC cannot be deleted
commit completed with the above exception(s).
commit complete.
```

**Workaround:** Enter the commands to delete the same statements from a Juniper Networks database assigned a primary role. Whenever you delete statements for a Juniper Networks database, do so from a Juniper Networks database assigned a primary role.

**Reference:** TIC 13376

## Policies

- Do not disable the Juniper Networks database (jdb component) while configuring policies with the Policies, Services, and Subscribers Editor.

**Workaround:** Enable the Juniper Networks database and restart the CLI.

**Reference:** TIC 15573

- Deleting policies that are being used can cause problems.

Do not delete policies, especially default policies, that are in use.

**Reference:** TIC 15153

## Policy Management

- Use care when modifying configurations with other policy management tools for interfaces on JunosE routers that are managed by the SRC software.

When applying policies to interfaces on JunosE routers that are managed by the SRC software, carefully consider using other policy management tools, such as CLI, RADIUS, CoA, or Service Manager. Policies that are applied to the interface before SRC management begins, such as at access-accept time, are properly replaced. However, if other policy managers change existing policies while SRC management is active, problems can occur.

- If you have a preconfigured policy through CLI or RADIUS as part of subscriber PVC/VLAN provisioning, the existing policy becomes inactive and the SAE manages the subscriber interface. When the SAE stops managing the interface, the preconfigured policy becomes active. However, if you change the policy on the interface using CLI or CoA, problems can occur.
- If you have a policy in Access-Accept, the existing policy becomes inactive and the SAE manages the interface.

## SAE

- When using VPN ID to identify subscriber sessions for MX Series routers that support the packet-triggered subscribers and policy control (PTSP) feature, the NIC and Dynamic Service Activator are not supported.

**Reference:** TIC 16565

- When specifying the name of a device at the **[edit shared network device]** hierarchy level, you must use lowercase characters.

**Reference:** TIC 14568

- SAE shared properties cannot be created until local SAE properties are edited for the configuration group.

If you want to use the configuration group for the SAE, edit the SAE shared properties at the **[edit slot 0 sae]** hierarchy level, then the group properties.

**Workaround:** Configure a group within the SAE. To do so:

1. At the **[edit slot 0 sae]** hierarchy level, specify a group name.

```
[edit slot 0 sae]
user@host# set shared /SAE/<group name>
user@host# commit
commit complete.
```

2. Review the local properties.

```

user@host# show
real-portal-address 10.10.4.24;
shared /SAE/<group name>
initial {
  directory-connection {
    url ldap://127.0.0.1:389/;
    principal cn=ssp,ou=Components,o=Operators,<base>;
    credentials *****;
    blacklist;
  }
  directory-eventing {
    eventing;
    polling-interval 30;
  }
}
radius {
  local-address 10.10.4.24;
  local-nas-id SAE.myCseries;
}

```

3. Change properties as needed (you must change at least one value to create the group) and commit the configuration.
4. Configure the group within a shared SAE configuration.

```

[edit]
user@host# edit shared sae group <group name>

```

**Reference:** TIC 12487

- Output for **show sae slot 0 statistics process** command.

If you run the **show sae slot 0 statistics process** command shortly after you start the SAE, the CLI may become inoperative.

**Workaround:** Wait for several minutes after you start the SAE before you run the **show sae slot 0 statistics process** command. If the CLI becomes inoperative, press Ctrl+c, wait a few seconds, and enter the command again.

**Reference:** TIC 13387

- During synchronization in COPS-PR mode, the JunosE router can send delete request state (DRQ) messages for interfaces for which a request (REQ) message has not been received. In this case, the SAE logs an error message similar to the following:

```

11:30:33.140 EDT 26.08.2005 [CopsHandler-15/0xAC001FCE]
[UnsolicitedMessage] [50] Unable to handle message for
unknown context: {Message type: 3,
ClientType: 24754, Handle: Handle(C-Num=1,C-Type=1,handle=0xAC001FCE)}

```

You can ignore messages similar to the one above.

**Reference:** TIC 10927

- The SAE sometimes prints a stack trace when a Blocks Extensible Exchange Protocol (BEEP) session is being taken down during an administrative change of address of the interface that the Junos OS uses to connect to the SAE. No data is lost in this procedure. You can safely ignore this exception.

**Reference:** TIC 9612

- During shutdown, the SAE sometimes logs the following stack trace to stderr. This message is harmless and can safely be ignored.

```
2004-12-24 11:35:25| java.io.InterruptedIOException
2004-12-24 11:35:29| at java.io.FileOutputStream.write(Native Method)
2004-12-24 11:35:29| at java.io.FilterOutputStream.write
(FilterOutputStream.java:60)
2004-12-24 11:35:29| at java.io.FilterOutputStream.write
(FilterOutputStream.java:108)
2004-12-24 11:35:29| at org.mortbay.util.ByteArrayISO8859Writer.writeTo
(ByteArrayISO8859Writer.java:95)
2004-12-24 11:35:29| at org.mortbay.util.OutputStreamLogSink.log
(OutputStreamLogSink.java:467)
2004-12-24 11:35:29| at org.mortbay.util.OutputStreamLogSink.log
(OutputStreamLogSink.java:445)
2004-12-24 11:35:29| at org.mortbay.util.Log.message(Log.java:297)
2004-12-24 11:35:29| at org.mortbay.util.Log.message(Log.java:232)
2004-12-24 11:35:29| at org.mortbay.util.Log.event(Log.java:248)
2004-12-24 11:35:29| at org.mortbay.util.ThreadedServer$Acceptor.run
(ThreadedServer.java:543)
```

**Reference:** TIC 9506

## Services

- Service names are case-preserving.

Do not mix cases in service names. Make sure you use the same names when specifying the service and subscription.

**Reference:** TIC 14932

- Runtime parameters are not resolved when activating sample AAA policies.

Do not use the `user_ipMask` and `user_ipAddress` runtime parameters for activate-on-login services.

**Reference:** TIC 15181

## Upgrade

- If the Java Web server is not enabled during upgrade from Release 2.1.0 to Release 3.0.0, an exception message might appear.

During the upgrade procedure, the following message sometimes appears when the Java Web server (www component) is not enabled. This message can safely be ignored.

```
Stopping WWW: done
Jul 15, 2008 11:32:53 AM org.apache.catalina.startup.Catalina stopServer
SEVERE: Catalina.stop:
java.net.ConnectException: Connection refused
  at java.net.PlainSocketImpl.socketConnect(Native Method)
  at java.net.PlainSocketImpl.doConnect(PlainSocketImpl.java:333)
  at java.net.PlainSocketImpl.connectToAddress(PlainSocketImpl.java:195)
  at java.net.PlainSocketImpl.connect(PlainSocketImpl.java:182)
```

```

at java.net.SocksSocketImpl.connect(SocksSocketImpl.java:366)
at java.net.Socket.connect(Socket.java:519)
at java.net.Socket.connect(Socket.java:469)
at java.net.Socket.<init>(Socket.java:366)
at java.net.Socket.<init>(Socket.java:180)
at org.apache.catalina.startup.Catalina.stopServer(Catalina.java:394)
at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:39)
at
    sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:25)
at java.lang.reflect.Method.invoke(Method.java:597)
at org.apache.catalina.startup.Bootstrap.stopServer(Bootstrap.java:320)
at org.apache.catalina.startup.Bootstrap.main(Bootstrap.java:411)
Reference: TIC 15179

```

## VTA

- Previous releases of the SRC VTA provided a public Enterprise Java Bean (EJB)-based API. In the SRC 4.3.x software release, this API has been deprecated. It may be removed in a future release. In the SRC 4.3.0 software release, the EJB-based API has been replaced with a SOAP API that provides the same functionality.

## Known Problems and Limitations

This section identifies known problems and limitations in this release.

## SAE

- While referencing an external parent group (EPG) from within an internal parent group (IPG), policies are not pushed to the JunosE router. When the subscriber comes up, the router does not receive the DEC message from the SAE and the following message is thrown:

```

22:26:21.055 UTC 17.07.2012 [CopsHandler-4/0x40000004@default@issu-erx40-2]
[Transaction] [10] Transaction aborted
22:26:21.055 UTC 17.07.2012 [CopsHandler-4/0x40000004@default@issu-erx40-2]
[JunosERouterDriver-default@issu-erx40-2] [10] Failed to create provisioning
set; stack trace: net.juniper.sgmt.sae.util.SSG_Exception: UMC-6000: Undefined
parent group /deva-epg referenced by parent group ParentGroup-ipg1
    at
net.juniper.sgmt.sae.policy.PolicyEngineImpl.getProvisioningSet(PolicyEngineImpl.java:843)

    at net.juniper.sgmt.sae.router.junose.m.if(JunosERouterDriver.java:465)

    at net.juniper.sgmt.sae.router.junose.at.if(IpInterfaceCtx.java:1078)
at net.juniper.sgmt.sae.router.junose.at$a.run(IpInterfaceCtx.java:971)

    at net.juniper.sgmt.sae.router.junose.at.do(IpInterfaceCtx.java:817)
at net.juniper.sgmt.sae.router.junose.av.if(UnsolicitedMessage.java:335)

    at net.juniper.sgmt.sae.router.junose.aa.runJob(JunoseJob.java:129)
at net.juniper.sgmt.lib.scheduler.Job.run(Job.java:38)
    at
edu.oswego.cs.dl.util.concurrent.PooledExecutor$Worker.run(PooledExecutor.java:748)

    at java.lang.Thread.run(Thread.java:679)

```

**Workaround:** None.

**Reference:** TIC 18331

## CLI

- When you make a change through the SRC CLI and then some other application like a router script also modifies the same configuration in the Juniper Networks database, the SRC CLI can display a timestamp error. For example:

```
[edit shared network device device1 virtual-router default]
host@user# commit
```

```
Detected that data node with name [virtualRouterName=default], modify time [Wed
Jun 22 10:40:27 EDT 2011] and correspondent ldap object with modify time [Wed
Jun 22 12:37:17 EDT 2011] have different timestamp. Will not perform ldap
modify operation. Will remove data node from memory.
```

If this problem occurs, you need to rollback the configuration and reconfigure your changes. To rollback the configuration, execute:

```
[edit]
host@user# rollback

rollback complete
```

**Reference:** TIC 17429

## C-Web Interface

- Modifications to parts of the configuration tree do not appear automatically.

When editing one part of the configuration tree automatically creates modifications in other parts of the configuration tree, you must click **Refresh** to see the modifications in the other parts of the configuration tree.

**Reference:** TIC 13881

## DMI

- Managing DMI network devices supported for demonstration only.

Using the SRC Device Management Interface (DMI) driver and Junos Space, the SRC software can manage DMI devices connected to routers running Junos software. The SRC software communicates with Junos Space using the representational state transfer (REST) over HTTP(S), and Junos Space manages the router running Junos software over the DMI. The SRC software recognizes and receives notifications for changes to DMI devices connected to the router, allowing you to offer dynamic services on those devices. In addition, you can define and automatically provision policies for DMI devices, provide per-subscriber accounting for services on DMI devices, and develop script services for service sessions residing on DMI-managed devices. This feature is supported only for demonstration purposes.

- The SAE fails to manage the DMI network device (router).



If the management IP address is not configured under the shared DMI network device before the SAE initializes the device, the SAE is not able to pick up the deviceID from Junos Space, and fails to manage the router.

**Workaround:** Configure the management IP address and then restart the SAE.

**Reference:** TIC 17267

## NIC

- Unable to activate service with VPN ID in OnePopServiceNode scenario.

You cannot activate services with VPN IDs in the OnePopServiceNode NIC scenario.

**Reference:** TIC 18270

## SIC

- SIC does not work after upgrade.

**Workaround:** To correct this problem, modify the sample SIC configuration as follows:

```
database {
  plug-in-attribute {
    login-name {
      request-attribute User-Name;
    }
    property.session-id {
      variable NASAcctSessionId;
    }
    property.session-state {
      variable UserStatusType;
    }
    user-inet-address {
      request-attribute Framed-IP-Address;
    }
    vpn-id {
      literal "";
    }
  }
}
```

**Reference:** TIC 17153

- UserIPAddress value is displayed in binary format rather than IPv4 or IPv6 address format in SIC audit logs.

In SIC Audit logs, the UserIPAddress value is displayed in binary format rather than IPv4 or IPv6 address format

**Reference:** TIC 18274

## SSR

- Fixed length binary and string columns are not padded to their full length.

Fixed length binary and string columns are not padded to their full length, which results in garbage values while being stored in the SSR database, especially when the request attribute contains values less than the length of the database column. Also if the request attribute contains a value which is greater than the length of its corresponding database column in SSR, the values should be truncated to fit in its defined length in the database.

**Reference:** TIC 18283

## Application Server

- Stack traces when VTA throws "queue full" exceptions

In the VTA Web application server (JBoss) server.log file, every time the VTA throws an EJBException to signal a "queue full" condition to the SAE, we see a stack trace. This should be suppressed but can be safely ignored. Here is an example:

```
2012-04-17 13:11:57,841 ERROR [org.jboss.ejb.plugins.LogInterceptor]
(WorkerThread#18[10.227.6.138:49373]) EJBException in method: public abstract
void
net.juniper.smgmt.sae.plugin.ejb.SAEEventListener.track(net.juniper.smgmt.sae.plugin.ejb.RemotePluginEvent)
throws java.rmi.RemoteException::
javax.ejb.EJBException: Event rejected: Max queue size 10000 exceeded.
    at
net.juniper.smgmt.vta.infra.SAEEventListenerBean.track(SAEEventListenerBean.java:135)
    [:]
    at sun.reflect.GeneratedMethodAccessor677.invoke(Unknown Source)
    [:1.6.0_24-jnpr]
    at
sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
    [:1.6.0_24-jnpr]
    at java.lang.reflect.Method.invoke(Method.java:616) [:1.6.0_24-jnpr]
    at org.jboss.invocation.Invocation.performCall(Invocation.java:386)
    [:6.1.0.Final]
    at
org.jboss.ejb.StatelessSessionContainer$ContainerInterceptor.invoke(StatelessSessionContainer.java:233)
    [:6.1.0.Final]
    at
org.jboss.resource.connectionmanager.CachedConnectionInterceptor.invoke(CachedConnectionInterceptor.java:156)
    [:6.1.0.Final]
    at
org.jboss.ejb.plugins.StatelessSessionInstanceInterceptor.invoke(StatelessSessionInstanceInterceptor.java:173)
    [:6.1.0.Final]
    at
org.jboss.ejb.plugins.CallValidationInterceptor.invoke(CallValidationInterceptor.java:63)
    [:6.1.0.Final]
    at
org.jboss.ejb.plugins.AbstractTxInterceptor.invokeNext(AbstractTxInterceptor.java:121)
    [:6.1.0.Final]
    at
org.jboss.ejb.plugins.TxInterceptorCMT.runWithTransactions(TxInterceptorCMT.java:350)
    [:6.1.0.Final]
    at
org.jboss.ejb.plugins.TxInterceptorCMT.invoke(TxInterceptorCMT.java:181)
```

```

[:6.1.0.Final]
    at
org.jboss.ejb.plugins.SecurityInterceptor.process(SecurityInterceptor.java:228)
[:6.1.0.Final]
    at
org.jboss.ejb.plugins.SecurityInterceptor.invoke(SecurityInterceptor.java:211)
[:6.1.0.Final]
    at
org.jboss.ejb.plugins.security.PreSecurityInterceptor.process(PreSecurityInterceptor.java:100)
[:6.1.0.Final]
    at
org.jboss.ejb.plugins.security.PreSecurityInterceptor.invoke(PreSecurityInterceptor.java:84)
[:6.1.0.Final]
        at org.jboss.ejb.plugins.LogInterceptor.invoke(LogInterceptor.java:205)
[:6.1.0.Final]
        at
org.jboss.ejb.plugins.ProxyFactoryFinderInterceptor.invoke(ProxyFactoryFinderInterceptor.java:138)
[:6.1.0.Final]
        at
org.jboss.ejb.SessionContainer.internalInvoke(SessionContainer.java:650)
[:6.1.0.Final]
            at org.jboss.ejb.Container.invoke(Container.java:1072) [:6.1.0.Final]
            at sun.reflect.GeneratedMethodAccessor602.invoke(Unknown Source)
[:1.6.0_24-jnpr]
            at
sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
[:1.6.0_24-jnpr]
            at java.lang.reflect.Method.invoke(Method.java:616) [:1.6.0_24-jnpr]
            at
org.jboss.mx.interceptor.ReflectedDispatcher.invoke(ReflectedDispatcher.java:157)
[:6.0.0.GA]
            at org.jboss.mx.server.Invocation.dispatch(Invocation.java:96)
[:6.0.0.GA]
            at org.jboss.mx.server.Invocation.invoke(Invocation.java:88) [:6.0.0.GA]

            at
org.jboss.mx.server.AbstractMBeanInvoker.invoke(AbstractMBeanInvoker.java:271)
[:6.0.0.GA]
            at org.jboss.mx.server.MBeanServerImpl.invoke(MBeanServerImpl.java:670)
[:6.0.0.GA]
            at
org.jboss.invocation.unified.server.UnifiedInvoker.invoke(UnifiedInvoker.java:232)
[:6.1.0.Final]
            at org.jboss.remoting.ServerInvoker.invoke(ServerInvoker.java:967)
[:6.1.0.Final]
            at
org.jboss.remoting.transport.socket.ServerThread.completeInvocation(ServerThread.java:791)
[:6.1.0.Final]
            at
org.jboss.remoting.transport.socket.ServerThread.processInvocation(ServerThread.java:744)
[:6.1.0.Final]
            at
org.jboss.remoting.transport.socket.ServerThread.dorun(ServerThread.java:586)
[:6.1.0.Final]
            at
org.jboss.remoting.transport.socket.ServerThread.run(ServerThread.java:234)
[:6.1.0.Final]

```

**Reference:** TIC 18186

## Migration

---

This section provides information about migrating from earlier SRC software releases to SRC Release 4.3.0.

### Policy Changes

Starting with SRC Release 4.2.0, an action configured for a policy rule no longer requires a name to identify the action. Old configurations with a name are accepted.



**NOTE:** You cannot have multiple instances of the same action configured for one rule.

### Migrating VTAs Running on Solaris to SRC VTA Running on the C Series Controller

If you have Solaris-based VTAs running and want to migrate to the SRC 4.3 VTA, which runs on the C Series Controller, contact Juniper Networks Professional Services.

The basic procedure to migrate from Solaris-based VTAs to a VTA running on SRC 4.3 C Series Controllers is:

1. Copy your VTA configuration data into the Juniper Networks database (if necessary).
2. Execute a shell script to copy the VTA configuration to a new version compatible with the SRC VTA. This script is specific to your environment. Please contact Juniper Networks Professional Services for assistance.
3. Configure and start the SRC VTA.
4. Shut down the Solaris VTA.
5. Modify the SAE EJB plug-ins to send their events to the SRC VTA.

To run both Solaris-based VTAs and SRC-based VTAs, the Solaris-based VTAs must be running a minimum of SRC Release 4.1 software.



**NOTE:** With the inclusion of the VTA in the SRC software package that runs on the C-Series Controller, there is no longer a separate application library package. If you wish to continue running your VTA on a Solaris host, use the SRC 4.1 Application Library package. The SRC 4.1 VTA is compatible with SRC 4.3.

**Reference:** TIC 17708

## Restrictions and Recommendations

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### CMTS Devices

SRC Release 4.3.0 should be suitable for use with any CMTS device that implements the PacketCable Multimedia Specification (PKT-SP-MM-I02-040930).

### Volume Tracking Application

The Volume Tracking Application (VTAs) have been tested with the following databases:

- MySQL version 4.0.13 (<http://www.mysql.com>) •
- Oracle Database version 9i (<http://www.oracle.com>)

### RADIUS Server

Juniper Networks SRC Release 4.3.0 was tested with the following RADIUS server products:

- Juniper Networks Steel-Belted Radius Carrier server

Any RADIUS product compliant with RFC 2865 and RFC 2866 should be suitable for use with SRC Release 4.3.0.:

Known issues exist with Steel-Belted Radius/Service Provider Edition 4.0.3 and earlier.

### Web Browsers

The C-Web interface in SRC Release 4.3.0 was tested with and supports use only with the following Web browsers:

- Firefox 2.0 or later
- Internet Explorer 6.0 or later

## Resolved Problems

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This section lists known problems that have been resolved in the current release. For more information about resolved problems, contact JTAC.

### SAE

- The following problem is resolved:

If you change the mode of the Juniper Networks database from standalone to community, it may cause connection problems with the junos-ise router driver. Restart the SAE to restore the junos-ise router connection.

**Reference:** TIC 17913

- The following problem is resolved:

SAE plug-in failure queues are not processed at a rate faster than 600 events per second. This is slower than the rate new events are created for some applications on the fastest C-Series Controller platforms. If there is a failure in the connection to a plug-in, SAE plug-in failure queues may grow as long as the event input rate is greater than 600 events per second. The system will recover from this situation when the sustained event input rate drops below 600 events per second.

**Reference:** TIC 17915

- The following problem is resolved:

AAA router driver cannot deactivate service session if no accounting request has been received from the service session.

When a service is activated, the AAA router driver stores the service session by correlation id. After the service accounting message is received, the service session is re-indexed by "correlation id:acct-session-id". Subsequently when the service is deactivated, the router driver uses "correlation id:acct-session-id" to locate the service session. If the SRC misses the service start Accounting-Request, the service session is not re-indexed and the service cannot be deactivated.

A related issue is that there cannot be multiple outstanding service activation requests with the same correlation ID. An outstanding service activation request is a service that has been activated but has not yet received a service start Accounting-Request. Because service sessions in this state are indexed by correlation ID, if multiple service sessions have the same correlation ID, some service sessions can be lost. This is not relevant to JunosE devices because the correlation ID for JunosE devices is qualified by service template parameters, so each service session has a unique correlation ID. However, this is a problem for Cisco devices. Support of multiple service sessions with the same correlation ID in the same user session is not supported for Cisco devices. If you do need to activate multiple, concurrent service sessions in the same user session, you need to define multiple service templates in the device model in order to provide unique correlation IDs.

**Reference:** TIC 17099

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## SRC Software Compatibility Matrix

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Table 1 on page 23 shows which versions of the SRC software are compatible with specified versions of the Junos Software and JunosE Software.

For the most current information about supported software releases, contact JTAC.

Table 1: SRC Software Compatibility with JunosE Software and Junos Software

SRC Software Release	Tested with JunosE Release	Intended to Be Tested with JunosE Release	Tested with Junos OS Release	Intended to Be Tested with Junos OS Release
2.1.0	9.1.0p0-1		8.3	
3.0.0	9.0, 9.0.1, 9.1.1		9.0, 9.1	
3.1.0	9.2, 9.3, 10.0		9.2R3, 9.3R2, 9.4R1	
3.2.0	10.1.1, 10.2.1	10.3.0	9.4R3.5, 9.5R2.7, 9.6R1.3 <sup>1</sup>	10.0R1
4.0.0R3	10.3, 11.0, 11.1		10.1, 10.2 <sup>2</sup>	
4.0.0R7	10.3.3, 11.3.1, 12.0.0, 12.1.1		10.3R2, 11.1R1.14 <sup>2</sup>	
4.1.0	12.0.1, 12.1.1, 12.2.0		10.4R1.9, 11.1R1.14, 11.2 <sup>2</sup>	
4.2.0	12.2.1, 12.3.0, 13.0.0		11.1R5.4 - 11.2R2.4 - 11.4R1.9	
4.3.0	13.0.0, 13.1.0, 13.2.0b1-7		11.4, 12.2, 12.3	

<sup>1</sup>To use the DPI script service, SRC Release 3.2.0 was tested with Junos OS Release 9.5R4, Release 9.6R3, Release 10.0R3, and Release 10.1B3. It is intended to work with Junos OS Release 10.1R1.

<sup>2</sup>To support the PTSP feature, use Junos OS Release 10.2R1 and later.

## Third-Party Software

This section lists the third-party software that is included with SRC Release 4.3.0. The third-party software is required to work with certain SRC components, and Juniper Networks supports issues associated with this software.

- Apache-Axis 1.4 (<http://ws.apache.org/axis>)
- Apache-Avalon 4.1.4 (<http://avalon.apache.org>)
- Beepcore-java 0.0.08 (<http://www.beepcore.org>)
- BouncyCastle CryptoAPI 1.33 (<http://bouncycastle.org/java.html>)
- Castor 0.9-AA (<http://www.castor.org>)
- Centos 4.9 (<http://centos.org>)
- GNUPROLOG for Java (<http://gnuprologjava.sourceforge.net>)
- ini4j 0.4 (<http://ini4j.sourceforge.net>)
- JacORB 2.3.1 (<http://www.jacorb.org>)
- Jakarta Commons Collections 3.1 (<http://jakarta.apache.org/commons/collections>)

- Jakarta Struts 1.1-Beta3 (<http://jakarta.apache.org/struts/index.html>)
- jax 0.0.15 (<http://www.ibr.cs.tu-bs.de/projects/jasmin/jax.html>)
- JBoss J2EE Server 4.2.1.GA (<http://jboss.org>)
- JDBM 0.12 (<http://jdbm.sourceforge.net>)
- Jersey 1.4 (<http://jersey.java.net>)
- JETTY 4.2.24 (<http://jetty.mortbay.org>)
- Jython 2.2 (<http://www.jython.org>)
- libart\_lgpl 2.3.16-3  
([http://www.linuxfromscratch.org/blfs/view/svn/general/libart\\_lgpl.html](http://www.linuxfromscratch.org/blfs/view/svn/general/libart_lgpl.html))
- libpng 1.2.7-3 (<http://www.libpng.org/pub/png/libpng.html>)
- mozilla rhino javascript engine 1.5 (<http://www.mozilla.org/rhino>)
- MySQL Cluster 7.1 (<http://www.mysql.com/products/cluster>)
- NetSNMP 5.4.1 (<http://www.net-snmp.org>)
- OmniORB 4.0.7 (<http://omniorb.sf.net>)
- omniORBpy-2.7 (<http://omniorb.sf.net>)
- OpenJDK 1.6.0 (<http://openjdk.java.net>)
- perl-Config-General 2.38-1 (<http://search.cpan.org/dist/Config-General/General.pm>)
- perl-RRD-Simple 1.44-1 (<http://search.cpan.org/dist/RRD-Simple>)
- perl-rrdtool 1.2.23-1 (<http://rpmfind.net/linux/rpm2html/search.php?query=perl-rrdtool>)
- PYSNMP (<http://pysnmp.sourceforge.net>)
- RRD Tool 1.2.23-3 (<http://oss.oetiker.ch/rrdtool>)
- RRD Bot 0.9 (<http://memberwebs.com/stef/software/rrdbot>)



## SRC Documentation and Release Notes

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For a list of related SRC documentation, see

[http://www.juniper.net/techpubs/en\\_US/release-independent/src/information-products/pathway-pages/c-series/product/index.html](http://www.juniper.net/techpubs/en_US/release-independent/src/information-products/pathway-pages/c-series/product/index.html).

If the information in the latest release notes differs from the information in the documentation, follow the *SRC PE Release Notes*.

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/>.

## Documentation Feedback

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We encourage you to provide feedback, comments, and suggestions so that we can improve the documentation. You can send your comments to [techpubs-comments@juniper.net](mailto:techpubs-comments@juniper.net), or fill out the documentation feedback form at <https://www.juniper.net/cgi-bin/docbugreport/>. If you are using e-mail, be sure to include the following information with your comments:

- Document or topic name
- URL or page number
- Software release version (if applicable)

## Requesting Technical Support

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Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active J-Care or JNASC 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/customers/support/downloads/710059.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: <https://www.juniper.net/alerts/>
- 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>.

## Revision History

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January 2014—Revision 3, SRC Release 4.3.0

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