SRC PE Software Release Notes

Release 4.7.0
July 2015
Revision 2

These release notes cover Release 4.7.0 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.

Contents

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 4.7.0:

- These *SRC 4.7.0 Release Notes*, which describe the changes between Releases 4.6.0 and 4.7.0.

- The 4.7.0 SRC Policy Engine (SRC PE) software documentation set, which provides detailed information about features available in Release 4.7.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 4.7.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.	*C Series Controllers C3000 and C5000 Hardware Guide*
	C Series Controllers C2000 and C4000 Hardware Guide
Get up and running quickly.	*C3000 and C5000 Quick Start Guide*
	C2000 and C4000 Quick Start Guide
Learn about the general operation of the SRC software.	*SRC PE Getting Started Guide*
Perform basic configuration of a C Series Controller.	*SRC PE Getting Started Guide*
Use the SRC CLI.	*SRC PE CLI User Guide*
Use the License Manager and directory events.	*SRC PE Getting Started Guide*
Use the SAE, Juniper Networks routers, NIC, ACP, SSR, and SIC.	*SRC PE Network Guide*
Use the SNMP agent and logging utilities.	*SRC PE Monitoring and Troubleshooting Guide*
Integrate external network devices into the SRC network.	*SRC PE Network Guide*

Task	Related Documentation
Work with SRC services and policies.	*SRC PE Services and Policies Guide*
Work with SRC subscribers and subscriptions.	*SRC PE Subscribers and Subscriptions Guide*
Use the enterprise portals.	*SRC Sample Applications Guide*
Use the residential portal.	*SRC Sample Applications Guide*
Use the C-Web interface to configure the SRC software.	*SRC PE C-Web Interface Configuration Guide*
Get specific information about commands and statements for: • CLI and system • Juniper Networks database • Service Activation Engine (SAE) • Network Information Collector (NIC) • Session State Registrar (SSR) • Subscriber Information Collector (SIC) • SNMP agent • SRC Admission Control Plug-In (SRC ACP) • Volume Tracking Application (VTA) • SRC License Management • Common Object Services (COS) Naming Service	*SRC PE CLI Command Reference, Volume 1*
Get specific information about commands and statements for: • Services • Policies • Subscribers • Redirect server • External Subscriber Monitor • Application Server • Dynamic Service Activator • IP Multimedia Subsystem (IMS) • Diameter application • Juniper Policy Server (JPS)	*SRC PE CLI Command Reference, Volume 2*

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

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 website at:

https://www.juniper.net/support/downloads/?p=src#sw

Release Highlights

Highlights include the following product enhancements:

NOTE: The SRC software runs on C Series Controllers—a range of hardware platforms. The SRC 4.7.0 software contains the features found in the SRC 4.6.0 release plus the features listed in this section. The SRC 4.7.0 software may contain references to the service activation engine (SAE) Release version 7.13.0.

Router Driver Performance Trap to Notify State Inconsistencies Between JunosE Router and JunosE Router Driver

The **routerStateOutOfSynch** trap is newly introduced in SRC SNMP agent to notify the state inconsistencies between the JunosE router and the JunosE router driver when the REMOVE DEC message is timed out.

Displaying Intermediate NIC Resolution Results and Logging Errors When Resolution Fails

The **test nic resolve** command is now enhanced to display the step-by-step NIC resolution results along with the final results and log the errors when the resolution fails.

You can view the step by step resolution results by including the **intermediate** option with the **test nic resolve** command at the **[edit]** hierarchy level.

HTTPS Support for Redirect Server

The SRC software now supports redirection of HTTPS traffic to a configured destination web server by using the redirect server. Before you start with setting up the HTTPS traffic redirection, you must create a certificate with the domain name of the URL. You can configure the redirect server to support HTTPS traffic by including the **redirect-server https** configuration statement with the **port** *port* and **certificate-identifier** *certificate-identifier* options.

The redirect server accepts HTTPS traffic only from the ports that you configured by using the **https-port** option at the **[edit redirect-server ip-redirect]** hierarchy level.

The **request security generate-self-signed-certificate** command is newly introduced to create a self-signed certificate.

Support for Storing Interim Events in SAE Fail Queue and VTA Performance Optimization

You can now store the service interim events in SAE fail queue, by including the **save-interim-events-in-failqueue** option under the **[edit shared sae configuration plug-ins name** *name* **ejb-adaptor]** hierarchy level.

The SRC VTA schema now uses the existing indexes that are created as part of the primary key for the MySQL database. This avoids maintaining the additional indexes in the database and consumes less memory.

The SRC VTA db-engine now retrieves the list of accounts for a specified subscriber instead of retrieving the account information every time for each subscriber.

Wildcard Character Support with Service Names in VTA Event Handler

The SRC software now supports the use of wildcard characters to configure an event for the specified service in event handler.

You can use glob pattern matching to configure events for the specified service. The pattern matching happens only when SRC VTA receives a new service event from the SAE. After the pattern matching, the service name related event handlers are evaluated and executed based on the priority.

NIC Event Trap to Notify blacklisted SAE

The **nicHostBlacklistedSae** event trap is newly introduced to notify a blacklisted SAE when the SAE is nonresponsive.

SAE Failover Traps Enhanced for Junos OS Device Drivers

The **routerConnUp** and **routerConnDown** traps are now enhanced to notify establishment or termination of diameter connections between Junos OS device drivers (devices of type junos-ise and junos-ptsp) and MX Series routers.

A **juniSaeRouterState** MIB entry is newly added in the **Juniper-SDX-SAE-MIB** file to allow you to query the state of Junos OS drivers through SNMP. The state of Junos OS drivers retrieved through SNMP is same as the output displayed by using the **show sae drivers device-name** *device-name* command.

Auto Refresh Feature Support through the C-Web Interface

The SRC software now supports configuring the auto refresh interval using the C-Web Interface. The **Auto Refresh Interval** option on the **Preferences** page allows you to prevent session time-outs while monitoring graphs and statistics. When you navigate to the **Monitor** and **Graph** pages, the pages keep refreshing and prevent the sessions from timing out. When you navigate away from the **Monitor** and **Graph** pages, the auto refresh feature is turned off. The available time intervals in the **Auto Refresh Interval** option are **5 minutes**, **10 minutes**, **15 minutes**, **20 minutes**, **25 minutes**, and **Never**. By default, the **Auto Refresh Interval** is set to **Never**.

NOTE: This feature is applicable only for the **Monitor** and **Graph** pages, but not for the **Configure**, **Diagnose**, and **Manage** pages.

Features Not Fully Qualified

The SRC Release 4.7.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 available in the product, but they are not fully qualified in this release.

Extensible Subscriber Services Manager Daemon Support with JSRC for Policy Provisioning

The SRC Release 4.7.0 includes support for Extensible Subscriber Services Manager Daemon (ESSMD), which will be included on a future release of the MX. This feature will allow provisioning of JSRC policy rules through operation scripts.

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 that run on Junos. This feature is supported only for demonstration purposes.

Upgrading the System Software

To upgrade the system software to Release 4.7.0 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

You must use this procedure to upgrade the system software from Release 4.2.x to Release 4.7.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 4.7.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 4.7.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 4.7 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

For each C Series Controller running an SAE:

1. Upgrade the C Series Controller from Release 4.2 to Release 4.7.

2. Do not change the ejb-adaptor configuration.

Upon restarting, the Release 4.7 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

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 4.7.

   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 Controllers 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 4.7 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 4.7 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 4.7 VTA, contact Juniper Networks Professional Services for assistance in the migration.

Known Behavior

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 unique only 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 / PR 902808

Aggregate Services

- NIC does not map primary username to managing SAE in 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 had entered on your first try.

  Reference: TIC 14193

C-Web Interface

- After you configure the **Auto Refresh Interval** option using the C-Web Interface, the graph is not refreshed based on the customized **from** and **to** time interval values.

  Reference: PR 979445

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

MIBs

- Recommendations for use of latest SNMP MIBs that the SRC software supports in this release.

  We recommend that you download the latest MIBs from the Juniper Networks website at http://www.juniper.net/techpubs/en_US/src/information-products/pathway-pages/c-series/index.html while upgrading to a latest version of the SRC software.

  Reference: None

Policies

- IPv4 policies are pushed to delegated DHCPv6 subscribers over the dual stack PPPv6 protocol.

  Workaround: Make sure that you configure only IPv6 policies for delegated DHCPv6 subscribers.

  Reference: PR 996681

- 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 / PR 1003053

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 you configure an interface classifier rule under the **[edit shared classification-script interface classifier]** hierarchy level, the changes do not take effect immediately on the SRC software.

  Workaround: Restart SAE for the changes to take effect.

  Reference: PR 973224

- 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 / PR 902785

- 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

- 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

VTA

- Previous releases of the SRC VTA provided a public Enterprise Java Bean (EJB)-based API. In the SRC 4.2.x software release, this API has been deprecated. It may be removed in a future release. In the SRC 4.2.0 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.

Application Server

- The sample enterprise service portal hangs when the configured application server interface goes down.

  Reference: PR 904175

CLI

- The SRC software supports VSA definitions only in the format **Vendor-Specific.4874.<vsa#>.<type>**, even though the SRC software accepts other formats too.

  Reference: PR 939170

- 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 / PR 906280

- When you configure the port value as 23 for SSH by using the **set shared sae group** *group-name* **configuration driver junos-ise pool-retrieval netconf-port** *netconf-port* or **set shared network device** *name* **pool-retrieval netconf-port** *netconf-port* command, the **request sae update ip-pools** command hangs.

  Reference: PR 940482

- When you execute the **show sae subscribers** command, the accounting user identifier value is not displayed for certain subscribers on devices running Junos OS.

  Reference: PR 943743

C-Web Interface

- The C-Web interface does not automatically display the changes that you made to parts of the configuration tree. When you modify one part of the configuration tree, the changes are automatically transmitted to other parts of the configuration tree, but not displayed automatically. To view these changes, you need to click **Refresh**.

  Reference: TIC 13881 / PR 1003163

DMI

- 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 / PR 903197

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 / PR 906487

PTSP

- Subscribers get some services activated without subscription, if services refer to the same policy group. For example, if a subscriber is only subscribed to Internet-Bronze, Internet-Gold may get activated if both the services refer to the same policy group.

  Reference: TIC 18482 / PR 906540

- Services do not get applied to subscribers if auth-plugin (ssr-reader) is registered at the hierarchy level **[edit shared network device xyz virtual-router]**. This problem is seen only in attach after PTSP scenario, where the SIC receives the accounting start packet after the SAE is notified of the PTSP flow (typically MX router notifies the SAE). This issue does not occur if the same plug-in is registered at the hierarchy level **edit shared sae group xyz configuration plug-ins event-publisher**.

  Reference: TIC 18462 / PR 906531

SAE

- The **show sae drivers device-name** command displays the number of junos-ise and junos-ptsp devices that are not currently connected.

  Reference: PR 904065

- After you change IP address and then restart the components such as SAE and NIC, the newly changed addresses are not displayed in the *sminfo.log* file.

  Reference: PR 904184

- The JSRC router driver remains in **state-in-transition** state, when a current state changing event is interrupted by a second state changing event, and the current state changing event on interruption triggers a new state changing event.

  Reference: PR 998494

- The JSRC router driver remains in **state-in-transition** state when SRQ message is received and if the other messages such as AAR, STR, and ACR are received during the same time frame as SRQ.

  Reference: PR 998440

- If there are overlapping schedules because of an incorrectly configured effective period, the expiry dates of multiple events are affected.

  Workaround: Configure the effective period in such a way that the schedules do not overlap.

  Reference: TIC 19008 / PR 904323

SIC

- 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 / PR 906490

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 / PR 906492

Upgrade

- Whenever you upgrade SRC software, the SRC software retains the already committed value for the parameters even though the committed value violates the new value range set for those parameters in the latest software version.

  Workaround: Make sure that you configure a value within the new value range after you upgrade the SRC software.

  Reference: PR 946171

Documentation Updates

This section lists the errata and changes in the documentation set published for SRC Release 4.7.x.

- In the *Configuring an SRC Component to Store Log Messages in a File (SRC CLI)* section and the *Enabling Network Device-Specific Filtering for SAE Debug Logs (SRC CLI)* subsection under the *Categories and Severity Levels for Event Messages* section in *SRC PE Monitoring and Troubleshooting Guide*, a note incorrectly states that after you configure the **device-filter-key** option, you should restart the SAE for the configuration to take effect.

  There is no requirement to restart the SAE after configuring the **device-filter-key** option.

Migration

This section provides information about migrating from earlier SRC software releases to SRC Release 4.7.0.

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 4.7 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 4.7 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.

> *(i)* 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 4.7.

Reference: TIC 17708 / PR 906376

Restrictions and Recommendations

VTA

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 4.7.0 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 4.7.0:

Web Browsers

The C-Web interface in SRC Release 4.7.0 was tested with and supports only with the following Web browsers:

- Firefox 10.0 or later
- Internet Explorer 8.0 or later
- Chrome 17.0 or later

Resolved Problems

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

C-Web Interface

- The following problem is resolved:

  The configuration wizard uses the data in the standard or customized wizard definition file to group and display related configurations on a single page of the wizard.

  a. If the wizard definition file does not conform to the wizard DTD, an XML validation failure error message is displayed.

  b. If you specify an XML file that is not a wizard DTD, an indefinite wait image page appears.

  Reference: TIC 18539 / PR 906548

SAE

The following problems are resolved:

- The description of the interface classification script match condition is ambiguous in the following guides in the SRC documentation set:

  1. *SRC PE C-Web Interface Configuration Guide*—The *Interface Classification Scripts* subsection under the *Classification Scripts Overview* section in *Chapter 13, Classifying Interfaces and Subscribers (C-Web Interface)*.

  2. *SRC PE Subscribers and Subscriptions Guide*—The *Interface Classification Scripts* subsection under the *Classification Scripts Overview* section in *Chapter 4, Classifying Interfaces and Subscribers (SRC CLI)*.

  Reference: PR 943863

- For an authorization scheduler, if you do not configure the **from** option, then the scheduled service is not activated or deactivated. It is mandatory to configure the **from** option.

  Reference: TIC 19009 / PR 904324

- When you configure logrotate, the **size** option is mapped to the **minimum-size** option, which is not a valid attribute for logrotate. This prohibits file rotation from being performed.

  Reference: TIC 19190 / PR 904424

- When a subscriber with subscriptions to AOL and scheduled services (the services are in a mutex group) logs in during the schedule window (that is, period when the scheduled service is eligible for activation), the AOL service gets precedence over the scheduled service.

NOTE: This problem occurs irrespective of whether the schedulers are configured at the retailer or global level.

Reference: TIC 19023 / PR 906692 and TIC 19011 / PR 904326

SRC Software Compatibility Matrix

Table 1 on page 22 shows which versions of the SRC software are compatible with specified versions of the Junos OS and JunosE OS.

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

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

SRC Software Release	Tested with JunosE Release	Tested with Junos OS Release
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
4.4.0	13.2.0, 13.3.0, 14.1.0	11.4x27, 12.2x49, 12.3R3
4.5.0	14.2.0, 13.2.2, 14.3.0	12.3R3.1, 11.4X27.46, 13.3
4.6.0	14.3.0, 14.1.1, 13.2.3	11.4X27.55, 12.3R4.6, 13.3
4.7.0	14.3.0, 14.3.1, 15.1.0b1-7	12.3R6.6, 13.3R2.7, 14.1X50 - D40.1

Third-Party Software

This section lists the third-party software that is included with SRC Release 4.7.0. 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)

- Apache-jakarta-ora 2.0.8 (http://jakarta.apache.org/oro)

- Beepcore-java 0.0.08 (http://www.beepcore.org)

- BouncyCastle CryptoAPI 1.33 (http://bouncycastle.org/java.html)

- Castor 0.9-AA (http://castor.codehaus.org)

- Centos 4.9 (http://centos.org)

- expect4j 1.0 (https://github.com/cverges/expect4j)

- 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://www.eclipse.org/jetty)

- Jython 2.2 (http://www.jython.org)

- libart_lgpl 2.3.16-3 (http://www.linuxfromscratch.org/blfs/view/svn)

- 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 1.6.0.26 (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://thewalter.net/stef/software/rrdbot)

SRC Documentation and Release Notes

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.

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® technical documentation,
see the product documentation page on the Juniper Networks website at
http://www.juniper.net/techpubs/.

Documentation Feedback

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, 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

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/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:
  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

July 2015—Revision 2, SRC Release 4.7.0

June 2014—Revision 1, SRC Release 4.7.0