

Release Notes: Junos[®] Space Service Automation Release 14.1R4

Release 14.1R4
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Junos Space Service Automation Release Notes

The Junos Space Service Now and Service Insight applications streamline fault management for devices running Junos OS by automating the detection, isolation, and resolution of network faults and incidents.

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New Features in Junos Space Service Automation Release 14.1R4

There are no new features in Junos Space Service Now Release 14.1R4 and Junos Space Service Insight Release 14.1R4.

New Features in Junos Space Service Automation Release 14.1R3

The following features are new in Junos Space Service Now Release 14.1R3 and Junos Space Service Insight Release 14.1R3:

- **Off-box On-demand JMB Enhancements**—The following changes are made to the on-demand Juniper Message Bundles (JMBs) generated using the **directive.rc** file (off-box).
 - The off-box on-demand event JMB (eJMB), informational JMB (iJMB), and Request Materials Authorization (RMA) JMBs generated use XSD schema 4.0 defined by AI-Scripts.
 - Service Now generates attachments and system log files of an off-box on-demand JMB as text files. The JMB only lists the names of the file. The JMB does not include the contents of the attachments and system log files.
 - Service Now provides an option to configure the default system log files to be included in an off-box on-demand JMB.
 - Service Now reads the attachments and system log files of the off-box on-demand JMB and uploads them to JSS. It also displays the read status and upload status of each attachment and system log file.

- The ***AISESI** attachment of an off-box on-demand JMB of a device running Junos OS includes the last four configuration changes made to the device.
- The following changes are introduced in the Create On-demand JMB dialog box and on the Request RMA page:
 - **Collect Log File** check box to enable or disable log file collection for an off-box on-demand JMB
 - **Verify CPU Usage** check box to enable or disable checking CPU usage before generating the off-box on-demand JMB
- The **Create on-demand iJMB** action is included for Service Now devices to enable generating on-demand iJMBs.
- The following REST API changes are introduced to enhance the off-box on-demand feature:
 - The Create On-demand iJMB API is added to generate off-box on-demand iJMBs.
 - The Create On-demand Incident and Request RMA Incident APIs are modified to include the **collectLogFile** and **verifyCPUUsage** parameters.

- **Validating Service Now Partner**—A Service Now end customer validates the SSL certificate received from a Service Now partner to ensure security.

The following changes are made in a Service Now end customer to validate a Service Now partner:

- The **Certificate Upload** option is provided on the Global Settings page to upload the SSL certificate received from the Service Now partner.
- A Partner Certificate Expiry e-mail template is provided to send e-mail notifications to Service Now administrators when the SSL certificate from the Service Now partner is about to expire.
- A Partner Certificate Expired e-mail template is provided to send e-mail notifications to Service Now administrators when the SSL certificate from the Service Now partner has expired.
- The following REST API change is introduced to validate a Service Now partner:
 - The Certificate-management resource group is added to retrieve, upload, and delete SSL certificates received from the Service Now partner. The resource group includes the following APIs:
 - Get All Certificate and Get Certificates—to list SSL certificates received from the Service Now partner
 - Add Certificate—to upload SSL certificates received from the Service Now partner to the Service Now database
 - Delete Certificate by ID—to delete SSL certificates stored in the Service Now database
- **Adding Attachments to Incidents and Cases**—Service Now Release 14.1R3 provides options to upload text or binary attachments to a case and incident. These attachments

that are uploaded for a case are not stored in the Service Now database and therefore cannot be viewed in Service Now. However, a summary of these attachments is provided in the associated incident. The text or binary attachment uploaded for an incident is stored in the Service Now database and the contents can be viewed in Service Now.

The following changes are made to enable adding attachments to an incident and case:

- The **Upload Attachments** action is provided for incidents and technical support cases to allow you to upload an attachment to an incident or technical support case by using HTTP or SCP.
- The Attachment Details tab is provided on the Tech Support Summary page to provide the status of uploading the attachment to JSS.
- The following REST API changes are made:
 - The Upload an Attachment to an Incident using HTTP and Upload an Attachment to an Incident using SCP APIs are added to the incident manager resource group to upload an attachment to an incident.
 - The Upload an Attachment to a Case using HTTP and Upload an Attachment to a Case using SCP APIs are added to the case manager resource group to upload an attachment to a case.
- **Exporting and Importing Event Profiles**—Service Now Release 14.1R3 provides options to export and import event profiles in XML format.

The following changes are made in Service Now to allow export and import of event profiles in XML format:

- The **Export All Profiles** action is provided for event profiles to export all configured event profiles.
- The **Export Selected Profiles** action is provided to export selected event profiles.
- The **Import Profile** task (**Service Now > Administration > Event Profile**) is introduced on the Service Now navigation tree to import event profiles to Service Now.
- The following REST API changes are introduced to export and import event profiles:
 - The following APIs are added to the event-profile-management resource group for exporting and importing event profiles:
 - Export All Event Profiles by Type—to export all event profiles in Service Now in XML format to a file
 - Export Event Profiles by ID and Type—to export selected event profiles in XML format to a file
 - Import Event Profiles by ID and Type—to import a file containing event profiles in XML format
 - Get Event Profile Import Job Results—to track the steps executed during the import of event profiles

- The Job Details for Import Event Profiles API is added to the jobs-management resource group to obtain the details of the import event profiles job.
- **Validating BIOS on a Device**—Service Now Release 14.1R3 provides options to configure BIOS validation on a device running Junos OS for checking BIOS integrity on the device. This option is available only for Service Now operating in Partner Proxy or Standalone mode.



NOTE: Service Now does not support BIOS validation of a device when operating in End Customer mode.



NOTE: Service Now can validate BIOS on a device only if AI-Scripts Release 4.1R4 is installed on the device.

The following changes are made to Service Now to validate BIOS on a device running Junos OS:

- The **Configure BIOS Validation** action is provided for a Service Now device to enable or disable BIOS integrity check on the device.
- The Device Analysis column is added to the Service Now Devices page. BIOS is displayed in the column for a device if BIOS validation is enabled and configured for the device.
- The **BIOS File Collection** parameter is added to the Device Detail page to specify the interval configured for collecting BIOS data from the device.
- The **Device Analysis** tab is added to the Device Detail page to specify the result of BIOS analysis of all the Routing Engines on the device.
- The **Device Analysis** task group (**Service Now > Service Central**) is added on the Service Now navigation tree. The **Device Analysis** task group includes the **BIOS Validation** task to list all BIOS information received from devices running Junos OS.
- The Case Type column is added on the View Tech Support Cases and View End Customer Support Cases pages to indicate the type of case created for an incident. Case Type can have the following values—Event, Event-RMA, On-demand, On-demand RMA, BIOS Health Check, AIS Health Check.
- The following REST API changes are introduced for supporting BIOS validation:
 - The device-analysis resource group is added to retrieve and export BIOS validation incidents, view and accept the BIOS legal notice, and configure BIOS validation on devices. The resource group contains the following APIs:
 - Get All BIOS Validations
 - Get BIOS Validation by ID
 - Delete BIOS Validation by ID
 - Export All BIOS Validations

- Export BIOS Validation by ID
- View BIOS Legal Notice
- Accept BIOS Legal Notice
- Configure BIOS Validation on Newly Discovered Devices
- Configure BIOS Validation on Devices
- The following APIs are modified to include the **caseType** attribute:
 - Get Device By ID
 - Get All Cases
 - Get Case by ID
 - Get All End Customer Cases
 - Get End Customer Case by ID

For more information about the BIOS validation feature, see [Automated Validation for BIOS Images](#).

- **New Device Support**—Service Now Release 14.1R3 and Service Insight Release 14.1R3 support the MX Series Virtual Chassis.

New Features in Junos Space Service Automation Release 14.1R2

The following features are new in Junos Space Service Now Release 14.1R2 and Junos Space Service Insight Release 14.1R2:

- **AI-Scripts Health Check JMBs**—Service Now receives and supports automatic submission of AI-Scripts health check JMBs to JSS.

The Add Members page of a Service Now partner is modified to include the **Accept AIS Health Check Incidents** field to define whether to accept and automatically submit AI-Scripts health check incidents from end customers.

- **New Device Support**—Service Now and Service Insight support EX4600 Ethernet switches.

New Features in Junos Space Service Automation Release 14.1R1

The following features are new in Junos Space Service Now Release 14.1R1 and Junos Space Service Insight Release 14.1R1:

- **Service Now and Service Insight as Hot-Pluggable Applications**—From Junos Space Release 14.1R1, Service Now and Service Insight are available as hot-pluggable applications. This enables you to install, upgrade, and uninstall Service Now and Service Insight applications independently of the Junos Space Network Management Platform.

The Service Now and Service Insight applications are bundled together and available as a single image. Therefore, you must install, upgrade, or uninstall both applications at the same time. You can find the image (**Service-Now.14.1R1.4.img**) of the applications at <https://www.juniper.net/support/downloads/?p=serviceautomation#sw>.

- **Proxy Server Support**—From Junos Space Release 14.1R1, Service Now and Service Insight use the proxy server configured on the Junos Space Network Management Platform for all external communication purposes.
- **Domains**—Service Now and Service Insight support the following changes made to domains in Junos Space Network Management Platform Release 14.1R1:
 - Domains are arranged hierarchically in six levels.
 - Multiple objects from a domain can be selected and assigned to another domain.
- **New Device Support**—Service Now and Service Insight support the Next-Generation Switch Control Board and Next-Generation Routing Engine on the following SRX Series devices:
 - SRX5400
 - SRX5600
 - SRX5800

Installation and Upgrade of Junos Space Service Now and Junos Space Service Insight

Prerequisites for Installing Service Now Release 14.1R4 and Service Insight Release 14.1R4

Junos Space Network Management Platform Release 14.1R1 or later must be installed on the Junos Space node.

You can download and install Service Now Release 14.1R4 and Service Insight Release 14.1R4 on Junos Space Network Management Platform Release 14.1 or later. Alternatively, if you have an earlier release of Service Now and Service Insight already installed, upgrade them to Service Now Release 14.1R4 and Service Insight Release 14.1R4. For information about compatibility of Service Now and Service Insight with Junos Space Network Management Platform, see [Junos Space Application Compatibility](#). For instructions about installing, upgrading, or uninstalling Junos Space Service Now and Service Insight, see [Installing, Upgrading, and Uninstalling Junos Space Service Now and Junos Space Service Insight](#).

Upgrade Path to Service Now Release 14.1R4 and Service Insight Release 14.1R4

Up to Service Now Release 13.3R4 and Service Insight Release 13.3R4, Service Now and Service Insight applications are bundled with Junos Space Network Management Platform. Therefore, to upgrade up to Service Now Release 13.3R4 and Service insight Release 13.3R4, you must upgrade Junos Space Network Management Platform.

You can upgrade to Service Now Release 14.1R1 and later and Service Insight Release 14.1R1 and later independent of Junos Space Platform. To upgrade to Service Now Release 14.1R1 or later and Service insight Release 14.1R1 or later, you must first upgrade Junos Space Platform to release 14.1R1.

To upgrade to Service Now Release 14.1R4 and Service Insight Release 14.1R4, use one of the following paths:



NOTE: The release numbers such as SN/SI 14.1R1 (Platform 14.1R1/14.1R2/14.1R3) in the following list indicate Service Now Release 14.1R1 and Service Insight Release 14.1R1 installed on Junos Space Platform Release 14.1R1, Junos Space Platform Release 14.1R2, or Junos Space Platform Release 14.1R3.

- SN/SI 14.1R1 (Platform 14.1R1/14.1R2/14.1R3) > SN/SI 14.1R2 (Platform 14.1R1/14.1R2/14.1R3) > SN/SI 14.1R4 (Platform 14.1R1/14.1R2/14.1R3)
- SN/SI 14.1R1 (Platform 14.1R1/14.1R2/14.1R3) > SN/SI 14.1R3 (Platform 14.1R1/14.1R2/14.1R3) > SN/SI 14.1R4 (Platform 14.1R1/14.1R2/14.1R3)
- SN/SI 14.1R1 (Platform 14.1R1/14.1R2/14.1R3) > SN/SI 14.1R4 (Platform 14.1R1/14.1R2/14.1R3)
- SN/SI 14.1R2 (Platform 14.1R1/14.1R2/14.1R3) > SN/SI 14.1R3 (Platform 14.1R1/14.1R2/14.1R3) > SN/SI 14.1R4 (Platform 14.1R1/14.1R2/14.1R3)
- SN/SI 14.1R2 (Platform 14.1R1/14.1R2/14.1R3) > SN/SI 14.1R4 (Platform 14.1R1/14.1R2/14.1R3)
- SN/SI 14.1R3 (Platform 14.1R1/14.1R2/14.1R3) > SN/SI 14.1R4 (Platform 14.1R1/14.1R2/14.1R3)
- SN/SI 14.1R1 (Platform 14.1R1/14.1R2/14.1R3) > SN/SI 14.1R2 (Platform 14.1R1/14.1R2/14.1R3) > SN/SI 14.1R3 (Platform 14.1R1/14.1R2/14.1R3) > SN/SI 14.1R4 (Platform 14.1R1/14.1R2/14.1R3)

Recommendations for Upgrading Junos Space Service Now

The upgrade process of Service Now sometimes takes a long time (around 30 minutes to 1 hour) to complete. This is due to back-end processes that are running at the time of upgrade.

We recommend the following to complete the upgrade faster:

- The Junos Space Network Management Platform Release 14.1R3 has some fixes to resolve issues while deploying a Junos Space cluster. So, we recommend you to upgrade Junos Space Platform to Release 14.1R3 before upgrading to Service Now to Release 14.1R4.
- Delete entries in the SI_EOL_ASYNC_TOKEN and SI_UNSYNCED_DEVICE tables of the MySQL database.

To delete the entries from the MySQL tables:

1. Log in to the MySQL database and execute the following command:

```
mysql -u jboss -pnetscreen
```

2. Execute the following commands to delete records from the MySQL tables:

```
use snsi_db;
delete from SI_EOL_ASYNC_TOKEN;
delete from SI_UNSYNCED_DEVICE;
```



NOTE: Deleting data from the SI_EOL_ASYNC_TOKEN and SI_UNSYNCED_DEVICE tables does not cause any issues as these tables are synced once every 24 hours.

- While upgrading Service Now ensure that the SI Midnight Timer class is not running.



NOTE: We recommend that you upgrade only when the SI Midnight Timer class is not running.

You can verify whether the SI Midnight Timer class is running or not by viewing the `/var/logs/jboss/server/server1/server.log`. The following entries are made in the `server.log` file for the SI Midnight Timer class in the Virtual IP node (also known as the master node) of a Junos Space cluster.

- **SI Midnight Timer Class - Started SIGlobalMidnighttimer...** when the SI Midnight Timer class is started.
- **SI Midnight Timer Class - Timed out - going to fetch intelligence updates from JSS** when the SI Midnight Timer class has completed running.

The time taken by the SI Midnight Timer to complete depends on the number of records in the database.

If you do not delete the entries from the MySQL tables and upgrade while the SI Midnight Timer class is running, Service Now upgrade takes a long time depending on the time taken by the back-end processes to complete.

Operational Recommendation

We recommend the following for operating Junos Space Service Now and Junos Space Service Insight:

- AI-Scripts must be installed on devices running Junos OS to generate event-based incidents in Service Now. AI-Scripts are designed to minimize the processing time and memory required to generate Service Now incidents. Therefore, AI-Scripts can be effectively used with a large number of devices running Junos OS. Nonetheless, AI-Scripts consume system resources when installed and activated on devices running Junos OS. Therefore, we recommend that you test and qualify Service Automation before you deploy it in a production environment. Refer to the AI-Scripts Release Notes for a list of supported platforms.

- When you upgrade Service Now operating in end customer or partner proxy mode, ensure that the Service Now partner proxy is of the same version as its end-customer Service Now application or up to two versions newer than the version of the end-customer Service Now application.
- Read the KB article, <http://kb.juniper.net/KB19155>, before installing AI-Scripts on devices running Junos OS to know about issues that can occur when AI-Scripts are installed on them.

Known Issues

The following are the known issues in Junos Space Service Now Release 14.1R4 and Junos Space Service Insight Release 14.1R4:

- If Service Now is installed on Junos Space Platform Release 14.1R2 or earlier, Service Now fails to store the log file contained in a JMB if the size of the log file, after compression, is between 25 MB and 50 MB. [PR 1087637]

Workaround: Upgrade to Junos Space Network Management Platform Release 14.1R3.

- Service Now does not support creating BIOS incidents on MX104, XRE200 External Routing Engine, and QFabric devices. [PR 1029546]
- Service Now does not support collecting on-demand iJMB and eJMB (both on-box and off-box) from QFabric devices. [PR 1014935]
- Service Now does not support configuring interval for RSI collection on QFabric devices. [PR 1014932]
- Devices installed with AI-Scripts and managed by Service Now should not be directly deleted from the Junos Space Platform. [PR 1006201]

Workaround: Delete the devices from Service Now and then delete the devices from the Junos Space Platform.

- Service Now does not discover devices with the same hostname in QFabric. [PR 985029]
- The device inventory information, when exported in Excel format, does not show up clearly in Excel 2013. [PR 975701]

Workaround: Use Excel 2007 or earlier to view the exported device inventory information.

- Service Now does not collect log files from QFabric. [PR 968658]
- Service Now supports configuring RSI collection only on the primary EX-XRE Series device. [PR 968433]
- Service Now does not support the core file upload feature for QFabric. [PR 887123]
- Service Now does not support the Request RMA feature for QFabric and EX-XRE Series devices. [PR 883404]
- If the device configuration contains the **load-scripts-from-flash** command, then events are not enabled on the device after AI-Scripts installation from Service Now. [PR 786972]

Workaround: Manually copy the **jais-SN-activate-scripts.slax** file from the **/var/db/scripts/commit** directory to the **/config/scripts/commit** directory.

- The connection between the Service Now partner proxy and its end customers fails when a user changes the IP address of a Service Now partner proxy. [PR 564827]

Workaround: Manually update the IP address of the Service Now partner proxy in your Service Now application.

- AI-Scripts do not install on a virtual chassis when GRES is enabled. [PR 543035]

Workaround: GRES should be disabled if you want to install AI-Scripts on a virtual chassis configuration.

- Service Now cannot uninstall AI-Scripts from the backup Routing Engine of a device with dual Routing Engines. [PR 555657]

Resolved Issues in Junos Space Service Automation Release 14.1R4

The following issues are resolved in Junos Space Service Now Release 14.1R4 and Junos Space Service Insight Release 14.1R4:

- Service Now is taking an excessively long time to upgrade from Release 14.1R3 to Release 14.1R4. [PR 1101158]
- Devices displayed on Service Insight are not in synchronization with those displayed on Service Now. [PR 1103929]
- The Exposure Analyzer page of Service Insight GUI takes a long time to load (around 92 seconds to load 200 records). [PR 1099827]
- The Incidents page of the Service Now GUI loads too slowly that the performance of Service Now is impacted. [PR 1092151]
- Add indexes to identified Service Now database tables so that queries are resolved more efficiently. [PR 1091193]
- The Device Management page of the Junos Space Network Management Platform GUI takes more than 30 seconds to load. [PR 1090028]
- Service Now hangs when processing multiple JMBs simultaneously because of a deadlock in accessing MySQL tables. [PR 1088705]
- On the Service Now GUI, under Core Information on the JMB Manifest section, the Binary parameter and its value are not aligned. [PR 1086699]
- For improved performance, Service Now should ignore the **Attachment ready for upload** system log message output by AI-Scripts during JMB generation. [PR 1081519]
- JMB processing should be enhanced to reduce CPU and memory usage. [PR 1081500]
- The mechanism used by Service Now for processing file-list remote procedure call (RPC) should be changed from XPath to StAX to reduce CPU usage during JMB processing. [PR 1081497]
- While discovering devices using the Device Discovery task of Junos Space Network Management Platform, Service Now queries result in high CPU usage. [PR 1078575]

- IP addresses in filtered off-box JMBs are not overwritten with asterisks when the JMB filter of an organization is set to Send all information with IP addresses overwritten. [PR 1078567]
- Autosubmit policies should extract only those core files that are relevant to a particular event instead of all core files in the device. [PR 1031444]

Resolved Issues in Junos Space Service Automation Release 14.1R3

The following issues are resolved in Junos Space Service Now Release 14.1R3 and Junos Space Service Insight Release 14.1R3:

- Service Now does not provide REST APIs for collecting RSI and system log files.
- Service Now submits a case instead of creating a new line when the Enter key is pressed while entering problem description on the On-demand Incident page. [PR 1041107]
- Service Now incidents information is missing in Service Now metadata files. [PR 1036269]
- Service Now does not support the creation of on-demand JMBs (using JDC) for EX-XRE Series devices. Also, the **Use Service Now to Generate Incident** option is disabled for EX-XRE Series devices on the On-demand incident creation page. [PR 854312]

Resolved Issues in Junos Space Service Automation Release 14.1R2

The following issue is resolved in Junos Space Service Now Release 14.1R2 and Junos Space Service Insight Release 14.1R2:

- If user credentials are not configured for proxy server in Service Now, the proxy server settings are not automatically transferred to Junos Space Platform when Service Now Release 13.3 is upgraded to Service Now Release 14.1. [PR 1038375]
- Service Now changes for IPv6 functionality should be made dormant. [PR 1018457]

Resolved Issues in Junos Space Service Automation Release 14.1R1

The following issues are resolved in Junos Space Service Now Release 14.1R1 and Junos Space Service Insight Release 14.1R1:

- If you configure a proxy server on Service Now Release 13.1 that is operating in end customer mode, the upgrade of Junos Space Network Management Platform, Service Now, and Service Insight from Release 13.1 to Release 13.3 fails. [PR 1012983]



NOTE: Do not configure the proxy server in Service Now if you are using Service Now Release 13.3 in end customer mode. To configure the proxy server, upgrade to Junos Space Platform Release 14.1R1 and then configure the proxy server on the Junos Space Platform.

Before upgrading to Service Now Release 14.1R1, ensure that the Service Now partner is running Service Now Release 14.1R1.

- The color of the text for Connection Status of Service Now devices under Quickview should be changed to a higher-contrast color for better clarity. [PR 987830]

**Related
Documentation**

- [Junos Space Frequently Asked Questions](#)

Documentation Feedback

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

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

Requesting Technical Support

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

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

Self-Help Online Tools and Resources

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

- Find CSC offerings: <http://www.juniper.net/customers/support/>
- Search for known bugs: <http://www2.juniper.net/kb/>
- Find product documentation: <http://www.juniper.net/techpubs/>
- Find solutions and answer questions using our Knowledge Base: <http://kb.juniper.net/>

- Download the latest versions of software and review release notes:
<http://www.juniper.net/customers/csc/software/>
- Search technical bulletins for relevant hardware and software notifications:
<http://kb.juniper.net/InfoCenter/>
- Join and participate in the Juniper Networks Community Forum:
<http://www.juniper.net/company/communities/>
- Open a case online in the CSC Case Management tool: <http://www.juniper.net/cm/>

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

Opening a Case with JTAC

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

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

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

Revision History

27 July, 2015—Junos Space Service Automation Release 14.1R4

06 October, 2015—Updated the operational recommendation section for PR 1126174

July 22, 2016—Rephrased PR 543035.

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