

Junos[®] Space Cross Provisioning Platform Release 16.1R1 Release Notes

Release 16.1R1
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Junos Space Cross Provisioning Platform (CPP) is an extension of the Network Activate application. It provides a real-time operations support system (OSS) for creating and deploying services across multivendor devices.

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Cross Provisioning Platform Release 16.1R1 Release Notes

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Cross Provisioning Platform Overview

Cross Provisioning Platform (CPP) is an extension of the Network Activate application. It provides a real-time operations support system (OSS) for creating and deploying services across multivendor devices. The CPP software manages the interaction of Service Activation Director (SAD) with a module called Nokia 5620 Service Aware Manager (SAM). With Cross Provisioning Platform, you can:

- Provision services between Juniper Networks devices and SAM devices
- Provision services across Juniper Networks devices and NEC's iPASOLINK devices.
- Manage Services Activation Director services and SAM 5620 Service Aware Manager services
- Use the Representational State Transfer (REST) APIs to manage services through Services Activation Director
- Use the Simple Object Access Protocol (SOAP) API to manage SAM 5620 Service Aware Manager

Creating services for Cross Provisioning Platform requires the coordination of tasks performed in several areas of expertise including script design, system administration, and service provisioning. When you create a Cross Provisioning Platform service definition, you can attach scripts designed for the service.

New Features in Cross Provisioning Platform Release 16.1R1

The following features are introduced in Cross Provisioning Platform Release 16.1R1:

- With Cross Provisioning Platform Release 16.1R1, you can provision services (microwave links) on the NEC iPASOLINK devices.

NEC has been involved in developing and providing field-proven, reliable wireless backhaul solutions through the iPASOLINK series of Microwave Radios, for service providers all over the world. The iPASOLINK device provide wireless solutions.

With Cross Provisioning Platform Release 16.1R1 you can:

- Provision services across Juniper Networks devices and NEC's iPASOLINK devices.
- Provision the microwave links along with the quality of service (QoS) configurations on the iPASOLINK devices.

For more information on provisioning QoS settings on an iPASOLINK device, see *Configuring QoS Settings for iPASOLINK Devices*.

- Provision pseudowire and Layer 3 VPN services across Juniper Networks devices, and use iPASOLINK devices to deliver the services that span a wireless network.

For more information on provisioning microwave links across Juniper Networks and iPASOLINK devices, see *Creating a Cross Provisioning Platform Service Definition for iPASOLINK Devices* and *Creating a Cross Provisioning Platform Service Order for iPASOLINK Devices*.



NOTE: The following functions are part of the native CPP functionality, but are not supported for iPASOLINK devices:

- Interface migration
- Service resynchronization

This feature has been tested on iPASOLINK 200, iPASOLINK 400, and iPASOLINK 1000 devices using schema version 1.0.12 and adaptor version 1.0.12.

- The Cross Provisioning Platform allows you to perform service resynchronization to validate and merge selected services with the current configuration within the same devices or network.

With Cross Provisioning Platform Release 16.1R1, you can resynchronize the configuration changes made:

- Within the same Juniper Networks device or Nokia device
- Within different Juniper Networks devices

The information about migrated devices is obtained from the latest configuration of a device using virtual circuit identifier (VCID) and the IP address of the neighboring device.



NOTE: This feature is supported only on LDP-based point-to-point services, deployed on Juniper Networks and Nokia devices. If the LDP-based point-to-point service is configured for a Layer 2 Ethernet device, Layer 2 Ethernet configurations are not validated.

- If you want to replicate a service order that is successfully deployed, you need not create a new service order. Cross Provisioning Platform Release 16.1R1 allows you to re-create an existing service order whose order state is *Completed*.



NOTE: The **Recreate Service Order** option is available for a service order whose order state is *Completed* only if the **Order Type** column displays *ADD*.

If the **Order Type** column displays *ADD*, the output of the GUI script that you attached in the **Creation** field while creating a service definition is displayed.

- In releases earlier than Cross Provisioning Platform Release 16.1R1, the Advance Detail tab of the CPP Service Details page displays only the output of the XSLT script.

With Cross Provisioning Platform Release 16.1R1 you have an option to view and modify the output of the GUI script in the Advance Detail tab of the CPP Service Details page. To provide this flexibility, the Service Type inventory page is added.

The Service Types inventory page displays table of predefined and customized Cross Provisional Platform service types. The Service Types page displays information in a table categorized by service type name, whether the service type is predefined or customized, creation date, and troubleshooting context path. To view more detailed information about the service type double-click the service type.

You can perform the following actions on the Service Types inventory page:

- **Create Service Types**—See *Creating Service Types in Cross Provisioning Platform*.
- **Modify Service Types**—See *Modifying a Service Type in Cross Provisioning Platform*.
- **Delete Service Types**—See *Deleting a Service Type in Cross Provisioning Platform*.

The data that you have specified while you are creating a service type is stored in the database. This data is retrieved when you click an endpoint on the CPP Service Details > Advance Details tab. You can either view the output or modify the parameters.

- Starting with Cross Provisioning Platform Release 16.1R1, you have an option to modify parameters before you deploy the services in bulk.

To modify parameters before you deploy the services in bulk, while you are creating a service definition you must attach the script in which the **isGUIRequired** parameter is set to True.

To modify parameters before you deploy the services in bulk:

- On the Bulk Modify page, select the services or devices that you want to modify.

Based on the script that you have attached, you have the following options:

- **Next**—This option is available only if **isGUIRequired** is set to True in the script you have attached.
- **Deploy**—This option is available only if **isGUIRequired** is set to False in the script you have attached.

- Click **Next** to modify services in bulk.

The Bulk Service Modify page appears.

- Modify the parameters.



NOTE: The script you have attached determines which parameters can be modified.

- Click **Deploy**.

The **Job Details** dialog box that appears contains the Job ID. You can click the Job ID link to view the status of the modified services on the Job Management page.

- Starting with Cross Provisioning Platform Release 16.1R1, you can configure network-to-network interface (NNI) ports on a device. You can configure the NNI ports on Juniper Networks and Nokia devices.

To configure the NNI port for Juniper Networks devices, a new option, **Manage Device NNIs**, is added to the Prestage Devices > Manage Device Roles page.

For third-party devices, the NNI ports are automatically added during the device synchronization. A new column, `isNNIPort`, is added on the View Third Party Devices page. If a device has an NNI port, the `isNNIPort` value is `true`.

- With Cross Provisioning Platform Release 16.1R1, the following action types are supported for point-to-point (E-Line) and multipoint-to-multipoint (E-LAN) Metro-Ethernet Forum (MEF) service operations:

- `createMefService`
- `deactivateMefService`
- `suspendMefService`
- `modifyMefUni`
- `statusMefService`
- `activateMefService`
- `deleteMefService`
- `resumeMefService`
- `modifyMefEvc`
- `addUniToExistingMefService`



NOTE: This action type is not supported for E-Line service type.

- `removeUniFromExistingMefService`



NOTE: This action type is not supported for E-Line service type.

- `resumeUni`



NOTE: This action type is not supported for E-Line service type.

- suspendUni



NOTE: This action type is not supported for E-Line service type.

- Starting with Cross Provisioning Platform Release 16.1R1, with the newly created helper functions you can validate route distinguisher and service ID values from the Nokia 5620 Service Aware Manager server. For information on newly added helper functions, see [Helper Functions in Cross Provisioning Platform Release 16.1R1 on page 7](#).
- Starting with Cross Provisioning Platform Release 16.1R1, you can include the following API with in a script to retrieve the interface details along with the device ID and vendor type:

```
http://<IPPORT>/service/restapi/cpp-devices/{deviceId}/{vendorType}/interfaces?interfaceType=<interfaceType>&start=0&limit=5
```

- For Cross Provisioning Platform Release 16.1R1, you must upgrade the Junos Space Network Management Platform to Release 16.1R1. For Junos Space Network Management Platform Release 16.1R1, CentOS 6.8 is used as the underlying OS of the Junos Space Platform software.

To upgrade to Junos Space Platform Release 16.1R1, you must follow the procedure outlined in *Upgrading to Junos Space Network Management Platform Release 16.1R1*.

API Enhancements in Cross Provisioning Platform Release 16.1R1

Cross Provisioning Platform Release 16.1R1 includes the following API enhancements:

- For modifying the CPP service definitions in bulk:
 - Deploy Bulk Modify Service (Version:2)
 - Deploy Bulk Modify Device (Version:2)
- For service type:
 - Get Service Type By Id
 - Get All Service Type
 - Create Service Type
 - Modify Service Type
 - Delete Service Type

For more information about the APIs, go to <https://Junos Space GUI IP Address/api/space/nsas/apihelp/>, where you replace *Junos Space GUI IP Address* with the IP address of the system that is running the Junos Space application.



NOTE: You must install the API package to access the API Help files.

To install the API package:

1. Install Cross Provisioning Platform Release 16.1R1.

For more information on installing Cross Provisioning Platform Release 16.1R1, see [Installation and Upgrade Instructions on page 8](#).

2. Install NetworkAppsAPI Release 16.1R1.

Helper Functions in Cross Provisioning Platform Release 16.1R1

The following table lists the helper functions created in Cross Provisioning Platform Release 16.1R1:

Helper Function	Description
<code>isValidRD (String Rd)</code>	Based on the route distinguisher, this function validates the route distinguisher value from the Nokia 5620 Service Aware Manager server.
<code>isValidServiceId (String serviceId)</code>	Based on the service ID, this function validates the service ID value from the Nokia 5620 Service Aware Manager server.
<code>isValidServiceIdandRd (String serviceId, String rd)</code>	Based on the route distinguisher and service ID, this function validates the route distinguisher and service ID value from the Nokia 5620 Service Aware Manager server.
<code>isValidResource (String key, String value)</code>	Based on input parameters of the customer, this function retrieves the object's full name from the Nokia 5620 Service Aware Manager server.

Supported Platforms for Cross Provisioning Platform Release 16.1R1

The following table lists the supported platforms and the corresponding qualified Junos OS release:

Supported Platforms	Qualified Junos OS Release
ACX Series Universal Access Routers: <ul style="list-style-type: none"> • ACX1000 router • ACX1100 router • ACX2000 router • ACX2100 router • ACX4000 router <p>NOTE: Only the Network Activate functionality is qualified for these platforms.</p>	Release 12.3R1 through Release 12.3X54-D10 for ACX1000, ACX1100, ACX2000, ACX2100, and ACX4000 routers
MX Series 3D Universal Edge Routers	Release 12.2R1 through Release 14.2R4 for MX80, MX104, MX240, MX480, and MX960 routers

Supported Platforms	Qualified Junos OS Release
M Series Multiservice Edge Routers	Release 10.0 through Release 12.2R1.8 for M320 router Release 10.0 through Release 14.2R4.12 for M7i and M10i routers
SRX Series Services Gateways NOTE: Only the Network Activate functionality is qualified for this platform.	Release 12.1, Release 12.1X45, and Release 12.1X45 for SRX100, SRX110, SRX210, SRX240, SRX550, SRX650, and LN2600 devices Release 12.1X46-D25 for SRX220 device

Installation and Upgrade Instructions

Prerequisites for Installing Cross Provisioning Platform Release 16.1R1

- The devices must be running Junos Space Platform Release 16.1R1 before you install Cross Provisioning Platform Release 16.1R1.
- You must uninstall the Network Activate application before you install the Cross Provisioning Platform application.



NOTE: If you have installed the Network Activate application, you cannot install the Cross Provisioning Platform application. Likewise, if you have installed the Cross Provisioning Platform application, you cannot install the Network Activate application.

A prescribed order is always required for the installation of Cross Provisioning Platform. Use the following table to determine the order required for the installation or upgrade:

Type of Upgrade or Installation	Order of Installation Required
New Installation Release 16.1R1	<ol style="list-style-type: none"> 1. Install Junos Space Platform Release 16.1R1. 2. Install Junos Space Platform hot patch release 16.1R1-hotpatch-v1. See Installing Junos Space Platform Hot Patch Release 16.1R1-hotpatch-v1 on page 9 for instructions on installing Junos Space Platform hot patch release 16.1R1-hotpatch-v1. 3. Install Cross Provisioning Platform Release 16.1R1. 4. Reboot the JBoss server.

Type of Upgrade or Installation	Order of Installation Required
Upgrade from Release 14.1R2 or Release 14.3R1 or Release 15.1R1	<ol style="list-style-type: none"> Upgrade Junos Space Platform to Release 15.1R1. NOTE: If you are upgrading from Cross Provisioning Platform Release 15.1R1, you can skip this step. Before upgrading to Junos Space Platform 15.2R2, you must uninstall Red Hat Package Manager. You can use the <code>uninstall_rpm.sh</code> script to uninstall Red Hat Package Manager. For more information about the script, contact the Juniper Networks Technical Assistance Center. Upgrade Junos Space Platform to 15.2R2.4 Before you reboot the JBoss server, you must install Red Hat Package Manager for the Cross Provisioning Platform application. You can use the <code>install_rpm.sh</code> script to install the Red Hat Package Managers. For more information about the script, contact the Juniper Networks Technical Assistance Center. Upgrade Junos Space Platform to Release 16.1R1. To upgrade to Junos Space Platform Release 16.1R1, you must follow the procedure outlined in <i>Upgrading to Junos Space Network Management Platform Release 16.1R1</i>. Reboot the JBoss server. Install Junos Space Platform hot patch release 16.1R1-hotpatch-v1. See Installing Junos Space Platform Hot Patch Release 16.1R1-hotpatch-v1 on page 9 for instructions on installing Junos Space Platform hot patch release 16.1R1-hotpatch-v1. Reboot the JBoss server. Upgrade Cross Provisioning Platform to Release 16.1R1. Upgrade NetworkAppsAPI Release 16.1R1.
Uninstalling	<ol style="list-style-type: none"> Uninstall NetworkAppsAPI Release 16.1R1. Uninstall Cross Provisioning Platform.

Installing Junos Space Platform Hot Patch Release 16.1R1-hotpatch-v1

To install Junos Space Platform hot patch for Release 16.1R1:

- Download the Junos Space Platform 16.1R1 Patch v1 (16.1R1-hotpatch-v1.tgz) patch to your local computer from the <https://www.juniper.net/support/downloads/?p=space&rel=1489#sw> location.
- Log in to the Junos Space active VIP node as the admin user.
- Create a temporary directory `16.1r1-hotpatch-v1` at `var/tmp/`.

```
mkdir 16.1r1-hotpatch-v1
```
- Navigate to the location on the node where you stored the patch.
- Extract the patch by using the following command:

```
tar zxvf 16.1r1-hotpatch-v1.tgz
```

6. On all nodes, you must manually stop all services. Run the following commands:

```
service jmp-watchdog stop
service jboss stop
service jboss-dc stop
```

7. To install patch only from VIP node, run the following command:

```
sh patchme.sh
```

To install patch individually on all nodes, run the following command:

```
sh patchme.sh LOCAL
```

8. You are prompted to enter your password. Enter your CLI password.
The JBoss server is rebooted automatically.

Known Issues

Cross Provisioning Platform Release 16.1R1 has the following known issue:

PR Number	Problem Description
PR-1244365	Even though you delete a device from Junos Space Platform, which has more service associated with it, the deleted device is not removed from the CPP Prestage table.
PR-1255707	For a VLAN_PATH service, in a single request if you try to delete an endpoint and add the same endpoint with the same entry number but different VLAN ID, the QoS information is not updated in the device.
PR-1255715	For a VLAN_PATH service, even though you can perform Configuration Audit successfully, the View Service Configuration window does not show the QoS information when you try to associate same VLAN ID and entry number to a different port in a single request.

Resolved Issues

There are no resolved issues in Junos Space Cross Provisioning Platform Release 16.1R1.

Junos Space Documentation and Release Notes

For a list of related Junos Space documentation, see <http://www.juniper.net/techpubs/>.

If the information in the latest release notes differs from the information in the documentation, follow the *Junos Space 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/>.

Juniper Networks supports a technical book program to publish books by Juniper Networks engineers and subject matter experts with book publishers around the world. These books go beyond the technical documentation to explore the nuances of network

architecture, deployment, and administration using the Junos operating system (Junos OS) and Juniper Networks devices. In addition, the Juniper Networks Technical Library, published in conjunction with O'Reilly Media, explores improving network security, reliability, and availability using Junos OS configuration techniques. All the books are for sale at technical bookstores and book outlets around the world. The current list can be viewed at <http://www.juniper.net/books>.

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: <https://prsearch.juniper.net/>
- Find product documentation: <http://www.juniper.net/documentation/>
- 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://entitlementsearch.juniper.net/entitlementsearch/>

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

24 February 2017—Revision 1, Junos Space Cross Provisioning Platform, Release 16.1R1

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