

Junos[®] Space Network Director API

Release 1.5 Release Notes

Release 1.5
21 October 2013

The Network Director API provides users with a set of software orchestration services that exposes a set of Representational State Transfer (REST) APIs. The REST APIs enable network management functions.

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Overview

The Network Director API provides users with a set of software orchestration services that exposes a set of Representational State Transfer (REST) APIs. The REST APIs enable network management functions, including:

- Virtualization of cloud and datacenter operations
- Provisioning of secure multitenant networks in a shared network infrastructure
- Support for Layer 2, Layer 3, security, and Internet services
- Support for a single point of integration with external cloud and datacenter orchestration tools

The software image for the Network Director API, Network Director API Reference documentation, and the release notes for Network Director API Release 1.5 are available at: [Junos Space and Junos Space Network Director Download](#) page. Before you install or test the Network Director API, see [Junos Space Network Management Platform Requirements on page 2](#).

Junos Space Network Management Platform Requirements

The Network Director API Release 1.5 is supported only on Junos Space Network Management Platform Release 13.1P5.

The Network Director API is supported on a Junos Space JA1500 Appliance or a Junos Space Virtual Appliance that meets the hardware requirements specified in the Junos Space documentation. It is not supported on a Junos Space instance running on a Juniper Networks NSM3000 appliance.

Supported Platforms for Network Director API in Release 1.5

The Network Director API supports the following Juniper Networks devices running Junos OS Release 12.3 and later:

- EX Series switches
- MX Series routers

- QFX3500 and QFX3600 switches
- QFabric systems
- SRX Series Services Gateways

Installation Instructions for Network Director API, Release 1.5

Before you begin to install Network Director API Release 1.5, ensure that the Network Management Platform is at the required release with the latest patch release installed. See [Junos Space Network Management Platform Requirements on page 2](#) for requirements information.



NOTE: If you have installed Network Director API Release 1.5 Beta on the same Junos Space appliance, then you must uninstall it before installing Network Director API Release 1.5.

To install Network Director API:

1. Install or upgrade to Network Management Platform, Release 13.1P5.
2. Install the Network Director, API Release 1.5.

Once the installation is complete, the system lists the Network Director API in the installed applications list.

3. Import the network topology and the static configurations.

For detailed instructions about installing Network Director API, see *Network Director API Quick Start Guide*.

Junos Space DMI Schema Requirements for Network Director API

In most installations, Junos Space automatically matches DMI schemas to device families. But there might be certain situations where your network uses a device for which Junos Space does not have the latest or supported schema available. In such instances, you must obtain and upload the requisite schema and set it as the default DMI schema for each device family. Set a default DMI schema for each device family to enable Junos Space to apply an appropriate schema to a device family.

[Table 1 on page 3](#) lists the latest DMI schema that you must obtain and upload in Junos Space before you start working on Network Director API Release 1.5:

Table 1: DMI Schemas

Device	Name of the DMI Schema	Device Family
EX4300 EX9200	JUNOS 13.2X50-D10.2	junos-ex
MX Series (applies to Network Director API only)	JUNOS 12.3R4.6	junos

Table 1: DMI Schemas (*continued*)

Device	Name of the DMI Schema	Device Family
QFabric devices	JUNOS 13.1X50-D15	junos-qf
QFX3500 QFX3600	JUNOS 12.3X50-D30.2	junos-qfx
SRX Series (applies to Network Director API only)	JUNOS 12.1R7.9	junos-es

For detailed steps on acquiring and uploading the schema files, see the *Junos Space Documentation* or [Managing DMI Schemas Overview](#).

Operational Notes on Device Discovery and Management

- For the Network Director API to be able to discover and manage devices, the following protocol ports must be open between the Junos Space Network Management Platform server and the devices:
 - Port 22 for SSH connections. If you have changed the SSH port to a port other than port 22 on your Network Management Platform, you must change the SSH ports on your managed devices to the port that the Network Management Platform is using.
 - Port 10162 for SNMP traps. the Network Director API receives traps from managed devices on this port. (After you install the Network Director API, use the Network Director API to configure SNMP on your devices to send traps to the Network Director API on this port.)
 - Port 21 (TCP) and port 69 (UDP) for uploading the software image and configuration file to the FTP server.

You can verify that the ports are open to the devices by logging in to the Network Management Platform CLI and executing the **nmap** command. For example, to verify that port 22 is open to a device, enter:

```
root@space# nmap <device-ip-address> -p 22
```

Known Issues in the Network Director API Release 1.5

The following are known issues in the Network Director API Release 1.5.

PR Number	Problem Description
904780	<p>If your network includes an MX Series router and has multiple tenants set up with Layer 3 and Internet access services, each tenant might be able to View the Layer 3 traffic of other tenants on the MX Series router.</p> <p>Workaround: None available at present.</p>

PR Number	Problem Description
905118	<p>After you use the Network Director API to activate services such as Layer 2 or Layer 3 connectivity on a switch, the access port on the switch is configured with the trunk port mode by default. As a result, the access port cannot communicate with physical (non-virtualized) servers that are part of the services. This issue does not affect virtualized servers.</p> <p>Workaround: In a non-virtualized environment, configure the server port to send the Ethernet frames with VLAN tags:</p> <ol style="list-style-type: none"> 1. Find the VLAN ID from the NaasService-L2ConnectivityService 2. Enter the following CLI command: <pre>sudo vconfig add interface-name VLAN-ID</pre> <p>For example: <code>sudo vconfig add eth1 22</code></p> 3. This creates a virtual interface eth1.22. Configure this virtual interface with an IP address and add routes as needed (similar to configuring any other physical interface).
905360	<p>After you install the Network Director API, activating NaaS services might fail.</p> <p>Workaround: Restart the JBoss process by issuing the CLI command, <code>service jboss restart</code>, and then activate NaaS services again.</p>
918553	<p>Reactivate with Layer 3 service in QFabric fails in certain scenarios.</p> <p>Workaround: None available at present.</p>
929572	<p>If you install Network Director and the Network Director API after upgrading Junos Space network management platform to Release 13.1P5, the topology import for the Network Director API might not work in some cases.</p> <p>Workaround: Login to the SQL server and execute the command: <code>alter table ServiceAccessPointPeer modify column peerL int(11);</code></p>
930768	<p>The Network Director API does not support clustered deployment across multiple Junos Space servers in this release.</p> <p>Workaround: Deploy and use the Network Director API in a single Junos Space server environment only.</p>

Known Limitations in the Network Director API Release 1.5

- The Network Director API supports running Junos Space in Space as System-of-Record (SSOR) mode only.
- Only user accounts with Admin privileges can use Network Director API.

- Related Documentation**
- [Network Director](#)
 - [Junos Space](#)

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 at the Juniper Networks Technical Documentation 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 <https://www.juniper.net/cgi-bin/docbugreport/>.
- 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 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: <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

21 October 2013—Revision 1, Junos Space Network Director API, Release 1.5

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