

# JUNOSPHERE RELEASE NOTES

Release 1.4

26 August 2011

These release notes cover Release 1.4 of the Junosphere virtual network. If the information in these release notes differs from the information found in the published documentation set, follow these release notes.

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## Release Overview

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

### Before You Begin

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 1.4:

- These *Junosphere Release Notes*
- The *Junosphere User Guide*, which provides detailed information about features available in Release 1.4.

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

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

## Junosphere Release Highlights

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Junosphere provides a virtual network environment in which you can configure network devices in the same manner as on a physical network.

### New Junosphere Features

The major features of Junosphere Release 1.4 are:

- An upgrade to VJX1000 virtual machine images.
- The addition of Space virtual machine images with preconfigured IP addresses.
- Updates to backend applications that are not visible to users.

### Supported Browsers

Junosphere supports the same browsers as Secure Access 7.1R1, the technology behind the Junosphere Access Portal Page. You can find related information in the latest Supported Platforms guide listed on [http://www.juniper.net/techpubs/en\\_US/sa7.1/information-products/pathway-pages/sa-series/index71.html](http://www.juniper.net/techpubs/en_US/sa7.1/information-products/pathway-pages/sa-series/index71.html).

### Junos Pulse Support

Junosphere supports the Junos Pulse mobile application. Pulse provides the tunnel to the cloud. You will also need an application providing SSH or telnet such as VNC.

## Network Topology Release Highlights

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### Images

Junosphere provides a range of virtual machine image files, depending on the permissions. Supported virtual image files for this release are listed in Table 1 on page 5. See the virtual machine image descriptions in the online help for information about installing the images.

**Table 1: Virtual Machine Images**

Disk Name	Description	Technical Support Provider
VJX1000_10_3R2_3	Junos OS release for VJX1000	Juniper Technical Assistance Center (JTAC)
VJX1000_10_3R2_2	Junos OS release for VJX1000	JTAC
VJX1000_10_3R2_1	Junos OS release for VJX1000	JTAC
VJX1000_LATEST	Latest qualified VJX1000 image	JTAC
VJX1000_10_3R1_0_EXP	Unqualified VJX1000 experimental image	NA
SPACE_11_1R1_8	Junos Space release	JTAC
SPACE_11_2R1_4	Junos Space release	JTAC
SPACE_LATEST	Latest qualified Junos Space image	JTAC
JS_SPACE_11_1R1_8	Junos Space release with preconfigured IP addresses	JTAC
JS_SPACE_11_2R1_4	Junos Space release with preconfigured IP addresses	JTAC
JS_SPACE_LATEST	Latest qualified Junos Space image with preconfigured IP addresses	JTAC
CENTOS_5_3	CentOS 32-bit image	NA
CENTOS64_5_4	CentOS 64-bit image	NA
RIM_LATEST	Latest qualified Virtual Route Insight Manager image	Packet Design
SPIRENT_LATEST	Latest qualified Virtual Spirent TestCenter image	Spirent

## VJX1000 Image

The VJX1000 image supports the following software features in Junos OS Release 10.3:

- IPv4
- IPv6
- OSPF
- BGP
- IS-IS
- MPLS
- L3VPN
- L2VPN
- VPLS
- MPLS-TE
- RSVP
- Multicast
- L2Circuit (PWE3)
- BGP-labeled unicast
- XML
- ISISv6
- OSPFv3
- Ethernet CCC
- The Layer 2 services and CoC support is the same as for J Series routers
- Only forwarding in packet mode has been qualified

## VJX1000 Network Management

All relevant platform manageability components of Release 10.3 of Junos OS for J Series routers are supported (such as, CLI, SNMP, traps, and logs). The only difference compared to current physical routers is that the virtual routers have virtual interface adapters.

## VJX1000 CLI Support

For supported features on the network devices, you can use the CLI features of Junos OS Release 10.3 for J Series routers.

## VJX1000 Junos OS Documentation

For help on supported features on the network devices, you can use the documentation of the release supported by Junos OS Release 10.3 for J Series routers.

The Junos OS Release 10.3 documentation can be found at:

<http://www.juniper.net/techpubs/software/junos-jseries/junos-jseries10.3/index.html>

## VJX1000 Interfaces

VJX1000 Junos OS Release 10.3 supports up to 16 interfaces.

## VJX1000 Hostnames and IP Addresses

While you are able to use your existing hostnames and IP addresses in the Junosphere topology models, and while Junosphere is architected based on secure VPN paradigms, we recommend for additional security that you use alternative names and addresses in your topology files.

Each version is preconfigured with user root and password Clouds. A vnc server is enabled on both virtual servers (vnc: *management\_Ethernet\_address*:1).

## Junos Space Image

This release supports four Junos Space versions:

- SPACE\_11\_1R1\_8
- SPACE\_11\_2R1\_4
- JS\_SPACE\_11\_1R1\_8
- JS\_SPACE\_11\_2R1\_4

The two JS\_versions have preconfigured IP addresses.

In order to use Junos Space in your network topology, refer to the online help file.

## CentOS Image

This release supports two CentOS Linux versions:

- CENTOS\_5\_3 for 32 bits.
- CENTOS64\_5\_4 for 64 bits.

The Junosphere Centos virtual machine images now contain iperf, mgen, and wireshark.

Iperf is a network testing tool that can create TCP and UDP data streams and measure the throughput of a network that is carrying them.

Mgen is open source software that provides the ability to perform IP network performance tests and measurements using TCP and UDP/IP traffic.

Wireshark is an open source network protocol analyzer.

## Virtual Route Insight Image

This release adds support for the following RIM image:

- RIM\_LATEST

This release also supports five macros that define the management interfaces for the RIM virtual machines.

- RIM1\_MGMT to RIM5\_MGMT

## Virtual Spirent TestCenter Image

This release adds support for the following Spirent image:

- SPIRENT\_LATEST

## Topology File Set Size Constraints

A topology file set must be less than 10 MB while each file must be less than 1 MB.

## Topology Constraints

A maximum of 40 interfaces can be directly connected to each other using a bridge in a network topology.

## Tunnel Support

Logical tunnels and GRE tunnels are not supported in this release.

## Junosphere Connector Memory Requirements

The Junosphere Connector software requires 512M of free RAM on your local workstation.

## Features Not Fully Qualified

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The Junosphere Release 1.4 documentation set describes a feature that is present but has not yet been fully qualified by Juniper Networks. This feature will be fully tested and supported in a future release:

- Packet forwarding in flow mode

## Known Problems and Limitations

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This section identifies known problems and limitations in this release.

### User Interface

- Canceling a starting topology lacks a visible sign that it is occurring. (PR/ 669754)
- Scrolling in the Messages box snaps back to the top on each screen refresh.  
The window should preserve the relative location of the scroll bar on a refresh. (PR/660363)
- Start/stop access to the “Public” library.  
Your account might not have start/stop access to the “Public” library. If it does not, in order to use a Public topology, download that topology and then upload it to your own library.
- User interface save issues.  
When you start a topology, the software assigns IP addresses to the EXTERNAL interface as specified by the topology.vmm file. If the user then performs a “Save” to save configuration changes made to the virtual router devices, these addresses are stored in the configuration file for each router. If the topology is then stopped and restarted, those same addresses are still in the configuration file and might conflict with new addresses assigned by the software. As a workaround, either download the topology file set and purge the addresses from the files, or log in to each router (via the console) and remove the extra configuration from each router. (PR/588040)
- The Save option in the user interface is not always successful. (PR/598741)
- Poweron Reset and Rebuild should show status under the Status heading.

The Poweron Reset (powering the virtual device on and off) and Rebuild (restoring the original disk image) buttons on the Topology page do not work. (PR/594227)

## Junosphere Connector

- The Connector statistics are not updated.  
When starting a Junosphere Connector session, the statistics on the Connector Data page are not updated for the Virtual Distributed Ethernet switch. (PR/596015)
- To configure 802.1q VLAN tagging pass-through when using Junosphere Connector with the VMWare ESXi server, you must set the VLAN ID of the port group of the vSwitch to 4095.  
This will put the port into VGT mode which allows VLAN tags to be preserved across the vSwitch.
- Junosphere Connector works on:
  - Linux:
    - › CentOS release 5.5 (Final)
    - › Fedora release 14 (Laughlin)

## Virtual Routers

The following lists virtual router problems and limitations that might impact Junosphere users when configuring virtual routers:

- Only one process can telnet to the console port at a time. If one connection exists, others cannot be made. The workaround is to rebuild the Virtual Machine using the **Rebuild** button on the Active Topology page. (PR/665498)
- The autonegotiation status always shows the status as Incomplete. (PR/582791)
- Web browser access to virtual routers via the Juniper Web Device Manager does not work.  
When using a Web browser to access virtual routers, the following problems are observed:
  - The Authentication button keeps spinning with message “loading data.”
  - Clicking on the Power Over Ethernet, Virtual chassis, and Switch buttons causes the browser to hang. The workaround is to refresh the URL. (PR/591918)
- The virtual router image does not contain tunneling interfaces. (PR/669731 – replaces duplicate PR/ 596969)
- Segment fault on validate operation.  
A segment fault results when while running NETCONF conformance tests and a validate operation is performed on /var/tmp/netconf.conf. (PR/600780)

## Secure Access

Secure Access is the technology behind the Junosphere Access Portal Page. You can find information relating to it in the Secure Access Release Notes. Click the 7.1R1 version on the following page:

[http://www.juniper.net/techpubs/en\\_US/sa7.1/information-products/pathway-pages/sa-series/index71.html](http://www.juniper.net/techpubs/en_US/sa7.1/information-products/pathway-pages/sa-series/index71.html).

## 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](mailto:techpubs-comments@juniper.net), or fill out the



documentation feedback form at <https://www.juniper.net/cgi-bin/docbugreport/>. If you are using e-mail, be sure to include the following information with your comments:

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

## Requesting Technical Support

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Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active J-Care or JNASC support contract, or are covered under warranty, and need postsales 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/resourceguides/7100059-en.pdf>.
- 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

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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/>
- 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

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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, visit us at <http://www.juniper.net/support/requesting-support.html>.

## Revision History

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15 April 2011—Revision 1, Junosphere Release 1.0  
15 May 2011—Revision 2, Junosphere Release 1.0  
10 June 2011—Revision 3 Junosphere Release 1.1  
17 June 2011—Revision 4 Junosphere Release 1.1  
24 June 2011—Revision 5 Junosphere Release 1.2  
29 July 2011—Revision 6 Junosphere Release 1.3  
05 August 2011—Revision 7 Junosphere Release 1.3  
25 August 2011—Revision 8 Junosphere Release 1.4

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