

JunosV App Engine Release Notes

Release 14.1
April 2014
Revision 1

These release notes accompany Release 14.1 of the JunosV App Engine. They describe the features and the documentation of the JunosV App Engine and known problems.

JunosV App Engine provides a simpler, faster, and less expensive way to integrate the management, control, and data layers of third-party applications with Junos. JunosV App Engine enables these applications to run in their native environments without requiring porting to Junos. The applications are installed on a Juniper Networks M Series, MX Series, or T Series router and from there deployed to a VSE device tethered to the router. The applications run on the VSE device, each in its own virtualized guest OS environment.

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New Features

This section describes features for the JunosV App Engine applications that are new in the current release.

User Interface and Configuration

- **routing-instance Configuration Statement**—The **routing-instance** configuration statement occurs at the following hierarchy levels:
 - `[edit services app-engine compute-cluster compute-cluster-name local-management]`
 - `[edit services app-engine virtual-machines instance instance-name local-management]`

By specifying the routing instance for JunosV App Engine, you ensure that JunosV App Engine traffic is able to be segregated from other traffic.

- **NTP server**—NTP feature helps the compute nodes connected to the router to have same timing information as the router. Compute nodes treat the router as the NTP server and update their time information based on the information sent by the router. In this way, the router and compute nodes get their information synced after boot up. Without this feature the router and compute node might show different system time and time zone information.
- **Jumbo frame support**—To implement jumbo frame support for interfaces between the Junos router and compute nodes on virtual machines (VMs), the **mtu** statement is added to the following hierarchy levels:
 - `[edit services app-engine compute-cluster compute-cluster-name compute-node compute-node-name interfaces ethernet ethernet-interface-name]`
 - `[edit services app-engine compute-cluster compute-cluster-name compute-node compute-node-name interfaces bridge bridge-name]`
 - `[edit services app-engine compute-cluster compute-cluster-name compute-node compute-node-name interfaces aggregate aggregated-interface-name]`

For more information, see the [Configuring Junosv App Engine Aggregated Interfaces](#) configuration statement summary in the JunosV App-Engine Deployment Guide.

- **Link aggregation support**—The JunosV App Engine aggregated interfaces feature provides link aggregation support for the Linux-based interfaces on the VSE device. This feature provides link-level redundancy, which, when configured appropriately, ensures that the compute node or virtual machine (VM) and router communication is working even in the case of failures of line card, Ethernet port or cable. This feature does not add link aggregation support for interfaces on the router. For more about link aggregation for JunosV App-Engine, see [Configuring Junosv App Engine Aggregated Interfaces](#) and related configuration statement summaries in the JunosV App-Engine Deployment Guide.

General Feature Descriptions

Software Installation and Upgrade

- **JunosV App Engine Host Base OS package**—This software contains the bootloader, kernel, and necessary root file system. This software is first installed on the router and from there deployed on the VSE device tethered to the router according to configuration present on the router.

Dynamic Host Configuration Protocol (DHCP)

- **Do You Need a DHCP License?**—Based on which Juniper Networks router platform used (M Series, MX Series, or T Series), DHCP functionality might require a separate software license. If you encounter a message to this effect, contact the JunosV App Engine Technical Marketing team (jvae-tme@juniper.net). For more information, see [Configuring the DHCP Server and TFTP Server for Compute Nodes](#).

Network Management and Monitoring

- **SNMP Support for Compute Nodes**—SNMP-based management and monitoring of the JunosV App Engine infrastructure, specifically compute nodes, is now provided. There is a new JunosV App Engine MIB, which is a collection of tables exporting basic information about the JunosV App Engine setup, such as an inventory of compute nodes and application instances, resource usage, and hardware. System and Network administrators are the intended users of this feature.

Platforms Applications Can Run On

To run JunosV App Engine applications, you need an M Series, an MX Series, or a T Series router with a VSE device tethered to the router. The JunosV App Engine OS software, CLI configuration, and the applications are installed on the router and from there deployed to the VSE device.

Version Compatibility

As of Junos OS Release 12.3, JunosV App Engine deployed applications install on Junos OS only if the Junos OS release matches the release of the backing sandbox used to package the application. For example, an application packaged with Release 12.3R2 will only install on Junos OS Release 12.3R2 and will not install on Junos OS Release 12.3R1 or Junos OS Release 12.3R3 or Junos OS Release 13.1R1.

Outstanding Issues

This section lists outstanding issues with this release of the JunosV App Engine platform. If there is an identifier following the description, it is the tracking number in our bug database.

User Interface and Configuration

- When installing the jvae software with the `request system software add` command, a message is displayed: **WARNING: The software that is being installed has limited support. Ignore this message. It is not the case that the software has limited support.** [PR 830525]
- **Clarification on use of the name for `sdk-vmmd`:** The name of the app-engine-virtual-machine management service is `sdk-vmmd`. In all CLI commands, refer to this service using "app-engine-virtual-machine-management." For example, to set traceoptions for `sdk-vmmd`, you need to use the following CLI command:

```
set system processes app-engine-virtual-machine-management-service traceoptions ...
```

However, `tracelog` messages of this service can be viewed using the daemon's actual name at `/var/log/sdk-vmmd`. [PRs 804375 and 804376]
- **Configure `app-engine` before TFTP:** If TFTP is configured before the `app-engine` statement, an error message is displayed when it should not be displayed. If you follow the procedures for starting JunosV App Engine given in [Deploying an Application](#), you will configure the `[edit services app-engine]` hierarchy level before configuring the TFTP server and so avoid this error message. [PR 808652]
- **Message for the request system software add command:** When installing the JunosV App Engine software with the `request system software add` command, a message is displayed:
WARNING: The software that is being installed has limited support.
Ignore this message. It is not the case that the software has limited support.
[PR 830525]

Item Fixed Since the Last Release

This section lists fixes, both software and documentation fixes, made since the last release. If there is an identifier following the description, it is the tracking number in our bug database.

User Interface and Configuration

- **NTP server**—NTP feature helps the compute nodes connected to the router to have same timing information as the router. Compute nodes treat the router as the NTP server and update their time information based on the information sent by the router. In this way, the router and compute nodes get their information synced after boot up. Without this feature the router and compute node might show different system time and time zone information. [PR 884997]
- **Jumbo frame support**—To implement jumbo frame support for interfaces between the Junos router and compute nodes an virtual machines (VMs), the `mtu` statement is added to the following hierarchy levels:
 - `[edit services app-engine compute-cluster compute-cluster-name compute-node compute-node-name interfaces ethernet ethernet-interface-name]`

- [edit services app-engine compute-cluster *compute-cluster-name* compute-node *compute-node-name* interfaces bridge *bridge-name*]
- [edit services app-engine compute-cluster *compute-cluster-name* compute-node *compute-node-name* interfaces aggregate *aggregated-interface-name*]

For more information, see the [Configuring Junosv App Engine Aggregated Interfaces](#) configuration statement summary in the JunosV App-Engine Deployment Guide. [PR 905666]

- **Link aggregation support**—The JunosV App Engine aggregated interfaces feature provides link aggregation support for the Linux-based interfaces on the VSE device. This feature provides link-level redundancy, which, when configured appropriately, ensures that the compute node or virtual machine (VM) and router communication is working even in the case of failures of line card, Ethernet port or cable. This feature does not add link aggregation support for interfaces on the router. For more about link aggregation for JunosV App-Engine, see [Configuring Junosv App Engine Aggregated Interfaces](#) and related configuration statement summaries in the JunosV App-Engine Deployment Guide. [PR 842667]

Documentation Fix

- **Privilege levels for configuration statements**—Configuration statements in the [edit services] hierarchy level in the JunosV App Engine Administration Guide have the following privilege levels: system and system-control.

JunosV App Engine Documentation and Release Notes

The JunosV App Engine documentation is available online and downloadable. The technical publications home page for the JunosV App Engine is at the following URL:

http://www.juniper.net/techpubs/en_US/release-independent/junosv-app-engine/

Table 1: JunosV App Engine Documentation

Documentation Piece	Description
<i>JunosV App Engine Administration Guide</i>	This documentation, available in PDF and HTML, includes: <ul style="list-style-type: none"> • Topics on configuring the JunosV App Engine platform • Summaries of configuration statements used to configure the JunosV App Engine platform • Summaries of operational commands used to monitor the JunosV App Engine platform
<i>VSE1100 and VSE2100 Virtual Services Engine Hardware Installation Guide</i>	This documentation, available in PDF and HTML, includes: <ul style="list-style-type: none"> • Device features and specifications • Site preparation and compliance • Installation and maintenance • Safety and troubleshooting information

If the information in the latest release notes differs from the information in the documentation, follow the *JunosV App Engine 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 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: <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

April 2014—JunosV App Engine Release Notes, 14.1.

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