

# Junos<sup>®</sup> OS Junos Continuity Release Notes

**Junos Continuity Software for Junos OS Release 15.1F5**  
**May 2016**  
**Revision 3**

These release notes accompany the Juniper Networks<sup>®</sup> Junos Continuity software. They provide an overview, software and hardware requirements, known problems in this release, and detailed instructions to install Junos Continuity software.

For more information, see Junos Continuity documentation, which is located at [http://www.juniper.net/techpubs/en\\_US/release-independent/junos/information-products/pathway-pages/junos-continuity/index.html](http://www.juniper.net/techpubs/en_US/release-independent/junos/information-products/pathway-pages/junos-continuity/index.html).

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## Junos Continuity Software Overview

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Junos Continuity is a software package that enables you to deploy new hardware in the network without the need to upgrade Juniper Networks Junos operating system (Junos OS). Junos Continuity software works like a pluggable software module that enables you to deploy new hardware, by providing the drivers and support files required to bring the hardware online. Each version of the Junos Continuity software package supports a specific type of hardware. You can download and install the Junos Continuity software package that supports the hardware component that you want to deploy.

You install the Junos Continuity software package to enable a router to support new hardware without the need to upgrade Junos OS. You can install the Junos Continuity software package as a standalone package or as a package bundled with Junos OS.

- Install the Standalone Junos Continuity Plug-in—You install the Standalone Junos Continuity Plug-in if the version of Junos OS that is installed on the router supports Junos Continuity software. For example, if the router is running Junos OS Release 15.1F4, you can directly install Standalone Junos Continuity Plug-in and then bring the line cards online.
- Install the Junos Continuity Plug-in integrated with Junos OS—You use the integrated package if the version of Junos OS that is installed on the router does not support Junos Continuity software. For example, if you want to install Junos Continuity software on Junos OS Release 13.3, you can use the integrated package that contains both Junos OS Release 15.1F4 and the Junos Continuity Plug-in. This is a one-step process to upgrade the Junos OS to Junos OS Release 15.1F4 and also to install Junos Continuity software.

Installing the integrated package is equivalent to upgrading Junos OS and requires you to restart the router for the changes to take effect. Whereas, when you install the Standalone Junos Continuity Plug-in, you do not need to restart the router.

You install the Junos Continuity software package by using the **request system software add** command. After you install the Junos Continuity software package, the router recognizes the new line cards that the installed version of Junos Continuity software supports.

## New Hardware Supported in This Release

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This release of Junos Continuity software supports the following hardware components:

- MPC7E-MRATE—Fixed-configuration, rate-selectable Modular Port Concentrator (MPC) that provides a maximum bandwidth of 480 Gbps
- MPC7E-10G—Fixed-configuration Modular Port Concentrator (MPC) that provides a maximum bandwidth of 400 Gbps
- MPC8E—MPC with two Modular Interface Card (MIC) slots, which provides a maximum bandwidth of 960 Gbps
- MPC9E—MPC with two MIC slots, which provides a maximum bandwidth of 1.6 Tbps

- MIC-MRATE—12-port MIC with QSFP+ transceiver, which supports rate-selectability
- SFB2—Enhanced Switch Fabric Board (model number:MX2000-SFB2-S) that provides increased fabric bandwidth per slot

For more information about the hardware components supported by Junos Continuity, see [Hardware Supported by Junos Continuity Software](#) on Pathfinder.

## Known Behavior

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This section contains the known behavior and limitations in hardware and software in Junos Continuity software for Junos OS Release 15.1F4 and later.

- In MX2010 and MX2020 3D Universal Edge Routers, the installation of Junos Continuity Plug-in for Junos OS Release 15.1F4 takes up to four minutes. Therefore, you can bring the MPC7E-MRATE MPC online only after four minutes.[PR1034420](#)

## Known Issues in Junos Continuity in This Release

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This section lists the known issues in Junos Continuity software.

- When MPC7E-MRATE, MPC3E-3D-NG-Q, MPC3E-3D-NG, MPC2E-3D-NG-Q, or MPC2E-3D-NG are taken offline and Junos Continuity software is uninstalled, the router becomes unreachable and **db>** prompt is displayed.

As a workaround, after taking these MPCs offline, wait until all the physical interfaces on these MPCs are cleared, and then uninstall Junos Continuity software. You can run the **show interfaces terse** command to verify that all the physical interfaces on MPCs that Junos Continuity software supports are cleared. [PR1052571](#)

## Downloading and Installing Junos Continuity Software

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This section describes how to download, install, and uninstall Junos Continuity software.

- [Downloading Junos Continuity Software on page 3](#)
- [Installing Junos Continuity Software Standalone Package on page 4](#)
- [Uninstalling Junos Continuity Software on page 5](#)

## Downloading Junos Continuity Software

To download Junos Continuity software:

1. On the Juniper Networks [Download Software](#) page, navigate to **Junos Platform** and select **Junos Continuity**.

Or using a Web browser, navigate to the software download page for Junos Continuity software on the Juniper Networks web page:

<https://www.juniper.net/support/downloads/continuity.html>

2. Select the MX series platform for which you want to download Junos Continuity package.

3. Click the **Software** tab.
4. Select **Junos** from the **Type / OS** drop-down list and **15.1** from the **Version** drop-down list to the right of the **Download Software** page.
5. In the **Plug-In** section of the **Software** tab, select the software package.
6. Log in to the Juniper Networks authentication system by using the username (generally your e-mail address) and password supplied by Juniper Networks representatives.
7. Review and accept the End User License Agreement.
8. Download the software to a local host. For example, `http://hostname/pathname`.
9. Copy the software to the router or to your internal software distribution site.

## Installing Junos Continuity Software Standalone Package

You install the Junos Continuity software package to enable a router to support new line cards without the need to upgrade Junos OS.

Before you proceed with the installation:

- Verify that the version of Junos OS that is installed on the router supports Junos Continuity software standalone package.

If the installed version of Junos OS does not support Junos Continuity software standalone package, you must upgrade Junos OS by using the Junos Continuity software package bundled with Junos OS. See *Installation and Upgrade Guide* for more information about upgrading Junos OS.

- If graceful Routing Engine switchover (GRES) is enabled, you must install the Junos Continuity software package on both the primary and the backup Routing Engines to ensure that the line cards remain operational after a Routing Engine switchover.

This topic assumes that you have already installed the new line card on the router by following the procedure given in the router's hardware guide. After you install the new line cards, you install Junos Continuity software package so that the router recognizes the new line cards.

To install the Junos Continuity software standalone package:

1. Run the **request system software add path package-name** command to start installation of the Junos Continuity software package.

Where:

**path** is the location where Junos Continuity software package is downloaded and saved.

**package-name** is the name of the Junos Continuity software package.

2. Run the **show version** command to verify the installation.

In the command output, you can see **JUNOS 64-bit JAM Plugin Software Suite** among the list of packages that are installed on the router.

3. (Optional) Run the **show chassis fpc pic-status slot-number** command to display the status of the new line cards.



**NOTE:** In the command output, the status **Present** indicates that the router can recognize the new line cards. To make the new line cards operational, you must bring them online.

4. Run the **request chassis fpc slot-number online** command to bring the newly installed line cards online.
5. (Optional) Run the **show chassis fpc pic-status slot-number** command to display the status of the newly installed line cards.

The newly installed line cards are online and operational.

See *Installing Junos Continuity Software Package* in *Junos Continuity Software* documentation for more detailed installation procedure.

## Uninstalling Junos Continuity Software

You can uninstall the Junos Continuity software package by using the **request system software delete software-package** command. Before you uninstall the Junos Continuity software package, you must take the line cards that Junos Continuity software supports offline.



**NOTE:** If GRES is enabled, you must uninstall Junos Continuity software package from both the primary and the backup Routing Engines.

To uninstall the Junos Continuity software package:

1. (Optional) Run the **show version** command to verify that the Junos Continuity software package is installed on the router.

In the command output, you can see Junos Continuity software (**JUNOS 64-bit JAM Plugin Software Suite**) in the list of packages that are installed on the router.

2. Take the line cards that Junos Continuity software supports offline by using the **request chassis fpc slot slot-number offline** command.
3. (Optional) Verify that the line cards are taken offline by using the **show chassis fpc** command.

In the command output, you can see the status as **Offlined by cli command** against the line cards that Junos Continuity software supports.

4. Run the **request system software delete software-package** command to uninstall the Junos Continuity software package.
5. (Optional) Run the **show version** command to verify that Junos Continuity software package is uninstalled.

See *Uninstalling Junos Continuity Software Package* in *Junos Continuity Software* documentation for more detailed installation procedure.

## Finding More Information

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For the latest, most complete information about known and resolved issues with Junos OS, see the Juniper Networks Problem Report Search application at:

<http://prsearch.juniper.net> .

Juniper Networks Feature Explorer is a Web-based application that helps you to explore and compare Junos OS feature information to find the correct software release and hardware platform for your network. Find Feature Explorer at:

<http://pathfinder.juniper.net/feature-explorer/>.

Juniper Networks Content Explorer is a Web-based application that helps you explore Juniper Networks technical documentation by product, task, and software release, and download documentation in PDF format. Find Content Explorer at:

<http://www.juniper.net/techpubs/content-applications/content-explorer/>.

## Documentation Feedback

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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 <http://www.juniper.net/techpubs/feedback/>.
- E-mail—Send your comments to [techpubs-comments@juniper.net](mailto:techpubs-comments@juniper.net). Include the document or topic name, URL or page number, and software 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/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 located at <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, visit us at <http://www.juniper.net/support/requesting-support.html>.

If you are reporting a hardware or software problem, issue the following command from the CLI before contacting support:

```
user@host> request support information | save filename
```

To provide a core file to Juniper Networks for analysis, compress the file with the **gzip** utility, rename the file to include your company name, and copy it to **ftp.juniper.net/pub/incoming**. Then send the filename, along with software version information (the output of the **show version** command) and the configuration, to **support@juniper.net**. For documentation issues, fill out the bug report form located at <https://www.juniper.net/cgi-bin/docbugreport/>.

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## Revision History

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