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# MobileNext Broadband Gateway

## Software Licenses



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*MobileNext Broadband Gateway Software Licenses*

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# About the Documentation

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## Documentation and Release Notes

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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/>.

If the information in the latest release notes differs from the information in the documentation, follow the product Release Notes.

Juniper Networks Books publishes books by Juniper Networks engineers and subject matter experts. These books go beyond the technical documentation to explore the nuances of network architecture, deployment, and administration. The current list can be viewed at <http://www.juniper.net/books>.

## Supported Platforms

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For the features described in this document, the following platforms are supported:

- MX240 Routers
- MX960 Routers
- MX480 Routers

## Documentation Conventions

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Table 1 on page viii defines notice icons used in this guide.

Table 1: Notice Icons


Icon	Meaning	Description
	Informational note	Indicates important features or instructions.
	Caution	Indicates a situation that might result in loss of data or hardware damage.
	Warning	Alerts you to the risk of personal injury or death.
	Laser warning	Alerts you to the risk of personal injury from a laser.

Table 2 on page viii defines the text and syntax conventions used in this guide.

Table 2: Text and Syntax Conventions

Convention	Description	Examples
<b>Bold text like this</b>	Represents text that you type.	To enter configuration mode, type the <b>configure</b> command:  <code>user@host&gt; configure</code>
Fixed-width text like this	Represents output that appears on the terminal screen.	<code>user@host&gt; show chassis alarms</code> <code>No alarms currently active</code>
<i>Italic text like this</i>	<ul style="list-style-type: none"> <li>Introduces or emphasizes important new terms.</li> <li>Identifies book names.</li> <li>Identifies RFC and Internet draft titles.</li> </ul>	<ul style="list-style-type: none"> <li>A policy <i>term</i> is a named structure that defines match conditions and actions.</li> <li><i>Junos OS System Basics Configuration Guide</i></li> <li>RFC 1997, <i>BGP Communities Attribute</i></li> </ul>
<i>Italic text like this</i>	Represents variables (options for which you substitute a value) in commands or configuration statements.	Configure the machine's domain name:  <code>[edit]</code> <code>root@# set system domain-name <i>domain-name</i></code>
Text like this	Represents names of configuration statements, commands, files, and directories; configuration hierarchy levels; or labels on routing platform components.	<ul style="list-style-type: none"> <li>To configure a stub area, include the <b>stub</b> statement at the <code>[edit protocols ospf area area-id]</code> hierarchy level.</li> <li>The console port is labeled <b>CONSOLE</b>.</li> </ul>
< > (angle brackets)	Enclose optional keywords or variables.	<code>stub &lt;default-metric <i>metric</i>&gt;;</code>



Table 2: Text and Syntax Conventions (*continued*)

Convention	Description	Examples
(pipe symbol)	Indicates a choice between the mutually exclusive keywords or variables on either side of the symbol. The set of choices is often enclosed in parentheses for clarity.	<b>broadcast   multicast</b>  <i>(string1   string2   string3)</i>
# (pound sign)	Indicates a comment specified on the same line as the configuration statement to which it applies.	<b>rsvp { # Required for dynamic MPLS only</b>
[ ] (square brackets)	Enclose a variable for which you can substitute one or more values.	<b>community name members [ community-ids ]</b>
Indentation and braces ( { } )	Identify a level in the configuration hierarchy.	<b>[edit]</b> <b>routing-options {</b> <b>static {</b> <b>route default {</b> <b>nexthop address;</b> <b>retain;</b> <b>}</b> <b>}</b> <b>}</b>
;(semicolon)	Identifies a leaf statement at a configuration hierarchy level.	
<b>J-Web GUI Conventions</b>		
<b>Bold text like this</b>	Represents J-Web graphical user interface (GUI) items you click or select.	<ul style="list-style-type: none"> <li>In the Logical Interfaces box, select <b>All Interfaces</b>.</li> <li>To cancel the configuration, click <b>Cancel</b>.</li> </ul>
<b>&gt;</b> (bold right angle bracket)	Separates levels in a hierarchy of J-Web selections.	In the configuration editor hierarchy, select <b>Protocols&gt;Ospf</b> .

## 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

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: <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

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>.

## PART 1

# Overview

- [Licensing on page 3](#)



## CHAPTER 1

# Licensing

- [MobileNext Broadband Gateway Licenses Overview on page 3](#)

## MobileNext Broadband Gateway Licenses Overview

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The MobileNext Broadband Gateway requires that you install chassis-based activation license to enable mobility-specific configurations and features on each MX Series router configured as a broadband gateway. After the MX Series router is activated for mobility functions, you also install a separate subscriber scale license, which enables mobility features for a specified number of concurrent sessions (bearers). The concurrent sessions reflect the sum of active sessions across all gateways (P-GW, SGW, and GGSN) configured on one or more MX Series routers. You can also install feature packs to provide other types of capacity scaling.

To enable the licensed mobility software features, subscriber scaling licenses, and feature packs for the broadband gateway, you need to purchase, install, manage, and verify license keys.

This topic covers:

- [Chassis Activation License on page 3](#)
- [Subscriber Scaling Licenses on page 4](#)

## Chassis Activation License

To enable the mobile software features on a broadband gateway, you can install a chassis activation license. A chassis activation license is a perpetual license that activates the chassis for mobile functions on a single MX Series router and unlocks all mobility features. A chassis activation license specifies that counting (for scaling capacity licenses) applies at the chassis level. A chassis activation license never expires.

Before you can configure mobile features on the broadband gateway, you must first install the chassis activation license. When installed, the chassis activation license allows you to install and upgrade mobility software and Junos OS software.

You use the CLI to install a chassis activation license on an MX Series router.

## Subscriber Scaling Licenses

A subscriber scaling license is a perpetual license that provides scaling for concurrent sessions on the broadband gateway. The subscriber scaling license is a per-subscriber license where a subscriber is a single subscriber attachment or session on a gateway. A subscriber session can be a GGSN session, P-GW session, or S-GW session; all use the same subscriber license. The concurrent active sessions reflect the sum of active sessions across all gateways.

A subscriber scaling license is a release-based license, which provides entitlement for software upgrades, support services, and maintenance, to a specified number of licensed subscribers for a given major software version. For example, a subscriber scaling license purchased for Junos OS 12.x releases supports installation, upgrades, and maintenance for Junos OS software releases up to and including Release 12.3. However, to install or upgrade to Junos OS Release 13.1 software would require purchase of a subscriber scaling license for Junos OS 13.x releases.

When you install a chassis activation license, you use the CLI to install the subscriber scaling license on the MX Series router.

### **Related Documentation**

- [Adding New Licenses \(CLI Procedure\) on page 7](#)
- [Deleting a License \(CLI Procedure\) on page 8](#)
- [Saving License Keys on page 9](#)

## PART 2

# Software Licenses

- [Managing Licenses on page 7](#)





## CHAPTER 2

# Managing Licenses

- [Adding New Licenses \(CLI Procedure\) on page 7](#)
- [Deleting a License \(CLI Procedure\) on page 8](#)
- [Saving License Keys on page 9](#)

### Adding New Licenses (CLI Procedure)

Before adding new licenses, complete the following tasks:

- Purchase the required licenses.
- Establish basic network connectivity with the router or switch. For instructions on establishing basic connectivity, see the *Getting Started Guide* or *Quick Start Guide* for your device.

To add a new license key to the device using the CLI:

1. From the CLI operational mode, enter one of the following CLI commands:

- To add a license key from a file or URL, enter the following command, specifying the filename or the URL where the key is located:

```
user@host> request system license add filename | url
```

- To add a license key from the terminal, enter the following command:

```
user@host> request system license add terminal
```

2. When prompted, enter the license key, separating multiple license keys with a blank line.

If the license key you enter is invalid, an error appears in the CLI output when you press Ctrl+d to exit license entry mode.



**NOTE:** If the router has two Routing Engines, add the new license on each Routing Engine separately. This ensures that the license key is enabled on the backup Routing Engine during changeover of mastership between the Routing Engines.

To add a new license key to a router with dual Routing Engines:

1. After adding the new license key on the master Routing Engine, use the `request chassis routing-engine master switch` command to have the backup Routing Engine become the master Routing Engine.
2. Log in to the active Routing Engine and add the new license key, repeating the same process.

- 
3. Go on to Verifying Junos OS License Installation.



**NOTE:** Adding a license key to the router or switch might be delayed if a kernel resynchronization operation is in progress at that time. The following message is displayed on the CLI when the license-adding operation is about to be delayed:

A kernel re-sync operation is in progress. License update may take several minutes to complete.

#### Related Documentation

- [Deleting a License \(CLI Procedure\) on page 8](#)
- Junos OS Feature Licenses
- Verifying Junos OS License Installation
- `request system license add`

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## Deleting a License (CLI Procedure)

Before deleting a license, establish basic network connectivity with the router or switch. For instructions on establishing basic connectivity, see the *Getting Started Guide* or *Quick Start Guide* for your router or switch.

To delete a license key from a device using the CLI:

1. From the CLI operational mode, enter the following command for each license, specifying the license ID. You can delete only one license at a time.

```
user@host> request system license delete license-id
```

2. Go on to Verifying Junos OS License Installation.



**NOTE:** Deleting a license key from the router or switch might be delayed if a kernel resynchronization operation is in progress at that time. The following message is displayed on the CLI when the license-deleting operation is about to be delayed:

A kernel re-sync operation is in progress. License update may take several minutes to complete.

#### Related Documentation

- [Adding New Licenses \(CLI Procedure\) on page 7](#)
- [Saving License Keys on page 9](#)
- Junos OS Feature Licenses
- Verifying Junos OS License Installation
- request system license delete

## Saving License Keys

Before saving a license, establish basic network connectivity with the router or switch. For instructions on establishing basic connectivity, see the *Getting Started Guide* or *Quick Start Guide* for your router or switch.

To save the licenses installed on a device to a file using the CLI:

1. From the CLI operational mode, enter one of the following CLI commands:

- To save the installed license keys to a file or URL, enter the following command:

```
user@host> request system license save filename | url
```

For example, the following command saves the installed license keys to a file named **license.config**:

- To save a license key from the terminal, enter the following command:

```
user@host> request system license save ftp://user@host/license.config
```

2. Go on to Verifying Junos OS License Installation.

#### Related Documentation

- [Adding New Licenses \(CLI Procedure\) on page 7](#)
- [Deleting a License \(CLI Procedure\) on page 8](#)
- Junos OS Feature Licenses
- Verifying Junos OS License Installation



## PART 3

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