

# Junos<sup>®</sup> OS 11.2 Mobility Release Notes

Release 11.2W2  
5 December 2011  
Revision 2

These release notes accompany the maintenance Release 11.2 of the Junos OS for the MobileNext Broadband Gateway. They describe device documentation and known problems with the software. Junos OS for the MobileNext Broadband Gateway runs on all Juniper Networks MX Series except the MX80 and lower.

For the latest, most complete information about outstanding and resolved issues with the Junos OS for the MobileNext Broadband Gateway software, see the Juniper Networks online software defect search application at <http://www.juniper.net/prsearch>.

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## Junos OS Release Notes for Juniper Networks MobileNext Broadband Gateway

### New Features in Junos OS Release 11.2 for MobileNext Broadband Gateway

The following features have been added to Junos OS Release 11.2 for the MobileNext Broadband Gateway. Following the description is the title of the manual or manuals to consult for further information.

## Mobile Subscriber Application Framework

- **Mobile Subscriber Application Framework (Broadband Gateway MX Series platforms)**—Enables you to configure gateways, access point names (APNs) and associated features for mobility.

To configure the anchor services and interfaces, include the appropriate **anchor-spics** and **anchor-pfes** statements and parameters at the **[edit unified-edge gateways ggsn-pgw gateway-name system]** hierarchy level. To configure the broadband gateway as a GGSN or P-GW, include the **unified-edge gateways ggsn-pgw gateway-name** and related statements. To configure home PLMNs, include the **home-plmn** statement at the **[edit unified-edge gateways ggsn-pgw gateway-name system]** hierarchy level. To configure APNs, include the **apn apn-name** and related statements at the **[edit unified-edge gateways ggsn-pgw gateway-name]** hierarchy level. To configure local policies, include the policies and related statements at the **[edit unified-edge local-policies local-policy-profile-name]** hierarchy level. To configure call rate statistics, include the **history** and **interval** statements at the **[edit unified-edge gateways ggsn-pgw gateway-name call-rate-statistics]** hierarchy level.

*[MobileNext Broadband Gateway Configuration Guide]*

## GTP

- **GTP Support (Broadband Gateway MX Series platforms)**—Enables you to configure the GPRS Tunneling Protocol (GTP) and associated features for mobility.

To configure GTP, include the **gtp** and related statements at the **[edit unified-edge gateways ggsn-pgw gateway-name]** hierarchy level. You can establish separate VRFs for network-facing (for example, SGi) and mobile-facing (for example, S5) interfaces.

*[MobileNext Broadband Gateway Configuration Guide]*

## Charging

- **Charging for Subscribers Support (Broadband Gateway MX Series platforms)**—Enables you to configure charging and associated features for mobility.

To configure charging, include the **charging** and related statements at the **[edit unified-edge gateways ggsn-pgw gateway-name]** hierarchy level. To configure charging services to deliver Charging Data Records (CDRs) to the CGF using GTP Prime protocol, include the **gtpp** and related statements at the **[edit unified-edge gateways ggsn-pgw gateway-name charging]** hierarchy level. To configure the local storage of CDRs, include **local-persistent-storage-options** and related statements at the **[edit unified-edge gateways ggsn-pgw gateway-name charging]** hierarchy level. To configure the transport profiles, trigger profiles, and CDR profiles that are referenced by the charging profile, include the **transport-profiles**, **trigger-profiles**, **cdr-profiles** and related statements at the **[edit unified-edge gateways ggsn-pgw gateway-name charging]** hierarchy level. To configure charging profiles, include the **charging-profiles** and related statements at the **[edit unified-edge gateways ggsn-pgw gateway-name charging]** hierarchy level.

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## Quality of Service

- **QoS 3GPP Support (Broadband Gateway MX Series platforms)**—Enables you to configure 3GPP QoS and associated features for mobility.

To configure 3GPP QoS, include the **class-of-service** and related statements at the **[edit]** hierarchy level and apply them to the mobile interface of the APN (**mif-**). To configure QoS connection admission control, include the **cos-cac** statement and related statements at the **[edit unified-edge]** hierarchy level. To configure QoS policy profiles, include the **cos-policy-profiles** statement and related statements at the **[edit unified-edge]** hierarchy level.

*[MobileNext Broadband Gateway Configuration Guide]*

## DHCP

- **DHCP Proxy Client Support (Broadband Gateway MX Series platforms)**—Enables you to configure DHCP proxy client and associated features for mobility.

To configure DHCP support, include the **dhcp-proxy-client** and related statements at the **[edit system]** hierarchy level. You can configure both IPv4 and IPv6 DHCP parameters.

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## AAA

- **AAA (RADIUS) Support (Broadband Gateway MX Series platforms)**—Enables you to configure AAA and associated features for mobility.

To configure AAA servers, include the **radius** and related statements at the **[edit access]** hierarchy level. To apply AAA to a specific VRF, include the **radius** and related statements at the **[edit routing-instance routing-instance-name]** hierarchy level. To configure AAA profiles, include the **aaa** statement at the **[edit unified-edge]** hierarchy level.

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## High Availability

- **Redundancy Support for Interfaces Cards (Broadband Gateway MX Series platforms)**—Enables you to configure redundancy for interfaces cards for mobility.

To configure redundancy for aggregated interfaces PFEs, include **apfe apfe-number** (for aggregated interface PFEs) at the **[edit interfaces]** hierarchy level.

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- **Redundancy Support for Services and Interface Cards (Broadband Gateway MX Series platforms)**—Enables you to configure redundancy for services and interfaces cards for mobility.

Enables you to configure the redundancy and associated features for mobility cards. To configure redundancy for services cards, include the **amsams-number** (for aggregated multi-services interfaces) and related statements at the **[edit interfaces]** hierarchy

level. To configure redundancy for interfaces cards, include the **apfe *apfe-number*** (for aggregated PFEs) and related statements at the **[edit interfaces]** hierarchy level.

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- **AMS and HA Infrastructure Support (Broadband Gateway MX Series platforms)**—Enables you to configure aggregated multi-services groups (**ams-**) and use them for redundancy.

For configuration details, see Redundancy Support for Services and Interfaces Cards.

*[MobileNext Broadband Gateway Configuration Guide]*

## Software Datapath (Exception Handling)

- **IP Reassembly Support (Broadband Gateway MX Series platforms)**—Enables you to configure the IP reassembly handling for mobility.

To configure IP reassembly exception handling, include the **ip-reassembly** and related statements at the **[edit services]** hierarchy level and apply the reassembly profile to the broadband gateway at the **[edit unified-edge gateways ggsn-pgw *gateway-name* ip-reassembly-profile]** hierarchy level.

*[MobileNext Broadband Gateway Configuration Guide]*

- **IPv6 Router Advertisement Support (Broadband Gateway MX Series platforms)**—Enables you to configure the IPv6 RA parameters for mobility.

To configure IPv6 RA parameters, include the **ipv6-router-advertisement** and related statements at the **[edit unified-edge gateways ggsn-pgw *gateway-name*]** hierarchy level.

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## Services and Interfaces Cards

- **Mobility Interfaces Cards (Software) (Broadband Gateway MX Series platforms)**—Enables 64-bit operation mode for approved mobility interfaces cards.

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- **Mobility Services Cards (Software) (Broadband Gateway MX Series platforms)**—Enables 64-bit operation mode for approved mobility services cards.

*[MobileNext Broadband Gateway Configuration Guide]*

## Changes in Default Behavior in Junos OS Release 11.2 for MobileNext Broadband Gateway

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The changes to default behavior for the MobileNext Broadband Gateway are as follows:

- The show command **show unified-edge ggsn-pgw subscribers** no longer supports the **preemption-vulnerable** option. [PR/678856]
- Previously, the Broadband gateway generated SNMP traps on a per pool basis when the specified threshold was exceeded. The Broadband Gateway now also generates

SNMP traps when the specified threshold is exceeded on a range of addresses specified for a pool. [PR/678188]

## Issues in Junos OS Release 11.2 Mobility for MobileNext Broadband Gateway

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The current software release is Release 11.2W for Mobility.

- [Current Software Release on page 6](#)

### Current Software Release

#### Outstanding Issues in Junos OS Release 11.2 for MobileNext Broadband Gateway

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##### *Charging*

After deleting the **disable-replication** configuration option at the [edit unified-edge gateways ggsn-pgw gateway-name charging local-persistent-storage-options] hierarchy level, the Charging daemon might stop responding to batch requests and stops writing to the Routing Engine external drive. As a workaround, do not change the **disable-replication** configuration option when CDR files are open. [PR/701731]

##### *Chassis*

The Commit check fails for IP pool changes after removing the Service PIC or AMS from the gateway system hierarchy. As a workaround, perform the following steps to put individual Service PICs or AMS in service, or take an individual Service PICs or AMS out of service. [PR/716813]

To put an individual service PIC in service:

1. Include the **package jservices-mobile** statement at the [edit chassis fpc fpc-slot pic pic-slot adaptive-services service-package extension provider] hierarchy level.
2. Add the service PIC interface (interface *interface-name*) at the [edit unified-edge gateways gateway-name system anchor-spics] hierarchy level.
3. Commit the configuration.



NOTE: Steps 1 and 2 need to be performed in a single commit operation.

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To take an individual AMS out of service:

1. Remove the AMS interface from the [edit unified-edge gateways gateway-name system anchor-spics] hierarchy.
2. Remove the service package (**package jservices-mobile**) at the [edit chassis fpc fpc-slot pic pic-slot adaptive-services service-package extension provider] hierarchy level.
3. Commit the configuration.



NOTE: Steps 1 and 2 need to be performed in a single commit operation.

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To put an individual AMS in service:

1. Include the **package jservices-mobile** statement at the **[edit chassis fpc fpc-slot pic pic-slot adaptive-services service-package extension provider]** hierarchy level.
2. Add the service PIC interface (**interface interface-name**) at the **[edit unified-edge gateways gateway-name system anchor-spics]** hierarchy level.
3. Commit the configuration.



**NOTE:** Steps 1 and 2 need to be performed in a single commit operation.

To take an individual service PIC out of service:

1. Remove the service PIC interface from the **[edit unified-edge gateways gateway-name system anchor-spics]** hierarchy.
2. Remove the service package (**package jservices-mobile**) from **[edit chassis fpc fpc-slot pic pic-slot adaptive-services service-package extension provider]** hierarchy.
3. Commit the configuration.



**NOTE:** Steps 1 and 2 need to be performed in a single commit operation.

### **DHCP**

- If the DHCP-facing anchor PFE or FPC restarts, existing DHCP-bound clients are released. Existing subscribers are also deleted. As a work around for IPv4, you can bind DHCP server interfaces to loopback. [PR/666510-2]

### **Router**

When the Routing Engine external drive exceeds 40 percent capacity, you cannot execute the **ls** command on the **/opt/mobility/charging/ggsn/final\_log** directory. [PR/707879]