Release Notes for RingMaster Version 7.7.1.3

Juniper Networks recommends that you familiarize yourself with these release notes and the Juniper Networks RingMaster Quick Start Guide, and the Juniper Networks RingMaster documentation suite before installation. For additional product information, refer to the following documents:

- RingMaster 7.7 Planning Guide
- RingMaster 7.7 Configuration Guide
- RingMaster 7.7 Management Guide
- Mobility System Software (MSS) Version 7.7 Configuration Guide
- Mobility System Software Version 7.7 Command Reference

Feedback and Support ................................................................. 2
What's New in RingMaster Version 7.7 ........................................ 2
Version Compatibility ............................................................... 2
Licensing for RingMaster Version 7.7 .......................................... 3
Supported Platforms ............................................................... 4
Upgrading from RingMaster Version 7.6 ....................................... 5
Downgrading to a Previous RingMaster Version ............................ 5
Known Issues for RingMaster ...................................................... 6
Open Issues with WLM1200-UMSP ........................................... 10
Submitting Problem Reports .................................................... 10

For this release, open issues with SmartPass are tracked in this document.

Informational Note:

Please note that the tracking numbers for issues open and resolved have changed to reflect the Juniper Networks tracking system.

Product Name Changes

Please note that the former Trapeze products now reflect the Juniper Networks product names.

<table>
<thead>
<tr>
<th>Former Trapeze Name</th>
<th>Current Juniper Product Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MXR-2</td>
<td>WLC2</td>
</tr>
<tr>
<td>MX-8</td>
<td>WLC8</td>
</tr>
<tr>
<td>MX-200</td>
<td>WLC200</td>
</tr>
<tr>
<td>MX-800</td>
<td>WLC800</td>
</tr>
</tbody>
</table>
Feedback and Support

Juniper Networks encourages you to provide feedback about your experiences installing and using the product to the Juniper Networks Customer Assistance Center (TAC).

What's New in RingMaster Version 7.7

RingMaster 7.7 has the following enhancements:

- IF-Map Server Support
- WLA and WLC Watchlists
- Web Portal Wizard Enhancements

And support for the following MSS Features:

- VLAN Pooling
- WAN Outage Enhancements
- Support for High Latency Networks
- Enhanced Statistics and Counters for Network Resiliency
- WLA Network Resiliency Roaming History Enhancements
- WIDS Logging
- Multicast to Unicast Traffic Conversion
- Configurable IP Address for Sending SNMP Traps

Version Compatibility

- This version of RingMaster has been verified against MSS Version 7.7.
- Network plans created with RingMaster 7.1 and later are compatible with this version of RingMaster. If you want to use network plans created with previous versions of RingMaster, make sure the option to delete the network plans directory is not checked when you uninstall.
- If you are installing for the first time, you will need to install and activate licenses before using RingMaster. If you are upgrading from a previous licensed version, you do not need to reinstall your licenses.
- If you are upgrading from 7.0 or earlier, Juniper Networks recommends that you upgrade to 7.4 first, then upgrade to 7.5, and then to 7.6. Once you've installed the latest version of 7.6, you can upgrade to 7.7.

<table>
<thead>
<tr>
<th>Former Trapeze Name</th>
<th>Current Juniper Product Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MX-2800</td>
<td>WLC2800</td>
</tr>
<tr>
<td>MP-522</td>
<td>WLA522</td>
</tr>
<tr>
<td>MP-632</td>
<td>WLA632</td>
</tr>
</tbody>
</table>
Licensing for RingMaster Version 7.7

Licensing Overview

Juniper sends two kinds of tokens electronically, in e-mail, in response to ordered licenses: Software Serial Numbers, and Authorization Codes. Software Serial numbers are sent when you order a base system (e.g., WLM-RTMS). Authorization Codes ("AuthCodes") are sent when an additional capacity or feature is ordered. Both token types are transacted at the Juniper Networks License Management System (LMS) to provide license key to the customer. The Software Serial Number is also used to gain access to Juniper's software download center. Included in the email are "next steps" instructions that you can follow to complete the process. These instructions also are found on Juniper Licensing page (https://www.juniper.net/generate_license/) under the headings Download and Activate Your Software and Activate Your Software Capacity and/or Features.

Software Licensing

1. To get your keys after on receiving the base serial number or AuthCode, go to the generate license keys page (https://www.juniper.net/lcrs/license.do). Enter your support login information and follow the instructions. Access to the licensing server requires your Juniper Networks Customer Support Center (CSC) loginID.

2. Once you have the license keys, you can activate them online or offline at https://www.juniper.net/lcrs/wlmSelectAuthCodeLicenseType.do and follow the instructions for the "Offline Activation" option.

Informational Note:
For Base licenses (WLM-RMTS and WLM-SP-GA-BASE, WLM-RMTS-GLOBAL) the serial number is sufficient to generate a key, an AuthCode is not necessary. The e-mail containing base license serial number may not have an authcode to generate the license key.
Authcodes are present for only advanced licenses and are required with the serial number of the advanced license to generate the license key.

Appliance Licensing

1. Once you receive your appliance, enter the serial number of the appliance in the "WLM Hardware Devices" option on the license generation page https://www.juniper.net/lcrs/wlmSelectAuthCodeLicenseType.do.
You can now access the license information, serial number and license keys, for all licenses that shipped with the appliance.

2. Once you have the license keys, you can perform either an online or offline activation. To activate licenses offline, go to https://www.juniper.net/lcrs/wlmSelectAuthCodeLicenseType.do and follow the "Offline Activation" instructions.

3. Additional licenses, ordered for additional capacity, are considered software licenses and must be activated using the software licensing procedure.

Informational Note: There are no AuthCodes generated or required for the products that ship with the appliance; eg. WLM-1200-RMTS ships with WLM-RMTS and WLM-RMTS-250. These licenses are included in the BOM, so they do not require any authcodes and are displayed when you enter the serial number of the appliance.
License Types
Please consult with your sales representative about RingMaster license types. RingMaster has several licensing levels (SKU):

- **EVAL** — Evaluation license is valid for 90 days and enables support for up to 50 APs, unlimited switches, and planning.
- **WLM-RMTS** — RingMaster Tool Suite (RMTS) license enables support for up to 5 WLAs and one WLC.
- **WLM-RMTS-10** — Enables support for up to 10 additional WLAs. Requires WLM-RMTS.
- **WLM-RMTS-50** — Enables support for up to 50 additional WLAs.
- **WLM-RMTS-100** — Enables support for up to 100 additional WLAs.
- **WLM-RMTS-250** — Enables support for up to 250 additional WLAs.
- **WLM-RMTS-500** — Enables support for up to 500 additional WLAs.
- **WLM-RMTS-1000** — Enables support for up to 1000 additional WLAs. Available for RM Versions 6.3 and later.
- **WLM-RMTS-PLAN** — Enables RF planning.
- **WLM-RMTS-AGENT** — Enables RM Agent and supports REST-based API. Requires the purchase of WLM-RMTS.

License Violations
When a RingMaster network plan exceeds the limit of WLAs allowed by installed licenses, RingMaster enters a grace period. This grace period lasts for 60 days where RingMaster runs normally with the additional WLCs and/or WLAs. Appropriate licenses should be purchased and installed during this time. If new licenses are not installed to cover the extra management, RingMaster will automatically begin unmanaging WLAs in the network plan until the licensing situation is corrected.

License Help
For assistance with evaluation licenses, please contact a sales representative. For assistance with purchased licenses, please contact TAC. When requesting assistance, please have the output of the hostname command ready and have all license serial numbers and keys available. Screenshots of any errors are also appreciated.

Supported Platforms

- Microsoft Windows Server 2003 and 2008, Microsoft Windows XP with Service Pack 1 or higher, Microsoft Windows 2000 with Service Pack 4, Microsoft Windows 7, or Microsoft Vista Enterprise.
- SUSE Linux 10.2 and Red Hat WS ES5
- Apple MacOS Version 10.4.x. with Java 1.5.
Upgrading from RingMaster Version 7.6

You can install the new version of RingMaster on top of the previously installed one. You do not need to uninstall the previous version. However, you should backup your current network plan in case you have upgrade issues. You can use the backup data to restore your network plan.

When upgrading from RingMaster version 7.0 MR3 (7.0.6.7.0) to RingMaster version 7.7, please upgrade to 7.3 MR2 before upgrading to RingMaster 7.6. The upgrade path is 7.0 MR3 --7.0 MR5--7.1 MR3 --7.3 MR2 --7.5 MR1 --7.6 MR1 --7.7.

Warning:
Before upgrading to RingMaster Version 7.6, please read the Known Issues for RingMaster on page 6.

Downgrading to a Previous RingMaster Version

If you need to downgrade from a RingMaster 7.7.x version to a previous 7.x.x version, use the following procedure:

1. Uninstall the current RingMaster installation. Select to delete all but the license and the network plans.
2. Install the earlier RingMaster software version.
3. After installation, use the Restore feature using the backup data you created before upgrading to the next version.

When you start the downgrade version of RingMaster, it opens the Default network plan.

If you need to downgrade the WLCs managed by RingMaster, you can do so before or after the RingMaster downgrade.

Juniper Networks recommends that you do not downgrade to previous RingMaster versions. Database files saved in RingMaster Version 7.0 or higher are converted to the newer version and are not compatible with earlier RingMaster Versions. In addition, MSS features that are new in MSS Version 7.6 are not supported in previous versions of RingMaster. You may also lose Monitoring data and plans may not convert fully to the previous version.

JRE 1.6 and RingMaster Java Web Start Client

If you are using Java Runtime Environment (JRE) 1.6.0_12 when trying to remotely connect to a server with RingMaster software may experience issues with Java WebStart client failing to start due to the following Java bug:


This issue potentially affects remote clients on all operating system with JRE 1.6.0_12 or higher. When starting the Java WebStart client from the desktop icon, an error message is displayed: "Unable to start application" and a set of Java exceptions are thrown.

Customers that encounter this issue must downgrade the Java environment by uninstalling the JRE 1.6.0_12 and creating a fresh install of JRE 1.6.0_11.
If you do not want to downgrade your JRE installation, you can click on the RM Client icon on the RingMaster server page to launch the client.

Known Issues for RingMaster

- **Adding a wireless client to the Watched Client list may take up to 30 minutes to complete the process.** [PR77425]
  
  **Description** — If the RingMaster monitoring database is very large, it may take 20-30 minutes to update with the additional watched clients.

  **Workaround** — Limit the number of watched clients to five wireless clients.

- **Canceling report generation causes an exception in the RingMaster software.** [PR768755]
  
  **Description** — After upgrading from RingMaster Version 7.6, and you cancel a report while it is generating, RingMaster responds with an exception in the software.

  **Workaround** — First, stop the RingMaster services on the server. Second, navigate to Program Files/JuniperNetworks/RingMaster/conf folder. Locate the report-settings.xml file, and delete it. Lastly, restart the RingMaster Services on the server.

  If you encounter this problem on a WLM1200-RM appliance, use SSH to access the appliance and stop the RingMaster Services by using the command `rm-services stop`. Navigate to the appliance file system using WinScp and locate the report-settings.xml file in the var/ringmaster/conf folder. Delete it from the file system, and restart the RingMaster Services on the appliance.

- **Hitless upgrade process does not complete the upgrade before it times out on the network.** [PR747890]
  
  **Description** — Using the hitless upgrade feature in a cluster configuration can timeout on the network before the upgrade is complete. The upgrade process requires a longer connection timeout to be configured on the WLCs.

  **Workaround** — You can now configure the connection timeout between the RingMaster and WLCs by going to **Services > Setup > WLC Connection** settings. The default time is 7 minutes. For deployments with less than 2048 WLAs, use the default time of seven minutes. For deployments with more than 2048 WLAs and less than 4096 WLAs, set the default time to 15 minutes.

- **Deleting a report generated in RingMaster does not remove it from the hard drive.** [PR705488]
  
  **Description** — After generating a report in .xls format, you cannot delete it from the hard drive even though the report is deleted in RingMaster.

  **Workaround** — You can stop RingMaster Services, delete the file, and then restart RingMaster Services. The report file is located at C:\Program Files\Juniper Networks\RingMaster\report-contents\Default.

- **When reporting internal application errors from RingMaster, the Problem Report is sent to the wrong e-mail address.** [PR703590]
  
  **Workaround** — To submit Problem Reports, click Report Problem and enter the appropriate information. Instead of sending it via e-mail, click Save, and attach the report to the JTAC support ticket. The problem report is saved to C:\Documents and Settings\username\RingMaster\bugs\.
- Enabling Spectral Mode on a WLA in a Mesh configuration interrupts the services on the WLA. [PR693425]
  
  **Description** - When a WLA is part of a Mesh configuration, you can enable Spectral mode on it. This causes the radios to go out of service and disrupts the Mesh Services.

  **Workaround** - Best practices indicate that you should not enable Spectral Mode on a WLA configured for Mesh Services. A warning message is now displayed in RingMaster when you attempt to enable Spectral Mode on a Mesh WLA.

- If the computer monitor screen resolution is too low, the Spectrogram feature may not display properly. [PR692826]
  
  **Description** — The Spectrogram for Spectrum Analysis appears to be too large to display on the monitor screen.

  **Workaround** — Be sure that your monitor screen resolution is set to one of the following values:
  
  - 1680 x 1050 pixels
  - 1440 x 900 pixels
  - 1280 x 1024 pixels

- In some cases, the Events panel does not refresh properly and displays erroneous information. [PR676029]
  
  **Description** — When selecting an event on the Events panel, the panel appears frozen and does not display the selected event.

  **Workaround** — You can perform one of the following options:
  
  1. Re-size the event panel manually.
  2. Selecting any task in Alarms or Manage task groups also refreshes the UI.
  3. Clicking on the search text box at the top right of the alarms details panel also causes the panel to refresh.
  4. Select another event in the Events table and then return to the event that was not displayed.

- When importing large network plans into RingMaster, error messages are displayed and the import process does not finish. [PR675226]
  
  **Description** — The RingMaster Import feature cannot import large network plans for use with the application. The Import feature is designed to import incremental changes to network plans.

  **Workaround** — N/A

- When merging large network plans into RingMaster, error messages are displayed and the merge process does not finish. [PR675287]
  
  **Description** — The RingMaster Import feature cannot merge large network plans for use with the application. The Import feature is designed to merge incremental changes to network plans.

  **Workaround** — N/A

- When you make changes to a radio profile and then deploy the changes, RingMaster does not update as expected. [PR652753]
  
  **Description** — When you click **Apply**, the **Apply** button remains active in the interface.
Workaround — Click Apply until the button becomes grey (disabled).

- When RingMaster is installed on a Linux platform, and you create a SSID Monitoring report, no data is displayed in the report. (PR658227)

  **Description** — After deploying a new WLC in RingMaster, SSID statistics are not immediately collected.

  **Workaround** — Change the polling to a different interval and save the report. Change the polling interval to the original value and save the report. Restart RingMaster services.

- When you make multiple changes to radio profiles using RingMaster, the changes are not deployed as expected. (68359)

  **Description** — When you move radio profiles from one WLA to another, you may inadvertently delete the radio profile before it is moved to the second WLA. This causes cluster synchronization to fail on the network.

  **Workaround** — After every step of the change process, deploy the changes to the network. This ensures that the steps are deployed in the correct order.

- When using spectrum analysis and a WLC2, the spectrogram may not update properly. (PR658239, 68333)

  **Description** — The spectrogram in RingMaster may not display any data or update properly if the WLA is configured on a WLC2. The WLC2 cannot process the data fast enough to support the spectrogram display.

  **Workaround** — It is recommended to use a WLA on another model of WLC instead of a WLC2.

- When a WLC is configured for the Drop Ship feature but you configure a management port other than the default port, you cannot manage the WLC after uploading it. (68109)

  **Description** — The Drop Ship feature is used to preconfigure WLCs for placement in the network, and relies on connectivity to RingMaster to work properly.

  **Workaround** — Leave the Management port at the default setting in order to use the Drop Ship feature.

- RingMaster does not display the complete roaming history for client sessions on the network. [PR675384]

  **Description** — When a client roams to or from a WLA, the session details of the client does not display the roaming history but just displays the current location.

  **Workaround** — None at this time.

- If you add an MP that is unsupported by the current network plan, no warning is displayed and you can place the MP in the coverage area. (64987)

  **Description** — If you place an MP in a coverage area that does not support the selected MP radio settings, no warning message is displayed that the radio is not supported. For instance, if you create a plan that enables 5 GHz coverage, and you place an MP that supports only 2.5 GHZ into the plan, no warning is displayed.

  **Workaround** — Be sure to place only the MPs supported by the plan configuration to avoid configuration issues.
- RingMaster does not import rotated text on a CAD drawing. (64663)
  
  **Description** — If text is rotated 90 degrees from horizontal, the text does not import with the CAD drawing. This appears to be a limitation with the CAD application and not RingMaster.

  **Workaround** — Select the text layer in the CAD drawing and rotate it so the text appears horizontally on the drawing.

- If you configure AirTight to use SNMP v3 traps, the traps are not synchronized with RingMaster because a nonstandard implementation of SNMP is used by AirTight. (64814)

  **Description** — The AirTight SNMP engine and the RingMaster SNMP engine are not synchronized, therefore the trap that should be received and decoded is out of the 150 second accepted time frame. As such, it is discarded.

  **Workaround** — Configure AirTight to use SNMP v2 or SNMP v1 instead of SNMP v3.

- Enabling AAA access to a WLC using RingMaster and downgrading to 7.0 or earlier causes the authentication process to fail, and RingMaster can no longer access the WLC.

  **Description** — After upgrading to RingMaster 7.1 or a newer version, and enabling AAA for access to an WLC, if you downgrade to MSS 7.0 or earlier on the WLC, the WLC reverts to the enable password and RingMaster cannot access the WLC using AAA. (62913)

  **Workaround** — Disable the AAA feature in RingMaster before downgrading to an earlier software version. See “Downgrading to a Previous RingMaster Version” on page 5.

- MP licensing is not updating based on the number of MPs in the network. (61050)

  **Description** — If the serial number of an MP is changed, the change is not reflected in RingMaster and the serial number is deprecated from the license.

  **Workaround** — Restart the RingMaster server to reset the licensing.

- Because of a limitation in Windows XP that allows no more than 10 half-open connections, running RingMaster services on Windows XP is not recommended if your network plan contains more than 10 devices. If 10 devices in your network plan were unreachable or not responding, Windows XP would exceed its half-open connection limit, and connection attempts to reachable devices might time out as a result.

  **Workaround** — If your network plan contains more than 10 devices, and you want to run RingMaster services on a Windows system, use a server OS, such as Windows 2000 or Windows 2003, instead of Windows XP.

- Linux: The default browser is Firefox, which is not included with SuSE. (30491)

  **Description** — On SuSE, the default browser executable is Firefox. However, the Firefox browser is not included with the SuSE distribution; only the Konqueror browser is included. The Konqueror browser is not supported by RingMaster.

  **Workaround** — Install a different browser for accessing RingMaster online help. Preferred browsers for Linux are Firefox, Opera, Mozilla, and Netscape.
Open Issues with WLM1200-UMSP

- After upgrading the Location Appliance image from version 7.6 to version 7.7, the software images displays the upgraded version as 7.6 instead of 7.7. [753769]

Resolved Issues Since Version 7.6.0.2

- When upgrading from an earlier version of RingMaster to RingMaster Version 7.6, the network plan was corrupted. [PR684666]
- RingMaster incorrectly calculated the number of WLAs in an equipment group. [PR686855]
- RingMaster did not display the entire configuration under Network Access Rules if the cluster feature was configured. [PR690341]
- RingMaster did not display the entire SSID name in certain reports. [PR707798]
- The MP-422B was not displayed in RingMaster Version 7.6 if an earlier version of MSS is configured on the WLC. [PR708080]

Submitting Problem Reports

RingMaster can send problem reports to the Juniper Networks TAC (JTAC) team directly when it encounters a problem. You can also send a problem report at any time by selecting Help > Report Problem in RingMaster.

If a problem occurs, the Internal Application Error dialog box appears.

To submit a problem report:

1. Do one of the following:
   - In the Internal Application Error dialog box, click Report Problem.
   - Select Help > Report Problem.

   The Report Problem to Juniper Networks dialog box appears.
2. Fill out the information in the dialog box.

Provide your name, and enter as much detail as possible about the task you were performing when the problem occurred. You must provide the name of your company. The information goes to nms-support@juniper.net.

3. Click Send Now.

4. If network access for the email report is not available from the RingMaster host, click Save to store the problem report on the RingMaster host.

The problem report is saved as a directory with a name containing the timestamp of the problem report (for example, Thu-Aug-19-13-04-11-PDT-2004). This directory is located in C:\Documents and Settings\user_home_directory\Juniper\RingMaster\bugs, where user_home_directory is the home directory of the user that is running RingMaster at the time the problem report is generated.

To send the problem report to Juniper Networks, create a zip archive of the problem report directory and send the archive as an attachment to nms-support@juniper.net.