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MGOS 4.4.2.3

RELEASE NOTES

About MGOS 4.4.2.3

MGOS 4.4.2.3 is specifically for customers with MG90 5G routers containing EM9190 radio modules.

This release may be used for MG90 4G routers (currently running MGOS 4.3.1.2+) and 5G routers (currently running MGOS 4.4.0+).

Note: *Customers with MG90 routers that do not contain EM9190 radio modules <u>do not</u> need to upgrade to this release.*

This release specifically addresses an issue with radio module firmware image switching.
It also addresses all items described in MGOS 4.4.2.1 Release Notes and MGOS 4.4.2.2 Release Notes including:

- Issue with GPS TAIP messaging (resolved)
- Issue preventing PAP/CHAP APN authentication via AT$QCPDPP (resolved)
- MGOS 4.4.2 radio instability issue per MGOS 4.4.2 Radio Instability Issue Bulletin
- AirLink connection issues per AirLink Connection Issues Bulletins
- New features / updated functionality, addressed issues, and security updates

Important:
- ***Do not*** *install MGOS 4.4.2 before upgrading to MGOS 4.4.2.3. Use the appropriate upgrade path described in* Upgrade Methods *on page 2.*
- *After upgrading to MGOS 4.4.2.3,* ***do not*** *downgrade below MGOS 4.4.2.1, as the radio instability and AirLink connection issues may reappear.*

Customers with MG90 routers containing EM9190 radio modules are strongly encouraged to upgrade to this latest release to take advantage of the addressed radio module firmware switching issue and the items described in the MGOS 4.4.2.1 Release Notes and MGOS 4.4.2.2 Release Notes.

Important: FIPS customers should upgrade to MGOS 4.4.2.*x* to stay current with security bug fixes:

- MGOS 4.4.2.3 for routers containing EM9190 radio modules
- MGOS 4.4.2.2 or MGOS 4.4.2.3 if using TAIP messaging
- MGOS 4.4.2.1, MGOS 4.4.2.2 or MGOS 4.4.2.3 if not using TAIP messaging

Important: *All MG90 5G customers running MGOS 4.4.0 <u>must</u> follow the (MG90 5G) Upgrade MGOS 4.4.0 to MGOS 4.4.2.3 instructions on page 3 — in brief, the required process is:*

1. *Upgrade to MGOS 4.4.1 (via AMM OTA (Over-The-Air) or via USB stick).*
2. *Make sure the EM9190 module(s) are running the correct radio module firmware version.*
   If the wrong firmware is running, the router may not be able to connect to the carrier network.
3. *Upgrade to MGOS 4.4.2.3.*

If you upgraded directly from MGOS 4.4.0 to MGOS 4.4.2 or MGOS 4.4.2.3 and are experiencing network connectivity issues, please contact Support for further instructions.

Important: *MG90 5G customers only — If your MG90 5G routers are operating with a Sierra Wireless engineering-supplied version of EM9190 5G radio module firmware, please contact Support for further instructions on how to upgrade to MGOS 4.4.2.3.*

Note: *Sierra Wireless recognizes that our customers deploy devices in a wide range of network environments with varying configurations. It is always good practice to install a new MGOS release with the planned operation workflow on a few trial devices to ensure that standard operation is maintained within your environment before deploying the new release across your fleet of MG90 5G devices.*

Upgrade Methods

The following upgrade paths to MGOS 4.4.2.3 are supported:

- MG90 4G: MGOS 4.3.1.2+ → MGOS 4.4.2.3 (See below for details.)
- MG90 5G: MGOS 4.4.0 → MGOS 4.4.1 → MGOS 4.4.2.3 (See page 3 for details.)
- MG90 5G: MGOS 4.4.1 → MGOS 4.4.2.3 (See page 3 for details.)
- MG90 4G / MG90 5G: MGOS 4.4.2 → MGOS 4.4.2.3 (See page 4 for details.)
- MG90 4G / MG90 5G: MGOS 4.4.2.1 → MGOS 4.4.2.3 (See page 4 for details.)
- MG90 4G / MG90 5G: MGOS 4.4.2.2 → MGOS 4.4.2.3 (See page 5 for details.)

(MG90 4G) Upgrade MGOS 4.3.1.2+ to MGOS 4.4.2.3

USB Stick Upgrade

1. Upgrade directly from MGOS 4.3.1.2+ to MGOS 4.4.2.3.
2. Reboot the MG90.

AMM OTA Upgrade

1. Confirm your AMM version — AMM 2.17.1 or newer is required to upgrade OTA to MGOS 4.4.2.3.

   Important: *Upgrading using older AMM versions will result in MGOS firmware upgrade failures, and can require a USB-stick install to recover. For more information, refer to Product Bulletin: AMM 2.16 Prerequisite to MG90 firmware upgrade.*

2. Make sure software update options are correctly configured — Set MGOS Auto Software Update Options on page 5.
3. In AMM, upgrade OTA to MGOS 4.4.2.3.

(MG90 5G) Upgrade MGOS 4.4.0 to MGOS 4.4.2.3

USB Stick Upgrade

1. Make sure software update options are correctly configured—Set MGOS Auto Software Update Options on page 5.

2. Upgrade via USB stick to MGOS 4.4.1.

3. Reboot the MG90.

4. Check the EM9190 firmware version—Confirm Correct EM9190 Radio Module Firmware on page 6.

   Important: *The MG90 must be running MGOS version 4.4.1. Otherwise, it may not be able to connect to the carrier network.*

5. Upgrade via USB stick to MGOS 4.4.2.3.

6. Reboot the MG90.

AMM OTA Upgrade

1. Confirm your AMM version—AMM 2.17.1 or newer is required to upgrade OTA to MGOS 4.4.2.3.

   Important: *Upgrading using older AMM versions will result in MGOS firmware upgrade failures, and can require a USB-stick install to recover. For more information, refer to Product Bulletin: AMM 2.16 Prerequisite to MG90 firmware upgrade.*

2. Make sure software update options are correctly configured—Set MGOS Auto Software Update Options on page 5.

3. In AMM, upgrade OTA to **MGOS 4.4.1** (*do NOT upgrade to MGOS 4.4.2.3 yet*) from the Software Distribution panel.

   Wait until AMM indicates Download Complete. (Note—AMM performs two downloads. If 'Reboot when done' was selected, the MG90 reboots after the first download and then AMM starts downloading the second file. Wait until Download Complete displays a second time.)

4. Reboot the MG90.

5. Check the EM9190 firmware version—Confirm Correct EM9190 Radio Module Firmware on page 6.

   Important: *The MG90 must be running MGOS version 4.4.1. Otherwise, it may not be able to connect to the carrier network.*

6. In AMM upgrade OTA to MGOS 4.4.2.3.

7. Reboot the MG90.

Important: *If you upgraded directly from MGOS 4.4.0 to MGOS 4.4.2.3 (instead of 4.4.0→ 4.4.1→ 4.4.2.3) and are experiencing network connectivity issues, please contact Support for further instructions.*

(MG90 5G) Upgrade MGOS 4.4.1 to MGOS 4.4.2.3

USB Stick Upgrade

1. Confirm your AMM version—AMM 2.17.1 or newer is required to upgrade OTA to MGOS 4.4.2.3.

   Important: *Upgrading using older AMM versions will result in MGOS firmware upgrade failures, and can require a USB-stick install to recover. For more information, refer to Product Bulletin: AMM 2.16 Prerequisite to MG90 firmware upgrade.*

2. Make sure software update options are correctly configured—Set MGOS Auto Software Update Options on page 5.

3. Check the EM9190 firmware version—Confirm Correct EM9190 Radio Module Firmware on page 6.

> **Important:** *The MG90 must be running MGOS version 4.4.1. Otherwise, it may not be able to connect to the carrier network.*

4. Upgrade via USB stick to MGOS 4.4.2.3.

AMM OTA Upgrade

1. Confirm your AMM version—AMM 2.17.1 or newer is required to upgrade OTA to MGOS 4.4.2.3.

> **Important:** *Upgrading using older AMM versions will result in MGOS firmware upgrade failures, and can require a USB-stick install to recover. For more information, refer to Product Bulletin: AMM 2.16 Prerequisite to MG90 firmware upgrade.*

2. Make sure software update options are correctly configured—Set MGOS Auto Software Update Options on page 5.

3. Check the EM9190 firmware version—Confirm Correct EM9190 Radio Module Firmware on page 6.

> **Important:** *The MG90 must be running MGOS version 4.4.1. Otherwise, it may not be able to connect to the carrier network.*

4. In AMM upgrade OTA to MGOS 4.4.2.3.

(MG90 4G / MG90 5G) Upgrade MGOS 4.4.2 to MGOS 4.4.2.3

USB Stick Upgrade

1. Upgrade directly from MGOS 4.4.2 to MGOS 4.4.2.3.

2. Reboot the MG90.

AMM OTA Upgrade

1. Confirm your AMM version—AMM 2.17.1 or newer is required to upgrade OTA to MGOS 4.4.2.3.

> **Important:** *Upgrading using older AMM versions will result in MGOS firmware upgrade failures, and can require a USB-stick install to recover. For more information, refer to Product Bulletin: AMM 2.16 Prerequisite to MG90 firmware upgrade.*

2. Make sure software update options are correctly configured—Set MGOS Auto Software Update Options on page 5.

3. In AMM, upgrade OTA to MGOS 4.4.2.3.

(MG90 4G / MG90 5G) Upgrade MGOS 4.4.2.1 to MGOS 4.4.2.3

USB Stick Upgrade

1. Upgrade directly from MGOS 4.4.2.1 to MGOS 4.4.2.3.

2. Reboot the MG90.

AMM OTA Upgrade

1. Confirm your AMM version—AMM 2.17.1 or newer is required to upgrade OTA to MGOS 4.4.2.3.

> **Important:** *Upgrading using older AMM versions will result in MGOS firmware upgrade failures, and can require a USB-stick install to recover. For more information, refer to* Product Bulletin: AMM 2.16 Prerequisite to MG90 firmware upgrade.

2. Make sure software update options are correctly configured — Set MGOS Auto Software Update Options on page 5.

3. In AMM, upgrade OTA to MGOS 4.4.2.3.

(MG90 4G / MG90 5G) Upgrade MGOS 4.4.2.2 to MGOS 4.4.2.3

USB Stick Upgrade

1. Upgrade directly from MGOS 4.4.2.2 to MGOS 4.4.2.3.

2. Reboot the MG90.

AMM OTA Upgrade

1. Confirm your AMM version — AMM 2.17.1 or newer is required to upgrade OTA to MGOS 4.4.2.3.

> **Important:** *Upgrading using older AMM versions will result in MGOS firmware upgrade failures, and can require a USB-stick install to recover. For more information, refer to* Product Bulletin: AMM 2.16 Prerequisite to MG90 firmware upgrade.

2. Make sure software update options are correctly configured — Set MGOS Auto Software Update Options on page 5.

3. In AMM, upgrade OTA to MGOS 4.4.2.3.

Set MGOS Auto Software Update Options

Make sure the MG90 is configured to perform automatic radio module firmware updates — this is <u>required</u> if the EM9190 module(s) are running the wrong firmware version, and is recommended for all customers:

1. Go to General > Auto Software Updates.

2. Sierra Wireless recommends setting the download timeout value to 7200 s, to ensure the download completes in one attempt. (Otherwise, if the download times out, it will resume at the next opportunity — for example, when the active link changes, the next scheduled update window, when the device reboots, etc.)

   In Download Timeout (Seconds), enter 7200.

3. Expand the Radio Module Firmware Options section (click anywhere in the section heading).

4. Make sure Firmware Upgrade Option is set to Upgrade Active or Upgrade All.

5. Make sure SIM-based Switching Enabled is selected for each EM9190.

6. Click Submit.

Confirm Correct EM9190 Radio Module Firmware

Before upgrading from MGOS 4.4.1 to MGOS 4.4.2.3, it is important to ensure the MG90 5G router's EM9190 module(s) are running carrier firmware version(s) from the following list:

AT&T	01.07.13.00_00_ATT_012.007_001
GENERIC	01.07.13.00_00_GENERIC_016.006_001
T-MOBILE	01.07.13.00_00_TMO_001.005_001
VERIZON	01.07.23.00_01_VERIZON_012.019_000

1. Display the currently running firmware version(s) for the EM9190 module(s) — Use either of the following methods, and compare them to the list above:

   · Go to General > Auto Software Updates — The firmware is listed in the Radio Module Current Status section as "Firmware".

   · Go to Status > WAN > Extended Status — The carrier firmware is listed in the Cellular Info section as "Carrier PRI ID".

Important: *Make sure the <u>entire</u> version matches — sometimes only the last digit is different. (e.g., 01.07.13.00_00_GENERIC_016.006_00**0** vs 01.07.13.00_00_GENERIC_016.006_00**1**.*

2. If the wrong firmware is running, AMM should automatically download the correct firmware — AMM will indicate "Downloading" when it starts.

   When AMM indicates "Download Complete", reboot the MG90.

Addressed Issues

Radio Module Firmware

Resolved an issue that prevented image switching on EM9190 radio modules.

Known Issues

LAN Segment Configuration

Devices on different LAN segments are unable to communicate with each other after the LAN Segment Configuration "Isolated" option has been selected (enabled) and then de-selected (disabled).

If this occurs, reboot the router to ensure all LAN Segment Configuration options are applied.