



MOTOTRBO™ System Release Notes  
Professional Commercial Radios (PCR)

Version: M2024.01  
February 21, 2024

North America Region

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# What's new in the Release

## RM/CPS New Features

### **Upgrade of the RM SQL Server to the latest 2022 version**

The SQL Server installer included in the previous customer release version of RM installation is SQL Server 2017 Express. It has been upgraded to SQL Server 2022 Express version.

For the RDAC tool, the SQL Server version has been upgraded from the unsupported Compact edition to 2022 Express. Due to that change, the installer package size has increased. Also, the installer interface is changing.

There is also a dependency between the RM Server and RDAC installation, if they are both installed on the same machine - only one SQL installation is required, whichever is the first. Thus, during the installation of RDAC, if an older version of SQL Server is installed on the computer (because for example, there is still a previous version of RM Server installed), a message appears to upgrade the SQL Server version first and then continue the RDAC installation. When the SQL Server upgrade is planned, combine it with the RM Server upgrade as well, since the older RM Server versions are not compatible with SQL Server 2022.

The detailed instruction on how to upgrade the SQL Server, with the information about the upgrading to the Standard or Enterprise SQL edition, is described in the Radio Management System Planner (MN010425A01-AA) manual.

### **Support of the Windows Server 2022 for the RM**

Starting from M2024.01 release, Radio Management Server supports the latest Windows Server 2022 operating system.

## Radio New Features

### **MOTOTRBO R7 Get Started page (my device and dealer information)**

The MOTOTRBO R7 Get Started webpage is now being enhanced with "My Device Information" and "Dealer Information". Users are able to view their device and dealer's information on the MOTOTRBO R7 Get Started webpage after they scan the QR code on the radio.

Region	Radios
NA	MOTOTRBO R7 FKP series (display model only)

### Rental Timer

Enable partners to define / limit the rental period of MOTOTRBO radios and upon expiry the radios go to inhibit state.

Region	Model
NA	XPR 7000e series, XPR 7000/7000e IS series, XPR 5000e series, XPR 3000e series, XPR 2500, SL 3500e, SL 7000e series, MOTOTRBO R7.

### Radio Status Audio Announcement on Power Up

Announces channel name, radio alias and battery level when radio powers up.

Region	Model
NA	XPR 7000e series, XPR 7000e IS series, MOTOTRBO R7.

### MOTOTRBO R7 UI/UX Improvement on Contact List Initiated Calls

Calls initiated / received and all other operations such as sending text from "Contacts" list in MOTOTRBO R7 radio menu will now revert to the previous screen similar to XPR 7000e series behavior rather than returning to Home screen.

Region	Model
GLOBAL	MOTOTRBO R7 FKP series (display model only)

### Adding Partner Contact Information into the Radio

There is now a provision to enter name and phone number in RM / CPS which can be viewed from radio models with display.

Region	Model
NA	<b>All Display Models Only:</b> XPR 7000e series, XPR 7000/7000e IS series, XPR 5000e series, XPR 3000e series, XPR 2500, MOTOTRBO R7 FKP series

### Time and Date Audio Announcement via Programmable Button

Provide Time and Date audio announcements which are informative especially on non display radios.

Region	Model
NA	MOTOTRBO R7

### Configurable IMPRES Battery End of Life Warning

Radio will notify the user when the IMPRES battery is at the end of its life based on the duration predefined by the user.

On the MOTOTRBO R7 display model : QR code notification appears.

On other display models : "Battery EOSL - Service Code 0101" boxed message appears.

On non display models : "Battery End of Service Life, Service Code 0101" voice announcement can be heard.

Region	Model
NA	XPR 7000e series, XPR 3000e series, SL 3500e, SL 7000e series, MOTOTRBO R7.

## Infrastructure/System New Features

### Expanding Capacity Max up to 750 sites

It is now possible to configure and deploy a single Capacity Max system with up to 750 RF sites.

A single active Trunking Controller supports call processing in a huge Capacity Max system with up to 750 RF sites. As previously, adding new sites requires purchasing Capacity Max Site Connection Licenses for each additional site (HKVN4314A).

### Orderability of CMSS SW upgrades

CMSS Upgrade SW Packages can be now downloaded directly from MyView portal. It is no longer required to order these part numbers. Upgrading to the new SW is only possible with a valid SMA license on a server. This applies to the current M2024.01 release as well as all previous releases with the exception of R2.10 which remains orderable. Ordering SW upgrade on USB stick is no longer available.

## Product Versions

Listed below are all MOTOTRBO Product types with a reference to the released version of software:

Notes: From M2020.01 onwards, only products (i.e. MOTOTRBO radios, repeaters and CMSS) which are either in warranty or under a service contract are entitled to software update.

Software Update Management (SUM) was introduced with the R2.10 system release and provides products with built-in intelligence to determine if they are eligible to accept a software update. Products on prior releases must therefore be upgraded to an R2.10 system release and be eligible to

accept a software update before they can be upgraded to M2020.01 onwards.

Canceled products that are still under a service contract at time of cancellation will be entitled to the software update in line with the Motorola Solutions Software Support Policy. Following cancellation only critical bug fixes will be tested for these products.

MOTOTRBO Product	Version Supported in Release
MOTOTRBO 2.0, 2.5 (incl SL Series) - XPR 7000e series, XPR 5000e series, XPR 3000e series, SL 7000e Series, XPR 2500, SL3500e, MOTOTRBO R7, MOTOTRBO R2. MOTOTRBO - Commercial Devices MOTOTRBO - XPR 4000/6000 Series	<a href="#">R02.24.01.1002 (NEW)</a>  <a href="#">R01.24.01.0000 (NEW)</a> Canceled.
Option Board – MOTOTRBO 2.0 (incl SL Series) Option Board – MOTOTRBO - XPR 4000/6000 series	Canceled Canceled
Repeater - XPR 8380 / XPR 8400 Repeater - MTR 3000 Repeater - SLR 1000, SLR 5000, SLR 8000	<a href="#">R20.24.01.03 (NEW)</a> <a href="#">R20.24.01.03 (NEW)</a> <a href="#">R20.24.01.03 (NEW)</a>
XRC 9000 / 9100 Controller	R02.100.05.1036_1695
XRT 9000 / 9100 Gateway	R02.100.05.1036_1695
XRI 9100 Interconnect	R02.100.05.1030
Network Manager (merged with XRC / XRI packages)	R02.100.05.1030
Network Manager Connection Tool	R02.100.05.1030
XRT Configuration Tool	R02.100.05.1030
CPCPS	Canceled.
Paradise MPT1327 GOB CPS (not supported on MOTOTRBO R7 series)	R02.00.05
CPS 2.0	<a href="#">2.146.122.0 (NEW)</a>
Radio Management	<a href="#">2.146.122.0 (NEW)</a>
RadioCentral Client	<a href="#">2.146.123.0 (NEW)</a>
Tuner	<a href="#">V24.1 Build 2 (NEW)</a>
RDAC	<a href="#">V24.1 Build 2 (NEW)</a>
AirTracer	V11.0 Build 39
Device Discovery and Mobility Service (DDMS)	<a href="#">R24.01.0005 (NEW)</a>
Multi Channel Device Driver (MCDD)	Canceled
MNIS Data Gateway	<a href="#">R24.01.0023 (NEW)</a>
MNIS Status Agent	R22.03.01
MOTOTRBO Motopatch	Canceled
Capacity Max ESU Launchpad	<a href="#">DESU_LP-R17.18.10.56-02.rhel.iso (NEW)</a>
Capacity Max System Server Installer Software Image	<a href="#">PC435S0EI000202009.iso (NEW)</a>
MNIS Voice and Radio Command (VRC) Gateway	<a href="#">PCR-MNIS_20.24.01.00-05 (NEW)</a>
Capacity Max ESU	<a href="#">ESU-PCR_24.01.18.10-68 (NEW)</a>
Capacity Max Trunk Controller	<a href="#">Cmxtc-pcr_20.24.01.00-26 (NEW)</a>
Capacity Max System Advisor	<a href="#">UEM-PCR_20.24.01.16-00 (NEW)</a>
System Design Tools	Version 06.09

Sensor Management Tool	R01.00.01
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3rd Party Applications	Version Supported in Release
GW3-TRBO	2.17.3.73
Avtec VP Gate	5.3.0.41
Avtec Scout Console/Scout Manager	5.3.0.54
Avtec VPGate Advanced Radio Support w/Encryption	5.3.0.16
Avtec Data Management Services - Scout Central Distributor	5.3.0.20
SmartPTT PLUS	<a href="#">SmartPTT-PLUS-9.14.0.62 (NEW)</a>
TRBOnet PLUS	<a href="#">TRBOnet Plus 6.2.1.7429 (NEW)</a>
ConSEL PLUS	<a href="#">ConSEL PLUS v7r69.3 (NEW)</a>

ETSI DMR Specification	Version Supported in Release
TS 102 361-1: the DMR air interface protocol	v2.6.1
TS 102 361-2: the DMR voice and generic services and facilities	v2.5.1
TS 102 361-3: the DMR data protocol	v1.3.1
TS 102 361-4: the DMR trunking protocol	v1.7.1 ~ 1.12.1

1. The feature sets supported in the release are compliant with the versions of ETSI DMR standard specifications listed above. Note that DMR Tier 3 protocol versions are not necessarily backwards compatible; it is recommended to ensure the supported protocol versions are compatible if using another manufacturer's infrastructure or subscribers.
2. The Capacity Max System Advisor (SA) client is not accessible for the System View, Grid View and Alarm Details view if the Java version 8u211 or newer is used on the PC where the SA client resides. Downgrading the Java to any version between and including 8u181 and 8u201 will work fine.
3. In M2024.01 fault management of CX6000-24G, ARUBA-2530-24, MSR2003, MSR2003X and MSR3016 was added to the System Advisor. To use it, SNMP shall be enabled in those network equipment configurations. For details please refer to Chapter 8 "Configuration Description for HPE infrastructure" in MOTOTRBO™ CAPACITY MAX Installation and Configuration manual. After enabling SNMP on network equipment, devices should be rediscovered in System Advisor using the context menu on System View or Network Database view. For details please refer to the System Advisor manual. Equipment without SNMP enabled will show up as gray in System Advisor
4. With R2.8.0 and newer repeater releases, it is recommended to use USB 2.0 or USB 3.0 ports on the PC or connect repeater via USB 2.0 hub when upgrading the repeater via USB.
5. For CMSS (Capacity Max System Server),
  - a. Access to the MSI MyView portal to download MOTOTRBO M2024.01 Capacity Max System Server SW Upgrade as software iso image

6. For the PC used for CMSS upgrade only from M2022.01 and M2022.03 to M2024.01 ( note: upgrading from 2023.01 to M2024.01 does not require ESU-LP)
  - a. If ESU-LP is required, order (1) T8486A, MOTOTRBO Capacity Max System Server SW Update Launch Pad which contains the ESU LP software files on a DVD.
  - b. Alternatively, for customers with access to the MSI MyView portal, you can order (1) T8483B, MOTOTRBO Capacity Max System Server SW Update Launch Pad where you will receive an e-mail with a unique link to access/download the ESU LP application files from the MyView portal. The T8483B will require an e-mail address at time of order.
  - c. Please refer to the section “Capacity Max System Upgrade from M2022.01, M2022.03 or M2023.01 to M2024.01” of Capacity Max System Release Upgrade Guide for additional details. It is available on the Learning Experience Portal (LXP).
  - d. NOTICE: The DVD (T8486A) can take 2-3 weeks for delivery while the downloadable file via the MyView portal (T8483B) is generally available within a week. Please plan ahead and take the delivery times into consideration before scheduling your upgrade
  - e. The ESU Launchpad About page describes the target CMSS versions that it supports to ensure the appropriate ESU Launchpad version is ordered along with the CMSS upgrade installation files.

## Known and Resolved Issues in Product Release

### Overview

This section details the known MOTOTRBO product issues which remain outstanding at the time of this release of software to the field.

Known product issues are divided into two categories:

- Known issues contained within the current release
- Resolved Issues that have now been fixed within the current release

### Definitions

A known issue is a problem that is currently unresolved (open). The risk and workaround aspects are included in the release note description (Known Issues) for overall assessment of the problem.

A closed or resolved issue is one that has been repaired and no longer should occur in the product after upgrading to the new product version.

### Known Issues in Product Release

Known issues are the known problems that are currently unresolved (open). Following are the issue tracking number and issue descriptions that are currently unresolved in this release.



## Device Impact

**Issue Number:** PCR\_SUB-44459  
**System/Products:** XPR 7000e series FKP only  
**Description:** Next radio power up time will take longer than usual if the radio is interrupted by a power down action within 20 seconds of the initial power up.  
**Workaround:** No current workaround. Customers are advised not to perform power off action immediately until the power up sequence is completed.

**Issue Number:** PCR\_SUB-44406  
**System/Products:** MOTOTRBO R7 Series  
**Description:** CFS license write failure observed when a user attempted to register a second CFS license after the first by using a different write method (WIFI Otap or USB).  
**Workaround:** If error 679 appears on RM or CPS kindly read back the radio before performing the next license purchase.

## Infrastructure Impact

No known issues

## Resolved Issues in Product Release

Resolved issues are the known product problems that were reported in product releases, but have now been fixed or closed. Following are the issue tracking number and issue descriptions that have been resolved in this release.

## Device Impact

**Issue Number:** PCR\_SUB-43735 / INC000008188234  
**System/Product:** SL 7000e series, XPR 7000e series, XPR 5500 series, XPR 7000/7000e IS series  
**Description:** Upgrading from Firmware R02.22.03.1001 (M2022.03) or earlier to R02.23.01.3001 (M2023.01) will impair Text to Speech feature in Connect Plus mode.

**Issue Number:** PCR\_SUB-44943 / INC0000196268  
**System/Product:** SL 7000e series, XPR 7000e series, XPR 5000 series, XPR 7000/7000e IS series, MOTOTRBO R7  
**Description:** Radio with Unified Single Block Data (USB) Polling Service that is using Location Information Protocol (LIP) introduced in M2023.01 does not work in 3rd party DMR Tier III networks using color code other than 0.

## **Infrastructure Impact**

Issue Number: **ENG\_INFRA\_PCR-16111**  
System/Products: TRBOnet PLUS and Linked Capacity Plus (LCP)  
Description: When 2 or more Capacity Plus multi-site systems are set up to use a single MNIS gateway with a dispatch console, only one system will be able to work correctly, while the other systems will fail to communicate with the dispatch console.

Issue Number: **UEM-6670**  
System/Products: CMSS/UEM  
Description: During the upgrade to M2022.03 or M2023.01, the ATIA logs are not automatically saved and they will be lost, so users will not be able to access historical calls information

Issue Number: **ENG\_INFRA\_PCR-16303**  
System/Products: CMSS  
Description: CMSS defective hardware (incl. SD card) causes upgrade from 2022.03 to 2023.01 to fail

Issue Number: **ENG\_INFRA\_PCR-16386**  
System/Products: CMB - Capacity Max Bridge  
Description: After the upgrade from M2022.01 to M2023.01, CMB license is not preserved, which can be seen in System Advisor, CMB webpage. Without a license, CMB will not operate.

Issue Number: **UEM-6738**  
System/Products: CMSS/System Advisor  
Description: Grid View and Raw View may display incorrect information about ongoing calls in the system. This issue is related to the number of simultaneous calls in the system. When there are many calls started and ended in a short period of time, System Advisor is not able to process all of them and starts to display incorrect information on Grid View and Raw View.

Issue Number: **PBI00000044200**  
System/Products: TRBOnet PLUS/MNIS Gateway  
Description: User presses the PTT icon and they get a message saying "equipment not available". All the registered talkpath between TRBOnet PLUS and the MNIS Gateway become unregistered, then a short time later the problem resolves itself and the talk paths are re-register. Rebooting the MNIS Gateway also resolved the issue. Issue was affecting versions M2022.03 and M2023.01.

Issue Number: **INC000008066797 / MTN-0122-23**  
System/Products: CMSS  
Description: When trying to schedule a Write Job using Radio Management software, users may very rarely get an "Error 1562".

Issue Number: **INC000007702571**  
System/Products: MNIS Gateway  
Description: MNIS Gateway does not forward packets from repeaters into the tunnel

Issue Number: **MTN-0153-23**  
System/Products: CMSS  
Description: MNIS Gateway backup fails to restore when upgrading a CMSS to firmware M2022.03 using M2023.01 ESU Launchpad

Issue Number: **MTN-0163-23**  
System/Products: SLR 1000/5000/8000 series, XPR 8380 / XPR 8400, MTR 3000  
Description: Unable to open repeater web page with latest versions of Chromium-based browsers including Google Chrome and Microsoft Edge

## Cybersecurity

Motorola Solutions, Inc. (MSI) has delivered a PCR MOTOTRBO 2024.01 release. MSI development and operations teams continually make security updates as needed based on evaluated threats, determine protective measures, create response capabilities, and promote compliance. MSI interacts with and participates in several US and international security organizations, such as U.S. Department of Homeland Security's National Cybersecurity & Communications Integration Center (NCCIC), National Institute of Standards and Technology (NIST), The 3rd Generation Partnership Project (3GPP), Telecommunications Industry Association (TIA), European Telecommunications Standards Institute (ETSI), Digital Mobile Radio (DMR) Security standardization, and others. Standards from the aforementioned organizations can map to security controls in international standards such as Information System Standards (ISO / IEC 27001).

The PCR MOTOTRBO 2024.01 system release includes enhancements to security based on the National Vulnerability Database and industry standards:

- Ongoing vulnerability management remediation based on network scanning security tools
- Ongoing Software Lifecycle Management improvements (3rd party software)

In addition to ongoing releases for security updates, MSI has a Bug Submission Program for external entities to disclose to MSI possible security vulnerabilities or issues. Motorola Solutions encourages researchers to use the PGP key when sending sensitive information via email. Please send all security vulnerability reports to [security@motorolasolutions.com](mailto:security@motorolasolutions.com).

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## Important Note

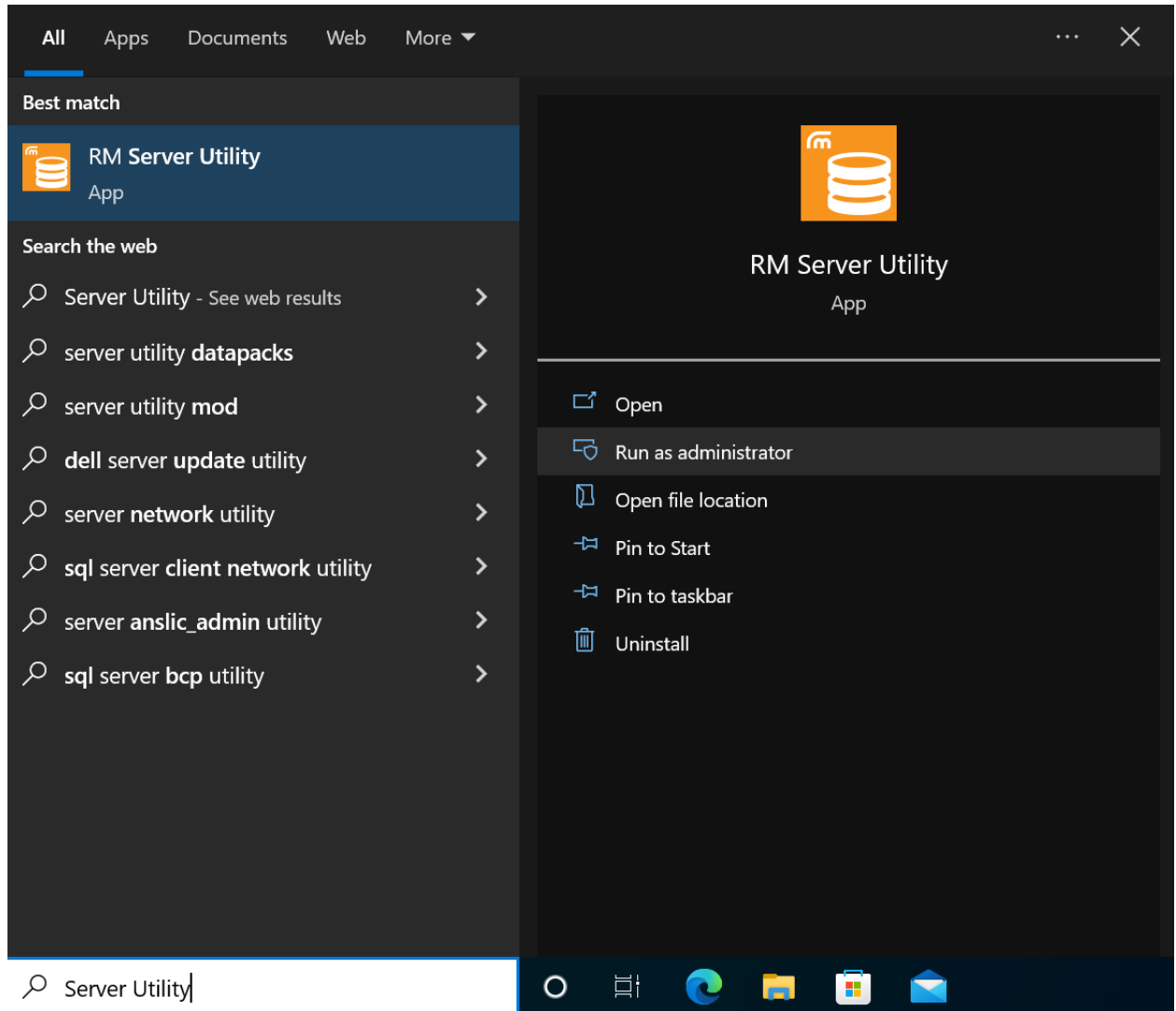
1. **PCT0174** MOTOTRBO M2024.01 New Features Training

## RM Access Control Feature Note

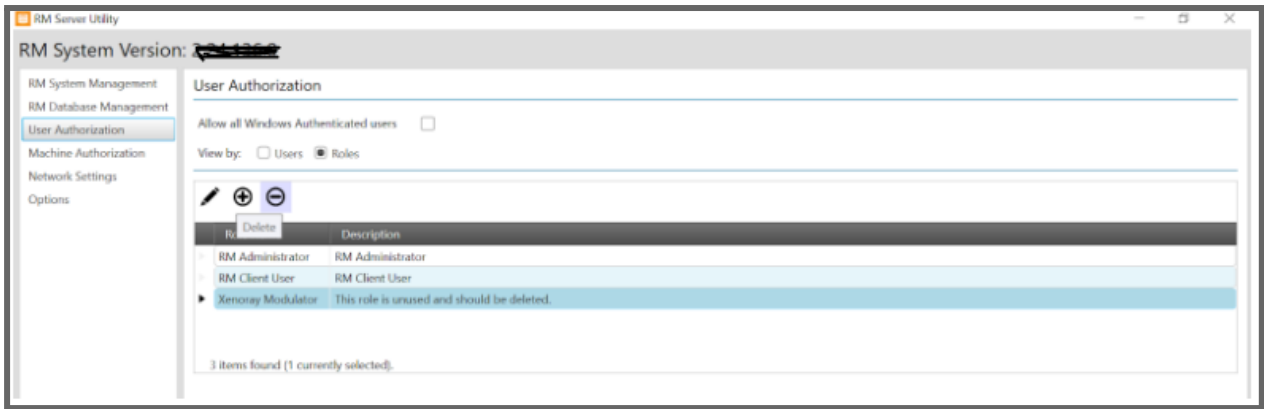
Important note for the customers who DO NOT need to use RM Access Control:

After upgrading an existing RM deployment to version 2.134.77.0 or later, there are some necessary steps to take to ensure normal operation, otherwise, users may not have access to the security keys and Radio View operations that they had prior to the upgrade.

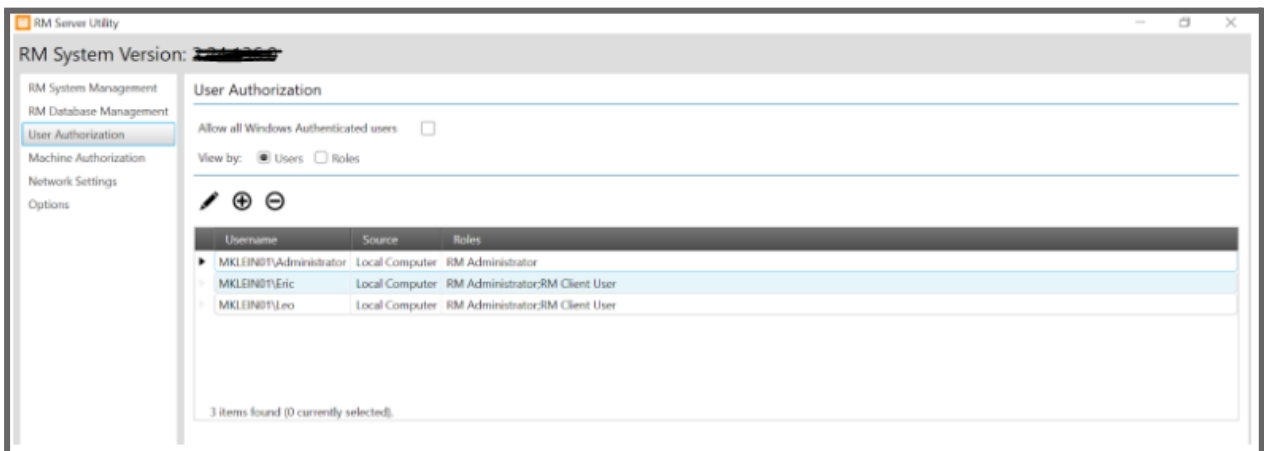
- 1) After performing the upgrade the user should open the RM Server Utility App on the machine that hosts the RM Server.



- 2) From the User Authorization tab, with the Roles radio button selected, delete any unnecessary roles that may have been created prior to the upgrade, leaving only the RM Administrator and RM Client User roles.



- 3) For users that do not wish to use the Access Control features at this time, select the Users radio button and ensure that each user that will be accessing RM remotely has both RM Administrator and RM Client User roles assigned to them.




- 4) This completes the necessary steps for users that do not wish to use the Access Control features. The RM Server Utility can be closed at this point. Users should be able to use the RM Configuration Client to connect to the RM Server and perform normal operations.

#### New Upgrade Package Zip Format

Starting from M2022.03, MSI will start to release the MOTOTRBO firmware upgrade package in zip format. Below are the instructions on how to install the firmware upgrade package.

1. Create a new folder of your choice in the C:\drive. We will use "Packages" as an example.
2. Download zip file to C:\Packages
3. Extract All


Name	Date modified	Type
 MOTOTRBO_2.0_R0222021000_222213_Portable_NA.zip	8/30/2022 11:09 AM	Compressed (zipp...

Open



Open in new window

---






Extract All...

 Select Left Folder for Compare

4. Open Folder

Name	Date modified	Type	Size
 MOTOTRBO_2.0_R0222021000_222213_Portable_NA.zip	8/30/2022 11:09 AM	Compressed (zipp...	58,252 KB
 MOTOTRBO_2.0_R0222021000_222213_Portable_NA	10/11/2022 1:45 PM	File folder	

5. Run the Exe

 program files	10/11/2022 1:45 PM	File folder	
 0x0409.ini	10/1/2014 11:41 AM	Configuration sett...	22 KB
 MOTOTRBO 2.0 R0222021000_222213 Portable Update Packages.msi	8/30/2022 11:09 AM	Windows Installer ...	663 KB
 MOTOTRBO_2.0_R0222021000_222213_Portable_NA.exe	8/30/2022 11:09 AM	Application	1,269 KB
 Setup.ini	8/30/2022 11:09 AM	Configuration sett...	6 KB

6. To save space, the folder can be deleted after successful installation