

Integrated Terminal Management (iTm)

TETRA Terminals

iTm Release 8.2

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Change History

Rev	Date	Author	Description
	11 Jun 2024	M. Polak	Initial version
A	14 Jun 2024	M. Polak	Release version

Acronyms and Abbreviations

Acronym	Definition
DPI	Dots per inch
DVD	Digital Versatile Disc
EAP	Extended Agency Partitioning
GUI	Graphical User Interface
OTAP	Over The Air Programming
PC	Personal computer
RPK	Release Packet
RPU	Release Pack Update
SPU	Service Pack Update
TEI	TETRA Equipment Identities
TRACES	TETRA RF Automated Coverage and Evaluation Solution
UDL	User Defined Language
UI	User Interface
UNC	Universal Naming Convention

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Introduction

The purpose of this document is to introduce the reader to the Integrated Terminal Management (iTM) Release 8.2. This document provides an initial overview of the key functionality introduced with this release. It is expected that Users will access the comprehensive information on these features contained in the associated User Guides and Administrator Guides which can be found on

Motorola Learning Experience Portal (LXP) at the following link

<https://learning.motorolasolutions.com/>

iTM Users can also access this release note and the installation files at the MyView Portal via free subscription to TETRA Terminals documents

<https://myview.motorolasolutions.com/>

1 WHAT'S CHANGED IN THIS RELEASE

1.1 New Features

Feature	Summarized Description	Enablement Needed	Platforms Affected
MR2024.1 support	Please refer to the MR2024.1 release note for the details of the release.	No	All
MXM600 support	Support for MXM600 devices. Support includes Wi-Fi OTAP and automatic control head synchronization functionalities.	No	MXM600
iTM Proxy update statuses	iTM Server Manager introduces a monitor option to see version and progress of installation of iTM Proxies. The functionality supports EAP agencies.	No	All
iTM Proxy failed jobs repeat mechanism	iTM Proxy users with proper permissions can revisit failed jobs and decide to repeat selected jobs.	No	All
OTAP Automatic codeplug synchronization	iTM Server Manager allows automatic codeplug synchronization for OTAP. iTM System, for MR2024.1 devices, allows to detect important configuration changes reported by device and may cancel ongoing job, with proper reason, and automatically schedule get configuration.	No	MXM600 MXP600
Security updates for third part solutions	Migration of critical third part solutions to new versions: <ul style="list-style-type: none">• Java Redhat 11.0.8 64-bit (iTM OTAP)• Java RedHat 1.8.0.402 64bit (iTM Client and Server)• Java Temurin 1.8.0.402 32bit (iTM Proxy),• Tomcat 9.0.87,• PostgreSQL 13.14	No	All



1.2 Features now made available or improved

Feature	Summarized Description	Enablement Needed	Platforms Affected
5-digit support for MR releases	iTM supports extended software release versions.	No	All
Customer Profiles for OTAP	iTM supports Customer Profiles using OTAP and Ethernet programming functionality.	No	MXM600 MXP600 MXP7000 MXM7000
Backward compatibility for two major releases	iTM Server extends backward compatibility to two major releases, it means iTM Server 8.2 may support connection from iTM Client and Proxy 8.0 and 8.1 versions. RPU mechanism can be used to trigger upgrades from 8.0 and 8.1 platform versions.	No	All
Settings for number of configuration processing in iTM Proxy	iTM Proxy introduces settings to manually change the number of configuration processing. Default settings follow configuration used in previous major releases. The feature allows usage of machines with limited resources.	No	All

1.3 Features removed in this Release

Feature	Summarized Description	Enablement Needed	Platforms Affected
iTM Server pgAdmin tool	iTM System will no longer provide installation of pgAdmin inside the iTM Server installation package. Please refer to the appendix for information about post installation support.	No	All

2 PRODUCT AND RELEASE INFORMATION

2.1 Important Information, Warnings, Limitations

- OTAP Automatic codeplug synchronization allows detecting important configuration changes reported by device and may cancel ongoing jobs. To enforce execution of selected jobs the user can select "Ignore Automatic Synchronization", setting supports only jobs in OTAP pending state. When radio communication with the system happens earlier these settings may be ignored.
- The radios with OTA capabilities may experience having multiple jobs in pending state at the same time when the second job was triggered. It would be visible using backward compatibility features for iTM Client. The user shall avoid the situation when the same radio is programmed at the same time by two different configuration managers. When this state would be detected it is recommended to recreate device record.
- When the radio status has been changed after opening the "Import Radios With Update", the further validation for the jobs is not fully covered from the iTM Server and it might cause the data

inconsistency like multiple jobs in pending status. The user shall avoid the situation when the same radio is programmed at the same time by two different configuration managers. When this state would be detected it is recommended to recreate device record.

- After closing 'iTM JP Configuration' window, there is no option to open this window again using the "Start Menu" shortcut nor from Desktop shortcut. The user shall navigate to the Windows icon tray to open the UI.
- When processing DB Upgrade it is important to verify free disk space. If there is not enough disk space, the system may behave unpredictable, depending on the phase in which the upgrade process is interrupted. The user shall check free disk space after the upgrade process, and if no empty space, retry process.
- If the administrator would like to remove the created group with the same working session (without closing the Manage Group window) by another administrator, the message "Group {group name} does not exist. Please refresh the group list." The user shall close the window and delete the group after reopen.
- When the iTM Proxy is working in offline mode and the iTM Server is not reachable, the user logoff time is longer than usual.
- When two instances of iTM Client are logged in as the same user and one of them changes the user password, it may be not possible to close the other instance for iTM Client 8.0. The application shall be closed from Windows Task Manager. iTM Clients from version 8.1 and 8.2 will inform users that password was changed, restart of iTM Client is needed and allow the application to close application.
- The "Download offline jobs/policies failed." message is prompted when the user tries to download jobs for offline execution containing the MR2024.1 SW usage using iTM Proxy from previously supported releases.
- The Proxy users permissions are synchronized after re-login in iTM Proxy application.
- When the system backup created in iTM8.0 version contains the scheduled agency backup records, the user might see the message "Provided agency does not exist" when the scheduler was triggered on the agency with the same name as one of folders inside the agency. To overcome the problem in the iTM8.2 version it is required to recreate the scheduler for the provided agency.
- iTM System supports MXM600 language enabled for four languages.
- When the backward compatibility is enabled and Proxy from previous releases tries to download the job with unsupported RPK for the Proxy version, the user might notice confusing information "File did not exist on the server". The user shall use the Proxy version supporting the corresponding release package.
- When the iTM Client user deletes the radio during the database/agency backup process, the radio deletion progress window is prompted. The operation will be ended when the backup process is finished.
- Changing the time zone for iTM Server Machine causes problems with the system/agency backup scheduling mechanism.

- The iTM System may present incorrect iTM Client license consumption after long inactivity of application. It may indicate less consumption than connections.
- "Add Agency" Function cannot be used to import agencies within EAP License. This functionality has been created only for the purpose of adding new agencies.
- "Import radios with update" and "Import radios" are handling different XML file formats.
- When activating your iTM installation please take note of the Host ID number displayed in the System Licenses tab in the Manage Licenses window. Store that number in a safe place so you can access it in a case of server PC failure/replacement. In such a case, iTM license can be transferred to another machine only if the Host ID of the original server PC is provided. For details on how to request a license transfer go to Annex D.
- When displaying a list of radio features on the Radio Licenses tab in the Manage Licenses menu, there is no indication of the features for which the customer has the site-wide license loaded to the system. Only the features with the TEI locked licenses loaded to the system will show the available quantity.
- User Data shall be validated before application to device, in most cases for codeplug fields with ranges. In case dynamic range is used, user data may allow writing invalid configuration into the device. For more information, please refer to CPS Release Notes, Appendix A, CPS Plus User Data Manual.
- The EAP feature cannot use an agency with the same name as the root level. In this case log to proxy is not possible.
- Change of agency on iTM Proxy will require the customer to restart the application, otherwise it will not connect to the new agency.
- It is suggested to run iTM UIs on PCs with Windows default DPI settings, and also avoid running iTM on the high resolution (higher than 1920 x 1080) display device.
- The iTM Server Manager GUI can only be accessed from the Server. No remote connection is possible.
- Some customers may face issues when trying to store the server backup files in a shared drive. A workaround is to configure the Tomcat service's logon account with a local user account and then restart iTM Server. The other way would be to add both PCs into the same domain and grant read/write permission to the computer account (the account format is "ComputName\$", for example if the PC with installed iTM Server is called "ServerPC", then its account is "ServerPC\$") in a target PC (the one that owns the shared folder). In both cases the Backup Location should be defined in the Universal Naming Convention (UNC) format (like "\\server\\MySharedFolder").
- MTM5500 Series radios require Control Heads (ReCH and TSCH) to be connected first, then the Transceiver.
- During the first job for the new terminal, iTM will initially upload codeplug to ensure a BACKUP is available in the event of programming or network error.
- Power off radio after programming does not support ATEX or MTM5000 Series Mobiles.



- Care should be ensured when handling both Bundle Licenses and Individual Licenses such as Enhanced Security and DMO SCK, SCK OTAR, GCK and GCK OTAR. These will both be activated if applied to the same unit.
- MTP3000/6000/8000, ST7000, TPG2200 and MXP600 series radio will reset automatically if it is in programming mode and no communication with CPS/iTM for 5 minutes. So if a job is failed and radio left in programming mode, radio will reset after 5 minutes and the job failure information may be lost from Proxy GUI
- If MTP3000/6000/8000, ST7000, TPG2200 and MXP600 series radios are damaged and the user puts radio (off mode) into the dock, the radio will not enter programming mode automatically. Customer needs to press the programming key combination to put the radio into programming mode manually (for most devices it is 1+9+Power Button).

2.2 Product Details

The iTM solution provides an automatic and easy method of upgrading, programming, and re-programming radios.

The system consists of the following components:

- Server Software, which is used to manage the server
- Client Software, which is used to manage the radios, SW, licenses, etc.
- Proxy Software, which resides at the end user station, where radios are connected.
- Email Transmitter for email notification of radio users when a job has been scheduled
- Job Processor Software which is used to support Wi-Fi OTAP functionality

The following system documentation is included with this release and is contained on the associated DVD or on the above referenced sites:

Integrated Terminal Management User Guides, suite;-

- Integrated Terminal Management Quick Start Guide
- Integrated Terminal Management Administrators Guide
- Integrated Terminal Management Client and Server User Guide
- Integrated Terminal Management Proxy User Guide
- Integrated Terminal Management and CPS Feature Guide
- The iTM Interfaces Programmer's Guide is available in pdf format via ADP only.

2.2.1 Upgrade

The upgrade to iTM R8.2 is supported from iTM6.x and iTM7.x which also include any certified SPU on top of previous versions installation.

The upgrade procedure is described in detail in the Integrated Terminal Management (iTM) Administrator's Guide, part of the User Guides suite of documents.

To upgrade from older releases (e.g. iTM R5.x), the iTM Server Software and all other data has to be upgraded first to R6.x and then to R8.2. Refer to the manual for details. Note, that this will require obtaining (e.g.) an iTM 6.2 release DVD or download SW to do the "in between" upgrade, since there is no operational requirement this interim upgrade would not require a System Licence.

**IMPORTANT:**

Existing iTM users on release 7.x can upgrade their system without the need to order a new system license. Customers on pre-7.0 releases must purchase an upgrade license for iTM 7.x. It is orderable under the main model GM0306A. In order to receive a full license that matches existing iTM configuration, customers have to select all features currently owned. To check which features are enabled go to iTM Client > Manage Licenses > License Usage tab.

An activation requires usage of Radio License System, protected by user authentication, more information about process may be obtained at Motorola Solutions webpage:

<https://motorolasolutions.com/radiolicensingsupport>

2.3 Sales Models

The part numbers for the SW DVDs are:

- Order Part No. GMYN5143A for iTM One R8.2
- Order Part No. GMYN5144A for iTM Enterprise R8.2

2.4 Release Compatibility with radio Firmware**2.4.1 iTM and Radio FW Compatibility Matrix**

Please note all previous releases starting with MR5.13 are also supported.

Radio Releases	iTM Releases
MR2020.1	iTM 7.6, iTM 7.7, iTM 7.8, iTM 7.9, iTM 8.0, iTM 8.1, iTM8.2
MR2020.2	iTM 7.6, iTM 7.7, iTM 7.8, iTM 7.9, iTM 8.0, iTM 8.1, iTM8.2
MR2020.3	iTM 7.6, iTM 7.7, iTM 7.8, iTM 7.9, iTM 8.0, iTM 8.1, iTM8.2
MR2021.1	iTM 7.6, iTM 7.7, iTM 7.8, iTM 7.9, iTM 8.0, iTM 8.1, iTM8.2
MR2021.2	iTM 7.7, iTM 7.8, iTM 7.9, iTM 8.0, iTM 8.1, iTM8.2
MR2021.3	iTM 7.8, iTM 7.9, iTM 8.0, iTM 8.1, iTM8.2
MR2022.2	iTM 7.8, iTM 7.9, iTM 8.0, iTM 8.1, iTM8.2
MR2022.3	iTM 7.9, iTM 8.0, iTM 8.1, iTM8.2
MR2022.4	iTM 8.0, iTM 8.1, iTM8.2
MR2023.1	iTM 8.0, iTM 8.1, iTM8.2
MR19.9	iTM 8.0, iTM 8.1, iTM8.2
MR2023.2	iTM 8.1, iTM8.2
MR2023.3	iTM 8.1, iTM8.2
MR2024.1	iTM8.2



2.5 Features Implementation

Any new features and enhancements are captured in the User Guides and Manuals. Those documents are available on the Learning eXperience Portal <http://learning.motorolasolutions.com/> and can be found by searching the below documents numbers

- 6866539D66 iTM Admin Guide
- 6866539D67 iTM Client and Server
- 6866539D68 iTM Proxy
- MN007277A01 WiFi OTAP Setup Guide
- MN007861A01 MS Logging Programmers Guide

2.6 Resolved and closed defects in this release of iTM

C3	Headline
INC0000651099	Recover of radios is failing
INC000005872536	Vulnerabilities found during IT Health Check in iTM
INC0000551730	iTM aborts database upgrade after iTM sw update
INC000007068687	Out of date Java Runtime Environment
INC000007124628	Mismatch of Model Name between CPS and iTM
INC000007493929	Wrong error message at csv import
INC000007523346	iTM Software Apache Tomcat Update
INC000007468804	OTAP Programming Does not update ITM Clients Template name Filed
INC000007768608	Unable to log in to iTM server even with enough client licenses
INC000007703512	ExportPolicyTool fails to export the device's data when software version is UNKNOWN
INC0000179601	User created on Agency can not change Password in iTM Proxy
INC0000196745	The multiple radio programming activity corrupts the radios
INC0000201168	Scheduled agency backups are skipped randomly when overlapped
INC0000217901	No automatic sorting in "manage group permissions"
INC0000218767	Offline iTM Proxy communicates with the iTM server
INC0000470080	LDAP does not handle Common Name (CN) with comma
INC0000641259	SPU application deletes PU configuration in the iTM Proxy

2.7 Customer Impacting Statement (CIS)

C3	Headline	Workaround
INC000005830912	Doubled CH TELs in iTM	Individual Control Head Identification features allow to mitigate potential collision.
INC0000375208	The name of the radio is not fully visible in the cup	N/A
INC0000266864	iTM job processor cannot process OTAP jobs after inconsistency in database	N/A



2.8 Release Version Information (Release Name)

Software	Version	KB number	Part Number
iTM R8.2	R8.2.75	iTM Enterprise – KB747V0EF000082000 iTM ONE – KB747V0EE000082000	iTM Enterprise – GMYN5144A iTM ONE – GMYN5143A
Server	R8.2.75		
Client	R8.2.75		
Proxy	R8.2.75		
Job Processor	R8.2.69		
OTAP	R8.2.37		
Component Update	R1.0.0		
Configuration Job	R1.0.0		
Email Transmitter	R8.2.75		
iTM One	R8.2.75		
PostgreSQL	13.14		
Tomcat	9.0.87		
Release Pack Update	RPU1		

3 Accessories

There are no new accessories introduced with this release of iTM.

4 Annex A – iTM R8.2 System Requirements

4.1 Networked version requirements

Maximum resource configurations:

- o Radios: 300,000
- o Proxy installations: 2,000 per server
- o Clients: 100 per server

Proxy:

- Hardware:
 - o Intel Core i3 3.0 GHz or above
 - o 8 GB Random Access Memory (RAM), 16 GB RAM, or more is recommended when programming multiple radios simultaneously
 - o 25GB of free hard disk space
 - o At least one USB 2.0 port
- Operating System: Windows 10 64-bit, Windows 11 64-bit

Client:

- Hardware:
 - o Intel Core i3 3.0 GHz or above
 - o At least 4 GB RAM

- o 25GB of free hard disk space
- Operating System:
Windows Server 2016, Windows Server 2019, Windows Server 2022, Windows 10 64-bit, Windows 11 64-bit

Server:

- Hardware (minimum requirement for supporting up to 20,000 radios):
Intel Xeon 2.66 GHz, 4 GB RAM and 150 GB of free hard disk space
- Hardware (minimum requirement for supporting up to 300,000 radios):
Intel Xeon 3 GHz, 8 GB RAM and 250 GB of free hard disk space
- Operating System:
Windows Server 2016, Windows Server 2019, Windows Server 2022

iTM installation is supported on English, German, Spanish, Portuguese and Japanese Windows only.

USB hubs and laptops are not supported for multiprogramming in the iTM system. Desktop PCs and PCI-to-USB cards can provide higher stability so they are suggested in such multi-programming scenarios.

4.2 Single PC version requirements

Maximum resource configurations:

- o Maximum number of terminals: 2000
- o Maximum number of programming connections: 12
- o One instance of management screen (client) and one programming screen (proxy)

PC spec:

- Hardware:
 - o Intel Core i3 3.0 GHz or above
 - o 8 GB Random Access Memory (RAM), 16 GB RAM, or more is recommended when programming multiple radios simultaneously
 - o 100 GB free disk space
- Operating System:
Windows 10 64-bit, Windows 11 64-bit

iTM installation is supported on English, German, Spanish, Portuguese and Japanese Windows only.

5 Annex B – Previous Releases

The current and previous release notes for iTM can be found on MyView

<https://myview.motorolasolutions.com/>

6 Annex C – Proxy & Client Backward Compatibility

iTM 8.2 Server offers backward compatibility with iTM 8.1 and iTM 8.0 proxy and client.

7 Annex D – Requesting License Transfer to a Different PC

In cases when a customer needs to replace an existing iTM Server PC with a new one due to the HW failure or a replacement schedule it is possible to request license transfer. To do that you have to perform the following steps:

1. Install the iTM Server SW on a new server PC and link an iTM Client PC to the new server.
2. You will be asked to specify the new license and on that screen you can go to the System Licenses tab and copy your Host ID number.
3. Contact the regional Customer Care team with the description of your problem, a Host ID of the original server PC and the Host ID of the new server PC, clearly indicating which one is which.

Respective Team will be able to re-host your existing iTM license to the new iTM Server:

- a. EMEA techsupport.emea@motorolasolutions.com
- b. APAC techsupport.apac@motorolasolutions.com

8 Annex E – Support for post installation of pgAdmin

In case when a customer needs to use pgAdmin4 solutions with iTM Server it is required to:

- Download pgAdmin from the official page version of pgAdmin4 for Windows ([pgAdmin 4 \(Windows\)](#)), iTM 8.2 has been tested with pgAdmin 4 v8.8.
- Install pgAdmin 4 to selected locations.
- Open pgAdmin 4 v8 from the shortcut or Start Menu” and follow server configuration as has been done in previous major releases.