

Integrated Terminal Management (iTm)

TETRA Terminals

iTm Release 8.1

SPU 3

Software Version: R8.1.44

Document revision: F

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

Revision Date: 27th June 2024

**Change History**

Rev	Date	Author	Description
A	1 Sep 2023	M. Polak	Released version
B	1 Dec 2023	M. Polak	Release for MR2023.3
C	20 Dec 2023	M. Polak	Release for SPU1
D	13 Feb 2024	M. Polak	Release for RPU2 (INC0000247103)
E	14 Apr 2024	M. Polak	Release for SPU2
F	27 Jun 2024	M. Polak	Release for SPU3 (INC0000651099, INC0000641259)

Acronyms and Abbreviations

Acronym	Definition
DNS	Domain Name system
EAP	Extended Agency Partitioning
GUI	Graphical User Interface
LAN	Local Area Network
MMI	Man to Machine Interface
MRC	Multiple Radio Control
OTAP	Over The Air Programming
PICS	Photograph and Intelligence Communication System
SPU	Service Pack Update
TCP	Transmission Control Protocol
TRACES	TETRA RF Automated Coverage and Evaluation Solution
CLL	Common Licensing Layer (refers to NEW License solution element introduced with iTM7.0 and CPS7.0)

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Introduction

The purpose of this document is to introduce the reader to the Integrated Terminal Management (iTM) Release 8.1. 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
MR2023.2 support	Please refer to the MR2023.2 release note for the details of the release	No	TPG2200
Windows Server 2022 Support	iTM Server supports usage of Windows Server 2022.	No	All
Custom Profile in iTM system	iTM System supports creation, usage and management of Custom Profile, self created profile Custom Profile supported in USB-cable programming only	No	All
Synchronization of users and groups automatically with Active Directory	iTM System supports synchronization with Active Directory for users and groups	No	All

1.2 Features now made available or improved

Feature	Summarized Description	Enablement Needed	Platforms Affected
Compare Codeplug extension to see added/deleted fields.	iTM shows information about codeplug fields added and removed between compared releases	No	All
Proxy name available in "Jobs and Policy Execution"	iTM Client "Jobs and Policy Execution" extended to include information about iTM Proxy where job has been executed	No	All



Release Pack Update (RPU)	iTM System can trigger a customized, semi-automated upgrade process for iTM Client and iTM Proxy. Please refer to Annex E for the details of the functionality	No	All
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1.3 Features removed in this Release

N/A

2 PRODUCT AND RELEASE INFORMATION

2.1 Important Information, Warnings, Limitations

- The iTM System may present incorrect iTM Client license consumption after long inactivity of application. It may indicate less consumption than connections.
- iTM 8.1 is the last release supporting Windows Server 2012 R2.
- When adding the agency from a non-EAP system to the EAP system, the users will not be migrated to the target system. The users shall be defined in the system or agency level.
- When loading the RPU into the system, the information about the RPU version should be available in the Server -> Status window. Currently it is always 0 even if the RPU is loaded.
- When EAP Agency is restored from Agency Backup, the OTAP packages are not included in the restored agency. To prevent failure of OTAP programming jobs RPK files shall be reimported.
- Do not try activating licenses for both iTM and CPS on the same machine. Any attempt of activating iTM and CPS licenses for the same Host ID will result in rejecting the license in iTM System altogether.
- 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.
- The language option "Use regional settings" has been removed from the Client and Proxy. Now the customer must explicitly select either English or German. This can be set during installation or later in the "Settings" dialog of the Proxy and Client.
- 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).
- After the user performs a downgrade of software for MXP600 radio from version 2021.3 to 2021.2 via OTAP (Over The Air Programming) with UDL (User defined language) set, then the read codeplug operation will fail. Still reading the codeplug for such radio is possible via USB connection.
- "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.

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 R8.1 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 R8.1. 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. GMYN5125A for iTM One R8.1
- Order Part No. GMYN5126A for iTM Enterprise R8.1

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
MR18	iTM 7.4, iTM 7.5, iTM 7.6, iTM 7.7, iTM 7.8, iTM 7.9, iTM 8.0, iTM 8.1
MR18a	iTM 7.4, iTM 7.5, iTM 7.6, iTM 7.7, iTM 7.8, iTM 7.9, iTM 8.0, iTM 8.1
MR19	iTM 7.4, iTM 7.5, iTM 7.6, iTM 7.7, iTM 7.8, iTM 7.9, iTM 8.0, iTM 8.1
MR19.2	iTM 7.4, iTM 7.5, iTM 7.6, iTM 7.7, iTM 7.8, iTM 7.9, iTM 8.0, iTM 8.1
MR2020.1	iTM 7.6, iTM 7.7, iTM 7.8, iTM 7.9, iTM 8.0, iTM 8.1
MR2020.2	iTM 7.6, iTM 7.7, iTM 7.8, iTM 7.9, iTM 8.0, iTM 8.1
MR2020.3	iTM 7.6, iTM 7.7, iTM 7.8, iTM 7.9, iTM 8.0, iTM 8.1
MR2021.1	iTM 7.6, iTM 7.7, iTM 7.8, iTM 7.9, iTM 8.0, iTM 8.1
MR2021.2	iTM 7.7, iTM 7.8, iTM 7.9, iTM 8.0, iTM 8.1
MR2021.3	iTM 7.8, iTM 7.9, iTM 8.0, iTM 8.1
MR2022.2	iTM 7.8, iTM 7.9, iTM 8.0, iTM 8.1
MR2022.3	iTM 7.9, iTM 8.0, iTM 8.1
MR2022.4	iTM 8.0, iTM 8.1
MR2023.1	iTM 8.0, iTM 8.1
MR19.9	iTM 8.0, iTM 8.1
MR2023.2	iTM 8.1
MR2023.3	iTM 8.1

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 for iTM8.1 with SPU2 loaded
INC0000641259	SPU application deletes PU configuration in the iTM Proxy
INC0000160824 INC0000173777 INC0000259675 INC0000230855	MXP600 upgrade issue - "Downgrade is not supported to the selected SW. [-1030]" error
INC0000269871	iTM 8.0 SPU3 Server crash
INC0000247103	Automatic Proxy Update failed iTM 8.1 using iTM_8_1_RPU_1.zip
INC0000160850	iTM Client license is unexpectedly consumed when the iTM Client is opened for a long time.
INC000007768608	License Usage consumption is not properly handled when the iTM Client process is killed.
INC0000181230	The German words are misaligned in the iTM Proxy application for Programming Units window
INC0000175525	Programming Cups are not automatically aligned with the size of the Proxy window
INC0000181229	Information in iTM Proxy Programming Cup is misaligned
INC000007462929	iTM8.0 Proxy opens at Windows login
INC000007290596	Connection TRACES 2.6.0 to iTM 8.0 does not work
INC000007758032	Load SPU2 failed
INC000007357343	Agency-iTM reacts slowly
INC000007610139	Recover of TPG2200 is failing
INC000007635095	iTM 8.0 SPU 1 Agency Backup is not working
INC000007225233 INC000007477408 INC000007588094	iTM Proxy 7.9 - programming issue
INC000007462917	iTM 8.0 while using the user-defined attributes, the data record is locked
INC000007508898	iTM System 8.0 ModellMapper issue
INC000007458007	No synchronization between AD and iTM
INC000007358348 INC000007541949	LDAP issue with members of more than AD group in iTM 8.0
INC000007291442 INC000007414125	iTM 8.0 architecture questions
INC000007124144	iTM_8.0_Beta Export Log File error
INC000007610025	TPG2200 iTM 8.0.21 programming issue



2.7 Customer Impacting Statement (CIS)

C3	Headline	Workaround
INC0000470080	LDAP does not handle Common Name (CN) with comma	User names in LDAP shall not have comma character
INC0000551730	iTM aborts database upgrade after iTM sw update	Remove two-platform RPK files from the system before backup used for the upgrade process.
INC0000375208	The name of the radio is not fully visible in the cup	Use shorter radio names in the system.
INC0000218767	iTM proxy without server connection can no longer be used after several starts	iTM Offline proxy connected to network with iTM Server (for synchronization purpose, no job download)
INC0000217901	Order in iTM group management - no automatic sorting in "manage group permissions"	N/A
INC0000201168	Faulty creation of backups per client (Scheduled agency backups are skipped randomly when schedule time overlapped)	Schedule backups in time intervals to not generate situation that two are run on same time
INC0000203502	iTM proxy fails to detect MXP600 after upgrade to 8.1	MXP600 identified in device manager cannot be fully recognized. Connection of any other devices (e.g MTP6000) or reinstallation of Tetra Radio driver allows to connect properly MXP600.
INC0000196745	Increased failure rate when upgrading MXP600, MTP6650 to MR2022.4	Maintain free memory and follow recommendations of memory consumption.
INC000008363969	iTM 8.1 - Codeplug protection can be bypassed	Management of users rights and protection of users password allow it to keep secure. Usage of radio password.
INC0000179601	Thuringen Police - iTM Proxy 8.0 SPU1 - User can not change password in iTM Proxy	Log into iTM Proxy using full user name with agency, e.g. Default\User.
INC000007703512	Connection TRACES 2.7.1 to iTM 7.4 does not work	Delete radios with "unknown" status.
INC000007468804	OTAP Programming Does not update ITM Clients Template name Filed	N/A
INC000007523346	iTM Software Apache Tomcat Update	N/A
INC000007493929	iTM 8.0 Wrong error message at csv import	N/A
INC000007124628	Mismatch of Model Name between CPS and iTM	Update values on exported files.
INC000007068687	iTM 7.9 vulnerability - out of date Java Runtime Environment	N/A

C3	Headline	Workaround
INC000005830912	Doubled CH TEIs in iTM	Individual Control Head Identification features allow to mitigate potential collision.
INC000005872536	Vulnerabilities found during IT Health Check in iTM	N/A

2.8 Release Version Information (Release Name)

Software	Version	KB number	Part Number
iTM R8.1	R8.1.44	iTM Enterprise – KB747V0DX000081000 iTM ONE – KB747V0DW000081000	iTM Enterprise – GMYN5126A iTM ONE – GMYN5125A
Server	R8.1.44		
Client	R8.1.44		
Proxy	R8.1.44		
Job Processor	R8.1.46		
OTAP	R8.1.19		
Email Transmitter	R8.1.44		
iTM One	R8.1.44		
PostgreSQL	13.2		
Tomcat	7.0.61		
Release Pack Update	RPU2		
Service Pack Update	SPU3		

3 Accessories

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

4 Annex A – iTM R8.1 System Requirements

4.1 Networked version requirements

Maximum resource configurations:

- o Radios: 300,000
- o Proxy installations: 1,000 per server
- o Clients: 100 per server

Proxy:

- Hardware:
 - o Intel Core i3 3.0 GHz or above
 - o At least 4 GB RAM
 - 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:
 - Intel Core i3 3.0 GHz or above
 - At least 4 GB RAM
 - 25GB of free hard disk space
- Operating System:
Windows Server 2012 R2 64-bit, 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 2012 R2 64-bit, 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:

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

PC spec:

- Hardware:
 - Intel Core i3 3.0 GHz or above
 - 4 GB RAM
 - 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 8.1 Server offers full backward compatibility with 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 ESSC at techsupport.emea@motorolasolutions.com 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.

ESSC will be able to re-host your existing iTM license to the new iTM Server.

8 Annex E – Release Pack Update

The iTM System can be updated using a customized, semi-automated upgrade process for iTM Client and iTM Proxy from the 8.0 version. Please follow the next steps to install the higher version of the components.

Prerequisites:

- Upgrade the iTM Server to the latest version. Please follow the section “Backup, Restore, and Upgrade of iTM” from the Integrated Terminal Management (iTM) Administrators Guide.
- Enable the Backward Compatibility function from iTM Server Manager.
- Make sure the iTM Client and iTM Proxy users have the “Manage Updates” permissions.

Procedure:

1. Download the Release Pack Update package from MyView Portal.
2. Load the RPU package into the system from iTM Server Manager. Follow the steps described in “Uploading Service Pack Update to iTM Server” from Integrated Terminal Management (iTM) Administrators Guide.
3. For iTM Proxy, please follow “Automatic Proxy Update” from Integrated Terminal Management (iTM) Administrators Guide.
4. For iTM Client, please open Help -> Check for Updates. Then please wait for the finalization of the downloading process. If finished, please follow the instructions prompted into the screen.