ETSI TS 124 484 V19.5.0 (2026-03)

TECHNICAL SPECIFICATION

LTE;
Mission Critical Services (MCS) configuration management;
Protocol specification
(3GPP TS 24.484 version 19.5.0 Release 19)

Reference
RTS/TSGC-0124484vj50

Keywords
LTE

ETSI

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Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

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Contents

Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

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where:

x the first digit:

1 presented to TSG for information;

2 presented to TSG for approval;

3 or greater indicates TSG approved document under change control.

y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

z the third digit is incremented when editorial only changes have been incorporated in the document.

In the present document, modal verbs have the following meanings:

shall indicates a mandatory requirement to do something

shall not indicates an interdiction (prohibition) to do something

The constructions "shall" and "shall not" are confined to the context of normative provisions, and do not appear in Technical Reports.

The constructions "must" and "must not" are not used as substitutes for "shall" and "shall not". Their use is avoided insofar as possible, and they are not used in a normative context except in a direct citation from an external, referenced, non-3GPP document, or so as to maintain continuity of style when extending or modifying the provisions of such a referenced document.

should indicates a recommendation to do something

should not indicates a recommendation not to do something

may indicates permission to do something

need not indicates permission not to do something

The construction "may not" is ambiguous and is not used in normative elements. The unambiguous constructions "might not" or "shall not" are used instead, depending upon the meaning intended.

can indicates that something is possible

cannot indicates that something is impossible

The constructions "can" and "cannot" are not substitutes for "may" and "need not".

will indicates that something is certain or expected to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document

will not indicates that something is certain or expected not to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document

might indicates a likelihood that something will happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

might not indicates a likelihood that something will not happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

In addition:

is (or any other verb in the indicative mood) indicates a statement of fact

is not (or any other negative verb in the indicative mood) indicates a statement of fact

The constructions "is" and "is not" do not indicate requirements.

1 Scope

The present document specifies the configuration management documents and protocols needed to support Mission critical service online configuration over the CSC-4 and CSC-5 reference points and the procedures to support Mission critical service offline configuration over the CSC-11 and CSC-12 reference points.

Mission critical services include:

- Mission Critical Push To Talk (MCPTT);
- Mission Critical Video (MCVideo); and
- Mission Critical Data (MCData).

Configuration management documents defined in the present document includes:

- MCS UE initial configuration document;
- MCPTT UE configuration document;
- MCPTT user profile configuration document;
- MCPTT service configuration document;
- MCVideo UE configuration document;
- MCVideo user profile configuration document;
- MCVideo service configuration document;
- MCData UE configuration document;
- MCData user profile configuration document; and
- MCData service configuration document.

Mission critical services are services that require preferential handling compared to normal telecommunication services, e.g. in support of police or fire brigade.

The Mission critical services can be used for public safety applications and also for general commercial applications (e.g., utility companies and railways).

The present document is applicable to an MCS UE supporting the configuration management client functionality, to application servers supporting the configuration management server functionality, and to application servers supporting the:

- MCPTT server functionality;
- MCVideo server functionality; or
- MCData server functionality.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] OMA OMA-TS-XDM_Core-V2_1-20120403-A: "XML Document Management (XDM) Specification".

[3] 3GPP TS 22.179: "Mission Critical Push to Talk (MCPTT) over LTE; Stage 1".

[4] 3GPP TS 24.483: "Mission Critical Services (MCS) Management Object (MO)".

[5] 3GPP TS 24.481: "Mission Critical Services (MCS) group management Protocol specification".

[6] 3GPP TS 24.482: "Mission Critical Services (MCS) identity management Protocol specification".

[7] 3GPP TS 29.283: "Diameter Data Management Applications".

[8] 3GPP TS 23.379: "Functional architecture and information flows to support mission critical push to talk (MCPTT); Stage 2".

[8A] 3GPP TS 23.280: "Common functional architecture to support mission critical services; Stage 2".

[9] 3GPP TS 24.379: "Mission Critical Push to Talk (MCPTT) call control Protocol specification".

[10] 3GPP TS 24.380: "Mission Critical Push to Talk (MCPTT) media plane control Protocol specification".

[11] IETF RFC 5875: "An Extensible Markup Language (XML) Configuration Access Protocol (XCAP) Diff Event Package".

[12] 3GPP TS 24.333: "Proximity-services (ProSe) Management Objects (MO)".

[13] IETF RFC 4745: "Common Policy: A Document Format for Expressing Privacy Preferences".

[14] IETF RFC 4825: "The Extensible Markup Language (XML) Configuration Access Protocol (XCAP)".

[15] Void.

[16] 3GPP TS 23.003: "Numbering, addressing and identification".

[17] OMA OMA-TS-XDM_Group-V1_1-20120403-A: "Group XDM Specification".

[18] 3GPP TS 23.303: "Proximity-based Services (ProSe); Stage 2".

[19] 3GPP TS 24.334: "Proximity-services (ProSe) User Equipment (UE) to ProSe function protocol aspects; Stage 3".

[20] IETF RFC 8101 "IANA Registration of New Session Initiation Protocol (SIP) Resource-Priority Namespace for Mission Critical Push To Talk service".

[21] IETF RFC 3986: "Uniform Resource Identifier (URI): Generic Syntax".

[22] 3GPP TS 24.229: "IP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3".

[23] IETF RFC 6050: "A Session Initiation Protocol (SIP) Extension for the Identification of Services".

[24] 3GPP TS 23.282: "Functional architecture and information flows to support Mission Critical Data (MCData); Stage 2";

[25] 3GPP TS 24.282: "Mission Critical Data (MCData) signalling control Protocol specification".

[26] 3GPP TS 24.582: "Mission Critical Data (MCData) media plane control Protocol specification".

[27] 3GPP TS 23.281: "Functional architecture and information flows to support Mission Critical Video (MCVideo); Stage 2".

[28] 3GPP TS 24.281: "Mission Critical Video (MCVideo) signalling control Protocol specification".

[29] 3GPP TS 24.581: "Mission Critical Video (MCVideo) media plane control Protocol specification".

[30] 3GPP TS 22.280: "Mission Critical Services Common Requirements (MCCoRe) Stage 1".

[31] 3GPP TS 23.032: "Universal Geographical Area Description (GAD)".

[32] 3GPP TS 23.501: "System Architecture for the 5G System; Stage 2".

[33] IETF RFC 3748: "Extensible Authentication Protocol (EAP)".

[34] 3GPP TS 24.526: "UE policies for 5G System (5GS); Stage 3".

[35] 3GPP TS 24.554: "Proximity-services (ProSe) in 5G System (5GS) protocol aspects; Stage 3".

[36] 3GPP TS 23.304: "Proximity based Services (ProSe) in the 5G System (5GS)".

[37] 3GPP TS 24.283: "Mission Critical Location Management (MCLoc); Protocol specification".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [1].

MCS network: A network infrastructure that supports the MCS.

Offline Configuration: Configuration of the MCS UE without connectivity with any MCS network. Configuration of the MCS UE is achieved using some external device (e.g. a laptop) with some kind of IP connectivity with the MCS UE (e.g. over USB, WLAN, Bluetooth, etc).

Off-network operation: An MCS UE operating without connectivity to an MCS network (not even via a relay).

Online Configuration: Configuration of the MCS UE using the MCS network. Configuration of the MCS UE is achieved using the network connectivity with the MCS UE (e.g. over LTE).

On-network operation: An MCS UE operating with connectivity to an MCS network including when network connectivity is achieved via a relay.

For the purposes of the present document, the following terms and definitions given in OMA OMA-TS-XDM_Core-V2_1 [2] apply:

XDMC
XDMS

For the purposes of the present document, the following terms and definitions given in 3GPP TS 22.179 [3] apply:

MCPTT administrator
MCPTT UE
MCPTT User Profile
MCPTT service
Mission Critical Push To Talk

For the purpose of the present document, the following terms and definitions given in 3GPP TS 23.379 [8] apply:

Pre-selected MCPTT user profile

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

5GS	5G System
APN	Access Point Name
AUID	Application Unique IDentity
CMC	Configuration Management Client
CMS	Configuration Management Server
DM	Device Management
DNN	Data Network Name
EAP	Extensible Authentication Protocol
EPS	Evolved Packet System
E-UTRAN	Evolved Universal Terrestrial Radio Access Network
FQDN	Fully Qualified Domain Name
GC	General Client
HTTP	HyperText Transfer Protocol
HTTPS	HyperText Transfer Protocol Secure
IANA	Internet Assigned Numbers Authority
IETF	Internet Engineering Task Force
IMEI	International Mobile Equipment Identity
IP	Internet Protocol
MC	Mission Critical
MCPTT	Mission Critical Push To Talk
MCS	Mission Critical Service
MIME	Multi-Purpose Internet Mail Extensions
MO	Management Object
OMA	Open Mobile Alliance
PQI	PC5 5QI
ProSe	Proximity Services
RFC	Request For Comments
SIP	Session Initiation Protocol
SNR	Serial Number
S-NSSAI	Single Network Slice Selection Assistance Information
TAC	Type Allocation Code
UE	User Equipment
URI	Uniform Resource Identifier
URN	Uniform Resource Name
USB	Universal Serial Bus
WLAN	Wireless Local Area Network
XCAP	XML Configuration Access Protocol
XDM	XML Document Management
XDMC	XML Document Management Client
XDMS	XML Document Management Server
XML	eXtensible Markup Language
XUI	XCAP Unique Identifier

4 General

4.1 MCS service administrator configuration

4.1.1 Common configuration

An MCS service administrator can, using an MCS UE configure the: