

MTAS Multi-Persona Management Guide

MTAS

USER GUIDE

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1 Introduction

This document describes how to configure the Multi-Persona (MUP) service in MTAS.

1.1 Prerequisites

It is assumed that the user of this document is familiar with the O&M area, in general.

1.1.1 Licenses

To enable the MUP service, the MUP license must be installed. For more information about the MUP license, refer to [MTAS Licenses](#).

1.1.2 Documents

Before starting any procedure in this document, ensure that the following documents are available:

- [Ericsson Command-Line Interface User Guide](#)
- [Managed Object Model \(MOM\)](#)

1.1.3 Conditions

Before starting any procedure in this document, ensure that the following condition is met:

- An Ericsson Command-Line Interface (ECLI) session in Exec mode is in progress.





2 Overview

This document describes the Multi-Persona service offered by MMTel AS. Multi-Persona service supports Basic Mode and Enhanced Mode functionality. Based on the node-level configuration, the respective mode is executed by MUP. MUP Enhanced Mode is recommended to enable persona-specific service execution in MMTel AS.

The Multi-Persona service allows a device to have more than one phone number for the same served user, and makes it possible to select the identity for outgoing communication (outgoing call). The alternative lines are supported on VoLTE, Wi-Fi calling, and CS access. All personas of the served user must be defined in the IRS.

In Enhanced Mode, all personas of the served user must be provisioned in the MUP service. All personas are defined in the `identity-list` of the MUP provisioning data, and in the `subscription-identity-mapping-list`, the personas valid for each mobile subscription are listed.

2.1 Subfunctions

2.1.1 Basic Mode

The basic functionality of Multi-Persona is to report about the selected line identity when the caller is using a primary or alternative persona. MMTel indicates to the offline/online charging node which persona initiates the call, when the Multi-Persona service is involved in the call.

2.1.2 Enhanced Mode

The Enhanced Mode of the Multi-Persona service provides the following features:

- Persona selection on PS access
- Persona selection/indication when camping on CS access
- Persona-specific Supplementary Service execution
- Persona usage policy per mobile subscription
- Used persona indication in charging per call



The following additional prerequisites must be fulfilled for MTAS to apply the Enhanced Mode to a specific served user:

- All personas of the served user must be provisioned in MMTel service data. One of the personas per mobile subscription must be marked as default on operator level.
- The served user must be a mobile subscriber with mobile subscriptions provisioned in MMTel service data.
- A valid Multi-Persona license is available.

2.1.3 Persona Selection on PS Access

An MP-capable UE camping on PS access indicates selected persona by using the SIP header P-Preferred-Identity when originating a call, and get notified about selected persona by using the P-Called-Party-Id SIP header when terminating a call.

When a non-MP capable UE camps on PS access, the selected persona is always the default persona of the calling mobile subscription.

2.1.4 Persona Selection/Indication When Camping on CS Access

Since use of the SIP headers P-Preferred-Identity and P-Called-Party-Id is not available to devices camping on CS access (2G/3G), a separate SIP-based Multi-Persona Message Channel (MPMC) is provided for persona selection/notification. Having established the MPMC, information about personas can be exchanged between the device and MMTel AS using a proprietary XML document per call.

When a non-MP capable UE camps on CS access or an MP-capable UE without MCMP capability camps on CS access, the selected persona is always the default persona of the calling mobile subscription.

2.1.5 Persona-Specific Supplementary Service Execution

An individual persona, or group of personas, can be assigned a unique set of MMTel Supplementary Services. The persona-unique set of services is applied for the complete call duration.

2.1.6 Persona Usage Policy per Mobile Subscription

An operator policy can define how the user per mobile subscription can use Multi-Persona numbers for Originating and Terminating use. The user can change this policy to be defined in a more restrictive way.



2.1.7

Used Persona Indication in Charging per Call

Charging reporting is different in the Enhanced Mode. MTAS reports the Multi-Persona service identity and served persona SIP URI in charging.





3 Multi-Persona Service Configurations

The Multi-Persona service is controlled by the MtasMultiPersona Managed Object Class (MOC).

The Managed Object (MO) structure of the MUP service is shown in Figure 1.

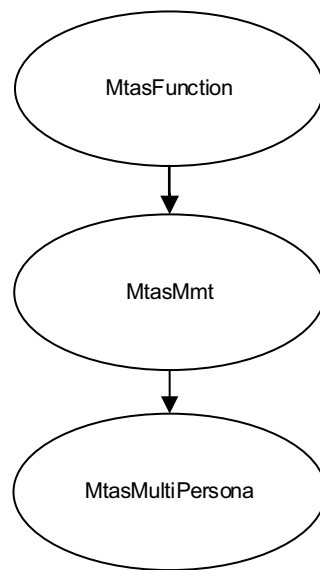


Figure 1 MUP Service MO Structure

For configurable MOs and attributes related to general Multi-Persona service configuration, refer to [Managed Object Model \(MOM\)](#).

3.1 Basic Mode

An O&M operator can configure the Multi-Persona service the following way to enable Basic Mode:

```
mtasMultiPersonaAdministrativeState = UNLOCKED
```

3.2 Enhanced Mode

An O&M operator can configure the MUP service the following way to enable Multi-Persona Enhanced Mode at MMTel AS node level:

— `mtasMmtMobileBehaviour` is set to 1 (MOBILE_ENHANCEMENT_ON)



- `mtasMultiPersonaAdministrativeState = UNLOCKED`
- `mtasMultiPersonaEnhancement = PERSONA_ENHANCEMENT_ON`
- A valid Multi-Persona license is available
- `mtasMultiPersonaCapableFeatureTag:= "+mp-capable"`
- `mtasChargingProfileReportServedPersona= REPORTING_ENABLED`

3.3 Persona Selection on PS Access

Same as described in Section 3.2 Enhanced Mode on page 7.

3.4 Persona Selection/Indication When Camping on CS Access

An O&M operator can configure the set of Multi-Persona Context Number (MPCN) ranges for the Multi-Persona service invocation. The service is active when the administrative state is enabled (`mtasMultiPersonaAdministrativeState=1`) and support for Multi-Persona feature enhancement is enabled (`mtasMultiPersonaEnhancement=1`).

For this subfunction to work, SIPCC with MCMP must be established by adding “+message-channel.multi-persona” in `mtasMmtSipccIdentification` and in the Contact header of the registration message as feature tag.

The CM attributes for the Multi-Persona service are as follows:

- `MtasMultiPersonaMpcnRange`
- `mtasMultiPersonaMpcnRangeFirst`
- `mtasMultiPersonaMpcnRangeLast`

```

MtasMmt=0
  MtasServices=0
    MtasMutliPersona=0
      mtasMultiPersonaAdministrativeState: 1
      mtasMultiPersonaEnhancement: 1
      mtasMultiPersonaMpcnMaxLifetime: 5
      MtasMultiPersonaMpcnRange=0
        mtasMultiPersonaMpcnRangeFirst: +12345600000
        mtasMultiPersonaMpcnRangeLast: +12345600100
      MtasMultiPersonaMpcnRange=1
        mtasMultiPersonaMpcnRangeFirst: +12345600400
        mtasMultiPersonaMpcnRangeFirst: +12345600500
      [...]

```

Example 1 CM Attributes for the Multi-Persona on CS Domain Service



The Multi-Persona service uses these parameters to configure the pool of free Multi-Persona Context numbers to allocate for connecting with CS domain.

The MO structure of the `MtasMultiPersonaMpcnRange` MOC for the Multi-Persona service is shown in Figure 2.

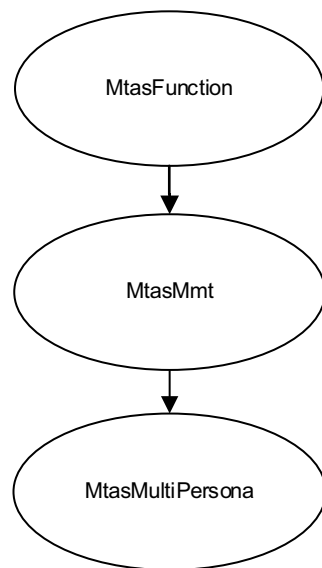


Figure 2 MtasMultiPersonaMpcnRange MO Structure

For configurable MOs and attributes related to the Multi-Persona service and `MtasMultiPersonaMpcnRange`, refer to [Managed Object Model \(MOM\)](#).

3.5 Persona-Specific Supplementary Service Execution

Same as described in Section 3.2 Enhanced Mode on page 7.

3.6 Persona Usage Policy per Mobile Subscription

Same as described in Section 3.2 Enhanced Mode on page 7.

3.7 Used Persona Indication in Charging per Call

MTAS reports Multi-Persona Service Identity (5600) in Supplementary-Service-Identity AVP with Supplementary-Service-Action AVP set to “Use of service in charging”.

If `mtasChargingProfileReportServedPersona` is enabled, MTAS sends the served persona SIP URI information in charging.



The information is reported in the Service-Specific-Info AVP. Here, the Service-Specific-Type contains the integer value corresponding to Served Persona (1023) and the Service-Specific-Data contains the SIP URI of served persona. MTAS also reports the SIP URI of served persona in the Subscription-Id AVP/END_USER_SIP_URI.

3.8 Wholesale for Multi-Persona Configuration

The Multi-Persona service supports Wholesale. The Multi-Persona service is configurable on Virtual Telephony Provider level.

Wholesale for the Multi-Persona service is activated when the following attributes are set to 1 (UNLOCKED):

- The `vtasMultiPersonaAdministrativeState` attribute in the `VtasMultiPersona MO`
- The `mtasMultiPersonaAdministrativeState` attribute in the `MtasMultiPersona MO`

For more information about the Wholesale service, see [MTAS Wholesale Support Management Guide](#).



4 Multi-Persona Service Provisioning

4.1 Basic Mode

Activate Basic Mode of the Multi-Persona service in the MMTel Service settings of the User MMTel Service data document by setting the `<activated>` element of `<multi-persona>` service to true.

For more information on Multi-Persona service provisioning, see [MTAS CAI3G Interface](#).

4.2 Enhanced Mode

To enable the Multi-Persona service in Enhanced Mode on top of Basic Mode, the subscriber must be provisioned with the following additional settings in `<multi-persona>` service:

- `mobile-subscription-list`, a list of all mobile subscriptions of the subscriber.
- `public-identity-list`, a list of public-identity/personas of the subscriber.
- `subscription-identity-mapping-list`, a list of the mobile subscriptions of the subscriber, with one or more personas mapped to it; one is marked as the default persona of the mobile subscription.

For detailed information on these lists and MMTel Context provisioning, see [MTAS CAI3G Interface](#).

4.3 Persona-Specific Supplementary Service Execution

To execute persona-specific service settings, zero or more instances of MMTelContext can be provisioned as part of User MMTel Service Data Document.

The effective service set of the MMTelContext identity `<context-Identity>` associated with the calling persona or called `<public-identity>/<value>` in the `public-identity-list` is considered during call handling.

The effective service set of the MMTelContext is derived by merging the MMTelContext-specific service setting and the MMTel service setting provisioned in the User MMTel Service document.

MMTel Service settings (subscriber level settings) and MMTelContext-specific service settings associated with `<context-Identity>` must be provisioned in the User MMTel Service Document before use.



4.4 Persona Usage Policy per Mobile Subscription

Each persona associated with a mobile subscription can be provisioned with policy <usage> element as part of the subscription-identity-mapping-list of the Multi-Persona service.

For more detailed information on the policy usage element provisioned in the User and Operator configuration of the Multi-Persona service, see [MTAS CAI3G Interface](#).



5 Performance Management

An operator can receive statistics on Multi-Persona service invocations. Statistics are provided in the following three dimensions:

- Successful service.
- Unsuccessful because of external reasons.
- Unsuccessful because of internal reasons.

For information on measurements related to the Multi-Persona service, see [MTAS Performance Measurements](#).





6 Fault Management

For information on alarms related to the Multi-Persona service, see [MTAS Alarm List](#).