

MTAS Unified Communication Routing Management Guide

MTAS

USER GUIDE

Copyright

© Ericsson AB 2017, 2018. All rights reserved. No part of this document may be reproduced in any form without the written permission of the copyright owner.

Disclaimer

The contents of this document are subject to revision without notice due to continued progress in methodology, design and manufacturing. Ericsson shall have no liability for any error or damage of any kind resulting from the use of this document.

Trademark List

All trademarks mentioned herein are the property of their respective owners. These are shown in the document Trademark Information.



Contents

1	Introduction	1
1.1	Prerequisites	1
2	Overview	3
2.1	Subfunctions	3
2.2	Interaction with Other Services	4
3	UC Routing Service Configuration	5
3.1	UC Routing Administrative State Configuration	5
3.2	SIP Header Name Containing the UC Served User Identity Configuration	6
3.3	SIP Header Name Containing the Original Destination Number for Originating UC VoLTE Configuration	6
3.4	SIP Header Name Containing the Normalized Number Configuration	6
3.5	SIP Header Name Containing the Terminating Received Number Configuration	6
3.6	Session Continuation Error Codes	7
3.7	UC Routing Service SIP Error Response Configuration	7
3.8	Service Data Management	7
4	Performance Management	9
5	Fault Management	11





1 Introduction

This instruction describes how to configure the Unified Communication (UC) routing service in the MMTel AS for business line users.

1.1 Prerequisites

It is assumed that the user of this instruction is familiar with the Operation & Maintenance (O&M) area, in general.

1.1.1 MMTel AS for Business Line

The UC routing service is executed in the context of MMTel AS for Business Line (BL). For information on deployment of MMTel AS for Business Line, see [MTAS MMTel Management Guide](#).

1.1.2 Licenses

The service is activated by the Business Line UC ReRouting Value pack license. For more information, see [MTAS Licenses](#).

1.1.3 IFC Configurations

An extra trigger for the terminating-trunk session to route the mobile terminated calls for the UC VoLTE user towards the MMTel AS for business line is defined in the Home Subscriber Server (HSS). For more information, see [MTAS External Network Configuration](#).

1.1.4 Documents

This instruction references the following documents:

- [MTAS Performance Measurements](#)
- [Ericsson Command-Line Interface User Guide](#)

1.1.5 Conditions

The following condition must apply:

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





2 Overview

The UC routing service routes the originating and the terminating calls towards the external (non-IMS) Unified Communication System (UCS) for the served UC VoLTE users. The service also adds SIP proprietary headers in the INVITE towards the UCS. These proprietary SIP headers carry the information needed by the UCS to provide enterprise communication services to the business users.

2.1 Subfunctions

2.1.1 Route Originating UC Call to the UCS

Originating MMTel AS for the business line routes the mobile originated call from the UC VoLTE user by changing the R-URI to the Originating UC Routing Number (OUCRN) so that the originating enterprise services are executed in the UC domain.

2.1.2 Route Terminating UC Call to the UCS

Terminating MMTel AS for the business line routes an incoming UC call to the terminating UCS by changing the R-URI to the Terminating UC Routing Number (TUCRN) so that the terminating enterprise services are executed in the UC domain. The MMTel AS session that routes incoming calls to the UC domain is named terminating-trunk.

2.1.3 Route Terminating UC Call from UCS to UC VoLTE

The terminating MMTel AS for business line applies MMTel services for the mobile endpoint of the business user.

2.1.4 Session Continuation

If the originating/terminating routed session towards the UC System is rejected with configurable final SIP error responses, MMTel AS (BL) reroutes the communication session to the original dialed number. This is called session continuation.

2.1.5 Suppress Routing of Originating Call to the UCS When User Dials Service (Non-UC) Number

When a user dials a Service (Non-UC) number, the originating MMTel AS for the business line suppresses routing of the mobile-originated call to the UC System. Service numbers are OSN, NSN, Short Code, and Toll-Free numbers. This behavior is controlled by CM `mtasUCRoutingSuppressServiceNumbers`.



2.2 Interaction with Other Services

2.2.1 **Ad-hoc Conference and Three Party Call**

Session continuation is applicable for the 2-party calls and hence not triggered for the Ad-hoc conference and 3-party dial out legs.



3 UC Routing Service Configuration

The UC routing service is controlled by the MtasUCRouting Managed Object (MO). An overview of the MO structure is shown in Figure 1.

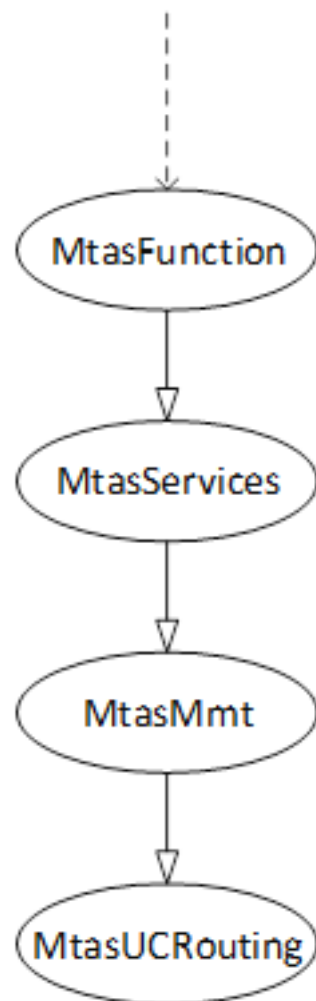


Figure 1 UC Routing MO Structure

3.1 UC Routing Administrative State Configuration

The Unified Communication routing service is enabled by setting the `mtasUCRoutingAdministrativeState` attribute. If the `mtasUCRoutingAdministrativeState` is set to 0 (LOCKED), the UC routing service is not started.



3.2 SIP Header Name Containing the UC Served User Identity Configuration

For originating and terminating UC VoLTE calls, the UC routing service creates a SIP proprietary header that contains the UC served user identity and the communication session case (originating/terminating). The header is added by the UC routing service in the INVITE sent both towards the originating and the terminating UCS. The name of the header is configurable by the CM attribute `mtasUCRoutingPSUHeader`. The default header name is `Ericsson-UCMobility-PSU`.

3.3 SIP Header Name Containing the Original Destination Number for Originating UC VoLTE Configuration

For originating UC VoLTE calls, the UC routing service creates a SIP proprietary header that contains the original destination number (R-URI of the incoming initial INVITE). The header is added by the UC routing service in the INVITE sent towards the originating UCS. The name of the header is configurable by the CM attribute `mtasUCRoutingOriginalDestinationNumberHeader`. The default header name is `Ericsson-Original-Destination-Number`.

3.4 SIP Header Name Containing the Normalized Number Configuration

For originating UC VoLTE calls, the UC routing service creates a SIP proprietary header that contains the normalized number (of the called-party) after executing the Number Normalization service. The header is added by the UC routing service in the INVITE sent towards the originating UCS. The name of the header is configurable by the CM attribute `mtasUCRoutingNormalizedNumberHeader`. The default header name is `Ericsson-Normalized-Number`.

Note: R-URI in the INVITE sent towards the originating UC-System is overwritten with the Originating UC Routing Number (OUCRN).

3.5 SIP Header Name Containing the Terminating Received Number Configuration

For terminating UC VoLTE calls, the UC routing service creates a SIP proprietary header that contains the called party number (R-URI of the incoming initial INVITE). The header is added by the UC routing service in the INVITE sent towards the originating UCS. The name of the header is configurable by the CM attribute `mtasUCRoutingNormalizedNumberHeader`. The default header name is `Ericsson-Normalized-Number`.

Note: R-URI in the INVITE sent towards the terminating UC-System is overwritten with the Terminating UC Routing Number (TUCRN).



3.6 Session Continuation Error Codes

The operator can configure individual SIP final error responses, or define the ranges from the 4xx/5xx/6xx responses using the CM attribute `mtasUCRoutingSessionContinuationErrorCodes`. The attribute is a list of 30 (maximum) elements, each defining an individual, or range of error responses.

Note: If the CM attribute `mtasUCRoutingSessionContinuationErrorCodes` is removed; then session continuation is OFF and the SIP final responses are sent towards the calling party.

3.7 UC Routing Service SIP Error Response Configuration

When the UC routing service is unavailable (locked, no license, not provisioned) in the terminating-trunk session; the terminating UC VoLTE call is rejected with a configurable SIP error response. The SIP error response is configurable through the CM attribute `mtasUCRoutingTermTrunkResponse`. The default error code is 480.

3.8 Service Data Management

3.8.1 Operator Subscription Level Service Configuration

The operator can activate, deactivate, or provision the UC routing service subscription for the business subscriber by setting the user data using the CAI3G protocol. The following information elements can be provisioned by the operator for every subscriber as part of the UC Routing service data:

- The UC routing service activation flag `<activated>`: Used to enable or disable the entire service. If the service is disabled, the UC routing service is not executed.
- Originating UC Routing Number `<originating-number>`: Used to route the originating UC VoLTE calls to the UCS.
- Terminating UC Routing Number `<terminating-number>`: Used to route the terminating UC VoLTE calls to the UCS.

For more information on the CAI3G protocol and XML schema details, see [MTAS CAI3G Interface](#).

The following is an example of a CAI3G protocol of how to provision the UC routing service:



```
<soap-env:Envelope xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/"
xmlns:mc="http://schemas.ericsson.com/mtas/mmtel/cai3g" xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://schemas.xmlsoap.org/soap/envelope/ ../../cai3g/schemas/Soap-
Envelope.xsd
http://schemas.ericsson.com/cai3g1.2/ ../../cai3g/schemas/cai3g1.2_header-fault-corrected.xsd
http://schemas.ericsson.com/mtas/mmtel/cai3g ../schemas/mmtel_aggregated_service.xsd">
<soap-env:Header>
  <cai3g:SessionId>S1</cai3g:SessionId>
  <cai3g:TransactionId>1</cai3g:TransactionId>
  <cai3g:SequenceId>100</cai3g:SequenceId>
</soap-env:Header>
<soap-env:Body>
  <cai3g:Create>
    <cai3g:M0Type>MMTel@http://schemas.ericsson.com/mtas/mmtel/cai3g</cai3g:M0Type>

    <cai3g:M0Id>
      <mc:publicId>sip:user@telco.com</mc:publicId>
    </cai3g:M0Id>

    <cai3g:M0Attributes>
      <mc:createMMTel publicId="sip:user@telco.com">
        <mc:publicId>sip:user@telco.com</mc:publicId>
        <mc:common-data>
          <mc:subscriber-type>BUSINESS</mc:subscriber-type>
        </mc:common-data>
        <mc:unified-communication-routing>
          <mc:ucr-operator-configuration>
            <mc:activated>true</mc:activated>
            <mc:originating-number>467611111</mc:originating-number>
            <mc:terminating-number>467622222</mc:terminating-number>
          </mc:ucr-operator-configuration>
        </mc:unified-communication-routing>
      </mc:createMMTel>
    </cai3g:M0Attributes>
  </cai3g:Create>
</soap-env:Body>
</soap-env:Envelope>
```

3.8.2 Subscriber Subscription Level Service Configuration

Not applicable.



4 Performance Management

For measurements related to the UC Routing service, see [MTAS Performance Measurements](#).





5 Fault Management

The BL UC/PBX ReRouting License Absent alarm is raised when the UC routing service administrative state is unlocked but there is no valid BL UC/PBX ReRouting value pack license. For more information, see [MtasLicenses, BL UC/PBX ReRouting License Absent](#).