

# MTAS Operator Controlled Transfer Management Guide

MTAS

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USER GUIDE

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# 1 Introduction

This document describes how to configure the Operator Controlled Transfer (OCT) service in the MTAS.

## 1.1 Prerequisites

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

### 1.1.1 Licenses

For the OCT service, the Multimedia Telephony (MMTel) AS Voice Base license must be installed.

For more information about the MMTel AS Voice Base 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

The following condition must apply:

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





## 2 Overview

The OCT service implements transfer of a call, upon request from the called party in the originating MTAS. The called party is an Operator Transferor. The MTAS accepts a SIP `REFER` request from a called party on an ongoing session, when the MTAS is aware of that it is coming from the Operator Transferor, and sends SIP `INVITE` to the refer-to user.

The OCT service mainly consists of three parts: the call established to the Operator Transferor call, the call setup to the refer-to user, and the different responses from the refer-to user.

### 2.1 Subfunctions

The subfunctions included in the OCT service are described in this section.

#### 2.1.1 Call Setup to Operator Transferor

A call is established to an Operator Transferor. The originating MTAS detects that the call is to an Operator Transferor, by checking the phone number included in a tel URI, or embedded in a SIP URI in the request URI, against the configured list of normalized phone numbers to Operator Transferors. Normalized phone numbers to Operator Transferors numbers must be classified as NSN/OSN.

#### 2.1.2 Call Setup to Refer-To User

The MTAS receives a SIP `REFER` from an Operator Transferor. The MTAS terminates any ongoing charging sessions for the call between the Operator Transferor and the calling party. The MTAS disconnects the Operator Transferor. The MTAS sends a SIP `INVITE` to the refer-to user, and establishes a new online charging session for the call between the calling user and the refer-to user, when applicable.

#### 2.1.3 Ringing before Call Established to Refer-To User

The MTAS receives `180 Ringing` from the refer-to user. The MTAS sends an announcement with the Ring Back Tone (RBT) to the calling user. When the refer-to user answers, the MTAS disconnects the announcement with the RBT. The call is established between the calling user and the refer-to user. The MTAS establishes a new offline charging session for the call between the calling user and the refer-to user, when applicable.



### 2.1.4 Early Media before Call Established to Refer-To User

The MTAS receives `183 Progress` with a Session Description Protocol (SDP) offer from the refer-to user. The MTAS sends `REINVITE` to the calling user with the SDP offer. The MTAS receives the SDP answer from the calling user. The MTAS sends the SDP answer in Provisional Response ACKnowledgement (PRACK) to the refer-to user. When the refer-to user answers the call is established between the calling user and the refer-to user. The MTAS establishes a new offline charging session for the call between the calling user and the refer-to user, when applicable.

### 2.1.5 Refer-To User Busy

MTAS receives `486 Busy` from the refer-to user. The MTAS sends an announcement with the busy tone to the calling user. The MTAS establishes a new offline charging session and terminates any ongoing charging session for the call between the calling user and the refer-to user, when applicable.

### 2.1.6 Charging for Operator Controlled Transfer

For information on the charging for successful and unsuccessful communication sessions, refer to *Diameter Offline Charging in MTAS* and *Diameter Online Charging in MTAS*.

The following service-specific Attribute-Value Pairs (AVPs) are included on the charging session to the User Agent Client (UAC) refer-to user.

- Supplementary-Service-Information AVP – indicating OCT (3500)
- Related-ICID AVP with the IMS Charging Identifier (ICID) value for the call between User Agent Calling (UA-A) and the Operator Transferor
- Service-Specific-Info AVP with the Service-Specific-Type set to Primary Call Type, and Service-Specific-Data AVP set to Directory-Assistance (only online charging)
- Call-Type AVP is set to Directory Assistance (only offline charging)

For offline charging, the AVPs are included in the Apply Charging Report (ACR) `Start Record` message generated for a successful communication session, or in the ACR `Event Record` message generated for an unsuccessful communication session setup. For further details of the offline charging actions performed by MTAS, refer to *MTAS Announcement Management Guide*.

For online charging, the AVPs are included in the Credit Control Request (CCR) `Initial Request` message generated for a successful communication session.

For more information about offline and online charging, refer to *Diameter Offline Charging in MTAS* and *Diameter Online Charging in MTAS*.





## 2.2 Interaction with Other Services

This section describes the OCT interactions with other services.

### 2.2.1 Conference or Three Party

The MTAS rejects a `REFER` request from the terminating network when it is a multi-party session.

### 2.2.2 Call Completion

It is not possible to make an OCT when the call is established owing to the Call Completion.

### 2.2.3 Communication Diversion

It is not possible to make an OCT when the call is established owing to the Communication Diversion. Adding phone numbers to the Operator Transferor in the Dynamic Blacklist is recommended.

### 2.2.4 Operator Controlled Transfer

It is not possible to make an OCT on an operator-controlled transferred call.





## 3 OCT Service Configuration

The OCT service is controlled by the *MtasOct* Managed Object (MO). An overview of the *MtasOct* MO structure is shown in Figure 1.

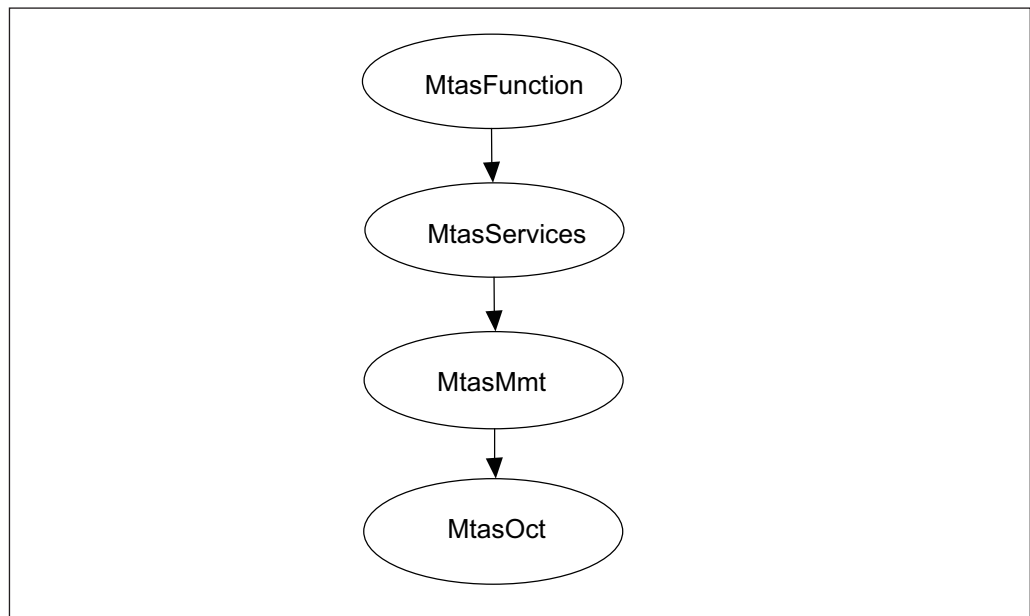


Figure 1 *MtasOct* MO Structure Overview

For configurable MOs and attributes related to the OCT service, refer to *Managed Object Model (MOM)*.

### 3.1 OCT Administrative State Configuration

The OCT service is enabled by setting the `mtasOctAdministrativeState` attribute in the *MtasOct* MO to 1 (Unlocked).

If the `mtasOctAdministrativeState` attribute is set to 0 (Locked), no OCT service is provided by the MTAS.

### 3.2 Configuration Activities

#### Activity:

Defines the list of phone numbers that can be assisted by the OCT service. The phone number must be an Operator Service Number (OSN), or a National Significant Number (NSN).



Attribute: `mtasOctPhoneNumber`

**Activity:**

Defines the value of the operator-named announcement to be played when the OCT service plays the Ring Back Tone.

Attribute: `mtasMmtLocalRingbackAnnouncementName`

**Activity:**

Defines the value of the operator-named announcement to be played when the OCT service plays the busy tone.

Attribute: `mtasMmtBusyToneAnnouncementName`

**Activity:**

Defines the value of the operator-named announcement to be played when the target of OCT services final response is 4xx, 5xx, or 6xx, except 486.

Attribute: `mtasMmtGenericFaultAnnouncementName`

**Activity:**

Defines the content of the Associated Number string in the Service-Specific-Data AVP for online charging. When set to **TRUE**, the string is the Passport Unique ID (PUID) of the calling user. When set to **FALSE**, the string is the phone number in the initial **INVITE** URI, matching a phone number defined by `mtasOctPhoneNumber`.

Attribute: `mtasChargingProfileDisableOCTMatchedDigits`

**Activity:**

Enables/disables the including of SDP-offer in initial **INVITE** sent to refer-to target.

Attribute: `mtasOctOfferEstablishedMediaTypesToTarget`.

### 3.3 Phone Number Configuration

The phone number to configure must be an OSN or NSN in the Number Normalization. For more information, refer to *MTAS Number Normalization Management Guide*.

### 3.4 Announcement Configuration

For information on announcement handling and OCT announcement attributes, refer to *MTAS Announcement Management Guide*.



## 4 Performance Management

For measurements related to the OCT service, refer to *Managed Object Model (MOM)*.





## 5 Fault Management

The OCT service has no alarms.