

# MTAS Service Management Guide

## MTAS

---

### USER GUIDE

**Copyright**

© Ericsson AB 2016. 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

|          |   |           |
|----------|---|-----------|
| <b>1</b> | <b>Introduction</b>                     | <b>1</b>  |
| 1.1      | Prerequisites                           | 1         |
| <b>2</b> | <b>Overview</b>                         | <b>3</b>  |
| 2.1      | Services                                | 5         |
| <b>3</b> | <b>Activate Service</b>                 | <b>19</b> |
| <b>4</b> | <b>Service Deactivation</b>             | <b>21</b> |
| 4.1      | Deactivate Service Immediately          | 21        |
| 4.2      | Deactivate Service Gracefully           | 21        |
| <b>5</b> | <b>Service Parameters Configuration</b> | <b>23</b> |





# 1 Introduction

This document provides a short description of each service in the MTAS, and how to configure these services.

## 1.1 Prerequisites

This section describes the prerequisites that must be fulfilled. 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

To enable basic services in the MTAS, the MMTel license must be installed. More advanced services also require other licenses to be installed.

For more information about the MTAS licenses, refer to *MTAS Licenses*.

### 1.1.2 Documents

Before any of the procedures in this document are carried out, the following documents must be read and understood:

- *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

This section describes the following supported MTAS services:

- Abbreviated Dialing
- Address Policing
- Advice of Charge
- AS Interworking
- Calling Party Category
- Call Return
- Carrier Pre-Select
- Carrier Select
- Communication Barring
- Communication Completion
- Communication Diversion
- Communication Waiting
- Conference
- Customized Alerting Tones
- Dialed Number Mapping
- Dial Plan
- Dial Tone Management
- Distinctive Ring
- Emergency Call Notification
- Explicit Communications Transfer
- Flexible Communication Distribution
- Flexible Service Format Selection
- Gateway Model
- Generic Announcement
- Group Call Admission Control
- Hold Communication



- Hotline
- Identity Presentation
- Japanese Charging
- Malicious Communication Identification
- Multimedia Telephony
- Multiple Languages Support
- Network Announcement
- Network Provided Ring Back Tone
- Number Portability
- Parlay X
- Parlay X in MMTel
- Priority Call
- Session Transfer to Own Device
- Short Number Dialing
- Single Radio Voice Call Continuity
- Supplementary Service Codes
- Three Party
- User Call Admission Control
- Video Fallback to Audio
- Wholesale

For detailed descriptions of all attributes for the configuration of the services, refer to *Managed Object Model (MOM)*.

Some features in the services have dependencies to other subsystems, such as charging and the Media Resource Function Controller (MRFC). Examples of such features are announcement and conference, which have dependencies to the MRFC, and to the external Media Resource Function Processor (MRFP) node.

For more information about the services providing announcement and announcement configuration, refer to *MTAS Announcement Management Guide*.

For more information about the MRFP and how to configure the MRFP in the MRFC, refer to *MTAS Media Control Management Guide*.





## 2.1 Services

Each service in an MTAS node is described by a service Managed Object (MO) that holds attributes to define the behavior of that particular service. The administrative state of the MO controls whether the service is available to the network. A reference to a charging profile defines the charging behavior for the service.

The *MtasServices* MO embraces all of the other services, and its structure is created by the MTAS node. Hence, the MO and the status of the *MtasServices* MO cannot be changed. Each service MO is used to enable and disable a particular service in the MTAS node.

For most of the services, a valid license must be installed to enable the service. For more information about the licenses, refer to *MTAS Licenses*.

This release of the MTAS contains only one service format, which is the IMS Multimedia Telephony (MMTel) service format.

Each service for an *MtasServices* MO is activated by setting its `...AdministrativeState` attribute to 1 (Unlocked).

### 2.1.1 Abbreviated Dialing

The Abbreviated Dialing (AbDial) service enables a subscriber to call an assigned, stored number by dialing a short digit sequence.

For more information about how to configure the Abbreviated Dialing service, refer to *MTAS Abbreviated Dialing Management Guide*.

### 2.1.2 Address Policing

The Address Policing (AP) service checks the format of the destination address entered by a caller, and rejects the communication attempt if the check fails.

For more information about how to configure the Address Policing service, refer to *MTAS Address Policing Management Guide*.

### 2.1.3 Advice of Charge

The Advice of Charge (AoC) service allows the served user to be informed of SIP session-related charging information. AoC-S gives the applicable tariff at the start of a session and when the tariff changes. AoC-D gives the cost of a session that has been incurred to date and upon session completion. AoC-E gives the cost of a session at session completion.

For more information about how to configure the AoC service, refer to *MTAS Advice of Charge Management Guide*.



## 2.1.4 AS Interworking

The Application Server (AS) Interworking service allows the operator to install the MTAS in a network that includes ASs that do not comply with the current standards. The service allows interworking with ASs that use the `Diversion` header rather than the `History-Info` header, and use an asserted `From` header rather than a `P-Asserted-Identity` header.

The `mtasAsIwAssertedId` attribute is used to configure if the `P-Asserted-Identity` is copied to the `From` header and if so, whether the value copied is the `sip:` or `tel:` URI.

For more information about how to configure the AS Interworking, refer to *MTAS Application Server Interworking Management Guide*.

## 2.1.5 Calling Party Category

The Calling Party Category (CPC) service allows the operator to assign CPC values to users. When the user initiates a call, the originating MTAS adds the user's CPC value to the `P-Asserted-Identity` header. When the served user causes the call to become transit, the CPC value is added to the diverting user's URI in the `History-Info` header.

CPC value for the user is stored in the operator part of the user's transparent service data and can be provisioned by the operator using CAI3G.

The charging messages generated by MTAS include the CPC value.

For more information about how to configure the CPC, refer to *MTAS Call Return Management Guide*.

## 2.1.6 Call Return

The Call Return service saves information (such as TEL URI and SIP URI) about the last incoming call and provides the end user with the possibility to obtain this information using a Supplementary Service Code (SSC). The user can also call back to the user of the incoming call.

For more information about how to configure the Call Return service, refer to *MTAS Calling Party Category Management Guide*.

## 2.1.7 Carrier Pre-Select

The Carrier Pre-Select (CPS) service allows the operator to set up data on behalf of the end user to override the default carrier and select a carrier based on the call type, where the call type is determined by the destination phone number. There are two types of CPS services provided, CPS and CPS Rn.



For more information about how to configure the CPS and CPS Rn services, refer to *MTAS Carrier Select and Carrier Pre-Select Management Guide*.

### 2.1.8 Carrier Select

The Carrier Select (CS) service allows an end user to override the default carrier and signal which carrier to use for a particular call. There are two types of CS services provided, CS and CS Rn.

For more information about how to configure the CS and CS Rn services, refer to *MTAS Carrier Select and Carrier Pre-Select Management Guide*.

### 2.1.9 Communication Barring

The Communication Barring (CB) service enables a served user to have the network disallow the setup of certain communications. Which communications are allowed and which are disallowed is determined by the served user's CB rule sets.

The following CB services are offered to the subscribers:

- Outgoing Communication Barring (OCB)
- Incoming Communication Barring (ICB)
  - Dynamic Black List
- Anonymous Communication Rejection (ACR)
- Barring Programs

For more information about how to configure the CB service, refer to *MTAS Barring and Dial Plan Services Management Guide*.

### 2.1.10 Communication Completion

The Communication Completion (CC) service includes Communication Completion to Busy Subscriber (CCBS) and Communication Completion by No Reply (CCNR).

The CCBS service enables a caller to complete communication to a busy subscriber after the busy called party becomes available to receive another call. After the busy party becomes available, the original caller is alerted by MTAS. When the original caller answers, a short recall announcement is played to the caller, then MTAS automatically attempts to establish the "Communication Completion" call to the original called party.

The CCNR service enables a caller who has attempted to make a call to a subscriber, who does not answer the call, to activate a CC request against that subscriber.



For more information about how to configure the CC service, refer to *MTAS Communication Completion Management Guide*.

### **2.1.11 Communication Diversion**

The Communication Diversion CDIV service enables a served user to have the network redirect communication to another user. This applies to communications addressed to the served user, that meet conditions in the served user's CDIV rule set, and to communications redirected by the served user's User Agent (UA).

For more information about how to configure the CDIV service, refer to *MTAS Communication Diversion Management Guide*.

### **2.1.12 Communication Waiting**

The Communication Waiting (CW) service enables a subscriber to be informed, while engaged in a communication session, that there is another communication session waiting. The subscriber can choose to accept, reject, or ignore the waiting communication session.

The CW service can operate in different modes, Normal mode and Alternative Mode 1 and 2.

For more information about how to configure the CW service, refer to *MTAS Communication Waiting Management Guide*.

### **2.1.13 Conference**

The conference service enables the subscribers to start a conference and invite other users to join the conference. There are two types of conference services, Ad-hoc and Scheduled. The Ad-hoc Conference allows users to start an instant conference. The creator of the conference is called the Conference Creator (CC) and is automatically joined in the conference; the participants are called Conference Participants (CPs).

The Scheduled Conference allows the users to schedule and create a conference in advance and send invitations to CPs before the conference takes place. The CPs can then dial in to the conference at a scheduled time. In this case, the conference creator is considered as the Conference Owner (CO) and must not actually join the conference.

For more information about how to configure the Ad-hoc and Scheduled Conference services, refer to the following documents:

- *MTAS Ad-hoc Conference Management Guide*
- *MTAS Scheduled Conference Management Guide*



## 2.1.14 Customized Alerting Tones

The Customized Alerting Tones (CAT) service is an IMS terminating service that triggers an external Customized Alerting Tones Server (CAT-S) to generate a CAT signal (customized welcome message or selected music) towards the caller while the served user is alerted.

For more information about how to configure the CAT service, refer to *MTAS Customized Alerting Tones Management Guide*.

## 2.1.15 Dialed Number Mapping

The Dialed Number Mapping (DNM) service supports seven-digit and short-code dialing services for the subscribers within North American Numbering Plan (NANP). The DNM service is focused to serve mobile subscribers.

For more information about how to configure the DNM service, refer to *MTAS Dialed Number Mapping Management Guide*.

## 2.1.16 Dial Plan

The Dial Plan service allows the operator to restrict the set of addresses that users on this node can contact.

For more information about how to configure the Dial Plan service, refer to *MTAS Barring and Dial Plan Services Management Guide*.

## 2.1.17 Dial Tone Management

The Dial Tone Management (DTM) service enables a user to receive a special dial tone indication when Communication Forwarding Unconditional (CFU) is active and standard dial tone is otherwise.

The DTM service is activated by setting the `mtasDtmAdministrativeState` to 1 (Unlocked).

To enable this service, the DTM license must be installed, refer to *MTAS Licenses*.

### 2.1.17.1 Operate Mode Configuration

Depending on the operate mode, the DTM is able to send one or two DTM NOTIFY messages based on the configuration and terminals used in the network.

The `mtasDtmOperateMode` attribute specifies the DTM operate mode.



The operate modes are as follows:

- Normal mode – Content-Type: application/simservs+xml is used in the NOTIFY
- Alternate mode 1 – Content-Type: text/XML is used in the NOTIFY
- Alternate mode 2 – Two independent NOTIFY's are sent, one with Content-Type: application/simservs+xml and one with Content-Type: text/XML

### 2.1.18 Distinctive Ring

The Distinctive Ring service (DR) enables a subscriber to specify different ring tones for its IMPUs which are in the same IRS. For more information about how to configure the Distinctive Ring service, refer to the following document:

For more information about how to configure the Emergency Call Notification service, refer to *MTAS Distinctive Ring Management Guide*.

### 2.1.19 Emergency Call Notification

The Emergency Call Notification service enables notifications for emergency calls. Based on SIP NOTIFY received from the Call Session Control Function (CSCF), the MTAS indicates the start and stop of an emergency call to the Online Charging System (OCS) over the Ro interface.

For more information about how to configure the Emergency Call Notification service, refer to *MTAS Emergency Call Notification Management Guide*.

### 2.1.20 Explicit Communications Transfer

The Explicit Communications Transfer (ECT) service enables a user involved in two separate calls with two users to connect these two users, while the user leaves the communication.

For more information about how to configure the ECT service, refer to *MTAS Explicit Communication Transfer Management Guide*.

### 2.1.21 Flexible Communication Distribution

The Flexible Communication Distribution (FCD) service is an IMS terminating service that rings multiple targets either serially or in parallel, based on user configuration rules. The FCD service can ring one to ten targets as a result of incoming communication. FCD targets can be IMS or non-IMS users.

For more information about how to configure the FCD service, refer to *MTAS Flexible Communication Distribution Management Guide*.



### 2.1.22 Flexible Service Format Selection

The Flexible Service Format Selection (FSFS) service makes it possible for other application servers before MTAS in the IMS Centralized service (ISC) chain to influence the set of services to be executed in MTAS for a specific session.

For more information about how to configure the FSFS service, refer to *MTAS Flexible Service Format Selection Management Guide*.

### 2.1.23 Gateway Model

The Gateway Model (GM) service allows the MTAS to map events received from the terminating user, in one or several dialogs, to the originating user in one single dialog. This service is used when the User Agents (UAs) in the network do not handle multiple early dialogs.

For more information about how to configure the GM service, refer to *MTAS Gateway Model Management Guide*.

### 2.1.24 Generic Announcement

The Generic Announcement (GA) service allows the operator to associate a name with a combination of announcement parameters, so that the name can be used in other services to control the playing of an announcement.

For more information about how to configure the GA service, refer to *MTAS Generic Announcement Management Guide*.

### 2.1.25 Group Call Admission Control

The Group Call Admission Control (GCAC) service enables the operator to restrict the following:

- The number of all sessions all the users in the group are involved in.
- The number of all originating sessions all the users in the group are involved in.
- The number of all terminating sessions all the users in the group are involved in.
- The number of active sessions all the users in the group are involved in.
- The number of active originating sessions all the users in the group are involved in.
- The number of active terminating sessions all the users in the group are involved in.



For more information about how to configure the GCAC service, refer to *MTAS Call Admission Control Management Guide*.

### **2.1.26 Hold Communication**

The Hold Communication service enables a user to suspend active media streams of an established IP multimedia session, and resume the media streams later. The hold function supports announcements with communication hold and resume. Typical reasons to hold communication are a need for privacy, or related to placing a session inquiry made from a user in the Public Switched Telephone Network (PSTN).

This service is always active, and cannot be deactivated.

For more information about how to configure the Hold Communication service, refer to *MTAS Hold Communication Management Guide*.

### **2.1.27 Hotline**

The Hotline service is an automatic signaling service providing a point-to-point communication link. The call is automatically directed to a preselected destination, the so called hotline number, without any additional action by the user when the user equipment goes off-hook. Emergency calls can, for example, be configured as a Hotline service, where the user is automatically directed to the emergency call destination without having to dial the emergency number.

For more information about how to configure the Hold Communication service, refer to *MTAS Hotline Service Management Guide*.

### **2.1.28 Identity Presentation**

The following Identity Presentation services are offered to the subscribers:

- Originating Identification Presentation (OIP)
- Originating Identification Restriction (OIR)
- Terminating Identification Presentation (TIP)
- Terminating Identification Restriction (TIR)
- Calling Name Identity Presentation (CNIP)
- Originating Calling Name Identity Presentation (OCNIP)
- Flexible Identity Presentation (FIP)

The services enable presentation, as well as restriction, of the identities of participants to the other participants in a communication session.





For more information about how to configure the Identity Presentation service, refer to the following documents:

- *MTAS Identity Presentation Management Guide*
- *MTAS Calling Name Identity Presentation Management Guide*
- *MTAS Originating Calling Name Identity Presentation Management Guide*

## 2.1.29 Japanese Charging

The Japanese Charging (JC) service realizes Interconnection Charge Billing System (ICBS) and Flexible Charging (FCH) features in IMS required by the Japanese market. The JC service fetches and adds ICBS to SIP messages, to `INVITE` on originating MTAS and `18x/200 OK (INVITE)` on terminating MTAS, and reports the data over the Rf interface for successfully established calls. Flexible charging when received in originating MTAS is reported over the Rf interface for successful calls.

Flexible Charging is also reported over the Rf-interface for Telephone Directory Service (TDS) queries.

For more information about how to configure JC, refer to *MTAS Japanese Charging Management Guide*.

## 2.1.30 Malicious Communication Identification

The Malicious Communication Identification (MCID) service enables the subscriber to register a recent incoming communication as malicious. The MTAS uses Diameter messages to convey details of the malicious communication to the Communication Details Server (CDS). Each user provisioned with the MCID service can be provisioned in one of two modes, permanent mode or temporary mode.

For more information about how to configure the MCID service, refer to *MTAS Malicious Communication Identification Management Guide*.

## 2.1.31 Multimedia Telephony

The Multimedia Telephony (MMTel) service represents the basic call service. It contains all configurations that are part of the MMTel, but not specific to a service. The MMTel service also contains the unregistered subscriber service that triggers an announcement for calls to an unregistered subscriber.

For more information about how to configure the MMTel service, refer to *MTAS MMTel Management Guide*.



### 2.1.31.1 Configuring SIP Error Response Codes from MTAS

The `mtasMmtSendSipTermResponse` attribute is used to set or change which SIP error response the MMTel service to send when an announcement has been played from the terminating MTAS. If this attribute is set to 0, the SIP error code 480 (Temporary unavailable) is sent.

### 2.1.31.2 Cause Value Configuration

The MTAS can be configured to include a Q.850 cause value and corresponding cause code in a Reason header that is inserted in the SIP 183 Session Progress provisional response sent to the User Agent A, generated by the MMTel service.

To specify the cause value, change the attribute `mtasMmtUnregAnnCauseValue` for the MMTel service. If the attribute is set to 0, no cause value is included.

### 2.1.31.3 Terminating Unregistered Behavior Configuration

The `mtasMmtTermUnregBehavior` attribute is used to define the criteria for determine when services that are dependent on the unregistered state are to be invoked. Normal behavior is to invoke those services when a SIP 480 is received as a response to an initial invite sent to S-CSCF after an initial SIP INVITE has been received in the terminating MTAS on the terminating unregistered SIP port.

## 2.1.32 Multiple Languages Support

The Multiple Languages Support (MLS) service supports sending of announcements and voice prompts to the served user according to the user's provisioned language preferences.

The served user is the caller in the originating MTAS and the called party in the terminating MTAS.

The support of languages in Media Resource Function Controller (MRFC) is subject to the MLS license. Languages for announcements played on order of the embedded MRFC are specified by the content of the language prefix inserted in front of the announcement code.

For more information about how to configure the MLS service, refer to *MTAS Multiple Languages Management Guide*.

## 2.1.33 Network Announcement

The Network Announcement (NA) service enables the operator to play an announcement to a calling user when fault situations occur during an MMTel session establishment, for example, congestion or wrong number. It is possible to configure if an announcement is to be played depending on the received SIP error status code and which announcement to be played. It is also



possible to configure if the announcement is to be played from the originating or terminating MTAS.

The announcement can be assigned to audio, video, or audio-video announcement.

For more information about how to configure the NA service, refer to *MTAS Network Announcement Management Guide*.

### **2.1.34 Network Provided Ring Back Tone**

The Network Provided Ring Back Tone (RBT) service is an IMS terminating service that triggers an MRFP to generate an RBT signal (customized welcome message or ringing tone) towards the caller while the served user is alerted. The tone is common for all the IMS subscribers and is only configurable by an operator.

For more information about how to configure the RBT service, refer to *MTAS Network Provided Ring Back Tone Management*.

### **2.1.35 Number Portability**

The Number Portability (NP) service allows telephony subscribers to keep their telephone number when they change service provider, move to a new location, or change the subscribed services.

The NP service identifies whether the other party URI (only if it is in either tel URI or embedded tel URI format) is within the original or donor network, or has been ported to another network. If the other party URI has been ported to another network, the NP service conveys this NP-related information to the charging system.

For more information about how to configure the NP service, refer to *MTAS Number Portability Management Guide*.

### **2.1.36 Parlay X**

The Parlay X service is not part of the MMTel service format, they execute in a separate Parlay X service format.

The MTAS partly supports two Parlay X interfaces: Call Notification and Third-Party Call.

Call Notification enables a Parlay X application, external to MTAS, to translate the originally called party number into a new target number.

Third-Party Call enables a Parlay X application, external to MTAS, to initiate a call setup between two parties.



For more information about how to configure the Parlay X service, refer to *MTAS Parlay X Management Guide*.

### **2.1.37 Parlay X in MMTel**

Compared to the Parlay X service, the Parlay X in MMTel service is a part of the MMTel service format and only supports the Call Notification interface. Third-Party Call is not supported.

For more information about how to configure the Parlay X in MMTel service, refer to *MTAS Parlay X in MMTel Management Guide*.

### **2.1.38 Priority Call**

The Priority Call service assigns a priority indication in the outgoing requests originated by a subscriber provisioned with the service.

For more information about how to configure the Priority Call service, refer to *MTAS Priority Call Management Guide*.

### **2.1.39 Session Transfer to Own Device**

The Session Transfer to Own Device (STOD) is an IMS service which allows an originating and terminating served user to transfer an ongoing communication session from one device to another device belonging to the same user.

For more information about how to configure the STOD service, refer to *MTAS Session Transfer to Own Device Management Guide*.

### **2.1.40 Short Number Dialing**

The Short Number Dialing (SND) service provides the members in a group the possibility to call each other by means of short numbers common to all members of the group.

The SND service affects the routing, for example, to route a call from the caller to the receiver of the call based on the SND identity in the Request-URI. It also affects the presentation and charging.

For more information about how to configure the SND service, refer to *MTAS Short Number Dialing Management Guide*.

### **2.1.41 Single Radio Voice Call Continuity**

The Single Radio Voice Call Continuity (SRVCC) service allows voice call continuity between IMS over Packet Switched (PS) access and Circuit Switched (CS) access, for calls that are anchored in IMS when the User Equipment (UE)



is capable of transmitting or receiving on only one of those access networks at a given time.

For more information about how to configure the SRVCC service, refer to *MTAS SRVCC Management Guide*.

#### **2.1.42      Supplementary Service Codes**

The SSC is a service that enables users to gain access to and to control supplementary services, by using service code commands. The SSC service is independent of the user access type, and includes all necessary procedures to activate, deactivate, and interrogate a supplementary service.

For more information about how to configure the SSC service, refer to *MTAS Supplementary Service Codes Management Guide*.

#### **2.1.43      Three Party**

The Three Party (3PTY) service enables a user involved in two separate calls with two users to connect these two users into a 3PTY call, while the initial two calls are suspended.

For more information about how to configure the 3PTY service, refer to *MTAS Three Party Management Guide*.

#### **2.1.44      User Call Admission Control**

The User Call Admission Control (UCAC) service keeps the following counts for each user:

- The number of all originating sessions a served user is involved in.
- The number of all terminating sessions a served user is involved in.
- The number of active originating sessions a served user is involved in.
- The number of active terminating sessions a served user is involved in.
- The number of waiting sessions a served user has.

For more information about how to configure the UCAC service, refer to *MTAS Call Admission Control Management Guide*.

#### **2.1.45      Video Fallback to Audio**

The Video Fallback to Audio service improves the user experience if the originating multimedia User Equipment (UE) calls a destination network that does not support media capability negotiation based on SDP offer/answer protocol.



For more information about how to configure the Video Fallback to Audio service, refer to *MTAS Video Fallback to Audio Management Guide*.

#### **2.1.46**

#### **Wholesale**

The Wholesale service allows the network owner to sell the services of its network to other, “virtual” operators; and for each virtual operator to be able to configure each service as it seems fit.

For more information about how to configure the Wholesale service, refer to *MTAS Wholesale Support Management Guide*.



## 3 Activate Service

Each of the MOs has an attribute handling the administrative state. The service associated to an MO can be activated by unlocking the corresponding administrative state.

To activate a service:

1. Verify that the correct parameters are set in the corresponding MO. For a complete description of the parameters, refer to *Managed Object Model (MOM)*.
2. Verify that the `mtasFunctionAdministrativeState` attribute for the *MtasFunction* MO is 1 (Unlocked), refer to *MTAS Node Management Guide*.
3. Verify that the `mtasMmtAdministrativeState` attribute in the *MtasMmt* MO is 1 (Unlocked).
4. Navigate to the MO for the service to be activated.
5. Set the `...AdministrativeState` or `...AdminState` attribute associated to the MO to 1 (Unlocked).
6. Perform a backup, as described in *Create Backup*.

Result: The service is activated, and the `...AdministrativeState` or `...AdminState` attribute associated to the activated MO is set to 1 (Unlocked).







## 4 Service Deactivation

The services can be divided into two groups, depending on by which method the service is deactivated in the MTAS. The supplementary services are also included.

Both the immediate deactivation method and the graceful deactivation method allow the ongoing traffic presently using the deactivated service to continue, at the same time as the activation of new such traffic is disallowed. Services that use the session-based functions in the MTAS, use the graceful deactivation method. Each service that can be gracefully deactivated can also be deactivated immediately.

**Note:** The Hold service cannot be deactivated. All other MTAS services can be deactivated immediately.

The following services can be deactivated gracefully:

- MtasConf
- MtasMmtel

### 4.1 Deactivate Service Immediately

To deactivate a service immediately:

1. Navigate to the MO for the service to be deactivated immediately.
2. Set the `...AdministrativeState` or `...AdminState` attribute associated to the MO to 0 (Locked).
3. Perform a backup, as described in *Create Backup*.

Result: The service is deactivated, and the `...AdministrativeState` or `...AdminState` attribute associated to the deactivated MO is set to 0 (Locked).

### 4.2 Deactivate Service Gracefully

To deactivate a service gracefully:

1. Navigate to the MO for the service to be deactivated gracefully.
2. Set the `...AdministrativeState` attribute associated to the MO to 2 (Shuttingdown).
3. Perform a backup, as described in *Create Backup*.



**Result:** The service is deactivated, and the `...AdministrativeState` attribute associated to the deactivated MO is set to 0 (Locked).

**Note:** The status of the `...AdministrativeState` attributes associated to the MOs that have now been simultaneously deactivated, remains unchanged.

An activation of the MO, by setting the associated `...AdministrativeState` attribute to 1 (Unlocked), results in the services having their associated `...AdministrativeState` attribute set to 1 (Unlocked) also being activated.



## 5 Service Parameters Configuration

It is possible to configure the parameters relating to the services, for example, adding a charging profile or enabling and disabling audio announcements.

For a complete description of the parameters relating to service configuration, refer to *Managed Object Model (MOM)*.

**Note:** The configurable parameters in the MTAS are also described as attributes belonging to a Managed Object (MO).