

# MTAS Dialog Event Notifier Management Guide

## MTAS

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### USER GUIDE

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# 1 Introduction

This document describes how to configure the Dialog Event Notifier (DEN) 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

The Dialog Event Notifier service does not check for a license. To enable the DEN service, no specific license must be installed. Instead, the activation of the service is initiated with the `mtasDenAdministrativeState` Configuration Management (CM) attribute which is to be set to `TRUE` in the *MtasDen* Managed Object Class (MOC).

### 1.1.2 Documents

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

- *Managed Object Model (MOM)*
- *Ericsson Command-Line Interface User Guide*

### 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

The Multimedia Telephony (MMTel) Application Server (AS) allows out-of-dialog subscription to Dialog Events as defined in [RFC 4235](#). Each device sends an explicit `SUBSCRIBE` request to the number of the subscriber. The MMTel AS maintains separate subscriptions for each device. Devices refresh the subscription periodically.

### 2.1 Subfunctions

The subfunctions of the DEN service are included in this section.

#### 2.1.1 Subscription

The DEN service supports out-of-dialog subscription by receiving an explicit `SUBSCRIBE` request from the client. Upon successfully accepting a subscription, MMTel AS starts the expiration timer and sends a `NOTIFY` request immediately to communicate the current dialog state to the subscriber.

#### 2.1.2 Un-subscription

The DEN service considers the `SUBSCRIBE` message from an active subscriber containing Expires set to 0 as un-subscription. Receiving such `SUBSCRIBE` request, MMTel AS stops the expiration timer and sends a 200 OK response with inserting Expires header value of 0.

The successful un-subscription triggers a final `NOTIFY` message. This request contains Subscription-State header with a value of “terminated” and a “reason” parameter with a value of “time-out”.

#### 2.1.3 Refreshing the Subscription

The subscriber device can refresh its subscription by sending a re-`SUBSCRIBE` request with non-zero Expires header. With a successful re-`SUBSCRIBE` request, the DEN service extends the subscription expiration time with the value of the Expires header and MMTel AS sends 200 OK response inserting the Expires header.

The refreshing `SUBSCRIBE` request triggers a new immediate `NOTIFY` message where the Subscription-State is set to “active” and the XML document is empty.



### 2.1.4 Polling the Subscription

The DEN service accepts the out-of-dialog SUBSCRIBE request with an Expires header containing zero coming from a subscriber without persistence subscription. Upon receiving of this SUBSCRIBE request, DEN sends a NOTIFY request containing the dialog states on the other devices of the served user. The NOTIFY message contains a Subscription-State header with a value of “terminated”, and a reason parameter with a value of “time-out”, but the XML document is empty.

Although the polling and unsubscribing SUBSCRIBE both contains Expires header with zero value, the significant difference between the requests is that polling SUBSCRIBE does not include tag parameter in the To header field.

### 2.1.5 Subscription Expiry

If no refreshing SUBSCRIBE is received before its expiration time, the subscription is removed. When removing the subscription, MMTel AS sends a terminating NOTIFY request for expired subscription and removes subscription at the end of the NOTIFY transaction. The NOTIFY request includes Subscription-state value of “terminated” to inform the device that the subscription is being removed. If such a request is sent, the Subscription-state header field contains a “reason=time-out” parameter.

### 2.1.6 Notification about the Dialog State Transition

When more devices of a served user subscribed to dialog notification events, and changes of the dialog state of a particular device occur (call establishment and termination, change in media type or direction), the other devices get notification about the changes in the XML document included in a NOTIFY request.

### 2.1.7 Shared Appearances Element in Call Notifications

The DEN service can include shared appearances, that is, <exclusive> element in an XML document of notification messages as described in [RFC 7463](#) if it is configured. Setting the <exclusive> element to value TRUE of a specific call dialog indicates restrictions in call handling operations of the dialog, for example call pull.





## 3 Dialog Event Notifier Service Configurations

The DEN service is controlled by the *MtasDen* MO.

### 3.1 DEN Administrative State Configuration

The DEN service is enabled by setting the `mtasDenAdministrativeState` attribute in the *MtasDen* MO to `TRUE`. If the `mtasDenAdministrativeState` is set to `FALSE`, the DEN service is not provided by MTAS.

#### 3.1.1 Configuration of DEN Timer

The DEN service contains configuration options for the minimum, maximum and default value of the subscription session.

The minimum value of the refresh timer of subscription sessions for the DEN service is defined by the `mtasDenMinTimer` attribute in the *MtasDen* MO.

The maximum value of the refresh timer of subscription sessions for the DEN service is defined by the `mtasDenMaxTimer` attribute in the *MtasDen* MO.

The default value of the refresh timer of subscription sessions for the DEN service is defined by the `mtasDenDefaultTimer` attribute in the *MtasDen* MO.

#### 3.1.2 DEN XML Elements Configuration

The DEN service contains configuration options for some XML elements in `NOTIFY` requests sent by the DEN service.

The `mtasDenSAExclusiveElementReported` attribute controls if the `<exclusive>` element is present in the XML document of the `NOTIFY` request. Setting the `mtasDenSAExclusiveElementReported` attribute to value `TRUE` of a specific call dialog indicates restrictions in call handling operations of the dialog, for example call pull. The attribute change takes effect for the next subscription. The default value is `FALSE`.

The `mtasDenMediaAttributesReported` attribute controls if the `<mediaAttributes>` element and its subelements are present in the XML document of the `NOTIFY` request. If the attribute is `FALSE`, the `<mediaAttributes>` element and its subelements are not included in the dialog information XML document. The administrative state change takes effect for the next subscription. The default value is `FALSE`.



### 3.1.3 Configuration of Maximum Number of Subscription Sessions

The maximum number of the subscription sessions per subscriber is set by the `mtasFunctionMaxNumberOfSubscriptionSessions` attribute in the *MtasFunction* MO.

### 3.1.4 Wholesale for DEN Configuration

The DEN service supports Wholesale. DEN is configurable on Virtual Telephony Provider level.

Wholesale for DEN is activated when the following attributes are set to 1 (Unlocked):

- The `vtasDenAdministrativeState` attribute in the *VtasDen* MO
- The `mtasDenAdministrativeState` attribute in the *MtasDen* MO

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



## 4 Performance Management

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





## 5 Fault Management

For alarms related to the DEN service, refer to *MTAS Alarm List*.