

MTAS Priority Services Management Guide

MTAS

USER GUIDE

Copyright

© Ericsson AB 2016–2018. 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	7
3	Priority Services Configuration	11
3.1	Priority Services Administrative State Configuration	11
3.2	Priority Call Termination on Low Credit Configuration	11
3.3	GETS Priority Services Configuration	11
4	Performance Management	25
5	Fault Management	27





1 Introduction

This document describes how to configure the Priority Services feature 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

To enable the Priority Services feature, the 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 Priority Services feature enables MTAS to operate as part of an IP Multimedia Subsystem (IMS) network, which uses the Government Emergency Telecommunications Service (GETS) priority scheme to ensure liable rescue communications in a disaster scenario.

The GETS scheme is defined in IMS Core Network Government Industry Requirements for National Security/Emergency Preparedness NGN Priority Services, Issue 2.0, January 2013.

Priority Services is a network feature that ensures priority handling of communication throughout nodes. Eligibility for priority is granted by other node, Serving Call Session Control Function (S-CSCF), or Session Border Gateway (SBG).

MTAS gives priority treatment and provides exemption from certain restriction policies for incoming communication sessions that have been initiated with priority. This is determined, based on presence of a valid Resource-Priority Header (RPH) Session Initiation Protocol (SIP) extension, in the initial INVITE of the session. According to the GETS scheme, five different priority levels are used above normal.

The GETS Priority Service is enhancement over Priority Services, where MTAS identifies the GETS Priority Service Call type based on the Request URI in the initial INVITE request and reports the GETS-specific charging information. Eligibility for the GETS Priority Service is granted by another node, Call Session Control Function (CSCF), SBG, or the GETS Application Server (GETS-AS). GETS-AS is the third-party Application Server.

2.1 Subfunctions

This section describes the following subfunctions:

- Priority session identification
- Resource priority treatment
- Propagate priority information
- Provide exemption
- GETS Priority Service Call Identification
- Configure GETS Priority Service



2.1.1 Priority Session Identification

Resource-prioritized sessions are identified by recognition and analysis of the RPH in a received initial INVITE. Level of priority is determined, and resource priority data are preserved with the session.

Priority Session Identification is specified according to [RFC 4412 \(February 2006\) Communications Resource Priority for the Session Initiation Protocol \(SIP\)](#) and IMS Core Network Government Industry Requirements for National Security/Emergency Preparedness NGN Priority Services, Issue 2.0, January 2013.

MTAS processes the RPHs if the “ETS.x” namespace is present, where value of x can be either 0 or 1. This value is not used beyond validation.

Five different levels of priority are determined based on the “WPS.y” namespace of the RPH, where y ranges from 0 (highest) to 4 (lowest).

2.1.2 Resource Priority Treatment

Session initiations with higher priority level are treated with higher priority.

Request priority treatment means that the load regulation mechanism does not reject higher priority requests, unless the load is so high that all normal and lower priority requests have been rejected.

Once a session is established, no in-session requests are rejected by the load regulation. This behavior is not depending on priority.

2.1.3 Propagate Priority Information

RPHs are forwarded to other SIP entities through IP Multimedia Service Control (ISC) and Ma interfaces. The priority value, that is preserved from the initial INVITE, is mapped to the Mr, Mp, Ro, and Rf interfaces, and to Sh-Pull messages of the Sh interface.

2.1.3.1 Priority Indication on H.248 Interface to MRFP

In H.248 messages to the Media Resource Function Processor (MRFP), the Priority context attribute contains the value mapped from the preserved priority data of the session, see Table 1.

Table 1 H.248 Priority Attribute Value Mapping

RPH WPS Attribute	H.248 Priority Attribute
WPS.0	15
WPS.1	14
WPS.2	13



RPH WPS Attribute	H.248 Priority Attribute
WPS.3	12
WPS.4	11

2.1.3.2 Resource Priority Level Indication on Mr Interface

SIP messages on Mr interface to MRFC contain an RPH that is based on the preserved resource priority data of the session.

2.1.3.3 Priority Indication on Ro and Rf Interfaces to Charging System

Diameter messages through Ro and Rf interface to Charging Systems contain a Session-Priority Attribute-Value Pair (AVP) as an element of the IMS-Information group AVP, with a priority value mapped from the preserved priority data for the session, see Table 2.

Table 2 Session Priority Attribute Value Mapping

RPH WPS Attribute	Session-Priority AVP
WPS.0	Priority-0
WPS.1	Priority-1
WPS.2	Priority-2
WPS.3	Priority-3
WPS.4	Priority-4

Diameter messages through Ro and Rf interface to charging systems also contain a Supplementary Service Information Attribute Value Pair (AVP) as an element of the Ericsson-Service-Information for the GETS Priority Service call, see Table 3.

Table 3 Supplementary Service Information Attribute Value Mapping

GETS Priority Service Call Type	Supplementary-Service -Identity	Supplementary-Service-Action
GETS-FC	GETS_FC_PRIORITY_SERVICE (5000)	Use of Service
GETS-AN	GETS_AN_PRIORITY_SERVICE (5001)	Use of Service
GETS-NT	GETS_NT_PRIORITY_SERVICE (5002)	Use of Service
GETS-FC+GETS-AN	GETS_FC_GETS_AN_PRIORITY_SERVICE (5003)	Use of Service
GETS-FC+GETS-NT	GETS_FC_GETS_NT_PRIORITY_SERVICE (5004)	Use of Service



2.1.3.4 Priority Indication in Sh-Pull Messages on Sh Interface to HSS

All Sh-Pull messages in a priority session contain a Session-Priority AVP with a priority value mapped from the preserved priority data for the session. The same mapping, as described in Section 2.1.3.3 Priority Indication on Ro and Rf Interfaces to Charging System on page 5, is applied.

2.1.4 Provide Exemption

The Priority Services feature provides exemption from several policies that would block non-prioritized sessions.

2.1.4.1 Exemptions from Charging Failure Handling

For priority sessions, the Charging Failure Handling configuration is overridden, so that the calls are not terminated because of charging link failures.

Depending on the configuration, it is possible to disable that the established resource prioritized calls are terminated because of credit consumption.

For Charging Failure Handling configuration, refer to [MTAS Charging Management Guide](#).

2.1.4.2 Exemptions from Subscription Failures on Sh Interface

When a user is to be registered upon a prioritized initial INVITE, user data is requested with the priority (see Section 2.1.3.4 Priority Indication in Sh-Pull Messages on Sh Interface to HSS on page 6), so that, in high load conditions, the Home Subscriber Server (HSS) can handle it accordingly. Then, the MTAS also sends a Sh-Subs-Notif message, to subscribe to possible changes in user data. Since this request cannot indicate priority, the HSS can fail to process it because of the same high load.

For non-prioritized calls, this failure prevents the call from being established. For priority calls, the MTAS continues establishing the session without subscription for user data changes.

2.1.5 GETS Priority Service Call Identification

The MTAS identifies the call type as the GETS Priority Service call type in the following type and the process accordingly:

- GETS-FC: The originating MTAS removes the GETS-FC prefix (for example, *272) from the initial INVITE request based on the configured GETS-FC prefix, marks the type of GETS Priority Service call to the GETS-FC and continue with the Number Normalization.



- GETS-AN/NT: The originating MTAS marks the type of the GETS Priority Service call to the GETS-AN or the GETS-NT, based on Request URI of the initial INVITE request and the configured GETS numbers.
- GETS-FC + GETS-AN/GETS-NT: The originating MTAS removes the GETS-FC prefix (for example *272) from the initial INVITE request, based on the configured GETS-FC prefix. MTAS marks the type of GETS Priority Service call to GETS-FC + GETS-AN or GETS-NT, based on Request URI of initial INVITE request and the configured GETS numbers.

2.1.6 Configure GETS Priority Service

Configure GETS Priority Service function is utilized by the operator to configure the GETS Priority Service at the node level.

2.2 Interaction with Other Services

This section describes how services interact with the Priority Services feature.

MTAS services update or set SIP dialog priorities, as follows:

— Ad-hoc Conference

The Ad-hoc Conference service can be configured as follows:

- GETS Priority Service disabled

Ad-hoc Conference Participant (CP) SIP dialogs inherit resource priority settings of the INVITE that created the conference focus.

When an existing session is moved to the ad-hoc conference, its priority is updated with the priority of the conference. If the moved session had priority but the conference has not, then priority is removed from it.

- GETS Priority Service enabled

The Ad-hoc conference creator can move an active non priority service session or an active priority service session to the conference. The conference must have been created before the transfer.

When the ad-hoc conference creator creates a conference or moves an active service session (with or without priority) to a conference, the conference resource is reserved with maximum priority value (wps value). This is only applicable when there is an active priority session created by the conference creator.

When conference session is created by the conference creator, or the conference creator moves its own active originating or terminating MMTel sessions to the conference, conference resources are reserved with maximum priority value (wps value).



Maximum priority value (wps value) is calculated by comparing priority values (wps values) of one of the following:

- Conference session originated by conference creator.
- Active MMTel sessions originated by conference creator.

Conference creator's active terminating MMTel session priority value (wps value) is not considered for maximum priority value computation.

Priority information in signaling messages and charging messages towards conference participants, is the same as the value present in the original session before moving to the conference.

Priority information in the conference session charging messages is same as the priority (if applicable) present in conference session during creation.

If RPH is present in REFER request for moving active session, then RPH in response to REFER has the maximum priority value (wps value). Response for ad-hoc conference creator INVITE has contain maximum priority value (wps value).

— **Communication Completion**

The completion call has the same priority as original. However, the signaling that prepares the completion call has no priority.

— **Communication Diversion**

For priority service call, when a call is diverted by Communication Diversion (CDIV), resource priority of the caller is preserved for the diverted calls.

When AS chaining is disabled, for GETS priority service call, when the call is diverted by Communication Diversion (CDIV) service, GETS Priority Service identifies the call type of diverted call by checking forward to Destination Number (DN) and configured GETS number. GETS Priority service call type can be identified as GETS-AN or GETS-NT call only. MTAS prevents the call diversion to the GETS-FC prefix numbers. Call can be diverted only to certain numbers configured as GETS-AN or GETS-NT. MTAS supports this service interaction only when `mtasSipOriginatingAsChaining` is disabled.

— **Three Party Call**

The priority of the user who initiated the Three Party Service (3PTY) call is preserved as priority of the 3PTY focus. This priority is valid on all SIP dialogs of the focus.

After resuming to two party sessions, the priorities of the original calls are not restored.

— **Explicit Communication Transfer**



The priority of user who started Explicit Communication Transfer (ECT) service (Transferee) is valid on all SIP dialogs of the ECT session on the Transferee AS.

- **Flexible Communication Distribution**

The priority of the caller is used for the distributed requests.

- **Session Transfer to Own Device**

The priority of caller is used in transfer requests to all devices.

- **Call Return**

The priority of user who initiates the callback is in effect in the callback call.

- **Communication Completion**

The completion call has same priority as the original call. However, the signaling that prepares the completion call has no priority.

- **Operator Controlled Transfer**

When a GETS Priority Service call is transferred to a new target by the Operator Transferor, the transferred call towards the new target inherits the GETS Priority Service call type from the initial call between the caller and the Operator Transferor.





3 Priority Services Configuration

The Priority Services feature configuration is controlled by the `MtasPriorityCall` Managed Object (MO). An overview of the Priority Call MO structure is shown in Figure 1.

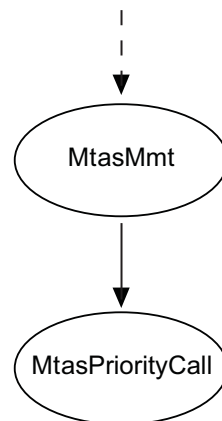


Figure 1 Priority Call MO Structure

For configurable MOs and attributes related to the Priority Call configuration, refer to [Managed Object Model \(MOM\)](#).

3.1 Priority Services Administrative State Configuration

The Priority Services feature is enabled by setting the `mtasPriorityCallResourcePriorityAdministrativeState` attribute in the `MtasPriorityCall` MO to 1 (Unlocked). If the `mtasPriorityCallResourcePriorityAdministrativeState` attribute is set to 0 (Locked), Resource-Priority headers pass through the MTAS with no effect.

3.2 Priority Call Termination on Low Credit Configuration

MTAS can be configured not to terminate priority calls running out of credit in the Online Charging scenario by setting `mtasPriorityCallTerminateOnLowCredit` to 0 (Disabled). If `mtasPriorityCallTerminateOnLowCredit` is set to 1 (Enabled), the priority calls terminate on low credit similarly as non-prioritized calls.

3.3 GETS Priority Services Configuration

The GETS Priority Services feature configuration is controlled by the `MtasPriorityCallGetsService` Managed Object (MO). An overview of the Priority Call GETS Service MO structure is shown in Figure 2.

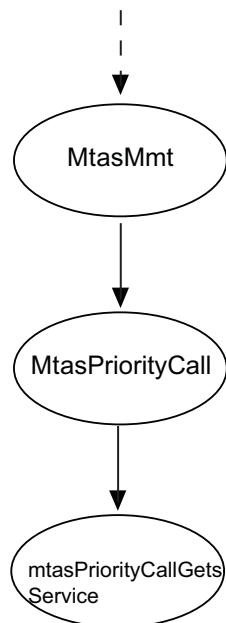


Figure 2 GETS Priority Call MO Structure

3.3.1 GETS Priority Service Administrative State

Unlock the `mtasPriorityCallGetsServiceAdministrativeState` attribute in the `MtasPriorityCallGetsService` MO by setting it to 1 (Unlocked). If the `mtasPriorityCallGetsServiceAdministrativeState` attribute is set to 0 (Locked), GETS Priority Service is not activated. MTAS does not identify the GETS Priority Service call type and does not support the GETS Priority Service specific charging functionality.

GETS Priority Service is enhancement over existing priority service, see Section 3.1 Priority Services Administrative State Configuration on page 11, which is a prerequisite for the GETS Priority Service activation.

As a prerequisite, the administrative state of the SSC service and the Number Normalization service must be enabled.

3.3.2 GETS Priority Service

GETS Priority Service is configured for different call types as follows:

3.3.2.1 GETS-FC Priority Service Configuration

mtasSscPriorityCallComSyntInv:

MTAS can be configured to identify GETS-FC Priority Service call by setting `mtasSscPriorityCallComSyntInv` to a specific feature code prefix. The prefix defines the command syntax to parse the SSC code dialed by the user for the GETS FC Priority Service Invocation.



For more information about the command syntax configuration, refer to MTAS Supplementary Service Codes Management Guide.

Different command syntaxes can be configured by the operator, for example:

— INVITE Request URI

sip:*2727106274387;phone-context=+1@bt.co.uk;user=phone

tel:*2727106274387;phone-context=+1

mtasSscPriorityCallComSyntInv: *272ND

MTAS identifies the call with above the Request URI as GETS-FC Priority Service Call.

— INVITE Request URI

sip:*272*314506274387;phone-context=+1@bt.co.uk;user=phone

tel:*272*314506274387;phone-context=+1

mtasSscPriorityCallComSyntInv: *272XND

MTAS identifies the call with the Request URI as GETS-FC Priority Service Call.

— INVITE Request URI

sip:*31*2724506274387;phone-context=+1@bt.co.uk;user=phone

tel:*31*2724506274387;phone-context=+1

mtasSscPriorityCallComSyntInv: *272ND

MTAS rejects the request because the GETS-FC prefix is not the first prefix.

— INVITE Request URI

sip:*272*31*@bt.co.uk;user=phone

mtasSscPriorityCallComSyntInv: *272XND

MTAS rejects the request because the XND syntax is not correct.

3.3.2.2

GETS-AN Priority Service Configuration

mtasPriorityCallGetsServiceAnNumbers:

MTAS can be configured to identify a GETS-AN Priority Service call by setting the `mtasPriorityCallGetsServiceAnNumbers` attribute to GETS-AN numbers and by configuring the GETS-AN number as OSN\NSN Number in the `MtasNumNorm` MOC. OSN/NSN configuration is required to deter the Number Normalization service from normalizing the number in the R-URI.



For more information about the OSN/NSN number configuration, refer to [MTAS Number Normalization Management Guide](#).

For example:

- GETS-AN number is 7106274387

`mtasPriorityCallGetsServiceAnNumbers = ":7106274387"`

Request URI example:

`sip:7106274387;phone-context=+1@bt.co.uk;user=phone`

`tel:7106274387;phone-context=+1;`

GETS-AN Number (7106274387) present in the sip or tel Request URI successfully matches based on the full set of "7106274387" digits, beginning in the NPA position.

- GETS-AN number is 8882884387.

`mtasPriorityCallGetsServiceAnNumbers = ":+18882884387"`

Request URI example:

`sip:+18882884387@bt.co.uk;user=phone`

`tel:+18882884387`

GETS-AN Number (8882884387) present in the sip or tel Request URI successfully matches based on the full set of "8882884387" digits, beginning in the NPA position.

- GETS-AN number is 8776464387.

`mtasPriorityCallGetsServiceAnNumbers = ":8776464387"`

Request URI example:

`sip:*318776464387;phone-context=+1@bt.co.uk;user=phone`

`tel:*318776464387;phone-context=+1`

GETS-AN Number (8776464387) present in the sip or tel Request URI successfully matches based on the full set of "8882884387" digits, beginning in the NPA position.

3.3.2.3

GETS-NT Priority Service Configuration

mtasPriorityCallGetsServiceNtNumbers:

MTAS can be configured to identify GETS-NT Priority Service call by setting the `mtasPriorityCallGetsServiceNtNumbers` attribute to GETS-NT numbers and



by configuring the GETS-NT number as OSN\NSN Number in `MtasNumNorm` MOC. Do not set any substitution rule in the `MtasNumNorm` for the dialed number.

For example:

- GETS-NT number is 7109999999.

`mtasPriorityCallGetsServiceNtNumbers = ":710"`

Request URI example:

`sip:7109999999;phone-context=+1@bt.co.uk;user=phone`

`tel:7109999999;phone-context=+1;`

GETS-AN Number (7109999999) present in the sip or tel Request URI successfully matches based on 3 digits of "710", beginning in the NPA position.

- GETS-NT number is 7102884387.

`mtasPriorityCallGetsServiceNtNumbers = ":+1710"`

Request URI example:

`sip:+17102884387@bt.co.uk;user=phone`

`tel:+17102884387`

GETS-AN Number (7102884387) present in the sip or tel Request URI successfully matches based on 3 digits of "710", beginning in the NPA position.

- GETS-NT number is 7106464387

`mtasPriorityCallGetsServiceNtNumbers = ":710"`

Request URI example:

`sip:*317106464387;phone-context=+1@bt.co.uk;user=phone`

`tel:*317106464387;phone-context=+1`

GETS-NT Number (7106464387) present in the sip or tel Request URI, successfully matches based on 3 digits of "710", beginning in NPA position.

3.3.2.4

GETS-FC + GETS-AN Priority Service Configuration

The configuration required is a combination of configurations for GETS-FC and GETS-AN call. For more details, see Section 3.3.2.1 GETS-FC Priority Service Configuration on page 12 and Section 3.3.2.2 GETS-AN Priority Service Configuration on page 13.



3.3.2.5 GETS-FC + GETS-NT Priority Service Configuration

The configuration required is a combination of configurations for GETS-FC and GETS-NT call. For more details, see Section 3.3.2.1 GETS-FC Priority Service Configuration on page 12 and Section 3.3.2.2 GETS-AN Priority Service Configuration on page 13.

3.3.2.6 Configuration for Charging Method Suppression in GETS Priority Service

In GETS Priority Service, for different Priority Service Calls Type (GETS-FC, GETS-AN, GETS-FC-AN, GETS-FC-NT, GETS-TERM, and so on), an operator can configure which charging method (online or offline, or both) needs to be suppressed at the originating side and the terminating side.

mtasChargingProfileSupressOrigChargingInGetsFC:

MTAS can be configured to suppress charging method for specific GETS-FC Priority Service call type by setting the `mtasChargingProfileSupressOrigChargingInGetsFC` attribute to the following values:

- 0: Do no suppress any method
- 1: Suppress Online Charging
- 2: Suppress Offline Charging
- 3: Suppress Online and Offline both

Example: if the `mtasChargingProfileSupressOrigChargingInGetsFC` default value is 0, it means no suppression of charging methods. All defined charging methods in the charging profile are applicable for GETS-FC Priority Service call type.

mtasChargingProfileSupressOrigChargingInGetsNT:

MTAS can be configured to suppress charging method for specific GETS-NT Priority Service call type by setting `mtasChargingProfileSupressOrigChargingInGetsNT` attribute to the following values:

- 0: Do no suppress any method
- 1: Suppress Online Charging
- 2: Suppress Offline Charging
- 3: Suppress Online and Offline both

Example: if the `mtasChargingProfileSupressOrigChargingInGetsNT` default value is 0, it means no suppression of charging methods. All defined charging methods in the charging profile are applicable for GETS-NT Priority Service call type.

For GETS-FC+GETS-AN\NT Priority Service call,



`mtasChargingProfileSupressOrigChargingInGetsFC` is applicable.

`mtasChargingProfileSupressOrigChargingInGetsAN`:

MTAS can be configured to suppress charging method for specific GETS-AN Priority Service call type by setting the `mtasChargingProfileSupressOrigChargingInGetsAN` attribute to the following values:

- 0: Do no suppress any method
- 1: Suppress Online Charging
- 2: Suppress Offline Charging
- 3: Suppress Online and Offline both

Example: if `mtasChargingProfileSupressOrigChargingInGetsAN` default value is 0, it means no suppression of charging methods. All defined charging methods in the charging profile are applicable for GETS-AN Priority Service call type.

3.3.2.7

Call Diversion Configuration

MTAS can be provisioned with forward to DN number as GETS Numbers. MTAS can be configured to identify the provisioned forward to DN number as GETS-FC, GETS-AN/NT, GETS-FC+ GETS-AN/NT Priority Service call by setting the `mtasSscPriorityCallComSyntInv`, `mtasPriorityCallGetsServiceAnNumbers`, and `mtasPriorityCallGetsServiceNtNumbers` attributes.

For more information on how to configure forward to DN number, refer to [MTAS CAI3G Interface](#).

For example:

- Forward to DN is prefixed with GETS-FC prefix.

```
sip:*2727106274387;phone-context=+1@bt.co.uk;user=phone
```

```
mtasSscPriorityCallComSyntInv: *272ND
```

MTAS identifies the diverted call as GETS-FC Priority Service Call and reject the diverted call by 403 SIP response if valid RPH header is present in the initial INVITE.

If RPH is not present in the initial INVITE, MTAS handles this diverted call as normal call diversion scenario.

- Forward to DN is prefixed with GETS-FC + SSC prefix

```
sip:*272*314506274387;phone-context=+1@bt.co.uk;user=phone
```

```
mtasSscPriorityCallComSyntInv: *272XND
```



MTAS identifies the diverted call as GETS-FC Priority Service Call and reject the diverted call by 403 SIP response if the valid RPH header is present in initial INVITE.

If the RPH is not present in the initial INVITE, MTAS handles this diverted call as normal call diversion scenario.

- Forward to DN is prefixed with SSC + GETS-FC prefix

`sip:*31*2724506274387;phone-context=+1@bt.co.uk;user=phone`

`mtasSscPriorityCallComSyntInv: *272ND`

MTAS identifies the diverted call as GETS-FC Priority Service Call and reject the diverted call by 403 SIP response if valid RPH header is present in the initial INVITE.

If the RPH is not present in the initial INVITE, MTAS handles this diverted call as a normal call diversion scenario.

- Forward to DN set to GETS-AN Number

`sip:7106274387;phone-context=+1@bt.co.uk;user=phone`

`mtasPriorityCallGetsServiceAnNumbers = ":7106274387"`

MTAS identifies the diverted call as GETS-AN Priority Service Call and do a successful call diversion if the valid RPH header is present in the initial INVITE.

If the RPH is not present in the initial INVITE, MTAS handles this diverted call as normal call diversion scenario.

- Forward to DN is set to GETS-NT Number

`sip:7109999999;phone-context=+1@bt.co.uk;user=phone`

`mtasPriorityCallGetsServiceNtNumbers = ":7109999999"`

MTAS identifies the diverted call as GETS-NT Priority Service Call and do a successful call diversion if the valid RPH header is present in the initial INVITE.

If RPH is not present in the initial INVITE, MTAS handles this diverted call as normal call diversion scenario.

- Forward to DN set to GETS-FC + GETS-AN Number

`sip:*2727106274387;phone-context=+1@bt.co.uk;user=phone`

`mtasSscPriorityCallComSyntInv: *272ND`

`mtasPriorityCallGetsServiceAnNumbers = ":7106274387"`



MTAS identifies the diverted call as GETS-FC Priority Service Call and reject the diverted call by 403 SIP response if the valid RPH header is present in initial INVITE.

If the RPH is not present in initial INVITE, MTAS handles this diverted call as normal call diversion scenario.

— Forward to DN is set to GETS-FC + GETS-NT Number

sip:*2727109999999;phone-context=+1@bt.co.uk;user=phone

mtasSscPriorityCallComSyntInv: *272ND

mtasPriorityCallGetsServiceNtNumbers = ":7109999999"

MTAS identifies the diverted call as GETS-FC Priority Service Call and reject the diverted call by 403 SIP response if the valid RPH header is present in the initial INVITE.

If the RPH is not present in the initial INVITE, MTAS handles this diverted call as normal call diversion scenario.

3.3.2.8 Miscellaneous Configuration Scenarios of Priority Service

There are multiple scenarios where calls are to be rejected or accepted as per the configuration.

3.3.2.8.1 Combination of GETS-FC + SSC Prefix +ND in Originating MTAS

When GETS-FC prefix (for example *272) is followed by another SSC Prefix and ND, the MTAS SSC service executes GETS-FC functionality first, mark the call as GETS-FC, and execute second SSC prefix-specific functionality.

Example: sip:*272*314506274387;phone-context=+1@bt.co.uk;user=phone;

1st SSC prefix (GETS-FC) = *272

2nd SCC prefix = *31

Number Dialed (ND) = 4506274387

3.3.2.8.2 Combination of SSC Prefix + GETS-FC + ND in Originating MTAS

When another valid SSC Prefix is followed by GETS-FC Prefix (for example *272) and ND, MTAS SSC service executes the SSC prefix-specific functionality first and then rejects the call by 403 SIP response, if the valid RPH Header is present in the INVITE request.

Example: sip:*31*2724506274387;phone-context=+1@bt.co.uk;user=phone;

1st SSC prefix = *31



2nd SCC prefix (GETS-FC) = *272

Number Dialed (ND) = 4506274387

If the valid RPH Header is not present in the INVITE request and another valid SSC Prefix is followed by GETS-FC Prefix (*272) and ND, MTAS SSC service executes the SSC prefix-specific functionality first. GETS call handling is done as per CM attribute `mtasPriorityCallGetsServiceNoRPH` value configured.

There are two values possible for `mtasPriorityCallGetsServiceNoRPH`:

- 0: Continue with call as normal call
- 1: The GETS priority service call type is rejected. Call is rejected by 403 SIP Response

3.3.2.8.3 Valid RPH Header but an Unidentified GETS Priority Service Call Type

When an INVITE request comes with valid RPH header values but MTAS did not find request URI belongs to any GETS Priority Service Call type then call handling is done as per CM `mtasPriorityCallGetsServiceWithUnknwonGETSCallType` value configured.

There are two values possible for this:

- 0: Continue with call as normal priority call
- 1: The GETS priority service call type is rejected. Call is rejected by 403 SIP Response

3.3.2.8.4 No RPH Header but an Identified GETS Priority Service Call Type

When an INVITE request comes without RPH header values or with an invalid RPH header value but MTAS found request URI belongs to any GETS PriorityService Call type then call handling is done as per CM `mtasPriorityCallGetsServiceWithNoRPH` value configured.

There are two values possible for this:

- 0: Continue with call as normal call
- 1: The GETS priority service call type is rejected. Call is rejected by 403 SIP Response

3.3.2.9 Configuration for GETS Session Response Matching

The following CM attributes define the SIP responses used to step the GETS Priority Service OK and NOK session counters:

- `mtasPriorityCallGetsServiceOkResponses`



— `mtasPriorityCallGetsServiceNokResponses`

mtasPriorityCallGetsServiceOkResponses

MTAS can be configured to increment the GETS Priority Service OK performance counter by setting successful SIP response values in the `mtasPriorityCallGetsServiceOkResponses` attribute.

Apart from 2xx response values, successful response values can include 1xx (except 100) or non-2xx response values, or both, indicating that GETS Priority Service call reached the remote end.

CM attribute `mtasPriorityCallGetsServiceOkResponses` is a list of strings, where each string consists of 1–2 parts separated by colons, see Example 1. The first part must contain the Status-Code of the response for GETS Priority Service session. The second part is optional and can contain the Reason-Phrase from the Status-Line, or the Reason header value present in the SIP response.

```
1. 200
2. 487:RequestTerminated
3. 480:SIP;cause=480;text="XYZ"
where Reason header in 480 SIP response is like Reason: SIP;cause=480;text="XYZ"
```

Example 1 `mtasPriorityCallGetsServiceOkResponses` String

During a GETS Priority Service Call establishment, the GETS Priority Service OK performance counter is incremented only once for a matched successful response, and the GETS Priority Service OK or GETS Priority Service NOK performance counter is not incremented in advance for the call. The text comparison/match is case-insensitive. The Reason-header/Reason-phrase part must be trimmed for leading and trailing whitespace.

In response matching, preference is given to detailed configuration matching, such as `Status Code: Reason-Phrase/ReasonHeader` (if configured), over simple configuration matching such as `Status Code`. If the detailed configuration is not matched, it can result in the GETS Priority Service OK counter not being incremented.

If there is a GETS Priority Service call type other than GETS-FC, the first 18X response is not considered for performance measurement because it is sent by a GETS-Application Server.

The `mtasPriorityCallGetsServiceNokResponses` list is considered for GETS Service NOK performance counter increment, if the final response values match not found in `mtasPriorityCallGetsServiceOkResponses` list and GETS Priority Service OK or NOK performance counter has not been incremented previously for the call.

mtasPriorityCallGetsServiceNokResponses

MTAS can be configured to increment GETS Priority Service NOK performance counter by setting unsuccessful SIP response values in the `mtasPriorityCallGetsServiceNokResponses` attribute.



The CM attribute `mtasPriorityCallGetsServiceNokResponses` is a list of strings, where each string consists of 1–2 parts separated by colons, see Example 2. The first part must contain the Status-Code of the response for the GETS Priority Service session. The second part is optional and can contain the Reason-Phrase from the Status-Line, or the Reason header value present in the SIP response.

```
1. 603
2. 500:Internal Error
3. 480:SIP;cause=480;text="XYZ"
```

where Reason header in 480 SIP response is like
Reason: SIP;cause=480;text="XYZ"

Example 2 `mtasPriorityCallGetsServiceNokResponses` String

During a GETS Priority Service Call establishment, the GETS Priority Service NOK performance counter is incremented only once for a matched unsuccessful response, and the GETS Priority Service OK or GETS Priority Service NOK performance counter is not incremented in advance for the call. The text comparison/match is case-insensitive. The Reason-header/Reason-phrase part must be trimmed for leading and trailing whitespace.

In response matching, preference is given to detailed configuration matching, such as `Status Code: Reason-Phrase/ReasonHeader` (if configured), over simple configuration matching such as `Status Code`. If the detailed configuration is not matched, it can result in the GETS Priority Service NOK counter not being incremented.

3.3.2.10

Configuration for Operator Network Identification

The `MtasPriorityCallGetsServiceOk/MtasPriorityCallGetsServiceNok` counters are keyed on the terminating network type as follows:

- Terminating in own operator network
- Terminating in External Network
- Terminating network type is unknown

In GETS Priority Service, the `mtasPriorityCallGetsServiceNetIdentifier` CM attribute is defined to identify the correct key value for the GETS Priority Service OK and NOK session counters performance measurement.

`mtasPriorityCallGetsServiceNetIdentifier`

MTAS can be configured to identify the operator network by setting the network identifier attribute `mtasPriorityCallGetsServiceNetIdentifier`, for example `mtasPriorityCallGetsServiceNetIdentifier = "ims.com"`.

The P-Charging-Vector (PCV) Header present in GETS Priority service session request and response is used to identify operator network. The PCV header



parameters `orig-ioi` and `term-ioi` values are compared with the values configured in the `mtasPriorityCallGetsServiceNetIdentifier` attribute.

- A GETS Priority Service session is identified as a session terminating in the operator network only if the PCV header parameter `term-ioi` value matches (case-insensitive) the configured `mtasPriorityCallGetsServiceNetIdentifier` attribute value.
- A GETS Priority Service session is identified as session terminating in an External Network or non-operator network only if the PCV header parameter `term-ioi` value does not match the configured `mtasPriorityCallGetsServiceNetIdentifier` attribute value.
- In all other scenarios, a GETS Priority Service session is identified as a session originating from the operator network, and terminating in unknown network.
 - A GETS Priority Service session is identified as a session originating from the operator network only if the PCV header parameter `orig-ioi` value matches (case-insensitive) the configured `mtasPriorityCallGetsServiceNetIdentifier` attribute value.
 - In call diversion scenario, when Transit MTAS originates the call to a GETS-AN or GETS-NT number, the originating network is always operator network. No `orig-ioi` match is required.
 - If the PCV header parameter `orig-ioi` value does not match (case-insensitive) the configured `mtasPriorityCallGetsServiceNetIdentifier` attribute value, the terminating network is identified as an unknown network, regardless of the PCV header parameter `term-ioi` value.





4 Performance Management

For a description of measurements related to the Priority Services feature, refer to MTAS Performance Measurements.





5 Fault Management

For a list of alarms related to the Priority Call service, refer to MTAS Alarm List.