

MTAS Operation and Maintenance Guide

MTAS

USER GUIDE

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1 Introduction

This document acts as an entry point to the operation and maintenance procedures within virtual MTAS. It specifies the tasks required to operate the system and references the documents needed to complete those tasks.

The tasks are primarily configuration-oriented, but can be ones that must be executed as actions.

The tasks are grouped into functional areas where appropriate, and presented on a functional level rather than managed object level. This allows mapping of a functional need into a set of documents required to achieve that functional need. This document can therefore be considered a functional or task-based index to the virtual MTAS operation and maintenance documentation suite.

1.1 Prerequisites

This section describes the prerequisites, which must be fulfilled before using the procedures.

1.1.1 Tools

MTAS provides several Northbound Interfaces (NBIs) for operation and maintenance. The included NBIs are as follows:

- **NETCONF**

The NETCONF interface is a Machine to Machine interface for configuration management of MTAS using the NETCONF protocol. For details, refer to *Ericsson NETCONF Interface*.

- **ECLI**

The Ericsson Command-Line Interface (ECLI) is a terminal-based command-line interface that allows the user to monitor and manage the MTAS. The ECLI enables the user to interact with the Management Information Base (MIB) through common, generic-purpose commands. For details, refer to *Ericsson Command-Line Interface*.

- **SFTP**

The SSH File Transfer Protocol (SFTP) is an interface for uploading and downloading files.

- **SNMP**



The Simple Network Management Protocol (SNMP) is an interface for reporting alarms through SNMP notifications.

To access the NBIs, except SNMP, a user must be authenticated and authorized. All user information is stored in a centralized Lightweight Directory Access Protocol (LDAP) server that provides authentication for NBIs. After a user passes the authentication, one or more roles are assigned to this user.

The Role-Based Access Control (RBAC) and the Target-Based Access Control (TBAC) authorization are used to ascertain the user access rights. For details, refer to *User Management*.

1.2 Generic Note for Configuration

To avoid traffic loss in the services provided by the MTAS, it is mandatory to create backup after any change has been made in the MTAS configuration that is meant to be persistent.



2 Services

The MTAS can fulfill several different functional roles in a Multimedia Telephony solution, such as Multimedia Telephony (MMTel) Application Server (AS), Service Centralization and Continuity Application Server (SCC AS), SIP Trunking Application Server (ST AS), and Network Application Server (NW AS).

These Application Servers provide several services, refer to *MTAS Service Management Guide*.

The following sections describe tasks that are configurable for the offered services per AS.

2.1 MMTel AS Services

2.1.1 Call Handling

Table 1 lists the configuration-related tasks for call handling.

Table 1 Call Handling Configuration-Related Tasks

Configuring	Function	Reference
Creating service profiles	MMTel Service Profile	<i>MTAS MMTel Service Profiles Management Guide</i>
Setting a user to use service profiles		
Service data <ul style="list-style-type: none">Operator subscription level service configuration (allowing the subscriber to initiate service profile through the CAI3G protocol)		



Table 1 Call Handling Configuration-Related Tasks

Configuring	Function	Reference
MMTel administrative state	Basic voice and multimedia communication (MMTel)	<i>MTAS MMTel Management Guide</i>
Wholesale for MMTel		
MMTel terminated unregistered behavior		
Long duration call supervision		
<ul style="list-style-type: none"> • Default originating supervision timer • Service number-specific supervision timer • Destination category • Default terminating supervision timer 		
Service data		
<ul style="list-style-type: none"> • Operator subscription level service configuration (activating or deactivating the User Common Data subscription, maximum number of targets in the common target list / device list, allowing / disallowing the use of the common device list and the holiday list) • Subscriber subscription level service configuration (common target list, common device list, UTC offset, start day of week, non-workday list, holiday list) • MMTel no reply timer • Charging • Reject response configuration • Terminal selection • Early media announcement • Calendar configuration and recommendation for summer/winter time • Network or MTAS-provided local ring back 		
Feature tag processing		
Prefix for voice and video calls (routing through BGCF ⁽¹⁾)		
Configuration and provisioning options for other services		
Media policy (block certain media streams in offered SDP) ⁽²⁾		



Table 1 Call Handling Configuration-Related Tasks

Configuring	Function	Reference
Control media streams of an established IP Multimedia session <ul style="list-style-type: none"> • Hold • Resume • Announcement • Bandwidth optimization 	Hold communication	<i>MTAS Hold Communication Management Guide</i>
Announcement configuration		
Wholesale for Hold		
Announcement	Communication Diversion (CDIV)	<i>MTAS Communication Diversion Management Guide</i>
Default voicemail address configuration		
Additional configuration (response values, timers, blacklist, and so on)		
DTM-related configuration		
Diversion for SSC		
CDIV administrative state		
Wholesale for CDIV		
Flexible Communication Distribution for CDIV		
Suppression by Flexible Service Format Selection (FSFS)		
Subscription rules (with examples)		
Diversion after BYE		
Service data <ul style="list-style-type: none"> • Operator subscription level service configuration • Subscriber subscription level service configuration 		



Table 1 Call Handling Configuration-Related Tasks

Configuring	Function	Reference
FCD administrative state	Flexible Communication Distribution (FCD)	<i>MTAS Flexible Communication Distribution Management Guide</i>
Announcement		
Auto-answer-avoidance announcement		
Distribution to primary devices of the user		
Prefixes to specify routing in the network for non-IMS targets		
Subscription rules (with examples)		
Communication Diversion interaction with FCD		
Suppression by FSFS		
Wholesale for FCD		
FCD to primary devices of the user		
<ul style="list-style-type: none"> • Node Level Configuration • Subscription Level Configuration 		
Caller preference filtering		
Service data		
<ul style="list-style-type: none"> • Operator subscription level service configuration (maximum number of targets in the target-list, primary number hosting IMS / non-IMS, maximum number of FCD rules, FCD Divert Primary service, allowing the subscriber to control length of the no reply timer, individual conditions, and actions the subscribers can use, no reply timer, list of distribution targets, fixed-target attribute of the list of distribution targets, FCD rules) • Subscriber subscription level service configuration (divert-primary, no reply timer, target-list, rules) 		
FCD in “486 Busy Here” response		



Table 1 Call Handling Configuration-Related Tasks

Configuring	Function	Reference
CW administrative state	Communication Waiting (CW)	<i>MTAS Communication Waiting Management Guide</i>
Announcement		
Communication Diversion interaction with CW		
Alerting timer		
Operate mode		
Wholesale for CW		
CW indication		
Service data <ul style="list-style-type: none"> • Operator subscription level service configuration • Subscriber subscription level service configuration 		
CC administrative state	Communication Completion (CC)	<i>MTAS Communication Completion Management Guide</i>
Communication Diversion interaction with CC		
Initial Filter Criteria in HSS		
CC timers		
CC notifier-configured minimum		
Announcements		
Additional configuration <ul style="list-style-type: none"> • Invocation code • Suspend resume • Retain • Separate timers for busy subscriber and no reply 		
Interactive Voice Recognition (IVR) specific attributes		
Wholesale for CC		
Service data <ul style="list-style-type: none"> • Operator subscription level service configuration 		

Table 1 Call Handling Configuration-Related Tasks

Configuring	Function	Reference
3PTY administrative state	Three Party Call (3PTY)	<i>MTAS Three Party Management Guide</i>
3PTY factory URI (subdomain-based PSI)		
Suppression by FSFS		
Wholesale for 3PTY		
Service data <ul style="list-style-type: none"> Operator subscription level service configuration 		
Conference administrative state	Ad-hoc Conference	<i>MTAS Ad-hoc Conference Management Guide</i>
Answer confirmation		
AS chaining (maximum number of sessions)		
Ad-hoc Conference configuration <ul style="list-style-type: none"> Conference factory URI Username prefix part of the conference URI ISC port on the originating S-CSCF⁽³⁾ Conference notifications activated / deactivated Conference focus allowing invitation of Conference Participants using URI list Answer Confirmation announcement DTMF response in Answer Confirmation function 		
Wholesale for Ad-hoc Conference		
Service data <ul style="list-style-type: none"> Operator subscription level service configuration (maximum number of participants allowed, Answer Confirmation enabled / disabled) 		
ECT administrative state	Explicit Communication Transfer (ECT)	<i>MTAS Explicit Communication Transfer Management Guide</i>
Suppression by FSFS		
Wholesale for ECT		
Service data <ul style="list-style-type: none"> Operator subscription level service configuration 		



Table 1 Call Handling Configuration-Related Tasks

Configuring	Function	Reference
STOD administrative state	Session Transfer to Own Device (STOD)	<i>MTAS Session Transfer to Own Device Management Guide</i>
Auto-Answer Avoidance		
Suppression by FSFS		
Subscription rules (with examples)		
Wholesale for STOD		
Session timer		
Service data <ul style="list-style-type: none"> Operator subscription level service configuration (list of destination targets, fixed-target attributes of the list if destination targets, maximum number of targets in the target-list, STOD rules, maximum number of STOD rules) Subscriber subscription level service configuration (target-list, target, rules) 		
OCT administrative state	Operator Controlled Transfer (OCT)	<i>MTAS Operator Controlled Transfer Management Guide</i>
OCT configuration <ul style="list-style-type: none"> Phone numbers that can be assisted by the OCT Operator-named announcements Associated Number string in the Service-Specific-Data AVP for online charging 		
Announcement		



Table 1 Call Handling Configuration-Related Tasks

Configuring	Function	Reference
Call Return administrative state	Call Return	<i>MTAS Call Return Management Guide</i>
Call Return configuration		
<ul style="list-style-type: none"> • Saving last incoming call • Operator named announcements • Code to press to make a callback • Auto-callback timer • Time to wait parameters related to the code for making a callback 		
Announcement		
Wholesale for Call Return		
Auto callback		
Service data		
<ul style="list-style-type: none"> • Operator subscription level service configuration 		
Hotline administrative state	Hotline	<i>MTAS Hotline Service Management Guide</i>
Announcements		
Wholesale for Hotline		
Service data		
<ul style="list-style-type: none"> • Operator subscription level service configuration (Hotline service activation flag, unconditional Hotline activation flag, Hotline number for Unconditional Hotline, Instant Hotline activation flag, Hotline number for Instant Hotline, Delayed Hotline activation flags, Hotline number for Delayed Hotline, called number used for Delayed Hotline to override the service code CM parameter) • Subscriber subscription level service configuration (activating / deactivating the Hotline subscription, setting Hotline number (redirection URI) used for Delayed Hotline, setting called number used for Delayed Hotline to override the service code CM attribute) 		

(1) Breakout Gateway Control Function (BGCF)

(2) Session Description Protocol (SDP)

(3) Serving Call Session Control Function (S-CSCF)



2.1.2 Communication Barring and Address Policing

Table 2 lists the configuration-related tasks for Communication Barring (CB) and Address Policing.

Table 2 Communication Barring and Address Policing Configuration-Related Tasks

Configuring	Function	Reference
CB administrative state	Communication Barring	<i>MTAS Barring and Dial Plan Services Management Guide</i>
Barring rules		
User barring category (create, modify, delete)		
Operator barring category (create, modify, delete)		
Localness barring categories (modify)		
Barring program in single scheme (create, modify, delete)		
Barring program in multiple schemes (create, modify, delete)		
Global white list		
<ul style="list-style-type: none"> • Modify the list of numbers included in ICB⁽¹⁾ global white list • Modify the list of numbers excluded in ICB global white list • Modify the list of domains included in ICB global white list 		
Dynamic Black List		
Announcement		
SIP error response codes from MTAS configuration		
Cause value		
Wholesale for CB		
Subscription rules		
Service data		
<ul style="list-style-type: none"> • Operator subscription level service configuration (barring rules, barring programs, operator barring programs, Dynamic Black List) • Subscriber subscription level service configuration (barring rules, barring programs) 		



Table 2 Communication Barring and Address Policing Configuration-Related Tasks

Configuring	Function	Reference
Dial Plan administrative state	Dial Plan	<i>MTAS Barring and Dial Plan Services Management Guide</i>
Dial Plan configuration		
<ul style="list-style-type: none"> • Modify the list of numbers included in nodal Dial Plan • Modify the list of numbers excluded from nodal Dial Plan • Modify the list of domains included in nodal Dial Plan 		
Per-VTP Dial Plan <ul style="list-style-type: none"> • Create • Modify the list of numbers included in per-VTP Dial Plan • Modify the list of numbers excluded in per-VTP Dial Plan • Modify the list of domains included in per-VTP Dial Plan 		
National Toll Restriction	Toll Restriction	<i>MTAS Toll Restriction Management Guide</i>
International Toll Restriction		
MCID administrative state	Malicious Communication Identification (MCID)	<i>MTAS Malicious Communication Identification Management Guide</i>
Reporting method (CDS / local storage)		
CDS configuration		
Closure of ACR files for local storage		
Disk full and disk not full percentage levels		
File transfer		
Access rights to log files and directories		
Announcement		
Wholesale for MCID		
Service data		
<ul style="list-style-type: none"> • Operator subscription level service configuration (permanent mode / temporary mode) 		



Table 2 Communication Barring and Address Policing Configuration-Related Tasks

Configuring	Function	Reference
Long-distance Mobile Number Policing administrative state	Address Policing	<i>MTAS Address Policing Management Guide</i>
Additional configuration		
<ul style="list-style-type: none"> • National Dialing Prefix for Address Policing • Length of a fixed number for Long-distance Mobile Number Policing • Length of a mobile number for Long-distance Mobile Number Policing • Announcement to play if Long-distance Mobile Number Policing rejects a call 		
Wholesale for Long-distance Mobile Number Policing	CCM ⁽⁴⁾	MTAS Country Code Mapping Management Guide
Default values for CCC ⁽²⁾ or MCC ⁽³⁾		

(1) Incoming Communication Barring (ICB)

(2) Country Calling Code (CCC)

(3) Mobile Country Code (MCC)

(4) Country Code Mapping (CCM)

2.1.3 Number Handling

Table 3 lists the configuration-related tasks for number handling.

Table 3 Number Handling Configuration-Related Tasks

Configuring	Function	Reference
Abbreviated Dialing administrative state	Abbreviated Dialing	<i>MTAS Abbreviated Dialing Management Guide</i>
Supplementary Service Codes (SSC)		
Wholesale for Abbreviated Dialing		
Service data		
<ul style="list-style-type: none"> • Operator subscription level service configuration (provisioning / withdrawing the Abbreviated Dialing subscription, managing list of Abbreviated numbers, and the stored numbers) • Subscriber subscription level service configuration (activating / deactivating the Abbreviated Dialing subscription) 		

Table 3 *Number Handling Configuration-Related Tasks*

Configuring	Function	Reference
SND administrative state	Short Number Dialing (SND)	<i>MTAS Short Number Dialing Management Guide</i>
Announcement		
Number Normalization data		
SND domains		
Wholesale for SND		
Behavior of the Number Normalization Common Component	Number Normalization	<i>MTAS Number Normalization Management Guide</i>
<ul style="list-style-type: none"> Removal of Phone-Context in the URI Which context used to normalize the URI 		
Localness exemption		
DNM administrative state	Dialed Number Mapping (DNM)	<i>MTAS Dialed Number Mapping Management Guide</i>
Method to access the database configuration		
Additional configuration		
<ul style="list-style-type: none"> Generic announcement names Areas forbidden for local format / NPA National level call processing NPAs in transition area Call accept / reject policy Fix device support in DNM Operator named announcement 		
DNM location data		
<ul style="list-style-type: none"> Group-centric DNM location data 		
DNM-specific number translation data		
<ul style="list-style-type: none"> Profile Rules 		



Table 3 Number Handling Configuration-Related Tasks

Configuring	Function	Reference
Number Translation administrative state	Number Translation Service	<i>MTAS Number Translation Management Guide</i>
Wholesale for Number Translation		
Additional configuration (mechanism to load and cache the data)		
Number Translation profile		
Translation rules		
Activation mechanism		
Carrier Pre-Select administrative state	Carrier Pre-Select	<i>MTAS Carrier Select and Carrier Pre-Select Management Guide</i>
Call type		
Local operator call type and number		
Carrier operator call type and number		
Service data <ul style="list-style-type: none"> • Operator subscription level service configuration 		
Carrier Pre-Select Rn administrative state	Carrier Pre-Select Rn	<i>MTAS Carrier Select and Carrier Pre-Select Management Guide</i>
Carrier		
Test numbers		
Service data <ul style="list-style-type: none"> • Operator subscription level service configuration 		
Carrier Select administrative state	Carrier Select	<i>MTAS Carrier Select and Carrier Pre-Select Management Guide</i>
Announcement		
Carrier Select IMS Common Component data		
Number Analysis IMS Common Component data		
Service data <ul style="list-style-type: none"> • Operator subscription level service configuration 		

**Table 3** *Number Handling Configuration-Related Tasks*

Configuring	Function	Reference
Carrier Select Rn administrative state	Carrier Select Rn	<i>MTAS Carrier Select and Carrier Pre-Select Management Guide</i>
Carrier		
Carrier Select Codes		
Service data <ul style="list-style-type: none">• Operator subscription level service configuration		
SSC for the Cell Announcement service <ul style="list-style-type: none">• Command syntax to parse the SSC code• Dialed string value	Cell Announcement	MTAS Cell Announcement Management Guide
Cell announcements		
Segmented announcements <ul style="list-style-type: none">• Order of segmented announcement• Announcement segment		
Service data <ul style="list-style-type: none">• Operator subscription level service configuration		

2.1.4 Identity Handling

Table 4 lists the configuration-related tasks for identity handling.



Table 4 Identity Handling Configuration-Related Tasks

Configuring	Function	Reference
Identity Presentation administrative state	Identity Presentation	<i>MTAS Identity Presentation Management Guide</i>
DNS		
Additional configuration		
<ul style="list-style-type: none"> • Time-out for the query to the Calling Name Server • When to query to the Calling Name Server • Screening and denormalization of the From header • Copying of the Request URI to the To header 		
Wholesale for Identity Presentation		
CNIP administrative state		
OCNIP administrative state		
Multi-Subscriber Number (MSN) administrative state		
Reason for lack of caller identity		
OCNIP mode		
Use of From header		
Removal of Privacy header		
Service data		
<ul style="list-style-type: none"> • Operator subscription level service configuration (subscription options for OIP / OIR / TIP / TIR / CNIP / FIP / OCNIP) • Subscriber subscription level service configuration (user level configuration of OIP / OIR / TIP / TIR / CNIP / FIP) 		



Table 4 Identity Handling Configuration-Related Tasks

Configuring	Function	Reference
Activation / deactivation / modification of CNIP service Modification of <ul style="list-style-type: none"> • CNIP protocol • Calling Name Server address • CNIP time-out • Names of Cname Private headers • Default display name • Privacy display name • Query to the Calling Name Server with OIR overrides Calling Name Server redundancy (DNS-based redundancy for SIP and SOAP/HTTP protocols) IP protocol version of the SOAP interface	Calling Name Identity Presentation (CNIP)	<i>MTAS Calling Name Identity Presentation Management Guide</i>
Activation / deactivation / modification of OCNIP service	Originating Calling Name Identity Presentation (OCNIP)	<i>MTAS Originating Calling Name Identity Presentation Management Guide</i>
Activation / deactivation of OCNIP or CNIP service Modification of OCNIP or CNIP mode Modification of CNIP protocol Modification of Calling Name Server address Modification of CNIP time out Modification of names of Cname Private headers <ul style="list-style-type: none"> • Name of Replacement Address header • Names of Transparent headers Calling Name Server redundancy IP protocol version of Cname interface Modification of default display name Modification of privacy display name Modification of OIR override skip query	Calling Name Identity Presentation for Cname	<i>MTAS Calling Name Identity Presentation Management Guide for Cname</i>



2.1.5 Charging

Table 5 lists the configuration-related tasks for charging.

Table 5 Charging Configuration-Related Tasks

Configuring	Function	Reference
AoC administrative state Additional configuration <ul style="list-style-type: none"> • Time interval between AoC-During updates • Default address of the online charging • Secondary address of the online Charging Server • Unique identification of the application starting the request • Behavior if the MTAS cannot provide the cost and applicable tariff Wholesale for AoC Service data <ul style="list-style-type: none"> • Operator subscription level service configuration (activating / deactivating the AoC (AoC-S, AoC-D, AoC-E) subscription, control of the AoC service, setting the preferred currency of the subscribers) 	Advice of Charge (AoC)	<i>MTAS Advice of Charge Management Guide</i>
NP administrative state Additional configuration <ul style="list-style-type: none"> • Enabling NP • Disabling NP • NP lookup and conveying NP-related info to the charging system Wholesale for NP		



Table 5 Charging Configuration-Related Tasks

Configuring	Function	Reference
Diameter stack <ul style="list-style-type: none">• Own node configuration• Neighbor node configuration• Realm Routing Table configuration• Charging application routing configuration	Charging	<i>MTAS Charging Management Guide</i>
Charging profile <ul style="list-style-type: none">• Creating / configuring / deleting• Presence of AVPs in ACR/CCR messages• Optional ACR and CCR event messages• Charging profile for SCC AS		
Activating charging for a service		
Deactivating charging <ul style="list-style-type: none">• For all services• For a specific service• For services using a specific charging profile		
Deactivating charging destinations (starting / revoking)		
Default CDF address (adding / removing)		
CDS addresses (adding / removing)		
Charging attributes		
Communication details transfer attributes		
Ro announcement mapping (creating / deleting)		
Ro language mapping (creating / deleting)		



Table 5 Charging Configuration-Related Tasks

Configuring	Function	Reference
JC administrative state	Japanese Charging (JC)	<i>MTAS Japanese Charging Management Guide</i>
Interconnection Charge Billing System (ICBS) database		
Wholesale for JC		
Service data <ul style="list-style-type: none"> Operator subscription level service configuration (provisioning the home location in user common data) 		
Enabling ACR Storage	Charging ACR Storage	<i>MTAS Charging ACR Storage Management Guide</i>
Defining closure of ACR files		
Defining disk full and disk not full percentage levels		
Access rights to log files and directories		

2.1.6 Call Admission Control

Table 6 lists the configuration-related tasks for Call Admission Control.

Table 6 Call Admission Control Configuration-Related Tasks

Configuring	Function	Reference
UCAC administrative state	User Call Admission Control (UCAC)	<i>MTAS Call Admission Control Management Guide</i>
Suppression by FSFS		
Announcement		
Wholesale for UCAC		
Service data <ul style="list-style-type: none"> Operator subscription level service configuration (activating / deactivating UCAC service) 		



Table 6 Call Admission Control Configuration-Related Tasks

Configuring	Function	Reference
GCAC administrative state	Group Call Admission Control (GCAC)	<i>MTAS Call Admission Control Management Guide</i>
Suppression by FSFS		
GCAC Category <ul style="list-style-type: none">• Creating / modifying / deleting a Group Profile Category		
GCAC Profile <ul style="list-style-type: none">• Creating / deleting a Group Profile		
Connection allocation <ul style="list-style-type: none">• Creating / modifying / deleting a connection allocation		
Resetting GCAC counts		
Initial Filter Criteria for subscribers with GCAC service configuration		
Announcement		
Additional configuration <ul style="list-style-type: none">• Counting sessions directly between 2 members of the same CAC group• Counting sessions diverted by the served user		
Wholesale for GCAC		
Service data <ul style="list-style-type: none">• Operator subscription level service configuration (activating / deactivating GCAC service)• Group and profile relationship, category and connection allocation		

2.1.7 Multiple Numbers

Table 7 lists the configuration-related tasks for multiple numbers.



Table 7 Multiple Numbers Configuration-Related Tasks

Configuring	Function	Reference
DR administrative state	Distinctive Ring (DR)	<i>MTAS Distinctive Ring Management Guide</i>
Service data <ul style="list-style-type: none">• Operator subscription level service configuration (activating / deactivating DR service subscription)• Subscriber subscription level service configuration		

2.1.8 Interworking

Table 8 lists the configuration-related tasks for interworking.

Table 8 Interworking Configuration-Related Tasks

Configuring	Function	Reference
GM administrative state	Gateway Model (GM)	<i>MTAS Gateway Model Management Guide</i>
GM mode		



Table 8 Interworking Configuration-Related Tasks

Configuring	Function	Reference
FSFS administrative state	Flexible Service Format Selection (FSFS)	<i>MTAS Flexible Service Format Selection Management Guide</i>
Suppression of configurable services <ul style="list-style-type: none">• Communication Barring (CB)• Communication Diversion (CDIV)• Flexible Communication Distribution (FCD)• Customized Alerting Tones (CAT)• Call Admission Control (CAC)• Session Transfer to Own Device (STOD)• Explicit Communication Transfer (ECT)• 3PTY (Three-party)		
Additional configuration <ul style="list-style-type: none">• Session case where the pattern is applied• Headers in the incoming <code>INVITE</code> message where the pattern is applied• Regular expression used for matching one parameter in the incoming <code>INVITE</code> message• Indication of matched parameter removal from the header in the <code>INVITE</code> message after the match• Algorithm being used by the FSFS service to evaluate the header• FSFS service format to be used when there is a match• List of suppressed services• List of URI addresses dedicated for voicemails servers		
Wholesale for FSFS		
Video Fallback to Audio administrative state	Video Fallback to Audio	<i>MTAS Video Fallback to Audio Management Guide</i>
Q.850 cause code triggering fallback call		
Wholesale for Video Fallback to Audio		



Table 8 Interworking Configuration-Related Tasks

Configuring	Function	Reference
AS Interworking administrative state	Application Server Interworking	<i>MTAS Application Server Interworking Management Guide</i>
History-Info and Diversion header handling		
Session In Progress mapping handling		
CLIR administrative state	CLIR ⁽¹⁾ Interworking	<i>MTAS CLIR Interworking Management Guide</i>
History-Info and Diversion header handling		
Session In Progress mapping handling		
PEM Interworking administrative state	P-Early-Media (PEM) Interworking	<i>MTAS PEM Interworking Service Management Guide</i>
PEM Interworking Indication of Supported: 199		

(1) Calling Line Identification Restriction (CLIR)

2.1.9 Call Prioritization

Table 9 lists the configuration-related tasks for call prioritization.

Table 9 Call Prioritization Configuration-Related Tasks

Configuring	Function	Reference
Priority Call administrative state	Priority Call	<i>MTAS Priority Call Management Guide</i>
Wholesale for Priority Call		
Service data <ul style="list-style-type: none"> Operator subscription level service configuration (allowing / disallowing subscriber to initiate Priority Call) 		
Priority Services administrative state	Priority Services	<i>MTAS Priority Services Management Guide</i>
Priority Call termination on low credit		
CPC administrative state	Calling Party Category (CPC)	<i>MTAS Calling Party Category Management Guide</i>
Wholesale for CPC		
Service data <ul style="list-style-type: none"> Operator subscription level service configuration (activating / deactivating CPC service, assigning CPC values per subscriber) 		



2.1.10 Tone and Announcement Management

Table 10 lists the configuration-related tasks for tone and announcement.

Table 10 Tone and Announcement Configuration-Related Tasks

Configuring	Function	Reference
NA administrative state	Network Announcement (NA)	<i>MTAS Network Announcement Management Guide</i>
Originating MTAS audio-video announcement code for a specific SIP error code		
Terminating MTAS audio-video announcement code for a specific SIP error code		
Audio announcement code for a specific SIP URI		
SIP error response codes from MTAS		
Q.850 cause value and corresponding cause code		
Wholesale for NA		
Announcement codes and announcement names for services <ul style="list-style-type: none">• Call Admission Control• Call Return• Carrier Select• Communication Barring• Communication Completion• Communication Diversion• Communication Waiting• Flexible Communication Distribution• Generic Announcement• Hold Communication• Multimedia Telephony• Network Announcement• Parlay X• Short Number Dialing• Supplementary Service Codes	Announcement	<i>MTAS Announcement Management Guide</i>

*Table 10 Tone and Announcement Configuration-Related Tasks*

Configuring	Function	Reference
Definitions <ul style="list-style-type: none">• Audio announcement played• Audio-video announcement or video announcement played• Which audio-only announcement played• Which video-only announcement played• Audio component of an audio-video announcement• Video component of an audio-video announcement• Q.850 cause value Wholesale for Generic Announcement	Generic Announcement	<i>MTAS Generic Announcement Management Guide</i>



Table 10 Tone and Announcement Configuration-Related Tasks

Configuring	Function	Reference
CAT administrative state	Customized Alerting Tones (CAT)	<i>MTAS Customized Alerting Tones Management Guide</i>
Suppression by FSFS		
Additional configuration for CAT <ul style="list-style-type: none">• CAT signals are started on 183 Session Progress• Timer for starting the CAT signal without SIP response messages• Black Hole IPv4 address (0.0.0.0) is used in the SDP offer• Maintaining single SIP dialog towards the caller when no-fork directive is set in the Request-Disposition header of the received INVITE• Timer for triggering ring tone generation• Enabling support of end-to-end negotiation of SIP Preconditions• SIP headers to be sent to CAT-S• Suppressing the early media from the called party• Suppressing CAT when the called user is roaming in CS		
Service data <ul style="list-style-type: none">• Operator subscription level service configuration (activating / deactivating CAT service subscription)		
External CAT-S <ul style="list-style-type: none">• Creating an additional media resource• Address of the additional media resource• Type of the additional external media resource• Enabling additional media resource		
Creating a CAT server and enabling the CAT service		



Table 10 Tone and Announcement Configuration-Related Tasks

Configuring	Function	Reference
RBT administrative state	Ring Back Tone (RBT)	<i>MTAS Network Provided Ring Back Tone Management</i>
RBT announcements		
Early media suppression		
Suppressing RBT		
Wholesale for RBT		
Test Announcement administrative state	Test Announcement	<i>MTAS Test Announcement Management Guide</i>
PSI number <ul style="list-style-type: none"> • normalized SIP or Tel URI • announcement reference 		

2.1.11 Third-Party Service Interaction

Table 11 lists the configuration-related tasks for third-party service interaction.

Table 11 Third-Party Service Interaction Configuration-Related Tasks

Configuring	Function	Reference
Call notification	Parlay X	<i>MTAS Parlay X Management Guide</i>
Third-party call		
Changing local port		
IP protocol version		
Circuit Switched Integration (CSI) and Northbound Call Control (NCC) administrative state	Parlay X in MMTel	<i>MTAS Parlay X in MMTel Management Guide</i>
Parlay X in MMTel administrative state		
Service data <ul style="list-style-type: none"> • Operator subscription level service configuration (activating / deactivating Parlay X in MMTel service subscription, DNS, Northbound Call Control, Parlay X triggers) 		



Table 11 Third-Party Service Interaction Configuration-Related Tasks

Configuring	Function	Reference
Administrative states for GSM Compatible SSF	GSM Compatible Service Switching Function (SSF)	<i>MTAS CAPv2 Management Guide</i>
Circuit Switched Integration (CSI) <ul style="list-style-type: none">• Administrative state• Subsystem number MTAS uses in the SS7 network when MTAS has the role of an SSF• Global title MTAS is assigned in the SS7 network		
Northbound Call Control (NCC) <ul style="list-style-type: none">• Administrative state• URI path for the Playcol announcement files on the MRFP		
SS7 configuration		

2.1.12 Language

Table 12 lists the configuration-related tasks for languages.

Table 12 Languages Configuration-Related Tasks

Configuring	Function	Reference
MLS administrative state	Multiple Languages (MLS)	<i>MTAS Multiple Languages Management Guide</i>
Announcement		
Segmented Announcements (both for Mp and Mr interfaces)		
Mp interface (embedded MRFC ⁽¹⁾), except Segmented Announcements		
Mr interface (External MRFC)		
Service data <ul style="list-style-type: none">• Operator subscription level service configuration (language-tag)		

(1) Media Resource Function Controller (MRFC)

2.1.13 Emergency Call Handling

Table 13 lists the configuration-related tasks for emergency call handling.



Table 13 Emergency Call Handling Configuration-Related Tasks

Configuring	Function	Reference
Emergency Call charging profile configuration	Emergency Call Notification	<i>MTAS Emergency Call Notification Management Guide</i>
Emergency State administrative state	Emergency State	<i>MTAS Emergency State Management Guide</i>
Emergency Callback window time-outs		

2.1.14 Closed User Group

Table 14 lists the configuration-related tasks for Closed User Group.

Table 14 Closed User Group Configuration-Related Tasks

Configuring	Function	Reference
CUG administrative state	Closed User Group (CUG)	<i>MTAS Closed User Group Management Guide</i>
CUG rejects announcement		
Wholesale for CUG		
Service data <ul style="list-style-type: none"> • Operator subscription level service configuration 		

2.1.15 Wholesale

Table 15 lists the configuration-related tasks for Wholesale.

*Table 15 Wholesale Configuration-Related Tasks*

Configuring	Function	Reference
Wholesale administrative state	Wholesale	<i>MTAS Wholesale Support Management Guide</i>
Tables and activation for VTP-controlled dial plan <ul style="list-style-type: none">• Activation state (setting and monitoring)• Scheduling activation• Dropback attribute		
VTP-controlled dial plan <ul style="list-style-type: none">• Creating <i>MtasVtp</i>• Modifying list of numbers included in VTP• Modifying list of numbers excluded from VTP• Modifying list of domains included in VTP		
Announcement		

2.1.16 Supplementary Service Codes

Table 16 lists the configuration-related tasks for Supplementary Service Codes (SSCs).



Table 16 Supplementary Service Codes Configuration-Related Tasks

Configuring	Function	Reference
SSC codes administrative state	Supplementary Service Codes (SSC)	<i>MTAS Supplementary Service Codes Management Guide</i>
SSC attributes (modify)		
Announcement		
Additional configuration		
<ul style="list-style-type: none"> • Exact length of a PIN • Maximum length of the New Destination (ND) number • Announcements for Supplementary Service activation, deactivation, and PIN modification • Erasing service data during deactivation • Command syntaxes (separate or integrated) • Dynamic Black List update method • SSC service playing announcements on early media or on established sessions 		
Wholesale for SSC		
Communication Forwarding SSC Attributes		
Service data		
<ul style="list-style-type: none"> • Operator subscription level service configuration (activating / deactivating the SSC service subscription, if PIN required for the subscriber control procedures, initial PIN) 		
Service code command syntax attributes (with examples)		

**Table 16** *Supplementary Service Codes Configuration-Related Tasks*

Configuring	Function	Reference
GenSSC commands <ul style="list-style-type: none">• use of simple schema• composite configuration using task pattern• Composite configuration including pre-processing logic and various use cases• composite configuration for MSN support• PIN employment	Generic Supplementary Service Codes (GSSC)	<i>MTAS Generic Supplementary Service Codes Management Guide</i>
Troubleshooting command configuration <ul style="list-style-type: none">• GenSSC adapter• GenSSC servlet		

2.1.17 Dialog Event Subscription and Notification

Table 17 lists the configuration-related tasks for dialog event subscription and notification.

Table 17 *Dialog Event Subscription and Notification Configuration-Related Tasks*

Configuring	Function	Reference
DEN administrative state	Dialog Event Notifier (DEN)	<i>MTAS Dialog Event Notifier Management Guide</i>
DEN timers (minimum / maximum / default values)		
DEN XML elements		
Maximum number of the subscription sessions		
Wholesale for DEN		

2.1.18 Voicemail

Table 18 lists the configuration-related tasks for voicemail.



Table 18 Voicemail Configuration-Related Tasks

Configuring	Function	Reference
Default voicemail address	Voicemail	<i>MTAS Voice Mail Management Guide</i>
Service data <ul style="list-style-type: none"> Operator subscription level service configuration (activating / deactivating the CDIV and voicemail services subscriptions) 		

2.1.19 Unified Communication Routing

Table 19 lists the configuration-related tasks for Unified Communication (UC) routing.

Table 19 UC Routing Configuration-Related Tasks

Configuring	Function	Reference
UC routing administrative state	UC routing	<i>MTAS Unified Communication Routing Management Guide</i>
SIP header for the UC served user identity		
SIP header for the original destination number		
SIP header for the normalized number		
SIP header for the terminating received number		
UC routing service SIP error response		
Service data: <ul style="list-style-type: none"> Operator subscription level service configuration (activating / deactivating / provisioning the UC routing service subscription) 		

2.2 SCC AS Services

Table 20 lists the configuration-related tasks for SCC AS services.

Table 20 SCC AS Services Configuration-Related Tasks

Configuring	Function	Reference
SCC administrative state	IMS Centralized Services (ICS)	MTAS IMS Centralized Services Management Guide
Charging profile for the SCC AS		
HSS ⁽¹⁾ deployment mode in SCC AS		
Mix of VoLTE and 2G/3G		
Policy for Network Provided Location Information (NPLI) retrieval		
Caching of registered contacts information		
GSM compatible SCF configuration <ul style="list-style-type: none">• Enabling / disabling• SS7 with CAP SDS administrative state	Service Domain Selection (SDS)	MTAS IMS Centralized Services Management Guide
Additional configuration <ul style="list-style-type: none">• IMRN range, first and last number• Lifetime of an allocated IMRN• IMRN prefix to be added to called party for T-SDS• CAMEL SCF service keys supported by SCC AS gsmSCF• CAP error handling policy in SCC AS gsmSCF, to return CAP Continue or CAP error• Policy for selecting called party number in CAP InitialDP for O-SDS calledPartyNumber or calledPartyBCDNumber precedence• Served HPLMN• International access prefix / national trunk prefix at served HPLMN		



Table 20 SCC AS Services Configuration-Related Tasks

Configuring	Function	Reference
<p>Conditional anchoring based on supported media call types</p> <ul style="list-style-type: none"> • Enabling the check for media call • List of media call types supported by SCC AS gsmSCF • Default video type 	Service Domain Selection (SDS)	MTAS IMS Centralized Services Management Guide
<p>Conditional anchoring based on roaming service profiles</p> <ul style="list-style-type: none"> • Enabling the check for service profile • MCC.MNC for HPLMN served by SCC AS • Mapping from SCF service key to service profile • Service profile defining if anchoring is allowed • Anchoring indication for a service profile • Reference to a VPLMN whitelist for the service profile • Whitelist name • VPLMNs from which IMS anchoring is allowed for this whitelist 		
<p>Conditional anchoring based on local numbers and escape code</p> <ul style="list-style-type: none"> • CC of served HPLMN • International access prefix / national trunk prefix at served HPLMN • List of local numbers at served HPLMN • Escape code for the served HPLMN • Escape code allowed when at home • MCC.MNC for a VPLMN • CC of a VPLMN • International access prefix / national trunk prefix at a VPLMN • List of local numbers at a VPLMN 		



Table 20 SCC AS Services Configuration-Related Tasks

Configuring	Function	Reference
<div>T-ADS administrative state</div> <div>Additional configuration<ul style="list-style-type: none">• How long the last terminated VoLTE session details can be used• Timer to be used in the HSS query for T-ADS information• Prefix to be added to called party in call breakout to CS• Prefix to be added to calling party in call breakout to CS• Timer to be used when waiting for response (18x) from VoLTE UE on PS• Routing Number for the Request-URI rn parameter when breaking out a call to CS• SIP error codes / error code ranges which cause T-ADS to execute a CS breakout when call delivered to PS contact fails• SIP error codes / error code ranges / optionally SIP cause codes, which cause T-ADS service to execute a CS breakout when call delivered to CS contact fails• Selection policy to retry with CS breakout when call delivered to PS/CS contact fails or not• Policy when breakout to CS is selected, CSRN based on prefix or on the MSRN as obtained from HSS/HLR• Indication to suppress tone generation to be added in the INVITE to MSC when the served user is not roaming• Enabling / disabling Wi-Fi calling support</div>	Terminating Access Domain Selection (T-ADS)	<i>MTAS IMS Centralized Services Management Guide</i>



Table 20 SCC AS Services Configuration-Related Tasks

Configuring	Function	Reference
CSI administrative state GMSC role <ul style="list-style-type: none"> • Subsystem number for SCC AS in the SS7 network • Global Title Indicator (GTI) in MAP messages • Translation Type (TT) • Nature of Address Indicator (NAI) • Numbering Plan (NP) • Encoding Scheme (ES) • Signaling network standard (ITU / ANSI) SS7 with ETSI MAP	Terminating Access Domain Selection (T-ADS)	<i>MTAS IMS Centralized Services Management Guide</i>



Table 20 SCC AS Services Configuration-Related Tasks

Configuring	Function	Reference
SRVCC administrative state	Single Radio Voice Call Continuity (SRVCC)	<i>MTAS SRVCC Management Guide</i>
<div>Additional configuration</div> <ul style="list-style-type: none">• Session Transfer Number for SRVCC (STN-SR) value assigned to the SCC AS• Access Transfer Update Session Transfer Identification (ATU-STI) for SRVCC value assigned to the SCC AS• Timer used to delay the BYE request containing Reason header with protocol “SIP” and reason parameter “cause” with value “503” (3GPP TS 24.237)• Timer used to delay the termination of the source access leg in successful access transfer using SRVCC procedures (3GPP TS 24.237)• Support for SRVCC of calls in alerting state in MTAS• Timer used to delay the CANCEL request from PS domain containing Reason header with protocol “SIP” and reason parameter “cause” with value “503” (3GPP TS 24.237)• Mode of media check during R10 SRVCC access transfer		

(1) Home Subscriber Server (HSS)

2.3 ST AS Services

For correct operation of the ST AS, the high-level configuration of the neighboring IMS nodes is described in *MTAS External Network Configuration for SIP Trunking* (see also Section 4.2 External Network Configuration for SIP Trunking on page 50).

Table 21 lists the configuration-related tasks for ST AS services.



Table 21 ST AS Services Configuration-Related Tasks

Configuring	Function	Reference
ST services activation <ul style="list-style-type: none"> • Activating ST AS • Activating ST service 	SIP Trunking Application Server (ST AS) services	<i>MTAS SIP Trunking Service Management Guide</i>
ST services deactivation <ul style="list-style-type: none"> • Deactivating ST AS immediately • Deactivating ST services (immediately / gracefully) 		
ST services parameters configuration		
ST AS administrative state	SIP Trunking Application Server (ST AS)	<i>MTAS SIP Trunking Management Guide</i>
Transit function address		
SIP trunking charging profile reference		
Feature tag handling		
No reply timer		
Access control profile <ul style="list-style-type: none"> • PBX route error definition • PBX route error guard timer • PBX route out of order timer • ST SIP port 		
ST CAC administrative state	ST Call Admission Control (ST CAC)	<i>ST AS Call Admission Control Management Guide</i>
ST CAC counts reset (per PBX)		
Announcement		
Service data <ul style="list-style-type: none"> • Operator subscription level service configuration (activating / deactivating the ST CAC service subscription for the PBX, setting CAC limits) 		



Table 21 ST AS Services Configuration-Related Tasks

Configuring	Function	Reference
ST Carrier Select Rn administrative state	ST Carrier Select Rn	<i>ST AS Carrier Select Rn and Carrier Pre-Select Rn Management Guide</i>
ST carrier selection reason codes (Q.850 reason code for a congestion situation)		
ST Carrier Select Rn Carrier Access Code		
ST Carrier Select Rn Carrier Select Code		
ST Carrier Select Rn carrier identity		
ST Carrier Select Rn carrier name		
ST Carrier Rn		
ST Carrier Rn domain		
ST Carrier Rn disallowed destinations		
Service data <ul style="list-style-type: none">• Operator subscription level service configuration (activating / deactivating ST Carrier Select Rn service)		
ST Carrier Pre-Select Rn administrative state	ST Carrier Pre-Select Rn	<i>ST AS Carrier Select Rn and Carrier Pre-Select Rn Management Guide</i>
ST Carrier Pre-Select test number for remote preselection		
Service data <ul style="list-style-type: none">• Operator subscription level service configuration (activating / deactivating ST Carrier Pre-Select Rn service)		



Table 21 ST AS Services Configuration-Related Tasks

Configuring	Function	Reference
ST CB administrative state	ST Communication Barring (ST CB)	<i>ST AS Communication Barring Service Management Guide</i>
ACR display name evaluation		
Operator barring category (create, modify, delete)		
Localness barring categories (modify)		
Global white list		
<ul style="list-style-type: none"> • Modify list of numbers included in ICB global white list • Modify list of numbers excluded in ICB global white list • Modify list of domains included in ICB global white list 		
Generic announcement name		
Service data	ST Communication Diversion (ST CDIV)	<i>ST AS Communication Diversion Management Guide</i>
<ul style="list-style-type: none"> • Operator subscription level service configuration (barring rules, operator barring programs) 		
ST CDIV administrative state		
Announcement		
Additional configuration		
<ul style="list-style-type: none"> • ST CDIV service is not reachable when any of the response codes are received • ST CDIV service is not reachable when the timer expires • Global Communication Forwarding blacklist for the MTAS • Maximum number of times the same communication is allowed to be forwarded • INVITE method response 302 causes a redirect generated by the ST AS, or if the 302 is to be passed on to the UA 		
Service data		
<ul style="list-style-type: none"> • Operator subscription level service configuration (activating / deactivating ST CDIV service subscription for the PBX) 		



Table 21 ST AS Services Configuration-Related Tasks

Configuring	Function	Reference
ST MCID administrative state	ST Malicious Communication Identification (ST MCID)	<i>ST AS Malicious Communication Identity Service Management Guide</i>
Reporting method		
Communication Details Server (CDS)		
Closure of ACR files for local storage definition		
Service data <ul style="list-style-type: none">• Operator subscription level service configuration (activating / deactivating ST MCID service subscription for the PBX, list of PBX extension numbers triggering the service)		
Contexts for the dialed numbers <ul style="list-style-type: none">• Phone error correction context• Profile context• Domain name context• Global phone context	ST Number Normalization	<i>ST AS Number Normalization Management Guide</i>
Normalization data <ul style="list-style-type: none">• Profile (profile context, phone error context)		
Algorithm data <ul style="list-style-type: none">• Substitution regular expressions• OSN numbers• NSN numbers		



Table 21 ST AS Services Configuration-Related Tasks

Configuring	Function	Reference
Identity Presentation administrative state	ST Identity Presentation	<i>ST AS Identity Presentation Service Management Guide</i>
Additional configuration		
<ul style="list-style-type: none"> Enabling / disabling screening of the From header Enabling / disabling denormalization of the From header Enabling / disabling copying of the Request URI to the To header 		
Reason for lack of caller identity		
Service data		
<ul style="list-style-type: none"> Operator subscription level service configuration (subscription options for OIP / OIR) User subscription level service configuration (user level configuration options for OIP / OIR) 		

2.4 Network AS Services

Table 22 lists the configuration-related tasks for Network AS services.

Table 22 Network AS Services Configuration-Related Tasks

Configuring	Function	Reference
NW AS administrative state	Communication Interworking Functionality (IWF)	<i>Network AS Management Guide</i>
NW AS name		
NW AS SIP port		
Precondition IWF administrative state	Precondition IWF	<i>Network AS Precondition IWF Management Guide</i>
Predefined number range		

2.5 Co-Location of AS Roles

Table 23 lists the configuration-related tasks for Co-location of AS roles.



Table 23 Co-Location of AS Roles Configuration-Related Tasks

Configuring	Function	Reference
Node level functions	Co-location of AS roles	<i>Co-Location of AS Roles in MTAS</i>
AS role-specific functions		
Service data <ul style="list-style-type: none">• Operator subscription level service configuration• User subscription level service configuration		

2.6 XML Document Management Server

Table 24 lists the configuration-related tasks for the XML Document Management Server (XDMS).

Table 24 XML Document Management Server Configuration-Related Tasks

Configuring	Function	Reference
Diameter stack for XDMS	XML Document Management Server (XDMS)	<i>MTAS XDMS Management Guide</i>
Sh interface		
Optional XDMS function parameters		
Access of Ut interface <ul style="list-style-type: none">• Administrative state• Reading, modifying and deleting its own MTAS service-specific provisioning data for MTAS subscriber		
Access of CAI3G interface <ul style="list-style-type: none">• Administrative state• Operator managing subscriber data in an encrypted and authenticated way		
CAI3G interface <ul style="list-style-type: none">• MTAS XDMS Keystore modifications (create / delete CAI3G certificate, import trusted certificate, list stored certificates)• Applying the Modified MTAS XDMS Keystore• CAI3G logging		



3 Quality of Service

Table 25 lists the configuration-related tasks for Quality of Service (QoS) assurance.

Table 25 QoS Assurance Configuration-Related Tasks

Configuring	Function	Reference
DSCP ⁽¹⁾ marking value in MTAS	Differentiated Services	<i>MTAS External Network Configuration</i>

(1) Differentiated Services Code Point (DSCP)





4 Network Connectivity

4.1 External Network Configuration

Table 26 lists the high-level configuration-related tasks of the neighboring IMS nodes needed for correct operation of the MTAS.

Table 26 External Network Configuration Tasks

Configuring	Function	Reference
MTAS interfaces: Dh / Sh / CNS / SNM / Rf / Ro / CDS / DNS / ISC / Ma / Pw / Ut / CAI3G / CAT / Mr / Mp / CAPv2 / ETSI MAP / Parlay X	Interface configuration	MTAS External Network Configuration
HSS configuration <ul style="list-style-type: none">• Initial Filtering Criteria for MTAS services• Implicit Registration Set• Service Indication• Subscription and service profile administration	Node configuration	
MTAS dynamic allocation <ul style="list-style-type: none">• DNS• AS instance caching		
MTAS DNS-based redundancy and load sharing of external server nodes <ul style="list-style-type: none">• SRV records• A/AAAA records		
Provisioning in MTAS		
MTAs parameter value selection for deployment-dependent CM attributes		
Installation of additional MTAS nodes		
Public Service Identities	Services configuration	
Differentiated Services		
AS Controlled Forking		
Originating AS chaining		
MTAS services suppression based on the INVITE method		



4.2 External Network Configuration for SIP Trunking

Table 27 lists the high-level configuration-related tasks of the neighboring IMS nodes needed for correct operation of the ST AS in the MTAS.

Table 27 External Network Configuration for SIP Trunking

Configuring	Function	Reference
MTAS interfaces: Dh / Sh / SNM / Rf / CDS / DNS / ISC / Ma / ST AS to IBCF / ST AS to Transit Function / CAI3G / Mr / Mp	Interface configuration	MTAS External Network Configuration for SIP Trunking
HSS configuration (static mode) <ul style="list-style-type: none">• Initial Filtering Criteria• HSS service type• Service Indication• HSS service trigger HSS configuration (dynamic mode) <ul style="list-style-type: none">• Initial Filtering Criteria• Implicit Registration Set• Service Indication• Subscription and service profile administration	Node configuration	
I-CSCF configuration (static mode) <ul style="list-style-type: none">• Standalone transit• Collocated transit		
Provisioning in MTAS (dynamic mode)		
Extra ST AS node installation		
Public Service Identities		
Originating AS chaining	Services configuration	

4.3 IPv6 Configuration

Table 28 lists the IPv6 configuration-related tasks for MTAS towards its peer nodes.

*Table 28 IPv6 Configuration Tasks*

Configuring	Function	Reference
Adding VIP IPv6 addresses	IPv6 configuration	<i>MTAS IPv6 Management Guide</i>
Adding and connecting Diameter IPv6 addresses		
Peer nodes IPv6 configuration <ul style="list-style-type: none">• SIP• H.248• Parlay X• NameDB• DNS		





5 MTAS Node Level Management

5.1 Node Management

Table 29 lists the configuration-related tasks and areas for MTAS node level management.

Table 29 MTAS Node Level Management Configuration-Related Tasks and Areas



Table 29 MTAS Node Level Management Configuration-Related Tasks and Areas

Configuring	Function	Reference
MTAS management <ul style="list-style-type: none">• Activating MTAS• Deactivating MTAS (gracefully / forcefully)	Node Management	<i>MTAS VNF Management Guide</i>
License Management <ul style="list-style-type: none">• Adding licenses• Checking license data / use		
MMTel AS management <ul style="list-style-type: none">• Activating MMTel AS• Deactivating MMTel AS (gracefully / forcefully)• Activating Supplementary Services• Deactivating Supplementary Services• Setting the attributes of Supplementary Services		
SCC AS management <ul style="list-style-type: none">• Activating SCC AS• Deactivating SCC AS (gracefully / forcefully)• Collocating MMTel AS and SCC AS		
ST AS management <ul style="list-style-type: none">• Activating ST AS• Deactivating ST AS (gracefully / forcefully)• Activating Supplementary Services• Deactivating Supplementary Services• Setting the attributes of Supplementary Services		
SIP management <ul style="list-style-type: none">• Changing SIP ports and parameters• Traffic activation / deactivation		
CS interworking management <ul style="list-style-type: none">• Activation / deactivation of CS interworking		



Table 29 MTAS Node Level Management Configuration-Related Tasks and Areas

Configuring	Function	Reference
Charging management <ul style="list-style-type: none"> • Definition of a charging destination (Diameter stack) • Definition of charging profiles • Connecting a charging profile to a service 	Node Management	MTAS VNF Management Guide
Subscriber data management <ul style="list-style-type: none"> • Configuring the Diameter stack • Configuring the Sh interface • Changing optional parameters • Query and purge 		
XDMS management <ul style="list-style-type: none"> • Configuring the Diameter stack • Configuring the Sh interface • Configuring Ut interface • Configuring CAI3G interface • Changing optional parameters • Activating provisioning by CAI3G manager • Deactivating provisioning by CAI3G manager (gracefully / forcefully) • Activating provisioning by Ut client • Deactivating provisioning by Ut client (gracefully / forcefully) 		
Number Normalization management <ul style="list-style-type: none"> • Definition of Number Normalization profiles • Definition of domain names from which user=phone parameter is missing • Definition of contexts • Definition of substitution rules • Definition of Operator Service Numbers (OSNs) • Definition of National Significant Numbers (NSNs) 		



Table 29 MTAS Node Level Management Configuration-Related Tasks and Areas

Configuring	Function	Reference
Media Resource Function management <ul style="list-style-type: none">• Creating an MRFP• Activating an MRFP• Deactivating an MRFP• Deleting an MRFP• Changing MRFP and MRFC parameters	Node Management	<i>MTAS VNF Management Guide</i>
Announcement management		
Performance measurement management <ul style="list-style-type: none">• Measurement XML files management		
Log management		
Fault Management		
Security management		
Recovery <ul style="list-style-type: none">• Software restart• System restore		
Backup		
Maintenance schedule		

5.2 Media Control

Table 30 lists the configuration-related tasks for media control in MTAS.



Table 30 Media Control Configuration-Related Tasks

Configuring	Function	Reference
MRFP <ul style="list-style-type: none"> • Adding • Activating • Configuring • Deactivating (gracefully / forced) • Removing 	Media control	<i>MTAS Media Control Management Guide</i>
Mp interface <ul style="list-style-type: none"> • Activating • IP protocol version • Multiple language support • Mrf operation timer • Hangterm timer 		
MRFC <ul style="list-style-type: none"> • Configuring default • Adding • Changing parameters • Activating • Deactivating • Removing 		

*Table 30 Media Control Configuration-Related Tasks*

Configuring	Function	Reference
Mr interface <ul style="list-style-type: none">• Activating• IP protocol version• Multiple language support• DNS-based redundancy	Media control	<i>MTAS Media Control Management Guide</i>
MRF selection <ul style="list-style-type: none">• Adding MRF site• Removing MRF site• Configuring default• Configuring MRF access map• Activating location-based MRF selection• Deactivating location-based MRF selection		

5.3 MTAS Services

Table 31 lists the MTAS services and configuration information.

Table 31 MTAS Services



Table 31 MTAS Services

Configuring	Function	Reference
MTAS services <ul style="list-style-type: none"> • 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 • Dialog Event Notifier • 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 	MTAS services	<i>MTAS Service Management Guide</i>



Table 31 MTAS Services

Configuring	Function	Reference
<ul style="list-style-type: none">• 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	MTAS services	<i>MTAS Service Management Guide</i>
Service <ul style="list-style-type: none">• Activation• Deactivation (immediately / gracefully)• Parameter configuration		

5.4 SIP Management

Table 32 lists the configuration-related tasks for SIP.



Table 32 SIP Configuration-Related Tasks

Configuring	Function	Reference
Session case determination Changing IP-version Changing DSCP marking value Changing SIP ports SIP parameters configuration SIP traffic and OAM traffic separation DNS configuration <ul style="list-style-type: none"> • Adding DNS entry Call Out Of the Blue Handling OPTIONS (ping) Failover and greylisting Served user Originating AS chaining Keepalive mechanism	SIP	<i>MTAS SIP Management Guide</i>
SIP Upstream Overload Control administrative state SIP Upstream Overload Control parameters <ul style="list-style-type: none"> • Overload Onset • Overload Abatement • Default Overload Control Increase Step • Default Overload Control Decrease Step • Overload Control Regulation Interval • Overload Control Validity SIP Upstream Overload Control resource configuration <ul style="list-style-type: none"> • CPU use related resources • Heap / Memory / MultiMMap use related resources • TIPC use related resources 	SIP Upstream Overload Control	<i>MTAS SIP Upstream Overload Control Management Guide</i>



5.5 SS7 Management

Table 33 lists the configuration-related tasks for SS7.

Table 33 SS7 Configuration-Related Tasks

Configuring	Function	Reference
Enabling expert mode	SS7	<i>MTAS SS7 Management Guide</i>
Signaling network		
- SCCP layer		
TCAP		
CAP and MAP		
• INAP		
• ETSI MAP		
SCTP		
Activating the configuration changes		
SCTP link failure detection		

5.6 Subscriber Data Management

Table 34 lists the configuration-related tasks for Subscriber Data.

Table 34 Subscriber Data Configuration-Related Tasks

Configuring	Function	Reference
Sh Diameter stack	Subscriber Data	<i>MTAS Subscriber Data Management Guide</i>
• Own node configuration for Subscriber Data / XDMS functions		
• Neighbor node data configuration for Subscriber Data / XDMS functions		
• Realm Routing Table data configuration		
Sh interface		
Caching contact data and UE terminal type classification		
Wholesale for Subscriber Data		
Query or purge file retrieval		



5.6.1 Subscriber Credit Notification Management

Table 35 lists the configuration-related tasks for Subscriber Credit Notification.

Table 35 Subscriber Credit Notification Configuration-Related Tasks

Configuring	Function	Reference
Subscriber Credit Notification administrative state	Subscriber Credit Notification	<i>MTAS Subscriber Credit Notification Management Guide</i>
Additional activities		
<ul style="list-style-type: none"> • Putting video stream on hold • Using MRF provided SDP offer/answer 		
Announcement name		
Wholesale for Subscriber Credit Notification		

5.7 Target Handling Management

Table 36 lists the configuration-related tasks for Target Handling.

Table 36 Target Handling Configuration-Related Tasks

Configuring	Function	Reference
Service data	Target Handling	<i>MTAS Target Handling Management Guide</i>
<ul style="list-style-type: none"> • Operator subscription level service configuration (activating / deactivating the user common data subscription, setting the maximum number of targets in the common target list and in the common device list, allowing / disallowing the use of the common device list, enabling the auto-answer avoidance feature for FCD and STOD) • Subscriber subscription level service configuration (common target list, common device list) 		
Terminal selector prefix used in network signaling		
AS Controlled Forking administrative state		

5.8 Time Based Services Management

Table 37 lists the configuration-related tasks for Time Based Services.



Table 37 Time Based Services Configuration-Related Tasks

Configuring	Function	Reference
Calendar data for Time Based Services	Time Based Services	<i>MTAS Time Based Services Management Guide</i>
Wholesale for Time Based Services		
Service data <ul style="list-style-type: none">• Operator subscription level service configuration (activating / deactivating the fine-grained service subscriptions for the time-based conditions, activating / deactivating the holiday-list element for the subscriber)• Subscriber subscription level service configuration (user common data, time-based conditions)		
UTC Offset <ul style="list-style-type: none">• Within the time-based conditions• Within the user common data by the <utc-offset> element• By CM attribute		



Table 37 Time Based Services Configuration-Related Tasks

Configuring	Function	Reference
Start day of the week <ul style="list-style-type: none"> • Within the user common data by the <start-day-of-week> element • By CM attribute 		
Workdays and non-workdays <ul style="list-style-type: none"> • Within the user common data by the <non-workday-list> element • By CM attribute 		
Private and public holidays <ul style="list-style-type: none"> • List of private holidays • List of public holidays 		
Subscription rules <ul style="list-style-type: none"> • Time-based conditions • cp: validity • mmt-serv: invalidity • mmt-serv: valid-periods (mmt-serv: utc-offset, mmt-serv: valid-days, mmt-serv: valid-times, mmt-serv: valid-months, mmt-serv: valid-weeks, mmt-serv: repeat-daily, mmt-serv: repeat-weekly, mmt-serv: repeat-monthly, mmt-serv: valid-monthdays, except-holidays) 		

5.9 VNF Life Cycle Management

Table 38 lists the tasks related to Virtual Network Function (VNF) life cycle management.

*Table 38 VNF Life Cycle Management Tasks*

Task	Function	Reference
Heal VNF	VNF Life Cycle Management	<i>MTAS VNF Life Cycle Management Guide</i>
Instantiate VNF		
Scale-out VNF		
Scale-in VNF		
Terminate VNF		



6 Data Collection

The data collection procedures instruct which troubleshooting data to collect that can be enclosed in Customer Service Requests (CSRs) or Trouble Reports (TRs), if a problem is experienced with the MTAS.

Table 39 lists the tasks related to data collection.

Table 39 Data Collection Tasks

Task	Function	Reference
Perform data collection	Data Collection	<i>Data Collection Guideline for MTAS</i>





7 Health Check

Health check means checking and monitoring the current state and health of the system, and searching for irregularities and deviations. During this procedure, MTAS health information is collected. The administrator can then decide if more actions are needed, or if a software or hardware configuration change is needed.

Table 40 lists the tasks related to health check.

Table 40 Health Check Tasks

Task	Function	Reference
Perform health check	Health Check	<i>MTAS Health Check</i>





8 Fault Management

Table 41 lists the various tasks for fault management.

Table 41 Fault Management Tasks

Task	Function	Reference
Configure SNMP targets or an SNMP view	SNMP configuration in Alarm handling	Section <i>SNMP Configuration</i> in <i>Fault Management</i>
Configure alarm severity	Alarm handling	Section <i>Alarm Configuration</i> in <i>Fault Management</i>
Get the active alarm list	Alarm handling	Section <i>Alarm Configuration</i> in <i>Fault Management</i> <i>MTAS Alarm list</i>
Change the heartbeat	Alarm handling	Section <i>Alarm Configuration</i> in <i>Fault Management</i>





9 File Management

Table 42 lists the various tasks for file management.

Table 42 File Management Tasks

Task	Function	Reference
Access to a logical file system through the MOM, based on security rules	File management	Section <i>Types of Operation</i> in <i>File Management</i>
Access to a logical file system over SFTP, based on security rules	File management	Section <i>Types of Operation</i> in <i>File Management</i>
Definition, modification, and deletion of preventive maintenance file group policies	File management	Section <i>Types of Operation</i> in <i>File Management</i>
Collect alarm logs	Alarm log handling	Section <i>File Management</i> in <i>File Management</i> <i>Fetch File in Logical File System</i>





10 Performance Management

For performance measurements, refer to *MTAS Performance Measurements*.

PM Jobs can be created, started, stopped, or deleted manually.

Table 43 lists the various tasks for performance management.

Table 43 Performance Management Tasks

Task	Function	Reference
List measurement types, PM groups, and PM jobs	Performance Management	Section <i>Types of Operation</i> in <i>Performance Management</i>
Create, start, stop, and delete measurement collection jobs	Performance Management	Section <i>Types of Operation</i> in <i>Performance Management</i>
Create, start, stop, and delete threshold monitoring jobs	Performance Management	Section <i>Types of Operation</i> in <i>Performance Management</i>





11 OAM Security Management

Table 44 lists the various tasks for the NBI users in the Operations, Administration, and Maintenance (OAM) security management area.

Table 44 OAM Security Management Tasks

Task	Function	Reference
View LDAP configuration	LDAP Authentication in Security management	Section <i>LDAP Authentication in User Management</i>
Unlock/lock LDAP authentication method	LDAP Authentication in Security management	Section <i>LDAP Authentication in User Management</i>
Change bind name and password for LDAP authentication	LDAP Authentication in Security management	Section <i>LDAP Authentication in User Management</i>
Change certificate settings for LDAP TLS	LDAP Authentication in Security management	Section <i>LDAP Authentication in User Management</i>
Change Target-Based Access Control (TBAC)	LDAP Authentication in Security management	Section <i>LDAP Authentication in User Management</i>
View roles and rules	Local Authorization in Security management	Section <i>Local Authorization in User Management</i>
Lock/unlock local authorization method	Local Authorization in Security management	Section <i>Local Authorization in User Management</i>
Create, change, and delete custom roles and custom rules	Local Authorization in Security management	Section <i>Local Authorization in User Management</i>
Understand MTAS-specific roles and rules	Local Authorization in Security management	Section <i>MTAS Roles and Rules in User Management</i>





12 Software Management

Table 45 lists the various tasks for software management.

Table 45 Software Management Tasks

Task	Function	Reference
Prepare an Upgrade Package	Software upgrade in software management	Section <i>Software Upgrade</i> in <i>Software Management</i>
Upgrade using one-step activation	Software upgrade in software management	Section <i>Software Upgrade</i> in <i>Software Management</i>
Upgrade using step-by-step activation	Software upgrade in software management	Section <i>Software Upgrade</i> in <i>Software Management</i>
Cancel an upgrade operation	Software upgrade in software management	Section <i>Software Upgrade</i> in <i>Software Management</i>
Delete an Upgrade Package	Software upgrade in software management	Section <i>Software Upgrade</i> in <i>Software Management</i>
Delete an inactive software version	Software removal in software management	Section <i>Software Removal</i> in <i>Software Management</i>
View software information	Software Inventory Management	Section <i>Types of Operation</i> in <i>Software Inventory Management</i>





13 System Management

Table 46 lists the various tasks for system management.

Table 46 System Management Tasks

Task	Function	Reference
Address Managed Element	System management	Section <i>Address Managed Element</i> in <i>System Management</i>
Identify DN Prefix	System management	Section <i>Identify DN Prefix</i> in <i>System Management</i>
Identify Managed Element	System management	Section <i>Identify Managed Element</i> in <i>System Management</i>
Identify Managed Element Location	System management	Section <i>Identify Managed Element Location</i> in <i>System Management</i>
List Supported XML Model Files	System management	Section <i>Manage XML Model Files</i> in <i>System Management</i>
Push of XML Model Files to External System	System management	Section <i>Manage XML Model Files</i> in <i>System Management</i>





14 System Backup and Restore

Table 47 lists the various tasks for backup and restore management.

Table 47 Backup and Restore Tasks

Task	Function	Reference
Create Backup Restore Backup Delete Backup Cancel Backup and Restore Operation List Backups View Progress Report	Backup and restore management	Section <i>Basic Backup Operations</i> in <i>System Backup and Restore</i>
Schedule Single Backup Schedule Backups Based on Calendar Event Schedule Backups Based on Periodic Event	Backup and restore management	Section <i>Schedule Backups</i> in <i>System Backup and Restore</i>
Change Prefix for Scheduled Backup Name Delete Scheduled Event Set Maximum Number of Scheduled Backups Lock Backup Scheduler Unlock Backup Scheduler	Backup and restore management	Section <i>Manage Scheduled Backups</i> in <i>System Backup and Restore</i>



Table 47 Backup and Restore Tasks

Task	Function	Reference
Change Maximum Number of Manual Backups Enable Automatic Deletion of Manual Backups Disable Automatic Deletion of Manual Backups	Backup and restore management	Section <i>Manage Manual Backups</i> in <i>System Backup and Restore</i>
Export Backup Import Backup Change Prefix for Exported Backup Names Set Automatic Export of Scheduled Backups	Backup and restore management	Section <i>Import and Export Backups</i> in <i>System Backup and Restore</i>