

vMTAS Upgrade Information from 1.2.1 to 1.4 MTAS

UPGRADE INFORMATION

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1 Introduction

This document provides information about the upgrade of vMTAS from 1.2.1 to 1.4.

This document is to be used when planning upgrades on customer sites.

Scope

This document covers the following topics:

- Upgrade Prerequisites
- Upgrade Overview

Target Groups

The software upgrade procedure is normally done (or overseen) by Ericsson maintenance personnel.

1.1 Prerequisites

This section describes the prerequisites which must be fulfilled before performing the MTAS upgrade.

1.1.1 Licenses

Make sure that needed licenses are installed before the installation of the MTAS upgrade packages.

1.1.2 Update of Charging System

Update the charging system, if applicable, with the new charging XML files to prepare for the new charging AVPs and enumeration values.

Note: Use the described charging system instead of Multi-Mediation (MM) as the MTAS can interact with other types of charging systems.

To perform the charging system update, refer to *MTAS Charging Management Guide*, Reference [7].

For more details of the XML specifications, refer to the following files:

- *MTAS, Communication Details, 3GPP R7 XML*, Reference [6]



- *MTAS, Offline Charging, 3GPP R7 MM XML*, Reference [11]
- *MTAS, Offline Charging, 3GPP R9 MM XML*, Reference [12]
- *MTAS, Offline Charging, 3GPP R12 MM XML*, Reference [13]
- *MTAS, Online Charging, 3GPP R7 MM XML*, Reference [14]
- *MTAS, Online Charging, 3GPP R9 MM XML*, Reference [15]
- *MTAS, Online Charging, 3GPP R12 MM XML*, Reference [16]

1.1.3 Hardware and Software Required

This section describes the required hardware and software.

Network Element Version

This instruction applies to the following Network Elements (NEs):

- MTASv 1.2.1: CXP9025660/9 R4F01

Hardware Configurations

The supported Hardware (HW) configurations are as follows:

- MTAS can run on any hardware supported by the hypervisor.

From Software Configuration States

- MTASv 1.2.1: CXP9025660/9 R4F01

Platform Level

- BRF-C, CXP9018859_2, R1C
- COM, CXP9028493/1, R1C01
- COREMW, CXP9020355/2, R1D01
- DBS, CXC1738069/5, R1B07
- EVIP, CXP9020395/3, R1C03
- LEM, CXP9025257/4, R1C02
- SS7 CAF, ANA90137/4, R4B
- vDicos, CXP9025265/4, R1D03



To Software Configuration States

- vMTAS 1.4: CXP9025660/9 R5A11

Platform Level

- BRF-C, CXP9018859_2, R1C
- COM, CXP9028493/1, R1C01
- COREMW, CXP9020355/2, R1D01
- DBS, CXC1738069/5, R
- EVIP, CXP9020395/3, R1C03
- LEM, CXP9025257/4, R1C02
- SS7 CAF, ANA90137/4, R4B
- vDicos, CXP9025265/4, R1D03

1.1.4

Documents

Before starting this procedure, ensure that the following information or documents are available:

- Information (facts) as, node name, software version, platform, operating system, and hardware.
- For information about IP addresses, usernames and passwords, how to collect data and log files, refer to *Data Collection Guideline for MTAS*, Reference [3].
- For information about how to make backup and restore procedures, refer to the following document:
 - *System Backup and Restore* , Reference [18]
 - *Restore Backup* , Reference [17]
 - *Create Backup*, Reference [1]
- For information about the Ericsson Command-Line Interface (ECLI), refer to *Ericsson Command-Line Interface User Guide*, Reference [4].
- For information about the Managed Object Model (MOM), refer to *Managed Object Model (MOM)*, Reference [5].
- Some of the recovery steps require physical access to the nodes for pressing buttons, replacing hardware, and so on. For information on physical access and handling, refer to *MTAS Health Check*, Reference [9].



1.1.5 Tools

The following tool must be available before performing any procedure in this document:

- A workstation (laptop) with SSH and SCP or FTP client, and a NETCONF browser.

1.1.6 Conditions

The following conditions must apply:

- The upgrade is supported with a 30% average CPU load traffic limit on the Pay Load Blades.
- An Ericsson Command-Line Interface (ECLI) session in Exec mode is in progress.

1.1.7 Prerequisites for Upgrading MTAS with Network Redundancy

1. The IMS network must be configured for AS failover. That is the AS FQDN has to have at least two DNS entries, one per used MTAS. For information on how to configure MTAS for Dynamic Allocation, refer to sections *Configuration for Dynamic Allocation* and *DNS Based Redundancy and Load Sharing of External Server Nodes* in *MTAS External Network Configuration*, Reference [8].
2. Verify that the intended secondary MTAS node(s) is/are operational by following the MTAS Health Check procedure, refer to *MTAS Health Check*, Reference [9].

1.2 Limitations

The following limitations apply:

- Provisioning is not allowed during the upgrade as configuration changes during upgrade can cause problems.
- It is not supported to use AppTrace during software upgrade.
- There is a risk of traffic loss and generation of new alarms if the diameter link restarts.
- Subscriber Data query or purge operations are not supported during upgrade.



1.3 Related Information

The MTAS Trademark information, typographic conventions, definitions, and explanation of acronyms and terminology can be found in the following documents:

- *Glossary of Terms and Acronyms*, Reference [2]
- *Trademark Information*, Reference [19]
- *Typographic Conventions*, Reference [20]

Impact of upgrade, rollback, and parameter changes can be found in *Virtualized MTAS Network Impact Report from 1.2.1 to 1.4*, Reference [10].

1.4 Revision Information

This is the first release of this document.





2 Upgrade Overview

This section describes the upgrade, and a possible rollback, from an impact point of view.

Lead Time

For information about lead times (minutes) for the MTAS upgrade, see Table 1.

Table 1 Overall Lead Time for MTAS Upgrade

	2+2	2+4	2+10
Pre-Upgrade	120 minutes	120 minutes	120 minutes
Upgrade	60 minutes	150 minutes	210 minutes
Post-Upgrade	30 minutes	30 minutes	30 minutes

Down Time

No down time is expected during the upgrade.

Traffic Loss

During the upgrade the following traffic loss is expected:

- Rejected traffic: None
Three Party (3PTY) sessions and conferences are lost.
- Disconnected traffic: None

Service Disturbances

Stable calls stay connected during the upgrade.

2.1 Impact of Upgrade

This section describes the impact of the upgrade.



Operation and Maintenance

The upgrade has the following impact on the operation and maintenance of the system:

- **Alarms**

The following alarms can appear, but are automatically resolved:
There are no alarms.

- **Notifications or Events**

The following notifications appear during or after the upgrade procedure:

- Capsule Abortion

These notifications require no actions.

- **Counters**

The error counters are expected to increase during the upgrade.

Provisioning

Provisioning is not supported during the upgrade.

Charging

No impact.

Security

Security is not treated in this document.

End Terminals

No impact.

Database Handling

No impact.

Dependencies to Other Nodes

This subsection describes the impact on the dependencies to other nodes during the upgrade.

The external interfaces are impacted as follows by the upgrade:



For more information about new, modified, obsolete, or temporary parameters during the upgrade, refer to *Virtualized MTAS Network Impact Report from 1.2.1 to 1.4*, Reference [10].

Other Impacts

No other impacts.

2.2 Impact of Rollback

This section describes the impact of a possible rollback, in case the upgrade is not concluded in a satisfactory manner.

Traffic Loss

See Section Traffic Loss on Page 7.

Service Disturbances

See Section Service Disturbances on Page 7.

Provisioning

See Section Provisioning on Page 8.

Charging

See Section Charging on Page 8.

Security

See Section Security on Page 8.

End Terminals

See Section End Terminals on Page 8.

Database Handling

No Impact.

Rollback Dependencies on Interaction with Other Nodes

See Section Dependencies to Other Nodes on Page 8.



Other Impacts

No impact.



3 Parameter Changes

For more information about parameters which are new, modified, or made obsolete during the upgrade, refer to *Virtualized MTAS Network Impact Report from 1.2.1 to 1.4*, Reference [10].





Reference List

Ericsson Documents

- [1] *Create Backup*
OPERATING INSTRUCTIONS, 3/1543-APA 901 44/1
- [2] *Glossary of Terms and Acronyms*
TERMINOLOGY, 1/0033-AVA 901 29/9
- [3] *Data Collection Guideline for MTAS*
OPERATING INSTRUCTIONS, 70/1543-AVA 901 29/9
- [4] *Ericsson Command-Line Interface User Guide*
USER GUIDE, 1/1553-APA 901 44/1
- [5] *Managed Object Model (MOM)*
MANAGED OBJECT MODEL, 155 54-LZN 765 0163/9-V1
- [6] *MTAS, Communication Details, 3GPP R7 XML*
PROCESSING SPEC., 4/190 04-AVA 901 18
- [7] *MTAS Charging Management Guide*
OPERATING INSTRUCTIONS, 3/1553-AVA 901 29/9
- [8] *MTAS External Network Configuration*
USER GUIDE, 43/1553-AVA 901 29/9
- [9] *MTAS Health Check*
OPERATING INSTRUCTIONS, 53/1543-AVA 901 29/9
- [10] *Virtualized MTAS Network Impact Report from 1.2.1 to 1.4*
NETWORK IMPACT REPORT, 18/109 48-AVA 901 29/9-3
- [11] *MTAS, Offline Charging, 3GPP R7 MM XML*
TECHNICAL DOCUMENT, 2/190 04-AVA 901 18
- [12] *MTAS, Offline Charging, 3GPP R9 MM XML*
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- [14] *MTAS, Online Charging, 3GPP R7 MM XML*
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- [15] *MTAS, Online Charging, 3GPP R9 MM XML*
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- [16] *MTAS, Online Charging, 3GPP R12 MM XML
TECHNICAL DOCUMENT*, 16/190 04-AVA 901 18
- [17] *Restore Backup
OPERATING INSTRUCTIONS*, 13/1543-APA 901 44/1
- [18] *System Backup and Restore
DESCRIPTION*, 5/1551-AVA 901 29/9
- [19] *Trademark Information
LIST*, 2/006 51-AVA 901 29/9
- [20] *Typographic Conventions
DESCRIPTION*, 1/1551-FCK 101 05

Other References

- [21] *SW Gateway*, <https://swgateway.ericsson.net/>
- [22] *IMS PLM Homepage*, https://ericoll.internal.ericsson.com/sites/MTAS_Portal/plm/default.aspx