

# MTAS Charging ACR Storage Management Guide

## MTAS

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### USER GUIDE

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# 1 Introduction

This document describes how to configure and activate the Accounting-Request (ACR) storage function in the MTAS. The ACR storage function is an optional subfunction, an alternative to the default backup buffer handler, in the offline charging service in the MTAS.

For more information about the offline charging service in the MTAS, refer to *Diameter Offline Charging in MTAS*.

## 1.1 Prerequisites

It is assumed that the user of this document is familiar with the O&M area, in general.

### 1.1.1 Licenses

To enable the ACR storage function, the offline charging service must be enabled and 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:

- *MTAS Charging Management Guide*
- *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 Charging ACR storage function enables the operator to store offline charging messages into the ACR files locally on the file system of the node. It is triggered when the charging messages cannot be sent to the Charging Server because of a failure situation as an alternative to the default backup buffer handling function in the MTAS. Examples of failure situations are if a Diameter link to the Charging Server is down or a faulty configuration of the offline charging service in the MTAS.

The ACRs are stored in the ACR files in a specific format in a logical file system in the following directory:

```
/cluster/storage/no-backup/MtasAcrStorage/PL-<X>
```

Where <x> is 1, 2, 3, and so on, corresponding to the number of PLs in the system, PL-1, PL-2, PL-3, and so on.

The function raises the *MtasCharging, ACR Disk Storage Started* alarm, when the first ACR file is opened. The alarm is cleared when the last ACR file has been retrieved and removed from the file system of the node.

The function creates and starts using a new ACR file when the currently used ACR file meets any of the following conditions:

- The file reached the configured maximum file size.
- The file has been open for the configured maximum time limit.
- The file contains the configured maximum number of ACRs.

The ACR file that reached the criteria is closed and given a predefined filename. It can be retrieved from the file system of the node using file transfer. For more information, refer to *File Management*.

For more information about the ACR storage format and the naming rules, refer to *ACR Storage in MTAS*.







## 3 ACR Storage Configuration

The ACR storage service is controlled by the *MtasCharging* MO. An overview of the *MtasCharging* MO structure is shown in Figure 1.

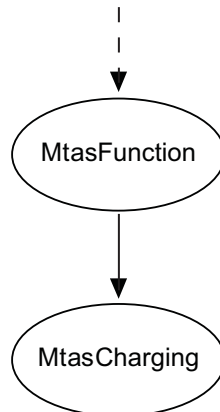


Figure 1 *MtasCharging* MO Structure

Configurable MOs and attributes related to the ACR storage service are defined in the *Managed Object Model (MOM)*.

### 3.1 Enable ACR Storage

If the offline charging messages cannot be delivered to the Charging Server, these messages can be stored locally.

The `mtasChargingAcrStorage` attribute defines if the ACR storage function is to be enabled for handling ACR messages at fault situations, when communication with a charging server does not work. If not enabled, the backup buffer is applied instead.

The following values are defined:

- |   |   |
|---|---|
| 0 | ACR storage function is disabled and backup buffer function is enabled. |
| 1 | ACR storage function is enabled.  |

The charging messages are stored locally in ACR files. The files can be fetched later through an SFTP application. For more information, refer to *File Management*.



## 3.2 Define Closure of ACR Files

An ACR file is closed when any of the following attributes are triggered:

- `mtasChargingAcrStorageMaxFileSize`
- `mtasChargingAcrStorageMaxTime`
- `mtasChargingAcrStorageMaxNbrAcr`

These attributes are only applied if the ACR storage function is enabled, that is, the `mtasChargingAcrStorage` attribute is set to 1.

## 3.3 Define Disk Full and Disk Not Full Percentage Levels

The attribute `mtasFunctionFullDiskPercentage` is used to define at which percentage level compared to full disk that the disk is considered to be full. When the full disk percentage level is reached, no more ACRs are stored on the file system of the node, and further requests to store ACRs are rejected.

The attribute `mtasFunctionNotFullDiskPercentage` is used to define at which percentage level compared to full disk that the state `diskfull` is changed to `enabled`, that is, more ACRs can be stored.

## 3.4 File Transfer

When the ACR files have been closed, they can be retrieved. For more information, refer to *File Management*.

## 3.5 Provide Access Rights to Log Files and Directories

The system administrator can provide access rights, for example, read or write, to other users to the ACR log files and directories where the files are stored. The access right is by default the node and platform super administrator accounts.

For more information about access to the log files and directories, refer to *File Management*.



## 4 Performance Management

For measurements, related to the ACR storage function, refer to *MTAS Performance Measurements*.





## 5 Fault Management

For alarms, related to the ACR storage function, refer to *MTAS Alarm List*.