

Communication Event Logging Interface in MTAS

Interwork Description

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1 Document History

Rev	Date	Sign	Comment
A	2018-03-25	erasunn	Initial Version
B	2018-03-28	erasunn	Editorial Changes

2 Scope and Purpose

This document covers the Communication Event Logging (CEL) interface from MTAS towards the Event server.

2.1 Interface Entities

The interface between MTAS and Event Server is called CEL interface.

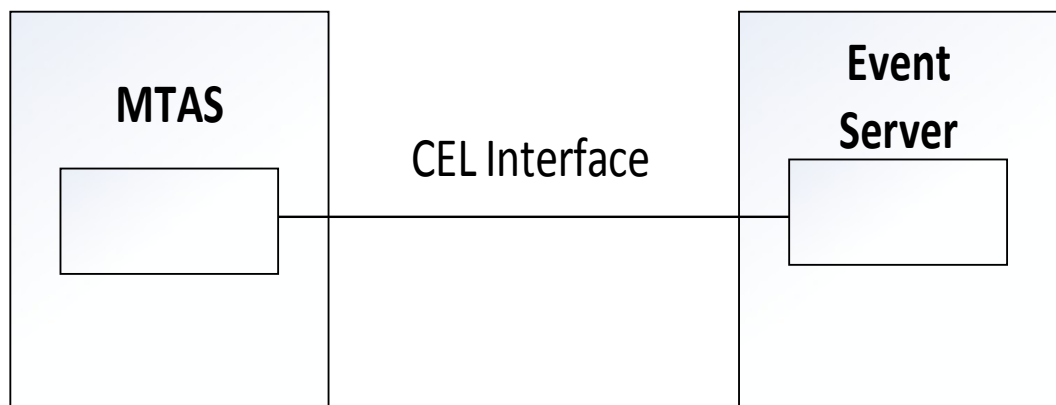


Figure 1: Entities involved in communication over CEL interface

- MTAS
- Event Server

2.2 Interface Role

CEL interface is a proprietary SIP based interface used for originating calls between MTAS and Event Server.

Event Server is a server that can receive the call notification from MTAS.

MTAS sends PUBLISH with a communication-event-info XML body depending on configuration to Event Server for reporting.

2.3 Services

Offered Service	Description
Report Communication Event	MTAS reports communication event towards event server whenever there is a communication attempt from served user.

Table 1: Offered Services

Used Service	Description
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Table 2: Used Services

2.4 Encapsulation and Addressing

Communication on CEL interface is performed using SIP over UDP or TCP. On network layer either IPv4 or IPv6 can be used. In SIP headers and bodies IPv4 and IPv6 addresses can be used.

PUBLISH with communication-event-info XML body is sent to Event server.

3 Procedures

3.1 Overview

These general statements apply to all operations.

- All operations are initiated by MTAS.
- Failure on CEL interface does not affect the ongoing call.
- MTAS considers all 2xx responses to PUBLISH as success.
- MTAS considers all non-2xx responses to PUBLISH as failures.
- The only reliability/retransmission mechanisms used are those provided by the TCP layer.

3.2 Lower Level Procedures

N/A

3.3 Send PUBLISH with XML body to Event Server

This is the procedure used between MTAS and the Event server. The procedure is invoked by MTAS and is used to send the PUBLISH request containing XML body for communication events to Event server.

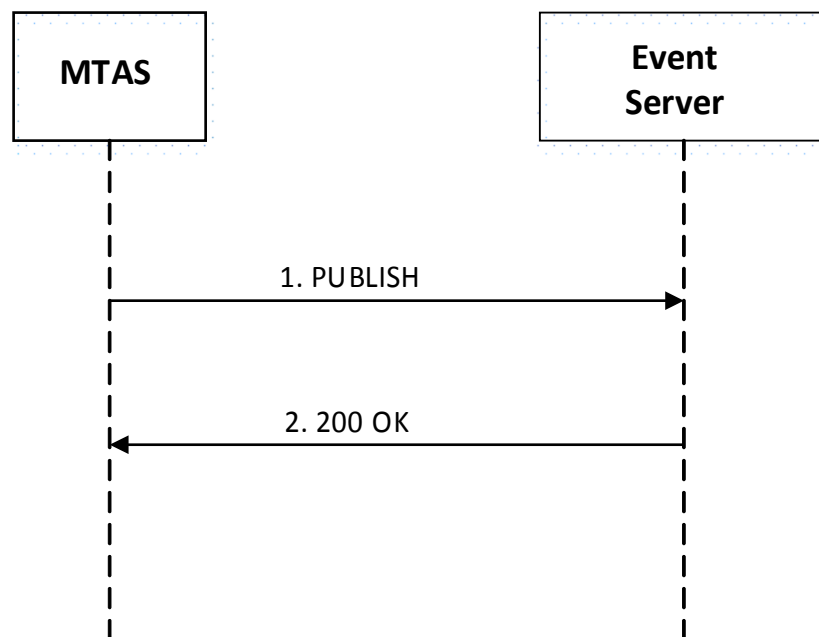


Figure 2. Sending PUBLISH request to Event server

1. MTAS sends PUBLISH to Event Server which contains SIP headers and XML body.

Example

```

PUBLISH sip:igw.ericsson.com SIP/2.0
Via: SIP/2.0/TCP
192.168.83.100:5082;branch=z9hG4bK3492325595-787322098
Max-Forwards: 70
Allow:
INVITE,BYE,CANCEL,ACK,INFO,PRACK,COMET,OPTIONS,SUBSCRIBE,NOTIFY,MESSAGE,REFER,REGISTER,UPDATE
From:
sip:192.168.83.100:5082;tag=p65537t1543483269m819850c131s1_875869517-2017426519
  
```

```
To: sip:igw.ericsson.com
Call-ID: p65537t1542622597m320973c291s2
CSeq: 1 PUBLISH
Contact:
<sip:p65537t1542622597m320973c291s1@192.168.83.100:5082;transport=udp>
Expires: 0
Event: call-event-info
Content-Type: application/call-event-info+xml
User-Agent: Ericsson MTAS - CXP2010134/1 R88X01
Content-Length: nnnn
```

```
<?xml version="1.0" encoding="UTF-8"?>
<communication-event-info
  xmlns="urn:ericsson:params:xml:ns:call-event-info">
  <Session-State-Event>UNSUCCESSFUL-ATTEMPT</Session-State-Event>
  <IMS-Charging-Identifier>1391809860</IMS-Charging-Identifier>
  <SIP-Request-Timestamp>20181119T101637718</SIP-Request-Timestamp>
  <SIP-Response-Timestamp>20181119T101640889</SIP-Response-Timestamp>
  <Called-Party-Address>tel:+42312005755</Called-Party-Address>
  <Calling-Party-Address>tel:+19169032537</Calling-Party-Address>
  <Analyzed-Call-Type>international</Analyzed-Call-Type>
  <Cause-Code>603</Cause-Code>
  <Role-Of-Node>ORIGINATING_ROLE</Role-Of-Node>
  <Subscription-Id-Group>
    <Subscription-Id-Data>46123456</Subscription-Id-Data>
    <Subscription-Id-Type>E164</Subscription-Id-Type>
  </Subscription-Id-Group>
  <Supplementary-Service-Identity-List>
    <Supplementary-Service-Identity>608</Supplementary-Service-Identity>
    <Supplementary-Service-Identity>601</Supplementary-Service-Identity>
  </Supplementary-Service-Identity-List>
</communication-event-info>
```

2. Event Server responds with 200 OK (PUBLISH). A '200 OK' response indicates that the communication-event-info XML is accepted by the server.

Example

```
SIP/2.0 200 OK
From: sip:+19092290000@igw.ericsson.com;tag=abc123
To: sip:igw.ericsson.com;tag=1697278020
```

```
Via: SIP/2.0/UDP
192.168.83.100:5082;branch=z9hG4bK875873347-998853247
Call-ID: 123456789
Contact: sip:192.168.83.254:5061
Content-Length:0
CSeq:1 PUBLISH
```

3.4 SIP failover and grey listing

MTAS supports Failover and SIP Grey listing of Event Server on PUBLISH failure due to 503 and timeout.

4 Information Model

MTAS sends PUBLISH message towards Event Server and can receives 200 OK or non-200 OK. XML body is described in next section.

4.1 PUBLISH request

Headers in PUBLISH request are mapped as below.

HEADERS	Mapped Value
PUBLISH	
R-URI	Set to mtasCelEventServerName with sip:
Via	MTAS generated
To	Set to mtasCelEventServerName with sip:
From	MTAS generated
Call-ID	MTAS generated
CSeq	MTAS generated
Contact	Added by MTAS
Max-Forwards	70
Expires	0
Event	Always set as 'call-event-info'
Content-Type	Always set as "application/call-event-info+xml"
Content-Length	Length of XML body

Table 3: Publish header mapping

4.2 PUBLISH response

SIP code	Reason
200 OK	Request accepted.
Non-2xx (except 503)	Error response.
503 Service Unavailable	If Event Server domain is configured

	with 2 IP addresses, retry the second IP address.
--	---

Table 4: Publish Responses

5 Formal Syntax or Schema

5.1 'communication-event-info'

This section defines the event body in the PUBLISH requests which is the communication-event-info event package.

The communication event logging function is a Rf based MMTel AS service and therefore PUBLISH carries the xml values mapped from existing AVPs populated over Rf 8. Detail of the same is described in below table.

Below table represents all possible values for XML element. Currently supported values for some of the XML elements are:

M: Mandatory field

O: optional field

XML element		Type	M/O	Description
<communication-event-info>				Ericsson proprietary XML for call-event-info
<Session-State-Event>		String	M	CEL event type e.g. Unsuccessful Attempt, Established Possible values: UNSUCCESSFUL-ATTEMPT, ESTABLISHED
<IMS-Charging-Identifier>		String	O	Unique per session
<SIP-Request-Timestamp>		String	O	INVITE time stamp
<SIP-Response-Timestamp>		String	O	Final response time stamp
<Called-Party-Address>		String	M	Called Party Address
<Calling-Party-Address>		String	M	Calling Party Address

XML element		Type	M/O	Description
<Analyzed-Call-Type>		String	O	Type of call
<Cause-Code>		String	O	Reason for a call Failure/Termination
<Role-of-Node>		String	M	Role of MMTel AS e.g. Originating or Terminating Possible values: ORIGINATING, TERMINATING
<Subscription-Id-Group>		String	O	List of pairs of Subscription Identifier (if defined)
	<Subscription-Id-Data>	String	M	
	<Subscription-Id-Type>	String	M	
<Supplementary-Service-Identity-List>			O	List of active SSIDs at the time of the event (if defined)
	<Supplementary-Service-Identity>	String	M	

Table 5: PUBLISH XML mapping to Rf AVPs

6 Related Standards

- RFC 3261
- RFC for PUBLISH [rfc3903](#)

7 Terminology

7.1 Abbreviations

CEL Communication Event Logging

7.2 Definitions

Communication
Event

Communication event is sent to the external logging server whenever there is a communication attempt from served user. The event includes information about type of session state event, time, calling party, Supplementary Service Identity List, subscription information etc

8 References

- [1] SIP: Session Initiation Protocol. RFC 3261, Internet Engineering Task Force
- [2] 13/155 19-AVA 901 18 IWD, Diameter Offline Charging in MTAS

** See the Customer or Support library for the Application System in question