

ETSI TS 124 323 V16.0.0 (2020-08)



**Universal Mobile Telecommunications System (UMTS);
LTE;
3GPP IP Multimedia Subsystem (IMS)
service level tracing Management Object (MO)
(3GPP TS 24.323 version 16.0.0 Release 16)**



Reference

RTS/TSGC-0124323vg00

Keywords

LTE,UMTS

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

The present document can be downloaded from:

<http://www.etsi.org/standards-search>

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the prevailing version of an ETSI deliverable is the one made publicly available in PDF format at www.etsi.org/deliver.

Users of the present document should be aware that the document may be subject to revision or change of status.

Information on the current status of this and other ETSI documents is available at

<https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

If you find errors in the present document, please send your comment to one of the following services:

<https://portal.etsi.org/People/CommitteeSupportStaff.aspx>

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2020.

All rights reserved.

DECT™, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members.

3GPP™ and **LTE™** are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

oneM2M™ logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners.

GSM® and the GSM logo are trademarks registered and owned by the GSM Association.

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<https://ipr.etsi.org/>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

Legal Notice

This Technical Specification (TS) has been produced by ETSI 3rd Generation Partnership Project (3GPP).

The present document may refer to technical specifications or reports using their 3GPP identities. These shall be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between 3GPP and ETSI identities can be found under <http://webapp.etsi.org/key/queryform.asp>.

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

Contents

| | |
|--|-----------|
| Intellectual Property Rights | 2 |
| Legal Notice | 2 |
| Modal verbs terminology..... | 2 |
| Foreword..... | 4 |
| 1 Scope | 5 |
| 2 References | 5 |
| 3 Definitions and abbreviations..... | 5 |
| 3.1 Definitions | 5 |
| 3.2 Abbreviations | 5 |
| 4 IMS service level tracing management object..... | 6 |
| 5 Management object parameters..... | 8 |
| 5.1 General | 8 |
| 5.2 Node: /<X> | 8 |
| 5.3 /<X>/Name | 8 |
| 5.4 /<X>/Debug_info_List/ | 8 |
| 5.5 /<X>/Debug_info_List/<X>..... | 8 |
| 5.6 /<X>/Debug_info_List/<X>/Debug_config/ | 9 |
| 5.7 /<X>/Debug_info_List/<X>/Debug_config/Address_of_record | 9 |
| 5.8 /<X>/Debug_info_List/<X>/Debug_config/Session_List/ | 9 |
| 5.9 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>..... | 9 |
| 5.10 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/ | 10 |
| 5.11 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Start_trigger/ | 10 |
| 5.12 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Start_trigger/From | 10 |
| 5.13 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Start_trigger/To..... | 10 |
| 5.14 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Start_trigger/ICSI..... | 11 |
| 5.15 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Start_trigger/IARI..... | 11 |
| 5.16 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Start_trigger/Method..... | 11 |
| 5.17 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Start_trigger/Time..... | 12 |
| 5.18 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Start_trigger/Debug_ID | 12 |
| 5.19 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Stop_trigger/ | 12 |
| 5.20 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Stop_trigger/Time | 12 |
| 5.21 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Stop_trigger/Time_period..... | 13 |
| 5.22 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Stop_trigger/Reason..... | 13 |
| 5.23 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Control/ | 13 |
| 5.24 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Control/Interface_List/ | 14 |
| 5.25 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Control/Interface_List/<X>/ | 14 |
| 5.26 ./<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Control/Interface_List/<X>/Interface | 14 |
| 5.27 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Control/Depth | 14 |
| 5.28 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Control/Debug_ID | 15 |
| Annex A (informative): Management object DDF | 16 |
| Annex B (informative): Change history | 28 |
| History | 29 |

Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
 - 1 presented to TSG for information;
 - 2 presented to TSG for approval;
 - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

1 Scope

This document defines the IMS service level tracing management object. The management object is compatible with OMA Device Management protocol specifications, version 1.2 and upwards, and is defined using the OMA DM Device Description Framework as described in the Enabler Release Definition OMA-ERELED_DM-V1_2 [3].

The IMS service level tracing management object consists of relevant parameters that can be managed for IMS service level tracing capabilities specified in 3GPP TS 24.229 [5].

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

- [1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 23.003: "Numbering, addressing and identification".
- [3] OMA-ERELED-DM-V1_2-20070209-A: "Enabler Release Definition for OMA Device Management, Version 1.2".
- [4] XML Schema Part 2: Datatypes Second Edition, W3C Recommendation 28 October 2004, <http://www.w3.org/TR/xmlschema-2/>
- [5] **3GPP TS 24.229: "IP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3"**.
- [6] 3GPP TS 32.422: "Telecommunication management; Subscriber and equipment trace; Trace control and configuration management".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 [1] apply.

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

| | |
|-----|--------------------------------------|
| CN | Core Network |
| DDF | Device Description Framework |
| DM | Device Management |
| IMS | IP Multimedia core network Subsystem |
| IP | Internet Protocol |
| MO | Management Object |
| OMA | Open Mobile Alliance |
| SIP | Session Initiation Protocol |

UE

User Equipment

4 IMS service level tracing management object

The IMS service level tracing management object is used to manage configuration settings of the UE for IMS service level tracing. The management object covers parameters for IMS service level trace related capabilities. The management object enables the management of the settings on behalf of the end user.

The management object Identifier is: urn:oma:mo:ext-3gpp-ims_sltr:1.0.

Protocol compatibility: This MO is compatible with OMA DM 1.2.

The following nodes and leaf objects are possible under the Service Level Tracingnode:

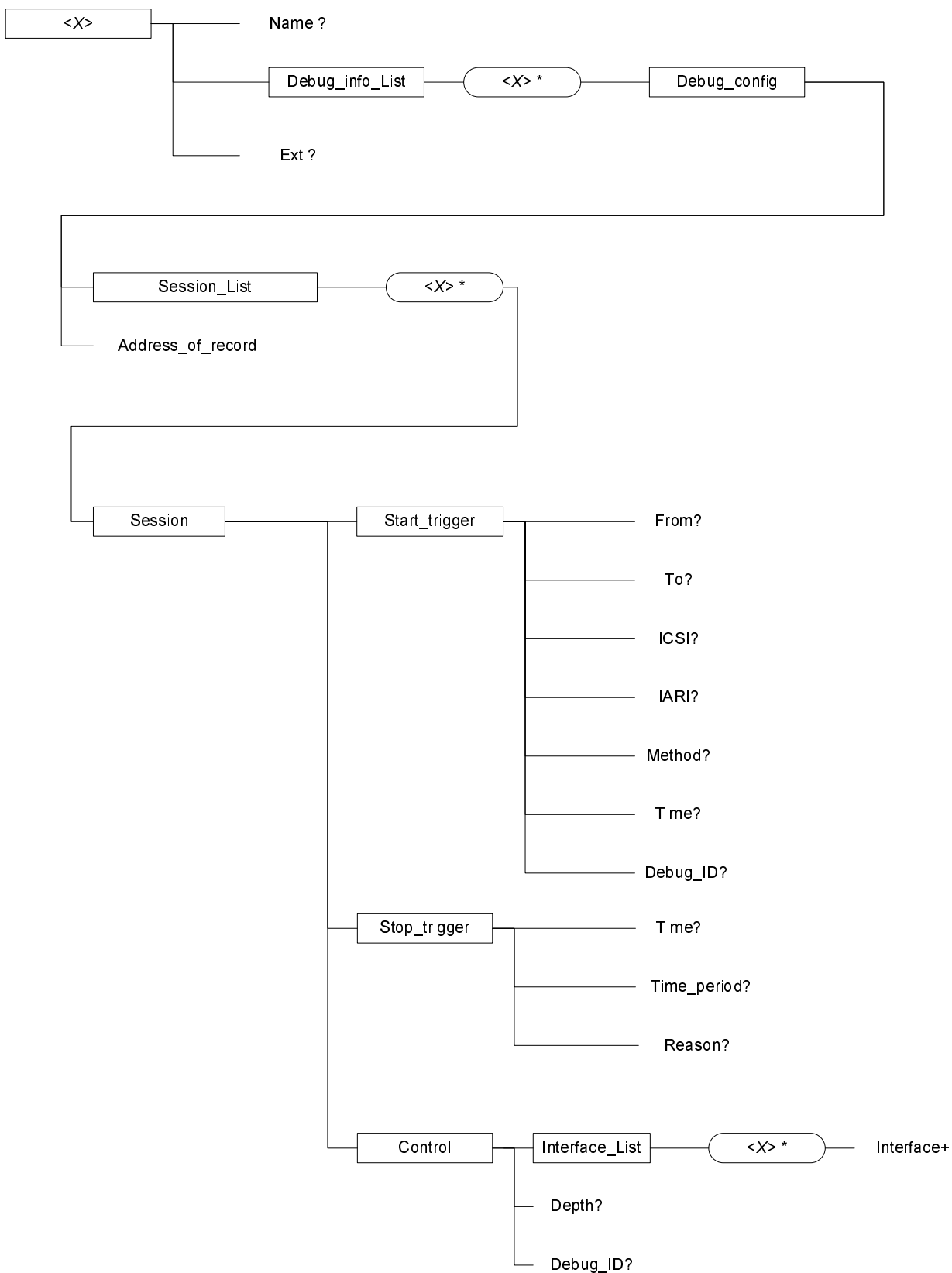


Figure 1: The 3GPP Service Level Tracing Management Object

5 Management object parameters

5.1 General

This clause describes the parameters for the IMS service level tracing management object.

5.2 Node: /<X>

This interior node acts as a placeholder for one or more accounts for a fixed node.

- Occurrence: OneOrMore
- Format: node
- Access Types: Get
- Values: N/A

The interior node is mandatory if the UE supports one or more IMS service level tracing capabilities. Support for a UE is defined by the related roles as defined by the related IMS service level tracing service, as listed in clause 4 of this specification.

NOTE: One node is normally used.

5.3 /<X>/Name

The Name leaf is a name for the 3GPP service level tracing settings.

- Occurrence: ZeroOrOne
- Format: chr
- Access Types: Get
- Values: <User displayable name>

5.4 /<X>/Debug_info_List/

The Debug-info_List node acts as a placeholder for control and configuration of IMS service level tracing.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.5 /<X>/Debug_info_List/<X>

This run-time node acts as a placeholder for one or more debugging configurations containing control and configuration of IMS service level tracing.

- Occurrence: One
- Format: node
- Access Types: Get

- Values: N/A

5.6 /<X>/Debug_info_List/<X>/Debug_config/

The Debug-config node acts as a placeholder for control and configuration of IMS service level tracing.

- Occurrence: ZeroOrMore
- Format: node
- Access Types: Get
- Values: N/A

5.7

/<X>/Debug_info_List/<X>/Debug_config/Address_of_record

The Address_of_record leaf represents one public user identity.

- Occurrence: One
- Format: chr
- Access Types: Get, Replace
- Values: <A public user identity>

This public user identity is the identity used to subscribe to SIP debugging configuration from the debug-event package.

The format of the public user identity is defined by 3GPP TS 23.003 [2].

EXAMPLE: sip: 234150999999999@ims.mnc015.mcc234.3gppnetwork.org

5.8 /<X>/Debug_info_List/<X>/Debug_config/Session_List/

The Session_List interior node is used to allow a reference to a list of different SIP sessions to be debugged.

- Occurrence: One
- Format: node
- Access Types: Get
- Values: N/A

5.9 /<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>

This run-time node acts as a placeholder for one or more descriptions of SIP sessions to be debugged.

- Occurrence: One
- Format: node
- Access Types: Get
- Values: N/A

5.10

`/<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/`

The Session interior node is used to allow a reference to events that start and stop logging of SIP signalling, and to control what is logged.

- Occurrence: One
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.11

`/<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Start_trigger/`

The Start_trigger interior node is used to allow a reference to events that start logging of SIP signalling.

- Occurrence: One
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.12

`/<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Start_trigger/From`

The From leaf represents an address in the From: SIP header field.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.13

`/<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Start_trigger/To`

The To leaf represents an address in the To: SIP header field.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.14

`/<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Start_trigger/ICSI`

The ICSI leaf represents an IMS communication service identifier.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: <an IMS communication service identifier>

The format of the IMS communication service identifier is defined by 3GPP TS 24.229 [5].

EXAMPLE: urn:urn-7:3gpp-service.ims.icsi.mmtel

5.15

`/<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Start_trigger/IARI`

The IARI leaf represents an IMS application reference identifier.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: <an IMS application reference identifier>

The format of the IMS application reference identifier is defined by 3GPP TS 24.229 [5].

EXAMPLE: urn:urn-7:3gpp-application.ims.iari.mmtel-app-

5.16

`/<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Start_trigger/Method`

The Method leaf represents a SIP method.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: <A SIP method name>

The SIP method names are listed in 3GPP TS 24.229 [5].

EXAMPLE: MESSAGE

5.17

`/<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Start_trigger/Time`

The Method leaf represents a SIP method.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: <A date and time at which trace logging shall begin in ISO 8601 extended format CCYY-MM-DDThh:mm:ss>

Date and time is described by the standard type 'dateTime' for an XML schema [4].

EXAMPLE: 2009-05-09T15:00:00-05:00 to indicate 3:00 pm on May 9th, 2009 for Eastern Standard Time, which is 5 hours behind Coordinated Universal Time (UTC).

5.18

`/<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Start_trigger/Debug_ID`

The Debug_ID leaf represents an identifier that allows trace logging to be correlated across IMS entities.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: <6-digit hexadecimal number>

The format of the trace reference is 3 octets in hexadecimal format, as defined by 3GPP TS 32.422 [6].

EXAMPLE: 7BA614

5.19

`/<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Stop_trigger/`

The Stop_trigger interior node is used to allow a reference to events that stop logging of SIP signalling.

- Occurrence: One
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.20

`/<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Stop_trigger/Time`

The Time leaf represents a time at which SIP logging is stopped.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: <A date and time at which trace logging shall stop in ISO 8601 extended format CCYY-MM-DDThh:mm:ss>

Date and time is described by the standard type 'dateTime' for an XML schema [4].

EXAMPLE: 2009-05-09T15:00:00-05:00 to indicate 3:00 pm on May 9th, 2009 for Eastern Standard Time, which is 5 hours behind Coordinated Universal Time (UTC).

5.21

`</X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Stop_trigger/Time_period`

The Time_period leaf represents a time duration of logging SIP signalling. When the duration has expired, logging stops.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: <A time period, measured from starting trace logging, after which trace logging shall stop>

Time period is described by the standard type 'duration' for an XML schema [4].

5.22

`</X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Stop_trigger/Reason`

The Reason leaf represents a named event that causes logging SIP signalling to stop.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get, Replace
- Values: "dialog_established" or "session_end"

5.23

`</X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/Session/Control/`

The Control interior node is used to allow a reference to parameters that control what SIP signalling is logged.

- Occurrence: One
- Format: node
- Access Types: Get, Replace
- Values: N/A

5.24

`/<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/
Session/Control/Interface_List/`

The Interface_List interior node is used to allow a reference to a list of different interfaces for which SIP signalling is to be logged.

- Occurrence: One
- Format: node
- Access Types: Get
- Values: N/A

5.25

`/<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/
Session/Control/Interface_List/<X>/`

This run-time node acts as a placeholder for one or more identifiers of interfaces for which SIP signalling is to be logged.

- Occurrence: One
- Format: node
- Access Types: Get
- Values: N/A

5.26

`/<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/
Session/Control/Interface_List/<X>/Interface`

The Interface leaf identifies an interfaces for which SIP signalling is to be logged.

- Occurrence: One
- Format: node
- Access Types: Get
- Values: <An IP address and port number of an interface>

5.27

`/<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/
Session/Control/Depth`

The Depth leaf indicates which SIP requests and responses are to be logged.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get
- Values: "maximum" or "minimum"

5.28

/<X>/Debug_info_List/<X>/Debug_config/Session_List/<X>/ Session/Control/Debug_ID

The Debug_ID leaf contains an identifier that is common to all logged SIP requests and responses for one logging session.

- Occurrence: ZeroOrOne
- Format: node
- Access Types: Get
- Values: <MCC + MNC + a 4-digit hexadecimal number>.

EXAMPLE: 722330A4D7

Annex A (informative): Management object DDF

This DDF is the standardized minimal set. A vendor can define it's own DDF for the complete device. This DDF can include more features than this minimal standardized version.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE MgmtTree PUBLIC "-//OMA//DTD-DM-DDF 1.2//EN"
"http://www.openmobilealliance.org/tech/DTD/dm_ddf-v1_2.dtd">

<MgmtTree>
  <VerDTD>1.2</VerDTD>
  <Man>--The device manufacturer--</Man>
  <Mod>--The device model--</Mod>
  <Node>
    <NodeName>IMS service level tracing</NodeName>
    <DFProperties>
      <AccessType>
        <Get/>
      </AccessType>
      <Description>IMS service level trace configuration parameters</Description>
      <DFFormat>
        <node/>
      </DFFormat>
      <Occurrence>
        <OneOrMore/>
      </Occurrence>
      <DFTitle>The IMS service level tracing management object.</DFTitle>
      <DFType>
        <DDFName/>
      </DFType>
    </DFProperties>
    <Node>
      <NodeName>Name</NodeName>
      <DFProperties>
        <AccessType>
          <Get/>
        </AccessType>
        <DFFormat>
          <chr/>
        </DFFormat>
        <Occurrence>
          <ZeroOrOne/>
        </Occurrence>
        <Scope>
          <Dynamic/>
        </Scope>
        <DFTitle>User displayable name for the node.</DFTitle>
        <DFType>
          <MIME>text/plain</MIME>
        </DFType>
      </DFProperties>
    </Node>

    <Node>
      <NodeName>Debug_info_List</NodeName>
      <!-- The Debug_info_List node starts here. -->
      <DFProperties>
        <AccessType>
```

```

    <Get/>
  </AccessType>
  <DFFormat>
    <node/>
  </DFFormat>
  <Occurrence>
    <One/>
  </Occurrence>
  <Scope>
    <Permanent/>
  </Scope>
  <DFTitle>List of debug configurations, one per debug session.</DFTitle>
  <DFType>
    <DDFName/>
  </DFType>
</DFProperties>
<Node>
<!-- The placeholder X node for Debug_config. -->
  <NodeName/>
  <DFProperties>
    <AccessType>
      <Get/>
    </AccessType>
    <DFFormat>
      <node/>
    </DFFormat>
    <Occurrence>
      <ZeroOrMore/>
    </Occurrence>
    <Scope>
      <Dynamic/>
    </Scope>
    <DFTitle>The "name" node for a debug configuration object.
  </DFTitle>
  <DFType>
    <DDFName/>
  </DFType>
</DFProperties>
<Node>
<!-- The Debug_config node starts here. -->
  <NodeName>Debug_config</NodeName>
  <DFProperties>
    <AccessType>
      <Get/>
      <Replace/>
    </AccessType>
    <DFFormat>
      <node/>
    </DFFormat>
    <Occurrence>
      <One/>
    </Occurrence>
    <Scope>
      <Permanent/>
    </Scope>
    <DFTitle>Configuration for debugging for one address of record.</DFTitle>
    <DFType>
      <DDFName/>
    </DFType>
  </DFProperties>
<Node>
<!-- The Address_of_record node starts here. -->

```

```
<nodeName>Address_of_record</nodeName>
<DFProperties>
  <AccessType>
    <Get/>
    <Replace/>
  </AccessType>
  <DFFormat>
    <chr/>
  </DFFormat>
  <Occurrence>
    <One/>
  </Occurrence>
  <Scope>
    <Permanent/>
  </Scope>
  <DFTitle>The address of record to be traced.</DFTitle>
  <DFType>
    <MIME>text/plain</MIME>
  </DFType>
</DFProperties>
</Node>
<!-- The Address_of_record node ends here. -->

<Node>
<!-- The Session_List node starts here. -->
<nodeName>Session_List</nodeName>
<DFProperties>
  <AccessType>
    <Get/>
    <Replace/>
  </AccessType>
  <DFFormat>
    <node/>
  </DFFormat>
  <Occurrence>
    <One/>
  </Occurrence>
  <Scope>
    <Permanent/>
  </Scope>
  <DFTitle>Debug configuration parameters, one configuration object per session.</DFTitle>
  <DFType>
    <DDFName/>
  </DFType>
</DFProperties>

<Node>
<!-- The placeholder X node for Session_List. -->
<nodeName/>
<DFProperties>
  <AccessType>
    <Get/>
  </AccessType>
  <DFFormat>
    <node/>
  </DFFormat>
  <Occurrence>
    <OneOrMore/>
  </Occurrence>
  <Scope>
    <Dynamic/>
  </Scope>
```

```

    <DFTitle>The "name" node for a list of sessions to be traced.
  </DFTitle>
  <DFType>
    <DDFName/>
  </DFType>
</DFProperties>

<Node>
<!-- Start of the Session node. -->
<NodeName>Session</NodeName>
<DFProperties>
  <AccessType>
    <Get/>
  </AccessType>
  <DFFormat>
    <node/>
  </DFFormat>
  <Occurrence>
    <One/>
  </Occurrence>
  <Scope>
    <Permanent/>
  </Scope>
  <DFTitle>The configuration of a single debug session.
  </DFTitle>
  <DFType>
    <DDFName/>
  </DFType>
</DFProperties>

<Node>
<!-- Start of the Start_trigger node. -->
<NodeName>Start_trigger</NodeName>
<DFProperties>
  <AccessType>
    <Get/>
  </AccessType>
  <DFFormat>
    <node/>
  </DFFormat>
  <Occurrence>
    <One/>
  </Occurrence>
  <Scope>
    <Permanent/>
  </Scope>
  <DFTitle>The description of a start trigger for a debug session.
  </DFTitle>
  <DFType>
    <DDFName/>
  </DFType>
</DFProperties>

<Node>
<!-- Start of the From node. -->
<NodeName>From</NodeName>
<DFProperties>
  <AccessType>
    <Get/>
  </AccessType>
  <DFFormat>
    <chr/>

```

```

</DFFormat>
<Occurrence>
  <ZeroOrOne/>
</Occurrence>
<Scope>
  <Dynamic/>
</Scope>
<DFTitle>The SIP From header field in a debug session.
</DFTitle>
<DFType>
  <MIME>text/plain</MIME>
</DFType>
</DFProperties>
</Node>
<!-- The From node ends here. -->

```

```

<Node>
<!-- Start of the To node. -->
<NodeName>To</NodeName>
<DFProperties>
  <AccessType>
    <Get/>
  </AccessType>
  <DFFormat>
    <chr/>
  </DFFormat>
  <Occurrence>
    <ZeroOrOne/>
  </Occurrence>
  <Scope>
    <Dynamic/>
  </Scope>
  <DFTitle>The SIP To header field in a debug session.
  </DFTitle>
  <DFType>
    <MIME>text/plain</MIME>
  </DFType>
</DFProperties>
</Node>
<!-- The To node ends here. -->

```

```

<Node>
<!-- Start of the ICSI node. -->
<NodeName>ICSI</NodeName>
<DFProperties>
  <AccessType>
    <Get/>
  </AccessType>
  <DFFormat>
    <chr/>
  </DFFormat>
  <Occurrence>
    <ZeroOrOne/>
  </Occurrence>
  <Scope>
    <Dynamic/>
  </Scope>
  <DFTitle>The IMS service identifier (ICSI) in a session to be traced.
  </DFTitle>
  <DFType>
    <MIME>text/plain</MIME>
  </DFType>

```

```
</DFProperties>
</Node>
<!-- The ICSI node ends here. -->

<Node>
<!-- Start of the IARI node. -->
<nodeName>IARI</nodeName>
<DFProperties>
  <AccessType>
    <Get/>
  </AccessType>
  <DFFormat>
    <chr/>
  </DFFormat>
  <Occurrence>
    <ZeroOrOne/>
  </Occurrence>
  <Scope>
    <Dynamic/>
  </Scope>
  <DFTitle>The IMS application reference (IARI) in a session to be traced.
  </DFTitle>
  <DFType>
    <MIME>text/plain</MIME>
  </DFType>
</DFProperties>
</Node>
<!-- The IARI node ends here. -->

<Node>

<!-- Start of the method node. -->
<nodeName>Method</nodeName>
<DFProperties>
  <AccessType>
    <Get/>
  </AccessType>
  <DFFormat>
    <chr/>
  </DFFormat>
  <Occurrence>
    <ZeroOrOne/>
  </Occurrence>
  <Scope>
    <Dynamic/>
  </Scope>
  <DFTitle>The SIP method that starts a debug session.
  </DFTitle>
  <DFType>
    <MIME>text/plain</MIME>
  </DFType>
</DFProperties>
</Node>
<!-- The method node ends here. -->

<Node>
<!-- Start of the Time node. -->
<nodeName>ICSI</nodeName>
<DFProperties>
  <AccessType>
    <Get/>
  </AccessType>
```

```

    <DFFormat>
      <chr/>
    </DFFormat>
  </Occurrence>
  <Scope>
    <Dynamic/>
  </Scope>
  <DFTitle>The Time of day to start a debug session.
</DFTitle>
  <DFType>
    <MIME>text/plain</MIME>
  </DFType>
</DFProperties>
</Node>
<!-- The Time node ends here. -->

<Node>
<!-- Start of the Debug_ID node. -->
<NodeName>Debug_ID</NodeName>
<DFProperties>
  <AccessType>
    <Get/>
  </AccessType>
  <DFFormat>
    <chr/>
  </DFFormat>
  <Occurrence>
    <ZeroOrOne/>
  </Occurrence>
  <Scope>
    <Dynamic/>
  </Scope>
  <DFTitle>The identity used to match logging of session across SIP entities.
</DFTitle>
  <DFType>
    <MIME>text/plain</MIME>
  </DFType>
</DFProperties>
</Node>
<!-- The Debug_ID node ends here. -->
</Node>
<!-- The Start-trigger node ends here. -->

<Node>
<!-- Start of the Stop_trigger node. -->
<NodeName>Stop_trigger</NodeName>
<DFProperties>
  <AccessType>
    <Get/>
  </AccessType>
  <DFFormat>
    <node/>
  </DFFormat>
  <Occurrence>
    <One/>
  </Occurrence>
  <Scope>
    <Permanent/>
  </Scope>
  <DFTitle>Description of the event that stops an ongoing tracing session.

```

```

    </DFTitle>
    <DFType>
      <DDFName/>
    </DFType>
  </DFProperties>

  <Node>
  <!-- Start of the Time node. -->
  <NodeName>Time</NodeName>
  <DFProperties>
    <AccessType>
      <Get/>
    </AccessType>
    <DFFormat>
      <chr/>
    </DFFormat>
    <Occurrence>
      <ZeroOrOne/>
    </Occurrence>
    <Scope>
      <Dynamic/>
    </Scope>
    <DFTitle>The time at which to stop a debugging session.
    </DFTitle>
    <DFType>
      <MIME>text/plain</MIME>
    </DFType>
  </DFProperties>
  </Node>
  <!-- The Time node ends here. -->

  <Node>
  <!-- Start of the Time_period node. -->
  <NodeName>Time_period</NodeName>
  <DFProperties>
    <AccessType>
      <Get/>
    </AccessType>
    <DFFormat>
      <chr/>
    </DFFormat>
    <Occurrence>
      <ZeroOrOne/>
    </Occurrence>
    <Scope>
      <Dynamic/>
    </Scope>
    <DFTitle>The time period after which a debugging session is stopped.
    </DFTitle>
    <DFType>
      <MIME>text/plain</MIME>
    </DFType>
  </DFProperties>
  </Node>
  <!-- The Time_period node ends here. -->

  <Node>
  <!-- Start of the Reason node. -->
  <NodeName>Reason</NodeName>
  <DFProperties>
    <AccessType>
      <Get/>

```



```

    </AccessType>
    <DFFormat>
      <chr/>
    </DFFormat>
    <Occurrence>
      <One/>
    </Occurrence>
    <Scope>
      <Dynamic/>
    </Scope>
    <DFTitle>The reason to stop a debugging session. Values are dialog_established and session_end
    </DFTitle>
    <DFType>
      <MIME>text/plain</MIME>
    </DFType>
  </DFProperties>
</Node>
<!-- The Reason node ends here. -->
</Node>
<!-- The Stop_trigger node ends here. -->

<Node>
<!-- Start of the Control node. -->
<nodeName>Control</nodeName>
<DFProperties>
  <AccessType>
    <Get/>
  </AccessType>
  <DFFormat>
    <node/>
  </DFFormat>
  <Occurrence>
    <One/>
  </Occurrence>
  <Scope>
    <Permanent/>
  </Scope>
  <DFTitle>Control information for a tracing session including depth of trace and interfaces to
trace.
  </DFTitle>
  <DFType>
    <DDFName/>
  </DFType>
</DFProperties>

<Node>
<!-- Start of the Interface_list node. -->
<nodeName>Interface_list</nodeName>
<DFProperties>
  <AccessType>
    <Get/>
  </AccessType>
  <DFFormat>
    <node/>
  </DFFormat>
  <Occurrence>
    <One/>
  </Occurrence>
  <Scope>
    <Permanent/>
  </Scope>
  <DFTitle>List of interfaces for which SIP signalling will be logged.

```

```

    </DFTitle>
    <DFType>
      <DDFName/>
    </DFType>
  </DFProperties>
</Node>
<!-- The placeholder X node for Interface_List. -->
<NodeName/>
<DFProperties>
  <AccessType>
    <Get/>
  </AccessType>
  <DFFormat>
    <node/>
  </DFFormat>
  <Occurrence>
    <ZeroOrMore/>
  </Occurrence>
  <Scope>
    <Dynamic/>
  </Scope>
  <DFTitle>The "name" node for a list of interfaces.
  </DFTitle>
  <DFType>
    <DDFName/>
  </DFType>
</DFProperties>

<Node>
<!-- Start of the Interface node. -->
<NodeName>Interface</NodeName>
<DFProperties>
  <AccessType>
    <Get/>
  </AccessType>
  <DFFormat>
    <chr/>
  </DFFormat>
  <Occurrence>
    <One/>
  </Occurrence>
  <Scope>
    <Dynamic/>
  </Scope>
  <DFTitle>The interface for which SIP signalling will be logged
  </DFTitle>
  <DFType>
    <MIME>text/plain</MIME>
  </DFType>
</DFProperties>
</Node>
<!-- The Interface node ends here. -->

<Node>
<!-- end of the placeholder X node for Interface_List -->
</Node>
<!-- end of the Interface_list node. -->

<Node>
<!-- Start of the Depth node. -->
<NodeName>Depth</NodeName>
<DFProperties>

```

```

    <AccessType>
      <Get/>
    </AccessType>
    <DFFormat>
      <chr/>
    </DFFormat>
    <Occurrence>
      <ZeroOrOne/>
    </Occurrence>
    <Scope>
      <Dynamic/>
    </Scope>
    <DFTitle>The depth of logging for a debug session, values are minimum and maximum.
  </DFTitle>
  <DFType>
    <MIME>text/plain</MIME>
  </DFType>
</DFProperties>
</Node>
<!-- The Depth node ends here. -->

<Node>
<!-- Start of the Debug_ID node. -->
<nodeName>Debug_ID</nodeName>
<DFProperties>
  <AccessType>
    <Get/>
  </AccessType>
  <DFFormat>
    <chr/>
  </DFFormat>
  <Occurrence>
    <ZeroOrOne/>
  </Occurrence>
  <Scope>
    <Dynamic/>
  </Scope>
  <DFTitle>The identity used to match logging in a debug session across entities.
  </DFTitle>
  <DFType>
    <MIME>text/plain</MIME>
  </DFType>
</DFProperties>
</Node>
<!-- The Debug_ID node ends here. -->

</Node>
<!-- The Control node ends here. -->

</Node>
<!-- The Session node ends here. -->

</Node>
<!-- The placeholder X for the Session_List node ends here. -->
</Node>
<!-- The Session_List node ends here. -->
</Node>
<!-- The Debug_config node ends here. -->
</Node>
<!-- The placeholder X node for Debug_config ends here. -->
</Node>
<!-- The Debug_info_List node ends here. -->

```

```
<Node>
  <NodeName>Ext</NodeName>
  <!-- The Extension node starts here. -->
  <DFProperties>
    <AccessType>
      <Get/>
      <Replace/>
    </AccessType>
    <DFFormat>
      <node/>
    </DFFormat>
    <Occurrence>
      <ZeroOrOne/>
    </Occurrence>
    <Scope>
      <Dynamic/>
    </Scope>
    <DFTitle>A collection of all Extension objects.</DFTitle>
    <DFType>
      <DDFName/>
    </DFType>
  </DFProperties>
</Node>
<!-- The Extension node ends here. -->

</Node>
<!-- The IMS service level tracing node ends here. -->
</MgmtTree>
```

Annex B (informative): Change history

| Change history | | | | | | | | |
|----------------|--------|-----------|------|-----|--|--------|--------|-----------|
| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New | WG doc |
| 2008-05 | | | | | Version 0.0.0: Preliminary proposal | | 0.0.0 | C1-081856 |
| 2008-05 | | | | | Version 0.0.1: Corrected preliminary proposal | | 0.0.1 | C1-081956 |
| 2008-05 | | | | | Version 0.0.2: Corrected wrong capitalizations | | 0.0.2 | C1-082040 |
| 2008-06 | | | | | Version 0.0.2: Added specification number | | 0.0.3 | |
| 2008-06 | CT1#54 | | | | Parameters for service level trace | 0.0.3 | 0.1.0 | C1-082754 |
| 2008-09 | | | | | Version 1.0.0 created for presentation to TSG CT#41 for information | 0.1.0 | 1.0.0 | |
| 2008-10 | | | | | Version 1.1.0 created incorporating C1-084097, C1-084098 for presentation to TSG CT#42 for approval. | 1.0.0 | 1.1.0 | |
| 2008-11 | | | | | Version 2.0.0 created for presentation to TSG CT#42 for approval | 1.1.0 | 2.0.0 | |
| 2008-12 | CT#42 | | | | Version 8.0.0 created after approval in CT#42 | 2.0.0 | 8.0.0 | |
| 2009-03 | CT#43 | CP-090135 | 0001 | | urn for the Trace MO registered by OMNA and minor corrections and cleanups | 8.0.0 | 8.1.0 | C1-090198 |
| 2009-12 | CT#46 | | | | Upgrade to Rel-9 | 8.1.0 | 9.0.0 | |
| 2011-03 | CT#51 | | | | Upgrade to Rel-10 | 9.0.0 | 10.0.0 | |
| 2012-09 | CT#57 | | | | Upgrade to Rel-11 | 10.0.0 | 11.0.0 | |
| 2014-09 | CT#65 | | | | Upgrade to Rel-12 | 11.0.0 | 12.0.0 | |
| 2015-12 | CT#70 | | | | Upgrade to Rel-13 | 12.0.0 | 13.0.0 | |

| Change history | | | | | | | | |
|----------------|---------|-----------|------|-----|-----|--|-------------|--|
| Date | Meeting | TDoc | CR | Rev | Cat | Subject/Comment | New version | |
| 2017-03 | CT-75 | | | | | Upgrade to Rel-14 | 14.0.0 | |
| 2018-10 | | | | | | Upgrade to Rel-15 | 15.0.0 | |
| 2019-03 | CT-83 | CP-190079 | 0010 | 1 | A | References update for ISAT after related RFC completed in IETF | 15.1.0 | |
| 2020-07 | SA-88e | - | - | - | - | Update to Rel-16 version (MCC) | 16.0.0 | |

History

| Document history | | |
|-------------------------|-------------|-------------|
| V16.0.0 | August 2020 | Publication |
| | | |
| | | |
| | | |
| | | |