

# 3GPP TS 24.323 V11.0.0 (2012-09)

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*Technical Specification*

## **3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; 3GPP IP Multimedia Subsystem (IMS) service level tracing management object (MO) (Release 11)**



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**Keywords**

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# Foreword

This Technical Specification has been produced by the 3<sup>rd</sup> 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.

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# 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.

---

# 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] draft-dawes-sipping-debug-event-00 (May 2008): "A Session Initiation Protocol (SIP) Event Package for Debugging".

**Editor's note:** The above document cannot be formally referenced until it is published as an RFC.

- [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 Tracing node:

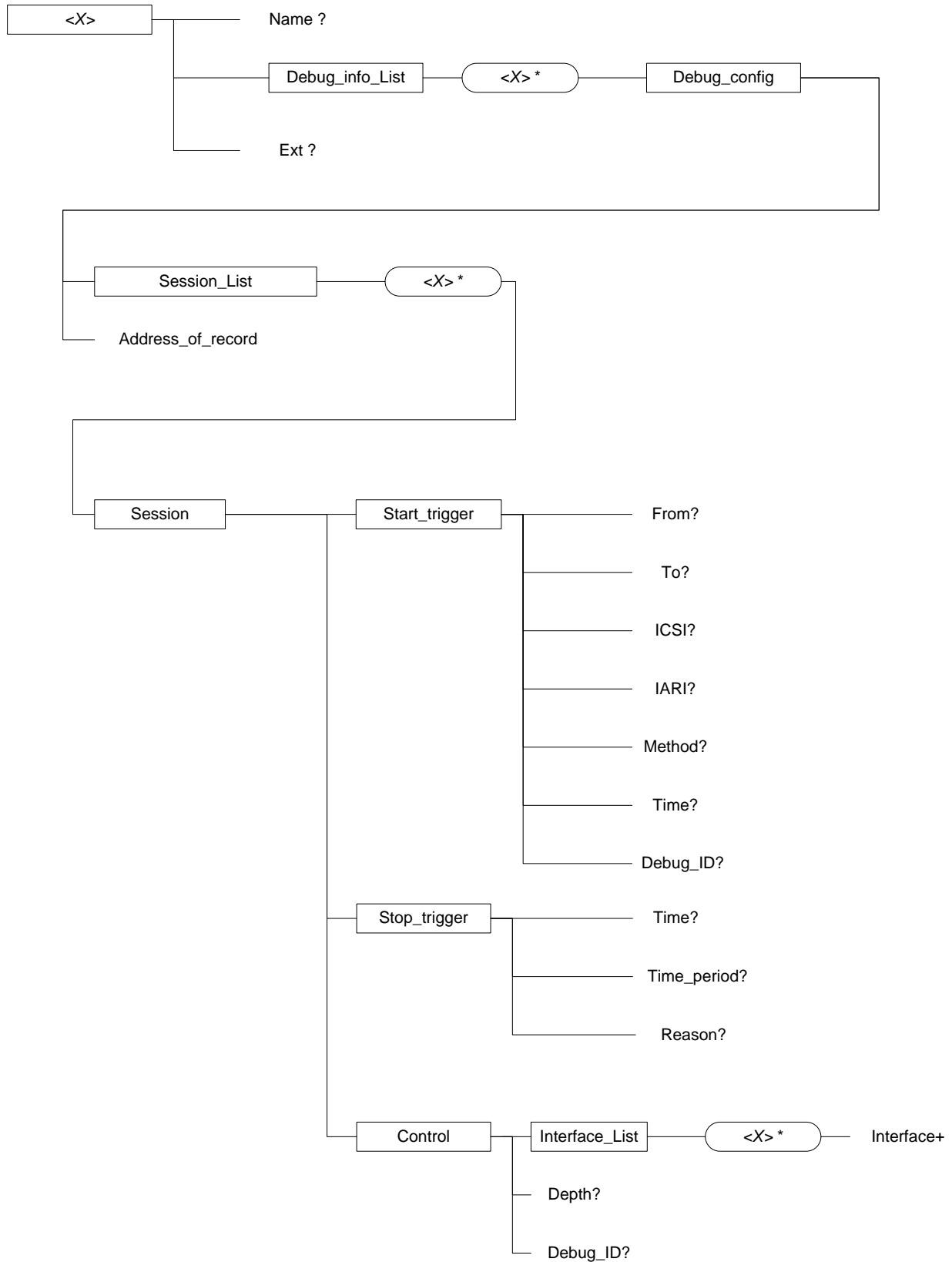


Figure 1: The 3GPP Service Level Tracing Management Object

---

## 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:23415099999999@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.mm1

## 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.mm1-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 9<sup>th</sup>, 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 9<sup>th</sup>, 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>
    </DFTType>
</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>
    <DFTType>
        <MIME>text/plain</MIME>
    </DFTType>
</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>
    <DFTType>
        <MIME>text/plain</MIME>
    </DFTType>
</DFProperties>
</Node>
<!-- The method node ends here. -->

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

```

```

    <Get/>
  </AccessType>
  <DFFormat>
    <chr/>
  </DFFormat>
  <Occurrence>
    <ZeroOrOne/>
  </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>

```



```

    </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			