Oracle® Communications Network Charging and Control

Session Initiation Protocol (SIP) Protocol Implementation Conformance Statement

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Contents

About This Document

Scope

This statement of compliance refers to the Internet Engineering Task Force (IETF) document:

- RFC 3428 Session Initiation Protocol (SIP) Extension for Instant Messaging.

Audience

This document is intended to be read by NCC staff. It has been prepared on the assumption that the reader is familiar with Messaging Manager as well as the IETF - SIP instant messaging capabilities.

Document Conventions

Typographical Conventions

The following terms and typographical conventions are used in the Oracle Communications Network Charging and Control (NCC) documentation.

Formatting Convention	Type of Information
Special Bold	Items you must select, such as names of tabs. Names of database tables and fields.
Italics	Name of a document, chapter, topic or other publication. Emphasis within text.
Button	The name of a button to click or a key to press. **Example:** To close the window, either click **Close**, or press **Esc**.
Key+Key	Key combinations for which the user must press and hold down one key and then press another. Example: **Ctrl+P** or **Alt+F4**.
`Monospace`	Examples of code or standard output.
`Monospace Bold`	Text that you must enter.
variable	Used to indicate variables or text that should be replaced with an actual value.
menu option > menu option >	Used to indicate the cascading menu option to be selected. Example: **Operator Functions > Report Functions**
hypertext link	Used to indicate a hypertext link.

Specialized terms and acronyms are defined in the glossary at the end of this guide.

Chapter 1

Compliance Statement

Overview

Introduction

This chapter explains the compliance of Messaging Manager with RFC 3428.

In this chapter

This chapter contains the following topics.

Messaging Manager - RFC 3428 Introduction

Overview

The Messaging Manager product itself does not support SIP. SIP support is provided by the SIP Call Agent (SCA) product.

Messaging Manager can support the SIP Extension for Instant Messaging when used in conjunction with the SCA product.

Where this document states **Provided by the SCA** it means that the feature is provided by the SCA product and that the SCA compliance document should be referenced. See *SCA SIP Compliancev01.00* document.

This document states the compliance of Messaging Manager with RFC 3428. In many cases RFC 3428 refers to sections in the following IETF documents:

- RFC 3261 SIP: Session Initiation Protocol
- RFC 2779 Instant Messaging / Presence Protocol Requirements

Where relevant these documents will be referenced.

Introduction

Statements of compliance with Section 1 through 11 of RFC 3428 follow.

Specification Sections 1 to 11

Introduction (1)

This section requires that the protocol (RFC 3428) be compliant with all the instant message requirements in RFC 2779 relevant to its scope of applicability.

Scope of Applicability (2)

Messaging Manager complies.

Messaging Manager supports the pager model only.

Overview of Operation (3)

Messaging Manager complies.

Next hop processing provided by the SCA.

UAC Processing (4)

Messaging Manager complies.

Messaging Manager sends MESSAGE requests with a body of type text/plain.

Messaging Manager does NOT send bodies of type message/cpim.

Messaging Manager does NOT initiate dialogs.

Messaging Manager does NOT insert Contact header fields into MESSAGE requests.

Messaging Manager sends a 202 Accepted response to indicate that a request has been successfully received and forwarded to the destination.

This section also requires compliance with Section 8.1 of RFC 3261.

RFC 3261 Section 8.1

Compliance with RFC 3261 Section 8.1 is stated below:

8.1.1 Generating the Request

Messaging Manager complies.

8.1.1.1 Request-URI

Messaging Manager complies.

8.1.1.2 To

Messaging Manager complies.

8.1.1.3 From

Messaging Manager complies.

8.1.1.4 Call-ID

Messaging Manager complies.

8.1.1.5 CSeq

Messaging Manager complies.

8.1.1.6 Max-Forwards

Messaging Manager complies.

8.1.1.7 Via

Messaging Manager complies.

Messaging Manager uses the UDP transport for SIP requests.

Via processing is provided by the SCA.

8.1.1.8 Contact

Messaging Manager complies.

8.1.1.9 Supported and Require

Messaging Manager complies.

8.1.1.10 Additional Message Components

Messaging Manager complies.

8.1.2 Sending the Request

Provided by the SCA.

8.1.3.1 Transaction Layer Errors

Provided by the SCA.

8.1.3.2 Unrecognized Responses

Messaging Manager does not comply.

Messaging Manager does NOT handle 1xx responses.

8.1.3.3 Vias

Messaging Manager does not comply.

Messaging Manager does NOT discard messages with more than one Via header.

8.1.3.4 Processing 3xx Responses

Messaging Manager does not comply.

Messaging Manager does NOT handle 3xx redirection responses.

8.1.3.5 Processing 4xx Responses

Messaging Manager does not comply.

Messaging Manager does NOT support the following 4xx responses that require a retry using a new request:

- 401 (Unauthorized)
- 407 (Proxy Authentication Required)
- 413 (Request Entity Too Large)
- 415 (Unsupported Media Type)
- 416 (Unsupported URI Scheme)
- 420 (Bad Extension)

Use of Instant Message URIs (5)

Messaging Manager complies.

Messaging Manager does NOT use the abstract Instant Message URI.

Proxy Processing (6)

Provided by the SCA.

UAS Processing (7)

Messaging Manager complies.

Messaging Manager does NOT respond with a final response immediately.

Messaging Manager does NOT insert a Contact header field into a 2xx response.

Messaging Manager returns a 202 (Accepted) response indicating that the message was accepted, but end to end delivery has not been guaranteed.

Messaging Manager sends MESSAGE requests with a body of type text/plain.

Messaging Manager does NOT send bodies of type message/cpim.

Messaging Manager does NOT indicate to the user that the message has expired.

Congestion Control (8)

Messaging Manager does not comply.

Method Definition (9)

Messaging Manager complies.

Messaging Manager complies with and uses the following header fields from Table 1 and 2 in RFC 3428:

Call-ID

Messaging Manager uses the following format when sending SIP requests:

- 'delivery receipt id@hostname'
  where the delivery receipt id is provided by the incoming transaction, or
- 'timestamp-random number@hostname'
  where timestamp and random number are 32-bit numbers in hexadecimal format.

Messaging Manager copies this value from the originating SIP request when sending SIP responses.

Content-Length

Messaging Manager sets this value to the size of the message body.

Content-Type

Messaging Manager sends SIP requests using the 'text/plain' media-type.

Messaging Manager supports the following charsets:

- ISO-8859-1 to ISO-8859-16
- US-ASCII, and
- UTF-8.

Messaging Manager will use one of the charsets above or will attempt to convert the content to UTF-8.

CSeq

Messaging Manager uses the value '1 MESSAGE' when sending SIP requests.

Messaging Manager copies this value from the originating SIP request when sending SIP responses.

Date

Messaging Manager uses the service center timestamp if provided by the originating transaction when sending SIP requests.

Messaging Manager does NOT use this header when sending SIP responses.

Expires

Messaging Manager uses the validity date if provided by the originating transaction when sending SIP requests.

Messaging Manager does NOT use this header when sending SIP responses.

From

Messaging Manager uses the originating address when sending requests.

Messaging Manager copies this value from the originating SIP request when sending responses.

Max-Forwards

Messaging Manager sets this value to 70 when sending requests.

Note: This value will be decreased by the SCA when the request is proxied through the SCA.

Messaging Manager copies this value from the originating SIP request when sending SIP responses.

Priority

Messaging Manager uses the priority indicator if provided by the originating transaction.

Messaging Manager does NOT use this header when sending SIP responses.

To

Messaging Manager uses the terminating address when sending requests.

Messaging Manager copies this value from the originating SIP request when sending SIP responses.

Via

Messaging Manager uses the destination address domain when sending requests.

Messaging Manager copies this value from the originating SIP request when sending SIP responses.

Example Messages (10)

Not relevant.

Security Considerations (11)

The following security considerations are noted:

11.1 Outbound Authentication

Messaging Manager does not comply.

11.2 SIPS URIs

Messaging Manager does not comply.

11.3 End-to-End Protection

Messaging Manager does not comply.

11.4 Replay Prevention

Messaging Manager does not comply.

11.5 Using message/cpim Bodies

Messaging Manager does not comply.

Glossary of Terms

AAA

Authentication, Authorization, and Accounting. Specified in Diameter RFC 3588.

Diameter

A feature rich AAA protocol. Utilises SCTP and TCP transports.

Messaging Manager

The Messaging Manager service and the Short Message Service components of Oracle Communications Network Charging and Control product. Component acronym is MM (formerly MMX).

MM

Messaging Manager. Formerly MMX, see also *XMS* (on page 8) and *Messaging Manager* (on page 7).

MS

Mobile Station

SCA

1) Service Centre Address

2) Session Control Agent for Session Initiation Protocol (SIP)

SCTP

Stream Control Transmission Protocol. A transport-layer protocol analogous to the TCP or User Datagram Protocol (UDP). SCTP provides some similar services as TCP (reliable, in-sequence transport of messages with congestion control) but adds high availability.

Session

Diameter exchange relating to a particular user or subscriber access to a provided service (for example, a telephone call).

SIP

Session Initiation Protocol - a signaling protocol for Internet conferencing, telephony, event notification and instant messaging. (IETF)

TCP

Transmission Control Protocol. This is a reliable octet streaming protocol used by the majority of applications on the Internet. It provides a connection-oriented, full-duplex, point to point service between hosts.

URI

Uniform Resource Identifier.

XMS

Three letter code used to designate some components and path locations used by the Oracle Communications Network Charging and Control *Messaging Manager* (on page 7) service and the Short Message Service. The published code is *MM* (on page 7) (formerly MMX).

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