

Source: TSG CN WG 1
Title: CRs to Rel-5 on Work Item IMS-CCR towards 24.229
Agenda item: 8.1
Document for: APPROVAL

Introduction:

This document contains 9 CRs on **Rel-5 on** Work Item "IMS-CCR", that have been agreed by **TSG CN WG1**, and are forwarded to TSG CN Plenary meeting #16 for approval.

Spec	CR	Rev	Phase	Subject	Cat	Version Current	Version-New	Meeting-2nd-Level	Doc-2nd-Level
24.229	090		Rel-5	3PCC AS editor's notes	F	5.0.0	5.1.0	N1-24	N1-021162
24.229	091		Rel-5	AS acting as terminating UA editor's notes	F	5.0.0	5.1.0	N1-24	N1-021163
24.229	092	1	Rel-5	AS acting as originating UA editor's notes	F	5.0.0	5.1.0	N1-24	N1-021466
24.229	093	2	Rel-5	Charging overview clause	F	5.0.0	5.1.0	N1-24	N1-021512
24.229	094	1	Rel-5	Procedures for original-dialog-id P-header	F	5.0.0	5.1.0	N1-24	N1-021456
24.229	095	2	Rel-5	Procedures for charging-vector P-header	F	5.0.0	5.1.0	N1-24	N1-021513
24.229	096	1	Rel-5	Procedures for charging-function-addresses P-header	F	5.0.0	5.1.0	N1-24	N1-021458
24.229	097	1	Rel-5	SDP types	F	5.0.0	5.1.0	N1-24	N1-021467
24.229	100		Rel-5	Removal of State from profile tables	F	5.0.0	5.1.0	N1-24	N1-021173

<small>CR-Form-v5</small>		
<h2>CHANGE REQUEST</h2>		
⌘	24.229 CR 090	⌘ rev - ⌘ Current version: 5.0.0 ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title: ⌘	3PCC AS editor's notes		
Source: ⌘	Lucent Technologies		
Work item code: ⌘	IMS-CCR	Date: ⌘	May 6, 2002
Category: ⌘	F	Release: ⌘	REL-5
	<i>Use one of the following categories:</i>		<i>Use one of the following releases:</i>
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)	R96	(Release 1996)
	B (addition of feature),	R97	(Release 1997)
	C (functional modification of feature)	R98	(Release 1998)
	D (editorial modification)	R99	(Release 1999)
	Detailed explanations of the above categories can		REL-4 (Release 4)
	be found in 3GPP TR 21.900 .		REL-5 (Release 5)

Reason for change: ⌘	AS procedures for 3pcc in 24.229 currently have editor's notes asking if the AS handles subsequent, call-related and further initial requests in any way other than standard SIP. Since no changes to SIP have been identified that are specific to 3GPP, other than the already noted BYE treatment, the editor's notes need to be removed.
Summary of change: ⌘	Editor's notes are replaced with 'void' indicator or simply removed.
Consequences if not approved: ⌘	There will be unresolved editor's notes in the document.

Clauses affected: ⌘	5.7.5.2.2, 5.7.5.4, 5.7.5.5		
Other specs affected:	<input type="checkbox"/> Other core specifications	⌘	
	<input type="checkbox"/> Test specifications		
	<input type="checkbox"/> O&M Specifications		
Other comments: ⌘			

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Start of changed text

5.7.5 Application Server (AS) performing 3rd party call control

5.7.5.1 General

The AS performing 3rd party call control acts as a B2BUA. The B2BUA AS will internally map the message headers between the two dialogs that it manages. It is responsible for correlating the dialog identifiers and will decide when to simply translate a message from one dialog to the other, or when to perform other functions. These decisions are specific to each AS and are outside the scope of the present document.

The AS, although acting as a UA, does not initiate any registration of its associated addresses. These are assumed to be known by peer-to-peer arrangements within the IM CN subsystem.

5.7.5.2 Call initiation

5.7.5.2.1 Initial INVITE

When the AS receives an initial INVITE request, it will contain the AS's SIP URL in the Request-URI. Before generating a new INVITE back to the S-CSCF, the AS:

- performs the Application Server specific functions. See 3GPP TS 23.218 [5]; and
- if successful, generate and send a new INVITE request to the S-CSCF to establish a new dialog. The AS shall look for the presence of the <original-dialog-id> XML element in the message body of the initial INVITE request and populate the same <original-dialog-id> XML element in the message body of the new INVITE request.

5.7.5.2.2 Subsequent requests

~~Editor's Note: subsequent requests can be handled in a generic way. Is there anything needed here?~~

[Void.](#)

5.7.5.3 Call release

5.7.5.4 Call-related requests

~~Editor's Note: call related requests can be handled in a generic way. Is there anything needed here?~~

An Application Server may initiate a call release. See 3GPP TS 23.218 [5] for possible reasons. The BYE request shall be sent simultaneously for both dialogs managed by the B2BUA.

5.7.5.5 Further initial requests

~~Editor's Note: call related requests can be handled in a generic way. Is there anything needed here?~~

[Void.](#)

End of changed text

CR-Form-v5	
CHANGE REQUEST	
⌘	24.229 CR 091
⌘ rev	-
⌘ Current version:	5.0.0 ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ AS acting as terminating UA editor's notes		
Source:	⌘ Lucent Technologies		
Work item code:	⌘ IMS-CCR	Date:	⌘ May 6, 2002
Category:	⌘ F	Release:	⌘ REL-5
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ AS procedures for terminating UA in 24.229 currently has an editor's note indicating a need to behave like the UE specified in clause 5.1.4. The editor's note needs to be removed and replaced with a pointer to clause 5.1.4 if common procedures have been defined. Otherwise, further description is needed in clause 5.7.2.
Summary of change:	⌘ Editor's notes are replaced with pointer to clause 5.1.4 and further clarifying statements.
Consequences if not approved:	⌘ There will be an unresolved editor's note in the document.

Clauses affected:	⌘ 5.7.2		
Other specs affected:	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications		⌘
Other comments:	⌘		

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Start of changed text

5.7.2 Application Server (AS) acting as terminating UA, or redirect server

~~Editors Note: When acting as a terminating UA the AS shall behave as defined for a UE in 5.1.4.~~

When acting as a terminating UA the AS shall behave as defined for a UE in subclause 5.1.4, with the exceptions noted in this subclause.

The AS, although acting as a UA, does not initiate any registration of its associated addresses. These are assumed to be known by peer-to-peer arrangements within the IM CN subsystem.

The S-CSCF may forward received initial requests to the application server based on initial filter criteria being met. If the S-CSCF includes an <original-dialog-id> XML element in these requests, the AS shall include this <original-dialog-id> XML element in any responses and/or subsequent requests sent on this dialog.

An Application Server acting as redirect server shall propagate any received 3GPP message body in the redirected message.

End of changed text

CHANGE REQUEST

⌘ **24.229 CR 092** ⌘ rev **1** ⌘ Current version: **5.0.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ AS acting as originating UA editor's notes		
Source:	⌘ Lucent Technologies		
Work item code:	⌘ IMS-CCR	Date:	⌘ May 6, 2002
Category:	⌘ F	Release:	⌘ REL-5
	<i>Use <u>one</u> of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use <u>one</u> of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ AS procedures for originating UA in 24.229 currently has an editor's note indicating a need to behave like the UE specified in clause 5.1.3. The editor's note needs to be removed and replaced with a pointer to clause 5.1.3 if common procedures have been defined. Otherwise, further description is needed in clause 5.7.2.		
Summary of change:	⌘ Editor's notes are replaced with pointer to clause 5.1.3 and further clarifying statements.		
Consequences if not approved:	⌘ There will be an unresolved editor's note in the document.		

Clauses affected:	⌘ 5.7.3		
Other specs affected:	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘		

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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Start of changed text

5.7.3 Application Server (AS) acting as originating UA

~~Editors Note: When acting as an originating UA the AS shall behave as defined for a UE in 5.1.3.~~

When acting as a originating UA the AS shall behave as defined for a UE in subclause 5.1.43, with the exceptions noted in this subclause.

The AS, although acting as a UA, does not initiate any registration of its associated addresses. These are assumed to be known by peer-to-peer arrangements within the IM CN subsystem.

When an AS acting as originating UA generates an initial request for a dialog or a request for a standalone transaction, the AS shall create a new, globally unique value for the <icid> XML element and insert it into the message body (see subclause 7.6).

End of changed text

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3GPP TSG-CN1 Meeting #24
Budapest, Hungary, 13. – 17. May 2002

Tdoc N1-021450[***021512***](#)
was Tdoc N1-021165

Start of first change

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 23.002: "Network architecture".
- [3] 3GPP TS 23.003: "Numbering, addressing and identification".
- [4] 3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2".
- [5] 3GPP TS 23.218: "IP Multimedia (IM) Session Handling; IM call model".
- [6] 3GPP TS 23.221: "Architectural requirements".
- [7] 3GPP TS 23.228: "IP multimedia subsystem; Stage 2".
- [8] 3GPP TS 24.008: "Mobile radio interface layer 3 specification; Core Network protocols; Stage 3".
- [9] 3GPP TS 25.304: "UE Procedures in Idle Mode and Procedures for Cell Reselection in Connected Mode".
- [10] 3GPP TS 26.235: "Packet switched conversational multimedia applications; Default codecs".
- [11] 3GPP TS 29.208: "End to end Quality of Service (QoS) signalling flows".
- [12] 3GPP TS 29.228: "IP Multimedia (IM) Subsystem Cx Interface; Signalling flows and message contents".
- [12a] [3GPP TS 32.200: "Telecommunication management; Charging management; Charging principles"](#).
- [12b] [3GPP TS 32.225: "Telecommunication management; Charging management; Charging data description for the IP Multimedia Subsystem"](#).
- [13] 3GPP TS 33.102: "3G Security; Security architecture".
- [14] 3GPP TS 33.203: "Access security for IP based services".
- [15] 3GPP TS 44.018: "Mobile radio interface layer 3 specification, Radio Resource Control Protocol".
- [16] RFC 2806: "URLs for Telephone Calls".
- [17] RFC 2833 (May 2000): "RTP Payload for DTMF Digits, Telephony Tones and Telephony Signals".
- [18] RFC 2916: "E.164 number and DNS".
- [19] RFC 2976 (October 2000): "The SIP INFO method".

[20] draft-ietf-sip-rfc2543bis-07 (January 2002): "SIP: Session Initiation Protocol".

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

[21] draft-ietf-sip-100rel-05 (February 2002): "Reliability of provisional responses in SIP".

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

[22] draft-sip-manyfolks-resource-03 (November 2001): "Integration of resource management and SIP".

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

[23] draft-ietf-sip-events-02.txt (February 2002): "SIP-Specific Event Notification".

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

[24] draft-ietf-sip-callerprefs-05 (November 2001): "SIP caller preferences and callee capabilities".

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

[25] draft-ietf-sip-refer-02 (October 2001): "The REFER method".

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

[26] draft-ietf-sip-session-timer-08 (October 2001): "The SIP session timer".

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

[27] draft-sip-privacy-03 (November 2001): "SIP extensions for caller identity and privacy".

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

[28] draft-sip-state-02 (August 2001): "SIP extensions for supporting distributed call state".

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

[29] draft-sip-call-auth-03 (November 2001): "SIP extensions for media authorization".

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

[30] draft-ietf-mmusic-sdp-new-04 (November 2001): "SDP: Session Description Protocol".

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

End of first change

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply.

Header:

Editor's note: To be provided.

Option-tag: unique identifiers used to designate new options in SIP
These tags are used in Require, Supported and Unsupported header fields.

Editor's note: Text extracted from RFC2543bis, but not specified as a definition.

Redirect server: a server that accepts a SIP request, maps the address into zero or more new addresses and returns these addresses to the client

Unlike a proxy server, it does not initiate its own SIP request. Unlike a user agent server, it does not accept calls.

Editor's note: Previous version of this definition was in the bis draft, but has now been removed. Requires further study as to whether there is a more preferred term.

Status-code: a 3-digit integer result code that indicates the outcome of the attempt to understand and satisfy the request

Editor's note: Text extracted from RFC2543bis, but not specified as a definition.

For the purposes of the present document, the following terms and definitions given in RFC 2543bis [20] (*Editor's note – working title*) apply.

Client
Dialog
Method
Proxy, proxy server
Registrar
Server
Session
(SIP) transaction
Stateful proxy
Stateless proxy
User agent client (UAC)
User agent server (UAS)
User agent (UA)

For the purposes of the present document, the following terms and definitions given in 3GPP TS 23.002 [2] subclause 4a.7 apply:

Breakout Gateway Control Function (BGCF)
Call Session Control Function (CSCF)
Media Gateway Control Function (MGCF)
Media Resource Function Controller (MRFC)

For the purposes of the present document, the following terms and definitions given in 3GPP TS 23.228 [7] subclause 4.3.3.1 and subclause 4.6 apply:

Interrogating-CSCF (I-CSCF)
Private user identity
Proxy-CSCF (P-CSCF)
Public user identity
Serving-CSCF (S-CSCF)

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

User Equipment (UE)

Start of second change

3.2 Abbreviations

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

1xx	A status-code in the range 101 through 199, and excluding 100
2xx	A status-code in the range 200 through 299
AS	Application Server
AUTN	Authentication TokeN
BGCF	Breakout Gateway Control Function
c	conditional
<u>CCF</u>	<u>Charging Collection Function</u>
<u>CDR</u>	<u>Charging Data Record</u>

CK	Ciphering Key
CN	Core Network
CSCF	Call Session Control Function
DNS	Domain Name System
ECF	Event Charging Function
FQDN	Fully Qualified Domain Name
GCID	GPRS Charging Identifier
i	irrelevant
ICID	IMS Charging Identifier
I-CSCF	Interrogating CSCF
IK	Integrity Key
IM	IP Multimedia
IOI	Inter Operator Identifier
IP	Internet Protocol
ISC	IP multimedia Subsystem Service Control
m	mandatory
MAC	Message Authentication Code
MGCF	Media Gateway Control Function
MRFC	Media Resource Function Controller
n/a	not applicable
o	optional
P-CSCF	Proxy CSCF
PDU	Protocol Data Unit
RAND	RANdOm challenge
RES	RESponse
RTP	Real-time Transport Protocol
S-CSCF	Serving CSCF
SDP	Session Description Protocol
SIP	Session Initiation Protocol
SQN	SeQuence Number
UA	User Agent
UAC	User Agent Client
UAS	User Agent Server
UE	User Equipment
URI	Universal Resource Identifier
URL	Universal Resource Locator
x	prohibited

End of second change

4 General

4.1 Conformance of IM CN subsystem entities to SIP

SIP defines a number of roles which entities can implement in order to support capabilities. These roles are defined in annex A.

Each IM CN subsystem functional entity using an interface at the Gm reference point, the Mg reference point, the Mi reference point, the Mj reference point, the Mk reference point, the Mm reference point, the Mr reference point and the Mw reference point, and also using the IP multimedia Subsystem Service Control (ISC) Interface, shall implement SIP, as defined by the referenced specifications in Annex A, and in accordance with the constraints and provisions specified in annex A, according to the following roles.

The Gm reference point, the Mg reference point, the Mi reference point, the Mj reference point, the Mk reference point, the Mm reference point and the Mw reference point are defined in 3GPP TS 23.002 [2]

The Mr reference point is defined in 3GPP TS 23.228 [7].

The ISC interface is defined in 3GPP TS 23.228 [7] subclause 4.2.4.

- The User Equipment (UE) shall provide the User Agent (UA) role with the exceptions and additional capabilities as described in subclause 5.1.
- The P-CSCF shall provide the proxy role, with the exceptions and additional capabilities as described in subclause 5.2. When acting as the subscriber to or the recipient of event information, the P-CSCF shall provide the UA role, again with the exceptions and additional capabilities as described in subclause 5.2.
- The I-CSCF shall provide the proxy role, with the exceptions and additional capabilities as described in subclause 5.3.
- The S-CSCF shall provide the proxy role, with the exceptions and additional capabilities as described in subclause 5.4. The S-CSCF shall provide the UA role with the additional capabilities as described in subclause 5.4. The S-CSCF shall also act as a registrar, with the exceptions and additional capabilities as described in subclause 5.4. However, as the notifier of event information the S-CSCF shall provide the UA role, again with the exceptions and additional capabilities as described in subclause 5.4.
- The BGCF shall provide the proxy role, with the exceptions and additional capabilities as described in subclause 5.5.
- The MGCF shall provide the UA role, with the exceptions and additional capabilities as described in subclause 5.6.
- The AS, acting as terminating UA, or redirect server (as defined in 3GPP TS 23.218 [5]), shall provide the UA role, with the exceptions and additional capabilities as described in subclause 5.7.2.
- The AS, acting as originating UA (as defined in 3GPP TS 23.218 [5]), shall provide the UA role, with the exceptions and additional capabilities as described in subclause 5.7.3.
- The AS, acting as a SIP proxy (as defined in 3GPP TS 23.218 [5]), shall provide the proxy role, with the exceptions and additional capabilities as described in subclause 5.7.4.
- The AS, performing 3rd party call control (as defined in 3GPP TS 23.218 [5]), shall provide the UA role, with the exceptions and additional capabilities as described in subclause 5.7.5.
- The MRFC shall provide the UA role, with the exceptions and additional capabilities as described in subclause 5.8.

4.2 URL and address assignments

In order for SIP and SDP to operate, the following preconditions apply:

- 1) I-CSCFs used in registration are allocated FQDNs. Other IM CN subsystem entities may be allocated FQDNs. How these addresses are assigned to the logical entities is up to the network operator. For example, a single FQDN may be assigned to all I-CSCFs, and the load shared between various physical boxes by underlying IP capabilities, or a separate FQDN may be assigned to each I-CSCF, and the load shared between various physical boxes using DNS SRV capabilities.

Editor's note: The requirements for DNS-SRV entries or alternatives require further discussion.

- 2) All IM CN subsystem entities are allocated IP addresses. Allocation of IPv6 and IPv4 addresses fulfils the requirements of 3GPP TS 23.221 [6] subclause 5.1.
- 3) The subscriber is allocated a private user identity by the home network operator, and this is contained within the USIM. This private user identity is available to the SIP application within the UE.

NOTE: The FQDNs may be resolved by using any of public DNSs, private DNSs, or peer-to-peer agreements.

- 4) The subscriber is allocated one or more public user identities by the home network operator. At least one of these is contained within the USIM. All public user identities are available to the SIP application within the UE.
- 5) The UE is dynamically assigned an IP version 6 address.

4.3 Routing principles of IM CN subsystem entities

Each IM CN subsystem functional entity shall apply loose routing policy as described in RFC 2543bis [20] with the following restrictions, when processing a SIP request.

Start of third change

4.4 Charging correlation principles for IM CN subsystems

4.4.1 Overview

This subclause describes charging correlation principles to aid with the readability of charging related procedures in subclause 5. See 3GPP TS 32.200 [12a] and 3GPP TS 32.225 [12b] for further information on charging.

IM CN subsystem generates and retrieves the following charging correlation information for later use with offline and online charging.

1. IMS Charging Identifier (ICID)
2. Access network information
 - a. GPRS Charging Information
3. Inter Operator Identifier (IOI)
4. Charging function addresses
 - a. Charging Collection Function (CCF)
 - b. Event Charging Function (ECF)

The charging correlation information is encoded in the P-Charging-Vector header as defined in subclause 7.2. The P-Charging-Vector header contains the following parameters: icid, access network information and ioi. The parameters are described further in the subclauses that follow. The GGSN provides the access network information to the IM CN subsystem, which is the common information used to correlate GGSN CDRs with IM CN subsystem CDRs.

The offline and online charging function addresses are encoded in the P-Charging-Function-Addresses as defined in subclause 7.2. The P-Charging-Function-Addresses header contains the following parameters: ccf and ecf.

4.4.2 IMS charging identifier (ICID)

The IMS Charging Identifier (ICID) is the session level data shared among the IMS network entities including ASs in both the calling and called IMS networks.

The first IMS network entity involved in a dialog (session) or standalone (non-session) message will generate the ICID and include it in the icid parameter of the P-Charging-Vector header in the SIP request. The P-CSCF will generate ICID for mobile originated calls. The I-CSCF will generate ICID for mobile terminated calls if there is no ICID received in the initial request (e.g. the calling party network is another SIP based network). The AS will generate ICID when acting as an originating UA. The MGCF will generate ICID for PSTN/PLMN originated calls. Each entity that process the SIP request will extract the ICID for possible later use in a charging data records (CDR). The I-CSCF and S-CSCF are also allowed to generate a new ICID for mobile terminated calls received from another network.

There is also an ICID generated by the P-CSCF with a REGISTER request that is passed in a unique instance of P-Charging-Vector header. ~~This ICID is valid for the duration of the registration and is associated with the signalling PDP context.~~

The icid parameter is included in any requests that include the P-Charging-Vector header. However, the P-Charging-Vector (and ICID) is not passed to the UE. ~~It is also possible for the ICID to be passed to the GGSN and SGSN, but that is outside the scope of this specification.~~

The ICID is also passed from the P-CSCF to the GGSN, but the ICID is not passed to the SGSN. The interface supporting this operation is outside the scope of this document.

4.4.3 Access network information

4.4.3.1 General

The access network information are the media component level data shared among the IMS network entities for one side of the session (either the calling or called side). GPRS charging information (GGSN identifier and GCIDs) is an example of access network information.

4.4.3.2 GPRS charging information

The P-CSCF provides the GPRS charging information to the S-CSCF. The S-CSCF may also pass the information to an Application Server (AS), which may be needed for online pre-pay applications. The GPRS charging information for the originating network is used only with in that network, and similarly the GPRS charging information for the terminating network is used only with in that network. Thus the GPRS charging information are not shared between the calling and called networks. The GPRS charging information is not passed towards the external ASs from its own network.

The GPRS charging information is populated in the P-Charging-Vector using the gprs-charging-info parameter. The gprs-charging-info parameter contains further parameters: ggsn and gcid. The gcid parameter contains charging identifiers for one or more PDP contexts, or GCID. Each gcid parameter has an identifier assigned by the GGSN (pdp-id parameter), the authorization token used when PDP context was established (auth-token) and an index number (pdp-flow-index parameter) to correlate the PDP context with a media stream in the SDP from the SIP signalling. The numbering for the index shall start at 1 and is associated with the 'm' lines in the SDP, where the counting is done from top to bottom.

The GPRS charging information is passed at the first opportunity after the resources are allocated at the GGSN. GPRS charging information will be updated with new information during the session as media streams are added or removed.

4.4.4 Inter operator identifier (IOI)

The Inter Operator Identifier (IOI) is globally unique identifier to share between operator networks/service providers/content providers. There are two possible instances of IOI to be exchanged between networks/service providers/content providers: one for the originating side, ioi-originating, and one for the terminating side, ioi-terminating.

The originating network populates the ioi-originating parameter of the P-Charging-Vector header in the initial request, which identifies the operator network from which the request originated. Also in the initial request, the ioi-terminating parameter is left out of the P-Charging-Vector parameter. The originating network retrieves the teminating-ioi parameter from the P-Charging-Vector header within the message sent in response to the initial request, which identifies the operator network from which the response was sent. The MGCF takes responsibility for populating the ioi-originating on behalf of the PSTN/PLMN when a call/session is originated from the PSTN/PLMN.

The terminating network retrieves the ioi-originating parameter from the P-Charging-Vector header in the initial request, which identifies the operator network from which the request originated. The terminating network populates the ioi-terminating parameter of the P-Charging-Vector header in the response to the initial request, which identifies the operator network from which the response was sent. IOIs will not be passed along within network. However, IOIs will be sent to AS for accounting purposes.

4.4.5 Charging function addresses

Charging function addresses are distributed to each of the IMS network entities in the home network for one side of the session (either the calling or called side) and are to provide a common location for each entity to send charging information. Charging Collection Function (CCF) addresses are used for offline billing. Event Charging Function (ECF) addresses are used for online billing.

There may be two separate addresses for CCF and ECF addresses populated into the P-Charging-Function-Addresses header of the SIP request or response. The parameters are ccf-primary, ccf-secondary, ecf-primary and ecp-secondary. Only ccf-primary is required. The other parameters are optional. The secondary addresses may be included by each IMS network for redundancy purposes.

The CCF addresses and ECF addresses are retrieved from HSS via Cx/Sh interface and passed by the S-CSCF to subsequent entities. The charging function addresses are passed from the S-CSCF to IM CN subsystem entities in its

~~own~~home network ~~and AS~~, but are not passed to the visited network or the UE. When the P-CSCF is allocated in the visited network, then the ~~CCF~~charging function addresses ~~is~~are obtained by means outside the scope of this ~~specification~~document. The AS receives the charging function addresses from the S-CSCF via the ISC interface.

End of third change

CHANGE REQUEST

⌘ **24.229 CR 094** ⌘ rev **1** ⌘ Current version: **5.0.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Procedures for original-dialog-id P-header		
Source:	⌘ Lucent Technologies		
Work item code:	⌘ IMS-CCR	Date:	⌘ May 6, 2002
Category:	⌘ F	Release:	⌘ REL-5
	<i>Use <u>one</u> of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use <u>one</u> of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ 3GPP has currently proposed an XML-based solution for passing the original-dialog-id. IETF has indicated a preference for a header based solution using the P-header mechanism. An internet-draft has been submitted for a P-header version of original-dialog-id. If it is approved, then the definition and use of the original-dialog-id needs to be updated in 24.229 to align with the change.
Summary of change:	⌘ The XML definitions are removed. Procedures are modified to describe using the P-header fields instead of the XML elements for original-dialog-id. Revision 1 has the following changes: Removed changes to 5.4.3.2, which are now covered by CR 008 (tdoc N1-021454) Removed duplicated information from the internet draft in clause 7.2.7.
Consequences if not approved:	⌘ XML-based solution will be used to pass original-dialog-id. This is appropriate if IETF does not approve the P-header internet-draft. However, if IETF does approve the P-header internet-draft then the effort will be wasted if the corresponding changes are not implemented in 24.229.

Clauses affected:	⌘ 2, 5.4.3.1, 5.4.3.3, 5.4.3.4, 5.7.2. 5.7.4, 5.7.5.2.1, 7.2.7 (new subclause), 7.6.2, 7.6.3		
Other specs affected:	⌘ <input checked="" type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/> Test specifications ⌘ <input type="checkbox"/> O&M Specifications	⌘ 24.228	
Other comments:	⌘ If this CR is approved, which depends on IETF acceptance of the internet-draft that defines P-Original-Dialog-ID, then CR 018 (tdoc N1-020787) should be rejected because it has the XML-based alternative.		

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Start of first change

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 23.002: "Network architecture".
- [3] 3GPP TS 23.003: "Numbering, addressing and identification".
- [4] 3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2".
- [5] 3GPP TS 23.218: "IP Multimedia (IM) Session Handling; IM call model".
- [6] 3GPP TS 23.221: "Architectural requirements".
- [7] 3GPP TS 23.228: "IP multimedia subsystem; Stage 2".
- [8] 3GPP TS 24.008: "Mobile radio interface layer 3 specification; Core Network protocols; Stage 3".
- [9] 3GPP TS 25.304: "UE Procedures in Idle Mode and Procedures for Cell Reselection in Connected Mode".
- [10] 3GPP TS 26.235: "Packet switched conversational multimedia applications; Default codecs".
- [11] 3GPP TS 29.208: "End to end Quality of Service (QoS) signalling flows".
- [12] 3GPP TS 29.228: "IP Multimedia (IM) Subsystem Cx Interface; Signalling flows and message contents".
- [13] 3GPP TS 33.102: "3G Security; Security architecture".
- [14] 3GPP TS 33.203: "Access security for IP based services".
- [15] 3GPP TS 44.018: "Mobile radio interface layer 3 specification, Radio Resource Control Protocol".
- [16] RFC 2806: "URLs for Telephone Calls".
- [17] RFC 2833 (May 2000): "RTP Payload for DTMF Digits, Telephony Tones and Telephony Signals".
- [18] RFC 2916: "E.164 number and DNS".
- [19] RFC 2976 (October 2000): "The SIP INFO method".
- [20] draft-ietf-sip-rfc2543bis-07 (January 2002): "SIP: Session Initiation Protocol".

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

- [21] draft-ietf-sip-100rel-05 (February 2002): "Reliability of provisional responses in SIP".

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

[22] draft-sip-manyfolks- resource-03 (November 2001): "Integration of resource management and SIP".

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

[23] draft-ietf-sip-events-02.txt (February 2002): "SIP-Specific Event Notification".

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

[24] draft-ietf-sip-callerprefs-05 (November 2001): "SIP caller preferences and callee capabilities".

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

[25] draft-ietf-sip-refer-02 (October 2001): "The REFER method".

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

[26] draft-ietf-sip-session-timer-08 (October 2001): "The SIP session timer".

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

[27] draft- sip-privacy-03 (November 2001): "SIP extensions for caller identity and privacy".

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

[28] draft- sip-state-02 (August 2001): "SIP extensions for supporting distributed call state".

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

[29] draft- sip-call-auth-03 (November 2001): "SIP extensions for media authorization".

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

[30] draft-ietf-mmusic-sdp-new-04 (November 2001): "SDP: Session Description Protocol".

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

[34] [draft-henrikson-sip-original-dialog-id-01 \(May 2002\): "Private SIP Extension for Original Dialog Identifier"](#).

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

End of first change

Start of second change

5.4.3 General treatment for all dialogs and standalone transactions excluding requests terminated by the S-CSCF

5.4.3.1 Requests initiated by the served user

When the S-CSCF receives from the served user an initial request for a dialog or a request for a standalone transaction, prior to forwarding the request, the S-CSCF shall:

- remove its own SIP URL from the topmost Route header;
- if the outgoing Request-URI is a TEL URL, the S-CSCF shall translate the E.164 address (see RFC 2806 [16]) to a globally routable SIP URL using an ENUM/DNS translation mechanism with the format specified in RFC 2916 [18]. Databases aspects of ENUM are outside the scope of the present document. If this translation fails, the request may be forwarded to a BGCF or any other appropriate entity (e.g a MRFC to play an announcement) in the originator's home network or an appropriate SIP response shall be sent to the originator;

- check if ~~<original-dialog-id> XML element~~P-Original-Dialog-ID header is present in the ~~payload of the~~ incoming request. If present, it indicates an association with an existing dialog, the request has been sent from an Application Server in response to a previously sent request. The ~~<od-to>, <od-from> and <od-call-id> XML element~~od-to-tag, od-from-tag and od-call-id parameter values from the ~~<original-dialog-id> XML element~~P-Original-Dialog-ID header may be used as additional parameters when searching for existing dialogs. Local data shall be updated to indicate that this Application Server has been contacted for the initial request. The S-CSCF shall determine the next hop using initial filter criteria and local data on status of which Application Servers have been contacted. If the next hop is another Application Server, the S-CSCF shall retain the ~~<original-dialog-id> XML element~~P-Original-Dialog-ID header in the ~~message body of the~~ request. If the next hop is not an Application Server, the S-CSCF shall ~~leave out~~remove the ~~<original-dialog-id> XML element~~P-Original-Dialog-ID header from the ~~payload of the~~ request;
- check whether the initial request matches the initial filter criteria of the application servers assigned for the public user identity as described in 3GPP TS 23.218 [5] subclause 6.4. Depending on the result of the previous check, the S-CSCF may contact one or more application server(s) before processing the outgoing Request-URI. In case of contacting one or more application server(s) the S-CSCF shall:
 - insert the AS URL to be contacted into the Route header as the topmost entry followed by its own URL; and
 - initialise local data to track the status of contacting each application server specified in the service profile. Additionally S-CSCF shall also populate the ~~<original-dialog-id> XML element~~P-Original-Dialog-ID header in the message ~~body~~ with the original To tag, From tag and Call-ID headers received in the request. See subclause ~~5.4.3.3~~7.2.7 for further information on the original dialog identifier.
- store the value of the <icid> XML element received in the message body (see subclause 7.6) and retain the <icid> XML element in the message body;
- determine the destination address (e.g. DNS access) using the URL placed in the topmost Route header if present, otherwise based on the Request-URI; and
- in case of an initial request for a dialog the S-CSCF shall create a Record-Route header containing its own SIP URL and save the necessary header fields from the request (and from its appropriate responses) in order to release the dialog when needed.

When the S-CSCF receives from the served user a refresh request for a dialog, prior to forwarding the request the S-CSCF shall:

- remove its own URL from the topmost Route header;
- create a Record-Route header containing its own SIP URL and save the necessary header fields from the request (and from its appropriate responses) in order to release the dialog when needed; and
- route the request based on the topmost Route header.

When the S-CSCF receives from the served user a subsequent request other than refresh request for a dialog, prior to forwarding the request the S-CSCF shall:

- remove its own URL from the topmost Route header; and
- route the request based on the topmost Route header.

5.4.3.2 Requests terminated at the served user

When the S-CSCF receives, destined for the served user, an initial request for a dialog or a request for a standalone transaction, prior to forwarding the request, the S-CSCF shall:

- remove its own URL from the topmost Route header;
- check if <original-dialog-id> XML element is present in the payload of the incoming request. If present, it indicates an association with an existing dialog, the request has been sent from an Application Server in response to a previously sent request. The <od-to>, <od-from> and <od-call-id> XML element values from the <original-dialog-id> XML element may be used as additional parameters when searching for existing dialogs. Local data shall be updated to indicate that this Application Server has been contacted for the initial request. The S-CSCF shall determine the next hop using initial filter criteria and local data on status of which Application Servers have been contacted. If the next hop is another Application Server, the S-CSCF shall retain the <original-dialog-id>

XML element in the message body of the request. If the next hop is not an Application Server, the S-CSCF shall leave out the <original-dialog-id> XML element from the payload of the request;

- check whether the initial request matches the initial filter criteria of the application servers assigned for the public user identity as described in 3GPP TS 23.218 [5] subclause 6.5. Depending on the result of the previous check the S-CSCF may contact one or more application server(s) before contacting an I-CSCF/P-CSCF respectively. In case of contacting one or more application server(s) the S-CSCF shall:
 - insert the AS URL to be contacted into the Route header as the topmost entry followed by its own URL; and
 - initialise local data to track the status of contacting each application server specified in the service profile. Additionally S-CSCF shall also populate the <original-dialog-id> XML element in the message body with the original To, From and Call-ID headers received in the request. See subclause 5.4.3.3 for further information on the original dialog identifier.
- store the value of the <icid> XML element received in the message body (see subclause 7.6) and retain the <icid> XML element in the message body;
- in case there are no Route headers in the request, then determine, from the destination public user identity, the list of preloaded routes saved during registration or re-registration, as described in subclause 5.4.1.2.1;
- determine, from the destination public user identity, the saved Contact URL where the user is reachable saved at registration or reregistration, as described in subclause 5.4.1.2.1;
- build the Request-URI and Request header field values from the preloaded routes and saved Contact URL, as described in RFC 2543bis [20];
- insert a P-Called-Party-ID SIP header field including the Request-URI received in the INVITE;
- in case of an initial request for a dialog create a Record-Route header containing its own SIP URL and save the necessary header fields from the request (and from its appropriate responses) in order to release the dialog when needed;
- replace the Request-URI with the contents of the user Contact URL saved by the S-CSCF at registration time; and
- forward the request based on the topmost Route header.

When the S-CSCF receives, destined for the served user, a refresh request for a dialog, prior to forwarding the request, the S-CSCF shall:

- remove its own URL from the topmost Route header;
- create a Record-Route header containing its own SIP URL and save the necessary header fields from the request (and from its appropriate responses) in order to release the dialog when needed; and
- forward the request based on the topmost Route header.

When the S-CSCF receives, destined for the served user, a subsequent request other than refresh request for a dialog, prior to forwarding the request, the S-CSCF shall:

- remove its own URL from the topmost Route header; and
- forward the request based on the topmost Route header.

5.4.3.3 Original dialog identifier

The original dialog identifier is coded as the ~~<original-dialog-id> XML element within the SIP message body~~[P-Original-Dialog-ID header](#) as described in subclause 7.6.2.7.

~~For the messages including the <original-dialog-ID> XML element, set the value of the Content-Type header to include the MIME type specified in subclause 7.6, which may be one part of a multipart message body.~~

5.4.3.4 Abnormal cases

The S-CSCF shall, when contacting application servers based on the initial filter criteria, expect either a final response from the application server as the session terminates there, or the initial request message, that may be modified. In either case the message should be identified (using ~~<original-dialog-id> XML element~~ [P-Original-Dialog-ID](#)) as belonging to the original request forwarded by the S-CSCF.

If the S-CSCF receives a message including an ~~<original-dialog-id> XML element~~ [P-Original-Dialog-ID](#) that does not match any that it has forwarded to the application server it shall:

- respond to the application server with 481 Call Leg/Transaction Does Not Exist.

End of second change

Start of third change

5.7 Procedures at the Application Server (AS)

NOTE: This subclause defines only the requirements on the application server that relate to SIP. Other requirements are defined in 3GPP TS 23.218 [5].

5.7.1 Common Application Server (AS) Procedures

5.7.1.1 Notification about registration status

The AS may support the REGISTER method in order to discover the registration status of the user. If a REGISTER request arrives containing information about the user's registration status and the AS supports the REGISTER method, the AS shall store the Expires parameter from the request and generate a 200 OK or an appropriate failure response. For the success case, the 200 OK response shall contain Expires value equal to the value received in the REGISTER request.

5.7.1.2 Extracting charging correlation information

When an AS receives an initial request for a dialog or a request for a standalone transaction, the AS shall store the value of the <icid> XML element received in the message body (see subclause 7.6) and retain the <icid> XML element in the message body.

5.7.2 Application Server (AS) acting as terminating UA, or redirect server

Editors Note: When acting as a terminating UA the AS shall behave as defined for a UE in 5.1.4.

The S-CSCF may forward received initial requests to the application server based on initial filter criteria being met. If the S-CSCF includes an ~~<original-dialog-id> XML element~~ [P-Original-Dialog-ID header](#) in these requests, the AS shall include ~~this <original-dialog-id> XML element~~ [the same P-Original-Dialog-ID header](#) in any responses and/or subsequent requests sent on this dialog.

An Application Server acting as redirect server shall propagate any received 3GPP message body in the redirected message.

5.7.3 Application Server (AS) acting as originating UA

Editors Note: When acting as an originating UA the AS shall behave as defined for a UE in 5.1.3.

When an AS acting as originating UA generates an initial request for a dialog or a request for a standalone transaction, the AS shall create a new, globally unique value for the <icid> XML element and insert it into the message body (see subclause 7.6).

5.7.4 Application Server (AS) acting as a SIP proxy

The S-CSCF may forward received initial requests to the application server based on initial filter criteria being met. If the S-CSCF includes an ~~<original-dialog-id> XML element~~ P-Original-Dialog-ID header in these requests, the AS shall include ~~this <original-dialog-id> XML element~~ the same P-Original-Dialog-ID header in any responses and/or subsequent requests sent on this dialog.

When the AS acting as a SIP proxy receives a request from the S-CSCF, prior to forwarding the request it shall:

- remove its own URL from the topmost Route header; and
- after executing the required services, route the request based on the topmost Route header.

The AS may modify the SIP requests based on service logic, prior to forwarding the request back to the S-CSCF.

An Application Server acting as a SIP proxy shall propagate any received 3GPP message body in the forwarded message.

5.7.5 Application Server (AS) performing 3rd party call control

5.7.5.1 General

The AS performing 3rd party call control acts as a B2BUA. The B2BUA AS will internally map the message headers between the two dialogs that it manages. It is responsible for correlating the dialog identifiers and will decide when to simply translate a message from one dialog to the other, or when to perform other functions. These decisions are specific to each AS and are outside the scope of the present document.

The AS, although acting as a UA, does not initiate any registration of its associated addresses. These are assumed to be known by peer-to-peer arrangements within the IM CN subsystem.

5.7.5.2 Call initiation

5.7.5.2.1 Initial INVITE

When the AS receives an initial INVITE request, it will contain the AS's SIP URL in the Request-URI. Before generating a new INVITE back to the S-CSCF, the AS:

- performs the Application Server specific functions. See 3GPP TS 23.218 [5]; and
- if successful, generate and send a new INVITE request to the S-CSCF to establish a new dialog. The AS shall look for the presence of the ~~<original-dialog-id> XML element~~ P-Original-Dialog-ID header in the ~~message body of the~~ initial INVITE request and populate the same ~~<original-dialog-id> XML element~~ P-Original-Dialog-ID header in the ~~message body of the~~ new INVITE request.

5.7.5.2.2 Subsequent requests

Editor's Note: subsequent requests can be handled in a generic way. Is there anything needed here?

5.7.5.3 Call release

5.7.5.4 Call-related requests

Editor's Note: call-related requests can be handled in a generic way. Is there anything needed here?

An Application Server may initiate a call release. See 3GPP TS 23.218 [5] for possible reasons. The BYE request shall be sent simultaneously for both dialogs managed by the B2BUA.

5.7.5.5 Further initial requests

Editor's Note: call-related requests can be handled in a generic way. Is there anything needed here?

End of third change

Start of fourth change

7 Extensions within the present document

7.1 SIP methods defined within the present document

There are no SIP methods defined within the present document over and above those defined in the referenced IETF specifications.

7.2 SIP headers defined within the present document

7.2.1 Path header

7.2.1.1 Introduction

Path header is a mechanism whereby a P-CSCF, I-CSCFs, and S-CSCF can request to be on a signalling path for the initial INVITE exchanged between the UE and the S-CSCF. The path-establishment procedure is originated by the P-CSCF during the registration process. The procedure is performed during the initial registration of each public user identity and all subsequent reregistrations. The list of Path headers obtained by a reregistration overwrites the existing list of Path headers at the S-CSCF. Each reregistration of the same public user identity may result in new list of Path headers. The P-CSCF uses the list of Path headers to construct a list of Route headers. When initiating a call pertaining to a given public user identity, the list of Route headers will be pre-loaded into the initial INVITE request. If a CSCF wants to receive subsequent requests, it will insert its own name to the Record Route header of the initial INVITE request. Once on the route, a CSCF remains on the route for the duration of the call. The path learned while reregistering during an active call does not affect the existing call, since the routing path for the respective call has already been established. The list of Path headers is not forwarded to the UE.

7.2.1.2 Syntax

The Path header field has the syntax described in table 7.1.

Table 7.1: Syntax of path header

<pre>Path = "Path" ":" 1#(name-addr *(";rr-param")) rr-param = generic-param</pre>
--

7.2.1.3 Operation

The operation of this header is described in clause 5.

7.2.2 P-Called-Party-ID header

7.2.2.1 Introduction

The P-Called-Party-ID header is the mechanism whereby the terminating UE learns the dialled public user identity that triggered the current session initiation.

The S-CSCF inserts the header in all terminating INVITE and reINVITE requests. The header is not used in any other request or response.

7.2.2.2 Syntax

The P-Called-Party-ID header field has the syntax described in table 7.2.

Table 7.2: Syntax of P-Called-Party-ID header

```
P-Called-Party-ID = "P-Called-Party-ID" HCOLON 1#
                    (name-addr *( SEMI p-cdpid-param))

p-cdpid-param = generic-param
```

Table 7.3 is an extension of tables 2 and 3 in RFC 2543bis [20] and table in subclause 7.5 in the SIP-specific event notification [23].

Table 7.3: P-Called-Party-ID header

Header field	where	proxy	ACK	BYE	CAN	INV	OPT	REG	PRA	SUB	NOT
P-Called-Party-ID	R	am	-	-	-	o	-	-	-	-	-

7.2.2.3 Operation

The operation of this header is described in subclause 5.4.3.2.

7.2.7 P-Original-Dialog-ID header

7.2.7.1 Introduction

The P-Original-Dialog-ID header is the mechanism whereby the S-CSCF may associate dialogs related to the same initial request when traversing Application Servers specified in filter criteria.

The S-CSCF inserts the header in all INVITE and reINVITE requests. The header may also be used with standalone transactions and included in responses.

7.2.7.2 Syntax

The P-Original-Dialog-ID header field has the syntax described in ~~table 7.x, which is extracted from draft-henrikson-sip-original-dialog-id [34].~~

Table 7.x: Syntax of P-Original-Dialog-ID header

```
P-Original-Dialog-ID = "P-Original-Dialog-ID" HCOLON
                        ( "od-from-tag" EQUAL od-from-tag )
                        ( COMMA "od-to-tag" EQUAL od-to-tag )
                        ( COMMA "od-call-id" EQUAL od-call-id )

od-from-tag = token
od-to-tag = token
od-call-id = callid
```

~~Table 7.y is an extension of table 2 in RFC 3261 [20].~~

Table 7.y: P-Original-Dialog-ID header

Header field	where	proxy	ACK	BYE	CAN	INV	OPT	REG	PRA	SUB	NOT
P-Original-Dialog-ID	R	ard	-	-	-	o	o	o	-	o	-

7.2.7.3 Operation

[The operation of this header is described in subclauses 5.4.3, 5.7.2, 5.7.4 and 5.7.5.](#)

7.3 Option-tags defined within the present document

7.3.1 "path" option-tag

A new option-tag "path" is added to the list of option-tags allowed for both Require and Proxy-Require headers.

The operation of this option tag is described in clause 5.

7.4 Status-codes defined within the present document

There are no status-codes defined within the present document over and above those defined in the referenced IETF specifications.

7.5 Session description types defined within the present document

There are no session description types defined within the present document over and above those defined in the referenced IETF specifications.

7.6 3GPP IM CN subsystem XML body, version 1

7.6.1 General

This subclause describes the Document Type Definition that is applicable for the 3GPP IM CN Subsystem XML body.

Any SIP User Agent or proxy may insert or remove the 3GPP IM CN subsystem XML body or parts of it, as required, in any SIP message. The <icid> XML element is an exception to this rule; it may only be removed by the P-CSCF. The 3GPP IM CN subsystem XML body shall not be forwarded outside a 3GPP network.

The associated MIME type with the 3GPP IMX XML body is "application/3gpp-ims+xml".

7.6.2 Document Type Definition

```

<?xml version="1.0" ?>
<!-- Draft DTD for the 3GPP IMS XML body. -->

<!DOCTYPE ims-3gpp [
  <!-- ims-3gpp element: root element -->

  <!ELEMENT ims-3gpp (vnid?, cell-id?,
    original-dialog-id?, destination-public-user-id?,
    access?, charging-vector?, service-info?)>
  <!ATTLIST ims-3gpp version CDATA #REQUIRED>

  <!-- vnid element: Visited network identity -->
  <!ELEMENT vnid                (#PCDATA)>

  <!-- cell-id element: The Cell-Global-ID -->
  <!ELEMENT cell-id             (mcc, mnc, lac, ci)>
  <!ELEMENT mcc                 (#PCDATA)>
  <!ELEMENT mnc                 (#PCDATA)>
  <!ELEMENT lac                 (#PCDATA)>
  <!ELEMENT ci                  (#PCDATA)>
  <!ATTLIST cell-id rat (utran | geran) #REQUIRED>

  <!-- original-dialog-id: original dialog ID -->
  <!ELEMENT original-dialog-id (ed-from, ed-to, ed-call-id)>
  <!ELEMENT ed-from             (#PCDATA)>
  <!ELEMENT ed-to               (#PCDATA)>
  <!ELEMENT ed-call-id         (#PCDATA)>

  <!-- public-user-id: public user ID -->
  <!ELEMENT destination-public-user-id  (#PCDATA)>

  <!-- access: the type of access network →
  <!ELEMENT access                    (access-type, technology?)>
  <!ELEMENT access-type               (gprs | wlan | fixed | (#PCDATA))>
  <!ELEMENT technology                 (utran| geran | 802.11a |
    802.11b | sat | adsl | (#PCDATA))>

  <!-- charging-vector element: Charging Vector -->
  <!ELEMENT charging-vector           (icid, gprs-charging-id?)>

  <!-- icid element: IMS charging identifier -->
  <!ELEMENT icid                      (#PCDATA)>
  <!-- gprs-charging-id element: GPRS charging identifiers -->
  <!ELEMENT gprs-charging-id          (ggsn, pdp-info+)>
  <!ELEMENT ggsn                      (#PCDATA)>
  <!ELEMENT pdp-info                  (pdp-index, pdp-id)>
  <!ELEMENT pdp-index                 (#PCDATA)>
  <!ELEMENT pdp-id                    (#PCDATA)>

  <!-- service-info element: The transparent data received from HSS for AS -->
  <!ELEMENT service-info               (#CDATA)>

  <!-- alternative-service: alternative-service used in emergency sessions -->
  <!ELEMENT alternative-service        (type, reason)>
  <!ELEMENT type                       (emergency)>
  <!ELEMENT reason                     (#PCDATA)>

]>

```

7.6.3 DTD description

This section describes the elements of the 3GPP IMS Document Type Definition.

- <ims-3gpp>: This is the root element of the 3GPP IMS XML body. It shall always be present. The version described in the present document is 1.
- <vnid>: Visited network identifier. Optional element that describes the P-CSCF network name. The vnid value is a string of characters that identifies the P-CSCF network at the user's network home.

<cell-id>: This element describes the identity of the cell that is serving the user.

The <cell-id> element contains the <ran> attribute that identifies the coding of the cell-id, according to whether the cell-id was received from the GERAN or UTRAN.

The <cell-id> element comprises four children elements: <mcc>, <mnc>, <lac> and <ci>. They represent, respectively, the Mobile Country Code, Mobile Network Code, Location Area Code and Cell Identity, as described in [3].

~~<original-dialog-id>: The original dialog, as received by the S-CSCF. This element helps the S-CSCF to correlate dialogues when the Application Server is behaving as a B2BUA, and therefore, modifies then dialogue.~~

~~————— The original dialog-id element comprises three children elements: <od-from>, <od-to>, <od-call-id>. Their values contain, respectively, a copy of the From, To and Call-ID header values as received in the SIP message at the S-CSCF.~~

<destination-public-user-id>: The destination public-user-id URL of the current session.

<access>: The access element, if present, identifies the access that the UE is utilized to connect to the network. The element contains two children elements: <ant> and <technology>.

The <access-type> child element describes the access type. The predefined values are:

- gprs: the user is accessing the network through a GRPS access;
- wlan: the user is accessing the network through a wireless local area network;
- fixed: the user is accessing the network through a fixed access.

The <technology> child element, if present, describes the access technology. The pre-defined values are:

- utran: UTRAN, as defined in [3];
- geran: GERAN, as defined in [3];
- 802.11a: wireless local area network according to the 802.11a technology;
- 802.11b: wireless local area network according to the 802.11b technology;
- sat: satellite access;
- adsl: asymmetric digital subscriber line.

<charging-vector>: the charging-vector element, if present, identifies charging correlation information. The element contains two children elements: <icid> and <gprs-charging-id>.

The <icid> child element contains an IMS charging identifier that is globally unique and is associated with the end-to-end session.

The <gprs-charging-id> child element, if present, contains GPRS charging identifiers comprised of the following: <ggsn> and <pdp-info>:

- <ggsn>: identifier of the GGSN;
- <pdp-info>: one or more instances of information for a PDP context, which is comprised of two children elements: <pdp-index> and <pdp-id>:
 - <pdp-index>: relative index of PDP context as it correlates to a media stream in the SDP;
 - <pdp-id>: unique identifier of the PDP context from the GGSN.

<service-info>: the transparent element received from the HSS for a particular Application Server are placed within this optional element.

<alternative-service>: in the present document, the alternative service is used as a response for an attempt to establish an emergency session within the IM CN subsystem. The element describes an alternative service where the call should success. The alternative service is described by the type of service information. A possible reason cause why an alternative service is suggested may be included.

The <alternative-service> element contains a <type> element that indicates the type of alternative service. In the present document, the <type> element contains only the value "emergency".

The <reason> element contains an explanatory text with the reason why the session setup has been redirected. A UE may use this information to give an indication to the user.

End of fourth change

CHANGE REQUEST

⌘ 24.229 CR 095 ⌘ rev 2 ⌘ Current version: 5.0.0 ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Procedures for charging-vector P-header		
Source:	⌘ Lucent Technologies, NEC Corporation, Siemens		
Work item code:	⌘ IMS-CCR	Date:	⌘ May 6, 2002
Category:	⌘ F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Release:	⌘ REL-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ 3GPP has currently proposed an XML-based solution for passing the charging-vector. IETF has indicated a preference for a header based solution using the P-header mechanism. An internet-draft has been submitted for a P-header version of charging-vector. If it is approved, then the definition and use of the charging-vector needs to be updated in 24.229 to align with the change.
Summary of change:	⌘ The XML definitions are removed. Procedures are modified to describe using the P-header fields instead of the XML elements for charging-vector. Revision 1 has the following changes: Updated 5.2.7.3 to incorporate changes from CR 131 for gprs-charging-info. Updated 5.2.7.4 to use flow-index instead of pdp-id. Clarifies that flow-index only applies to media flows, not a PDP context for signalling. Added auth-token as additional parameter. Structured text to be in form of requirements instead of informative statements. Also, references clause 9.2.5 for further details on PDP contexts for media flows. Removed changes to 5.4.1.2.1, which are now covered by CR 060. Updated 5.4.3.1 to provide S-CSCF to insert its own instance of ICID. If done, then S-CSCF responsible for managing the two ICIDs in subsequent messages. Removed changes to 5.4.3.2, which are now covered by CR 008 (tdoc N1-021454). Removed duplicated information from the internet draft in clause 7.2.5. Also, renamed pdp-id to flow-index, added auth-token and added extension capability to gprs-charging-info. Finally, added further descriptive text.
Consequences if not approved:	⌘ XML-based solution will be used to pass charging-vector. This is appropriate if IETF does not approve the P-header internet-draft. However, if IETF does approve the P-header internet-draft then the effort will be wasted if the

corresponding changes are not implemented in 24.229.

Clauses affected:	⌘	5.2.2, 5.2.6.2, 5.2.6.3, 5.2.7.2, 5.2.7.3, 5.2.7.4, 5.2.9.1, 5.2.9.2, 5.3.2.1, 5.4.1.2.1, 5.4.1.7, 5.4.4.2.1, 5.4.3.1, 5.4.4.2.1, 5.4.4.2.2, 5.4.6.1.2, 5.4.6.1.3, 5.5.3.1.1, 5.5.3.1.2, 5.6.2, 5.7.1.1, 5.7.1.2, 5.7.3, 5.8.2.1.1, 7.2.5 (new subclause), 7.6.1, 7.6.2, 7.6.3												
Other specs affected:	⌘	<table border="1"><tr><td><input checked="" type="checkbox"/></td><td>Other core specifications</td><td>⌘</td><td>24.228</td></tr><tr><td><input type="checkbox"/></td><td>Test specifications</td><td></td><td></td></tr><tr><td><input type="checkbox"/></td><td>O&M Specifications</td><td></td><td></td></tr></table>	<input checked="" type="checkbox"/>	Other core specifications	⌘	24.228	<input type="checkbox"/>	Test specifications			<input type="checkbox"/>	O&M Specifications		
<input checked="" type="checkbox"/>	Other core specifications	⌘	24.228											
<input type="checkbox"/>	Test specifications													
<input type="checkbox"/>	O&M Specifications													
Other comments:	⌘	If this CR is approved, which depends on IETF acceptance of the internet-draft that defines P-Charging-Vector, then CR 009 (tdoc N1-020921), CR 010 (tdoc N1-020907), CR 011 (tdoc N1-020922) and CR 012 (tdoc N1-020967) should be rejected because they have the XML-based alternative for the components of charging-vector.												

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Start of first change

5.2 Procedures at the P-CSCF

5.2.1 General

The P-CSCF shall support use of the Path header.

NOTE: The Path header is only applicable to the REGISTER request and its 200 OK response.

5.2.2 Registration

When the P-CSCF receives a REGISTER request from the UE that pertains to a given public user identity, the P-CSCF shall:

- insert a Path header in the request. The P-CSCF shall include in the Path header an entry containing the SIP URL identifying the P-CSCF;
- insert a Require header and a Proxy-Require header both containing the option tag "path";

3) for the initial REGISTER request for a public user identity create a new, globally unique value for icid, save it locally and insert it into the icid parameter of the P-Charging-Vector header (see subclause 7.2.5)–Also include the gprs-charging-info parameter in the P-Charging-Vector header (see subclause 5.2.7.4);

4) for a reREGISTER request for a public user identity use the previously assigned value for the icid and insert it into the icid parameter of the P-Charging-Vector header;

- if the REGISTER request was received with a valid integrity check, add information to the REGISTER request to indicate that the REGISTER request was received with a valid integrity check; and

Editor's Note : The exact mechanism for this is FFS.

- determine the I-CSCF of the home network and forward the request to that I-CSCF.

When the P-CSCF receives a 200 OK response to a REGISTER request, the P-CSCF shall check the value of the Expires header field and/or Expires parameter in the Contact header. When the value of the Expires header field and/or expires parameter in the Contact header is different than zero, then the P-CSCF shall:

- 1) remove its SIP URL from the list of Path headers, reverses the order of the list and save the resulting list of Path headers. This list shall be stored during the entire registration period of the respective public user identity. This list shall be used to preload the routing information into the initial requests originated by the UE. If this registration is a re-registration, the P-CSCF shall replace the already existing Path headers with the new list;
- 2) associate the Path header information with the registered public user identity;
- 3) remove the list of Path headers and "path" option-tags from the 200 OK response before forwarding the response to the UE.

When the P-CSCF receives a 401 Unauthorized response to a REGISTER request, the P-CSCF shall remove and store the CK and IK values contained in the 401 Unauthorized response. The 401 Unauthorized response shall be forwarded to the UE if and only if the CK and IK have been removed.

Editor's Note: The P-CSCF behaviour when 3xx or 4xx responses other than 401 Unauthorized are received is FFS.

Editor's Note: The text above assumes that public user identities are registered one by one. Public user identity might need to be changed to Service Profile in the case when public user identities can be implicitly registered.

NOTE: The P-CSCF will maintain two Route lists. The first Route list - created during the registration procedure - is used only to pre-load the routing information into the initial INVITE request that originated at the UE. This list is valid during the entire registration of the respective public user identity. The second Route list - constructed from the Record Route headers in the initial INVITE and associated response - is used during the duration of the call. Once the call is terminated, the second Route list is discarded.

When the P-CSCF receives a 420 Bad Extension response to the above REGISTER request, the P-CSCF shall check the value of the Unsupported header field. When the value of the Unsupported header field is path, the P-CSCF shall take OA&M actions to indicate an error, in addition to passing on the 420 response to the UE. In all other cases, the P-CSCF shall proxy the 420 Bad Extension response.

5.2.3 Subscription to the users registration-state event package

Upon receipt of a 2xx response to the initial REGISTER request of an user, the P-CSCF shall subscribe to the users registration-state event package at the users registrar (S-CSCF). Therefore the P-CSCF shall generate a SUBSCRIBE request with the following elements:

- a Request-URI set to the topmost entry of the path information that was obtained during the users registration;
- a From header set to a SIP URL that contains the P-CSCF's FQDN;
- a To header, set to a SIP URL that contains the public user identity that was previously registered;
- an Event header set to the "registration-state" event package;
- an Expires header set to a value higher then the Expires header of the before sent REGISTER request from the user; and
- a Route header according to the path information that was obtained during the users registration. Th S-CSCF shall set the last Route header entry to the resource to which it wants to subscribe to, i.e. to a SIP URL the public user identity that was previously registered.

Afterwards the P-CSCF shall send out the so generated SUBSCRIBE request.

Upon receipt of a 2xx response to the SUBSCRIBE message, the P-CSCF shall store the information for the so established dialog and the expiration time as indicated in the Expires header of the received response.

5.2.4 Registration of multiple public user identities

Upon receipt of a NOTIFY message on the dialog which was generated during subscription to the registration-state event package, the P-CSCF shall perform the following actions:

- if a registration state value "open", i.e. registered is received for one or more public user identities, the P-CSCF shall bind the indicated public user identities as registered to the contact information of the user;
- if a registration state value "closed", i.e. deregistered is received for one or more public user identities, the P-CSCF shall release all stored information for these public user identities.

NOTE: There may be public user identities which are automatically registered within the registrar (S-CSCF) of the user upon registration of one public user identity. These automatically registered public user identities belong to the same service profile of the user and they are not available at the P-CSCF, i.e. P-CSCF does not know that they have been registered. The here-described procedures provide a mechanism to inform the UE about these automatically registered public user identities.

5.2.5 Deregistration

5.2.5.1 User-initiated deregistration

When the P-CSCF receives a 200 OK response to a REGISTER request (sent according to subclause 5.2.2), it shall check the value of the Expires header field and/or expires parameter in the Contact header field. When the value of the Expires header field or expires parameter equals zero, then the P-CSCF shall remove the public user identity found in the To header field from the registered public user identities list and all related stored information.

NOTE: There is no requirement to distinguish a REGISTER request relating to a registration from that relation to a deregistration. For administration reasons the P-CSCF may distinguish such requests, however this has no impact on the SIP procedures.

5.2.5.2 Network-initiated deregistration

If the P-CSCF has subscribed for the event providing registration state information of a certain public user identity and an incoming NOTIFY request addressed to P-CSCF arrives containing information about network-initiated deregistration, then the P-CSCF shall remove the deregistered public user identity from the registered public user identities list and all related stored information.

Editor's note: The above text came from N1-011984, the text below from N1-011988. The two texts are attempting to specify the same thing. This conflict needs to be resolved in a future contribution.

Upon receipt of a NOTIFY message on the dialog which was generated during subscription to the registration-state event package as described in subclause 5.2.3, which contains the registration state value "closed", i.e. deregistered, for one or more public user identities that were previously stored as registered, the P-CSCF shall release all stored information for that public user identity of that user.

If all public user identities that have been bound to one contact information are marked as deregistered, the P-CSCF shall release all resources for that specific user, i.e. the user then is treated as deregistered from the IM CN subsystem.

5.2.6 General treatment for all dialogs and standalone transactions excluding the REGISTER method

5.2.6.1 Introduction

The procedures of subclause 5.2.6 and its subclauses are general to all requests and responses, except those for the REGISTER method. Procedures in subsequent clauses to subclause 5.2.6 apply in addition to the procedures of subclause 5.2.6.

5.2.6.2 Requests initiated by the UE

When the P-CSCF receives from the UE an initial request for a dialog, and a Path header list exists for the initiator of the request, the P-CSCF shall:

- remove any Route header from the request;
- select the list of Route headers that was created during the registration or reregistration of the respective public user identity utilizing the Path mechanism (see subclause 5.2.3);
- pre-load the list of Route headers to the request;
- create a Record-Route header containing its own SIP URL;
- create a new, globally unique value for the `<icid>` ~~XML-element~~parameter and insert it into the ~~message body~~ [P-Charging-Vector header](#); and ~~(see subclause 7.6)~~
- forward the request based on the topmost Route header.

When the P-CSCF receives a 1xx or 2xx response to the above request, the P-CSCF shall:

- remove the list of Record-Route headers from the received response; and
- create a new list of stored Route headers, with the newly received list of Record-Route headers. The Contact header received in the response shall not be appended to the bottom of the stored list of Route headers.

When the P-CSCF receives any other response to the above request, the P-CSCF shall:

- remove any list of Record-Route headers, even though not allowed, from the received response and forward it to the UE.

When the P-CSCF receives from the UE a refresh request for a dialog, the P-CSCF shall:

- remove any Route header from the request;
- select the list of Route headers that was created during the exchange of the initial request and its associated response;
- pre-load the list of Route headers to the request;
- create a Record-Route header containing its own SIP URL; and
- forward the request based on the topmost Route header.

When the P-CSCF receives a 1xx or 2xx response to the above request, the P-CSCF shall:

- remove the list of Record-Route headers from the received response; and
- overwrite any existing list of stored Route headers, or create a new list of stored Route headers, with the newly received list of Record-Route headers. The Contact header received in the response shall not be appended to the bottom of the stored list of Route headers.

When the P-CSCF receives any other response to the above request, the P-CSCF shall:

- remove any list of Record-Route headers, even though not allowed, from the received response and forward it to the UE.

When the P-CSCF receives from the UE the request for a standalone transaction, and a Path header list exists for the initiator of the request, the P-CSCF shall:

- remove any Route header from the request;
- select the list of Route headers that was created during the registration or reregistration of the respective public user identity utilizing the Path mechanism (see subclause 7.2.1);
- pre-load the list of Route headers to the request;
- create a new, globally unique value for the `<icid>` ~~XML element~~parameter and insert it into the ~~message body~~ [P-Charging-Vector header](#); and
- forward the request based on the topmost Route header.

When the P-CSCF receives any response to the above request, the P-CSCF shall:

- remove any list of Record-Route headers, even though not allowed, from the received response and forward it to the UE.

When the P-CSCF receives from the UE subsequent requests other than a refreshing request that pertains to an existing dialog, the P-CSCF shall:

- select the list of Route headers that was created during the exchange of the initial request and associated response for this call;
- pre-load the list of Route headers to the request; and
- forward the request based on the topmost Route header.

When the P-CSCF receives any response to the above request, the P-CSCF shall:

- remove any list of Record-Route headers, valid or not, from the received response and forward it to the UE.

When the P-CSCF receives from the UE an initial request for a dialog, a refresh request for a dialog, or the request of a standalone transaction, and a Path header list does not exist for the initiator of the request, the P-CSCF shall:

- send a 403 Forbidden response back to the UE containing a warning header.

Editor's Note: how to find out whether the user has a valid registration in the P-CSCF is FFS.

Editor's Note: The correct value for the warning code is yet to be assigned by IANA.

When the P-CSCF receives from the UE the request for an unknown method, and a Path header list exists for the initiator of the request, the P-CSCF shall:

- select the list of Route headers that was created during the registration or reregistration of the respective public user identity utilizing the Path mechanism (see subclause 7.2.1);
- pre-load the list of Route headers to the request, and
- forward the request based on the topmost Route header.

When the P-CSCF receives any response to the above request, the P-CSCF shall:

- remove any list of Record-Route headers, even though invalid, from the received response and forward it to the UE.

When the P-CSCF receives any request or response from the UE, the P-CSCF shall:

- remove the <charging-vector> XML element (see subclause 7.6), if present, from the message body of the received request or response.

5.2.6.3 Requests terminated by the UE

When the P-CSCF receives, destined for the UE, an initial request for a dialog, or a refresh request for a dialog, prior to forwarding the request, the P-CSCF shall:

- remove its own SIP URL from the topmost Route header;
- remove the list of Record-Route headers, and shall convert it into a list of Route headers. The Contact header shall not be appended to the bottom of the list of Route headers. The P-CSCF shall save this list of Route headers and append this list to all UE originated requests for this dialog;
- add itself on the top of the removed list of Record-Route headers and save the list. The list will be appended to UE originated response to the SUBSCRIBE request;
- remove and store the list of received Via headers from the received request and shall place its own address in the Via header with locally unique token to identify the saved values as a branch parameter . The P-CSCF shall append the list of Via headers to the UE originated response for this request; and
- ~~remove and~~ store the <icid> XML element parameter received in from the message body (see subclause 7.6) P-Charging-Vector header.

When the P-CSCF receives a 1xx or 2xx response to the above request, the P-CSCF shall:

- append the saved list of Record-Route headers to the response; and,
- append the saved list of Via headers to the response.

When the P-CSCF receives any other response to the above request, the P-CSCF shall:

- append the saved list of Via headers to the response.

When the P-CSCF receives, destined for the UE, a subsequent request for a dialog that is not a refresh request, or a request for a stand-alone transaction, prior to forwarding the request, the P-CSCF shall:

- remove and store the list of received Via headers from the received request and shall place its own address in the Via header with locally unique token to identify the saved values as a branch parameter . The P-CSCF shall append this list of Via headers to the UE originated response for this transaction; and
- ~~remove and~~ store the <icid> XML element parameter received from in the message body (see subclause 7.6) P-Charging-Vector header.

When the P-CSCF any response to the above request, the P-CSCF shall:

- append the saved list of Via headers to the response.

When the P-CSCF sends any request or response to the UE, the P-CSCF shall:

- remove the ~~<P-Charging-Vector>~~ header from XML element (see subclause 7.6) from the message body of the request or response.

5.2.7 Initial INVITE

5.2.7.1 Determination MO or MT case

Editor's Note: It has to be discussed whether this section is needed or if the determination of MO/MT case at the P-CSCF shall be left implementation dependent.

5.2.7.2 Mobile-originating case

The P-CSCF shall respond to all INVITE requests with a 100 Trying response.

Upon receiving a response (e.g. 183 Session Progress, 200 OK) to the initial INVITE request, the P-CSCF:

Editor's note: the case when the P-CSCF acts on behalf of the UE is FFS.

- if a media authorization token is generated by the PCF (i.e. when service-based local policy control is applied), insert the Media Authorization header containing that media authorization token.

When the P-CSCF sends the ~~COMET-UPDATE~~ request towards the S-CSCF, the P-CSCF shall also include the ~~<gprs-charging-id>~~ XML element parameter in the ~~message body~~ P-Charging-Vector header. See subclause 5.2.7.4 for further information on the GPRS charging ~~identifier~~ information.

5.2.7.3 Mobile-terminating case

When the P-CSCF receives an initial INVITE request destined for the UE, it will contain the URL of the UE in the Request-URI, and a single pre-loaded Route header. The received initial INVITE will also have a list of Record-Route headers. Prior to forwarding the initial INVITE to the URL found in the Request-URI, the P-CSCF shall:

Editor's note: the case when the P-CSCF acts on behalf of the UE is FFS.

- if a media authorization token is generated by the PCF (i.e. when service-based local policy control is applied), insert the Media Authorization header containing that media authorization token.

In addition, the P-CSCF shall respond to all INVITE requests with a 100 Trying response.

When the P-CSCF sends 180 (Ringing) or 200 (OK) (to INVITE) towards the S-CSCF, the P-CSCF shall also include the ~~<gprs-charging-id>~~ XML element parameter in the ~~message body~~ P-Charging-Vector header. See subclause 5.2.7.4 for further information on the GPRS charging ~~identifier~~ information.

5.2.7.4 GPRS charging identifier

The GPRS charging ~~identifier~~ information shall be coded as the ~~<gprs-charging-id>~~ XML element parameter within the ~~SIP message body~~ P-Charging-Vector header as described in subclause ~~7.6~~ 7.2.5.

The ~~<gprs-charging-id>~~ XML element parameter shall contain one ~~<ggsn>~~ child element parameter and one or more ~~<pdp-info>~~ child elements ~~gcid~~ parameters. Each ~~<pdp-info>~~ ~~gcid~~ child XML element parameter within ~~<gprs-charging-id>~~ corresponds to a PDP context that was established at the GGSN for a UE. Each ~~<pdp-info>~~ XML element ~~gcid~~ parameter contains ~~<pdp-id>~~, and ~~<pdp-index>~~ flow-index and auth-token child elements parameters. ~~where The <pdp-id>~~ parameter shall be populated with ~~is~~ the PDP context identifier that the P-CSCF obtained from the GGSN, and ~~<pdp-index>~~ The flow-index parameter shall be populated with ~~is~~ the relative index to the media stream in the SDP for the PDP context. ~~The auth-token parameter shall be populated with the authorization token that is associated with this PDP context for a media stream. The numbering for the <pdp-index> will start at 1 and will be associated with the 'm' lines in the SDP, where the counting is done from top to bottom. For more information about the PDP contexts for media, see subclause 9.2.5. For the case of a PDP context that is used for signalling, the flow-index and auth-token parameters shall be set to 0.~~

~~For the messages including the <gprs-charging-id> XML element, set the value of the Content-Type header to include the MIME type specified in subclause 7.6, which may be one part of a multipart message body.~~

5.2.8 Call release

5.2.8.1 P-CSCF-initiated call release

5.2.8.1.1 Cancellation of a session currently being established

Upon receipt of an indication that radio coverage is no longer available for a served user, for whom one or more ongoing multimedia sessions are currently being established, the P-CSCF shall cancel the related dialogs by sending out a CANCEL request according to the procedures described in draft-ietf-sip-rfc2543bis-05 [20].

5.2.8.1.2 Release of an existing session

Upon receipt of an indication that radio coverage is no longer available for a served user, for whom one or more ongoing sessions exist, the P-CSCF shall release each of the related dialogs by applying the following steps:

- 1) If the P-CSCF serves the calling user of a session it shall generate a BYE message based on the information saved for the related dialog, including:
 - a Request-URI, set to the topmost entry of the stored routing information towards the called user;
 - a To header, set to the To header value as received in the 200 OK response for the initial INVITE request;
 - a From header, set to the From header value as received in the initial INVITE request;
 - a Call-ID header, set to the Call-Id header value as received in the initial INVITE request;
 - a CSeq header, set to the CSeq value that was stored for the direction from the calling to the called user, incremented by one;
 - a Route header, set to the routing information towards the called user as stored for the dialog, exclusively the topmost entry (which appears in the Request-URI);
 - further headers, based on local policy or the requested session release reason.
- 2) If the P-CSCF serves the called user of a session it shall generate a BYE message based on the information saved for the related dialog, including:
 - a Request-URI, set to the topmost entry of the stored routing information towards the calling user;
 - a To header, set to the From header value as received in the initial INVITE request;
 - a From header, set to the To header value as received in the 200 OK response for the initial INVITE request;
 - a Call-ID header, set to the Call-Id header value as received in the initial INVITE request;
 - a CSeq header, set to the CSeq value that was stored for the direction from the called to the calling user, incremented by one – if no CSeq value was stored for that session it shall generate and apply a random number within the valid range for CSeqs;
 - a Route header, set to the routing information towards the calling user as stored for the dialog, exclusively the topmost entry (which appears in the Request-URI);
 - further headers, based on local policy or the requested session release reason.
- 3) Afterwards the P-CSCF shall send the so generated BYE message towards the indicated user.
- 4) Upon receipt of the 2xx responses for the BYE request, the P-CSCF shall delete all information related to the dialog and the related multimedia session.

5.2.8.1.3 Abnormal cases

Upon receipt of a request on a dialog for which the P-CSCF initiated session release, the P-CSCF shall terminate this received request and answer it with a 481 Call/Transaction Does Not Exist response.

5.2.8.2 Call release initiated by any other entity

When the P-CSCF receives a 2xx response for a BYE request matching an existing dialog, it shall delete all the stored information related to the dialog.

5.2.9 Subsequent requests

5.2.9.1 Mobile-originating case

For a reINVITE request from the UE, when the P-CSCF sends the ~~COMET-UPDATE~~ request towards the S-CSCF, the P-CSCF shall include the updated ~~<gprs-charging-id>~~~~info~~ ~~XML-element~~parameter in the ~~message-body~~~~P-Charging-Vector header~~. See subclause 5.2.7.4 for further information on the GPRS charging ~~identifier~~information.

5.2.9.2 Mobile-terminating case

For a reINVITE request destined towards the UE, when the P-CSCF sends 200 (OK) response (to the INVITE) towards the S-CSCF, the P-CSCF shall include the updated ~~<gprs-charging-id>~~~~info~~ ~~XML-element~~parameter in the ~~message body~~~~P-Charging-Vector header~~. See subclause 5.2.7.4 for further information on the GPRS charging ~~identifier~~information.

5.2.10 Further initial requests

5.2.10.1 Mobile-originating case

Void.

5.2.10.2 Mobile-terminating case

Void.

5.2.11 Emergency service

The P-CSCF shall inspect the Request URI of all INVITE requests for known emergency numbers and emergency URLs from a configurable list. If the P-CSCF detects that the Request-URI of the INVITE request matches one of the numbers in this list, the INVITE request shall not be forwarded. The P-CSCF shall answer the INVITE request with a 380 Alternative Service response.

The 380 Alternative Service response shall contain a Content-Type header field with the value set to associated MIME type of the 3GPP IMS XML body as described in subclause 7.6.1.

The 3GPP IMS XML body shall contain an <alternative-service> element that indicates the parameters of the alternative service. The <type> child element shall be set to "emergency" to indicate that it was an emergency call. An operator configurable <reason> child element shall be included with a reason phrase.

The P-CSCF shall have a configurable list of emergency numbers and emergency URLs (e.g. sos@domain). The list is used to determine whether the INVITE is destined for an emergency centre or not.

5.3 Procedures at the I-CSCF

5.3.1 Registration procedure

Editor's note: The text on routeing needs to be enhanced to ensure interworking with RFC 2543 and RFC 2543bis networks.

5.3.1.1 General

During the registration procedure the I-CSCF shall behave as a stateful proxy.

5.3.1.2 Normal procedures

When I-CSCF receives a REGISTER request, the I-CSCF starts the user registration status query procedure to the HSS as specified in 3GPP TS 29.228 [12].

If the user registration status query response from the HSS includes a valid SIP URI, the I-CSCF shall:

- 1) replace the Request-URI of the received REGISTER request with the SIP URL received from the HSS in the Server-Name AVP;
- 2) apply the procedures as described in subclause 5.3.3 if topology hiding is required; and
- 3) forward the REGISTER request to the indicated S-CSCF.

If the user registration status query response from the HSS includes a list of capabilities, the I-CSCF shall:

- 1) select a S-CSCF that fulfils the indicated mandatory capabilities – if more than one S-CSCFs fulfils the indicated mandatory capabilities the S-CSCF which fulfils most of the possibly additionally indicated optional capabilities;
- 2) replace the Request-URI of the received REGISTER request with the URI of the S-CSCF;
- 3) apply the procedures as described in subclause 5.3.3 if topology hiding is required; and
- 4) forward the REGISTER request to the selected S-CSCF.

When the I-CSCF receives a 2xx response to a REGISTER request, the I-CSCF shall proxy the 2xx response to the P-CSCF.

5.3.1.3 Abnormal cases

If the HSS sends a negative response to the user registration status query request, the I-CSCF shall send back a 403 Forbidden response.

If the user registration status query procedure cannot be completed, e.g. due to time-out or incorrect information from the HSS, the I-CSCF shall send back a 480 Temporarily Unavailable response to the UE.

If a selected S-CSCF:

- does not respond to the REGISTER request and its retransmissions by the I-CSCF; or
- sends back a 3xx or 480 Temporarily Unavailable response;

the I-CSCF shall select a new S-CSCF as described in subclause 5.3.1.2, based on the capabilities indicated from the HSS. The newly selected S-CSCF shall not be one of any S-CSCFs selected previously during this same registration procedure.

If the I-CSCF cannot select a S-CSCF which fulfils the mandatory capabilities indicated by the HSS, the I-CSCF shall send back a 600 Busy Everywhere response to the user.

When the I-CSCF receives a 420 Bad Extension response to a REGISTER request, and the Unsupported header contains the value path, the I-CSCF shall take OA&M actions to indicate an error. If the algorithm to select the S-CSCF in 1. above enables an alternative S-CSCF to be selected, then the I-CSCF shall repeat steps 1 through 5 to this new S-CSCF. If no alternative S-CSCF can be selected, the I-CSCF shall proxy the 420 Bad Extension response. In all other cases, the I-CSCF shall proxy the 420 Bad Extension response.

5.3.2 Further initial requests

5.3.2.1 Normal procedures

The I-CSCF may behave as a stateful proxy for further initial requests.

When the I-CSCF receives an initial request, not containing a Route header, the I-CSCF shall start the user location query procedure to the HSS as specified in 3GPP TS 29.228 [12] for the called user, indicated in the Request-URI.

Upon successful user location query, the I-CSCF shall:

- 1) insert the URL received from the HSS as the topmost Route header;
- 2) store the value of the ~~<icid> XML-elementparameter~~ received in the ~~message-body (see subclause 7.6) P-Charging-Vector header~~ and retain the ~~<icid> XML-elementparameter~~ in the ~~message-body P-Charging-Vector header~~. If no ~~<icid> XML-elementparameter~~ was found, then create a new, globally unique value for the ~~<icid> XML-elementparameter~~ and insert it into the ~~message-body P-Charging-Vector header~~;
- 3) apply the procedures as described in subclause 5.3.3 if topology hiding is required; and
- 4) forward the request based on the topmost Route header.

When the I-CSCF receives an initial request containing a Route header, the I-CSCF shall:

- remove its own SIP URL from the topmost Route header;
- apply the procedures as described in subclause 5.3.3; and
- forward the request based on the topmost Route header if present, or based on the Request-URI, in case no topmost Route header is available.

NOTE: In accordance with SIP the I-CSCF can add its own routeable SIP URL to the top of the Record-Route header to any request, independently of whether it is an initial request, or whether topology hiding is performed. The P-CSCF will ignore any Record-Route header that is not in the initial request of a dialog.

5.3.2.2 Abnormal cases

If the HSS sends a negative response to the user location query, the I-CSCF shall send back a 404 Not Found response.

Editor's Note: The procedures for selection of a default S-CSCF are ffs.

If the I-CSCF receives a CANCEL request and if the I-CSCF finds an internal state indicating a pending Cx transaction with the HSS, the I-CSCF:

- shall answer the CANCEL with a 200 OK;
- shall answer the original request with a 487 Request Terminated; and
- shall silently discard the later arriving (pending) Cx answer message from the HSS.

5.3.3 THIG functionality in the I-CSCF(THIG)

5.3.3.1 General

The following procedures shall only be applied if topology hiding is required by the network. The network requiring topology hiding is called the hiding network.

NOTE: Requests and responses are handled independently therefore no state information is needed for that purpose within an I-CSCF(THIG).

All headers which reveal topology information, such as Via, Route, Record-Route, Path, shall be subject to topology hiding. The Refer-To header shall not be subject to topology hiding.

Upon receiving an incoming REGISTER request for which topology hiding has to be applied and which includes a Path header, the I-CSCF(THIG) shall add the routeable SIP URL of an I-CSCF(THIG) to the top of the Path header.

Upon receiving an incoming initial request for which topology hiding has to be applied and which includes a Record-Route header, the I-CSCF(THIG) shall add its own routeable SIP URL to the top of the Record-Route header.

5.3.3.2 Encryption for topology hiding

Upon receiving an outgoing request/response from the hiding network the I-CSCF(THIG) shall perform the encryption for topology hiding purposes, i.e. the I-CSCF(THIG) shall:

- 1) use the whole header values which were added by one or more specific entity of the hiding network as input to encryption, besides the UE entry;
- 2) not change the order of the headers subject to encryption when performing encryption;
- 3) use for one encrypted string all received consecutive header entries subject to encryption, regardless if they appear in separate consecutive headers or if they are consecutive entries in a comma separated list in one header;
- 4) add after the encrypted string a "tokenized-by=" tag, indicating the encrypting network as a parameter;
- 5) form one valid entry for the specific header out of the resulting string, e.g. add "SIP/2.0/UDP" for Via headers and "sip:" for Route and Record-Route headers.

NOTE 1: Even if consecutive entries of the same network in a specific header are encrypted, they will result in only one encrypted header entry. For example:

```
Via: SIP/2.0/UDP icscf1_s.home1.net,
     SIP/2.0/UDP Token( SIP/2.0/UDP scscf1.home1.net,
                       SIP/2.0/UDP pcscf1.home1.net);tokenized-by=home1.net,
     SIP/2.0/UDP [5555::aaa:bbb:ccc:ddd]
```

NOTE 2: If multiple entries of the same network are within the same type of headers, but they are not consecutive, then these entries will be tokenized to different strings. For example:

```
Route: sip:icscf1_s.home1.net,
       sip:Token(sip:scscf1.home1.net);tokenized-by=home1.net,
       sip:as1.foreign.net,
       sip:Token(sip:scscf1.home1.net,
                sip:pcscf1.home1.net);tokenized-by=home1.net,
       sip:[5555::aaa:bbb:ccc:ddd]
```

5.3.3.3 Decryption for Topology Hiding

Upon receiving and incoming requests/response to the hiding network the I-CSCF(THIG) shall perform the decryption for topology hiding purposes, i.e. the I-CSCF shall:

- 1) identify encrypted strings within all headers of the incoming message;
- 2) use all those encrypted strings that carry the identification of the hiding network within the value of the tokenized-by tag as input to decryption;
- 3) use as encrypted string the data between the sent-protocol (for Via Headers, e.g. "SIP/2.0/UDP") or the URI scheme (for Route and Record-Route Headers, e.g. "sip:") and the tokenized-by tag;
- 4) replace all content of the received header which carries encrypted information with the entries resulting from decryption.

EXAMPLE: An encrypted entry to a Via header that looks like:

```
Via: SIP/2.0/UDP Token(SIP/1.0/UDP scscf1.home1.net,
                     SIP/1.0/UDP pcscf1.home1.net);tokenized-by=home1.net
```

will be replaced with the following entries:

```
Via: SIP/1.0/UDP scscf1.home1.net, SIP/1.0/UDP pcscf1.home1.net
```

NOTE: Motivations for these decryption procedures are e.g. to allow the correct routing of a response through the hiding network, to enable loop avoidance within the hiding network, or to allow the entities of the hiding network to change their entries within e.g. the Record-Route header.

5.4 Procedures at the S-CSCF

Editor's note: The text on routing needs to be enhanced to ensure interworking with RFC 2543 and RFC 2543bis networks.

5.4.1 Registration and authentication

5.4.1.1 Introduction

The S-CSCF shall act as the SIP registrar for all UAs of the IM CN subsystem with public user identities, (see table A.150/2 and other capabilities in annex A dependent on that major capability).

The S-CSCF shall support the use of the Path header. The S-CSCF must also support the Require and Proxy-Require headers. The Path header is only applicable to the REGISTER request and its 200-OK response.

The network operator defines minimum and maximum times for each registration. These values are provided within the S-CSCF.

The procedures for notification concerning automatically registered public user identities of a user are described in subclause 5.4.2.1.2.

5.4.1.2 Initial registration and user-initiated reregistration

5.4.1.2.1 Normal procedures

When the S-CSCF receives a REGISTER request, the S-CSCF shall verify that the "path" option-tag is contained in the Proxy-Require header. If the "path" option-tag is present, the S-CSCF shall store the information contained in the Path header so that it can be used for mobile terminated requests.

Editor's Note: If the S-CSCF receives a Path header without the "path" option tag in the Proxy-Require header, we have an error condition in the I-CSCF. The I-CSCF behavior for this scenario is FFS.

The S-CSCF shall:

- check the existence of a Path header in the request;

Editor's note: The action S-CSCF has to take when a Path header is not present in the request is FFS.

- when a Path header exists in the request, insert its own FQDN, or IP address, in the form of SIP URL at the top of the list found in the Path header saved from the REGISTER request;
- save the Contact header value for the entire duration of the registration;
- construct a list of preloaded Route headers from the list of entries in the Path header. The order in the lists is preserved;
- include an expiration time in the 200 OK response, using one value provided within the S-CSCF, according to the local policy of the network, if this expiration time is shorter than the requested expiry time received from the UE;
- save the list of preloaded Route headers for the entire duration of the registration;

NOTE 1: If this registration is a reregistration, then a list of pre-loaded Route headers will already exist. The new list replaces the old list.

- bind to each individual public user identity all contact information under which the public user identity has been registered (either manually by means of a REGISTER message or automatically upon the registration of another public user identity);

NOTE 2: There might be more than one contact information available for one public user identity.

- bind to each contact information the respective Path header entries, that were received in the same REGISTER message as that contact information;
- add its Path header on the top of the received list of Path headers, and returns this list in the 200 OK response;
- check whether the message contains information indicating that it was received with a valid integrity check by the P-CSCF; and

Editor's Note: The method by which the P-CSCF indicates this is FFS.

- send a third-party REGISTER request, as described in subclause 5.4.1.7, to each Application Server that matches the Filter Criteria from the HSS for the REGISTER event.

On receiving a failure response to one of the third-party REGISTER requests, the S-CSCF may initiate network-initiated deregistration procedure based on the information in the Filter Criteria. If the Filter Criteria does not contain instruction to the S-CSCF regarding the failure of the contact to the Application Server, the S-CSCF shall not initiate network-initiated deregistration procedure.

The S-CSCF may require authentication of the user for any REGISTER request, and shall always require authentication for initial registration. The information that a REGISTER has a valid integrity check may be used as part of the decision to authenticate the registration. The S-CSCF shall request authentication by responding to the REGISTER request with a 401 Unauthorized with:

- the Authorization header containing the authentication parameters (RAND, AUTN, CK and IK).

5.4.1.2.2 Abnormal cases

In the case that the authentication response from the UE is incorrect the S-CSCF shall either:

- attempt a further authentication challenge; or
- deregister the user and terminate any ongoing sessions for all public user identities associated with the private user identity being authenticated, and release resources allocated to those sessions.

In the case that the response from the UE is incorrect for three consecutive attempts then the S-CSCF shall deregister the user and terminate any ongoing sessions for all public user identities associated with the private user identity being authenticated, and release resources allocated to those sessions.

In the case that the S-CSCF determines that no response will be received from the UE (e.g. it may be unreachable due to loss of radio coverage), the S-CSCF shall either:

- attempt a further authentication challenge; or
- deregister the user and terminate any ongoing sessions for all public user identities associated with the private user identity being authenticated, and release resources allocated to those sessions.

In the case that the response from the UE indicates that the authentication challenge was invalid with no RES or AUTS parameter in the subsequent REGISTER message, the S-CSCF shall:

- respond with the relevant 4xx response (e.g. 401 Unauthorized to initiate a further authentication attempt, or 403 Forbidden if the authentication attempt is to be abandoned).

In the case that the response from the UE indicates that the authentication challenge was invalid with the AUTS parameter in the subsequent REGISTER message, the S-CSCF shall:

- fetch new authentication vectors from the HSS, including AUTS and RAND in the request to indicate a resynchronisation; and
- on receipt of the new vectors send a 401 Unauthorized to initiate a further authentication attempt, using these new vectors.

In the case that the expiration timer from the UE is too short to be accepted by the S-CSCF, the S-CSCF shall:

- reject the REGISTER with a 423 Registration Too Brief, containing a Min-Expires header with the minimum registration time the S-CSCF will accept.

5.4.1.3 Authentication and reauthentication

Authentication and reauthentication is performed by the registration procedures as described in subclause 5.4.1.2.

5.4.1.4 User-initiated deregistration

When the S-CSCF receives a REGISTER request, it shall verify that the "path" option-tag is contained in the Proxy-Require header. If the "path" option-tag is present, the S-CSCF shall store the information contained in the Path header so that it can be used for mobile terminated requests.

Editor's Note: If the S-CSCF receives a Path header without the "path" option tag in the Proxy-Require header, we have an error condition in the I-CSCF. The I-CSCF behavior for this scenario is FFS.

When S-CSCF receives a REGISTER request with the Expires header field containing the value zero, the S-CSCF shall:

- deregister the subscriber and remove all related stored information;
- insert its own FQDN or IP address in the form of SIP URL at the top of the list found in the Path header saved from the REGISTER request;
- add its Path header on the top of the received list of Path headers, and returns this list in the 200 OK response; and
- send a third-party REGISTER request, as described in subclause 5.4.1.7, to each Application Server that matches the Filter Criteria from the HSS for the REGISTER event.

5.4.1.5 Network-initiated deregistration

When a network-initiated deregistration event occurs for a public user identity, and the UE has subscribed for that event, the S-CSCF shall generate a NOTIFY request in order to inform the UE of the network-initiated deregistration event for that public user identity. The S-CSCF shall set the event header to the name of the event package, which provides information about the registration state of the UE.

When a network-initiated deregistration event occurs for a public user identity, and the P-CSCF has subscribed for registration events for that public user identity, the S-CSCF shall generate a NOTIFY request in order to inform the P-CSCF of the network initiated deregistration event for that public user identity. The S-CSCF shall set the event header to the name of the event package, which provides information about the registration state of the UE.

If the network-initiated deregistration is for a set of public user identities associated with the subscriber, the NOTIFY shall send the registration state of all public user identities of the subscriber.

Editor's note: The possible values of the event header are: presence, registration-state, a new subpackage of presence.

Also, the S-CSCF shall send a third-party REGISTER request, as described in subclause 5.4.1.7, to each Application Server that matches the Filter Criteria from the HSS for the REGISTER event.

5.4.1.6 Network-initiated reauthentication

The S-CSCF may request a subscriber to reauthenticate at any time, based on a number of possible operator settable triggers as described in subclause 5.4.1.2.

If the S-CSCF is informed that a private user identity needs to be re-authenticated, the S-CSCF shall generate a NOTIFY request on all dialogs (i.e. the dialog between S-CSCF and the UE and additionally between S-CSCF and P-CSCF) which have been established due to subscription to the registration-state event package of that user. The S-CSCF shall populate the content of the NOTIFY request and additionally shall:

- set the Request-URI and Route header to the saved route information during subscription;
- set the Event header to the "registration-state" value; and
- indicate a public user identity of the user for which the private user identity needs to be re-authenticated in the body of the NOTIFY request with registration state "re-authenticate".

Afterwards the S-CSCF shall:

- wait for the user to reauthenticate (see subclause 5.4.1.2).

NOTE: Network initiated re-authentication might be requested from the HSS or may occur due to internal processing within the S-CSCF.

In case S-CSCF receives no data it can authenticate the subscriber from, the S-CSCF may as an implementation option try to request the UE by other means to re-authenticate, e.g. by sending a REFER method in order to request a REGISTER message.

If UE does not re-authenticate within a certain period of time, the S-CSCF shall deregister the private user identity as described in subclause 5.4.1.5 and terminate the ongoing sessions of that user.

5.4.1.7 Notification of Application Servers about registration status

If the registration procedure described in subclauses 5.4.1.2, 5.4.1.4 or 5.4.1.5 (as appropriate) was successful, the S-CSCF shall send a third-party REGISTER request to each Application Server with the following information:

- a) the Request-URI shall contain the FQDN or IP address of the AS in the form of a SIP URL;
- b) the From header shall contain the FQDN or IP address of the S-CSCF in the form of a SIP URL;
- c) the To header shall contain the public user identity as contained in the REGISTER request received from the UE;
- d) the Contact header shall contain the FQDN or IP address of the S-CSCF in the form of a SIP URL;
- e) for initial registration and user-initiated reregistration (subclause 5.4.1.2), the Expires header shall contain the same value that the S-CSCF returned in the 200 OK response for the REGISTER request received from the UE;
- f) for user-initiated deregistration (subclause 5.4.1.4) and network-initiated deregistration (subclause 5.4.1.5), the Expires header shall contain the value zero;
- g) for initial registration and user-initiated reregistration (subclause 5.4.1.2), a message body shall be included in the REGISTER request if there is Filter Criteria indicating the need to include HSS provided data for the REGISTER event (e.g. HSS may provide AS specific data to be included in the third-party REGISTER, such as IMSI to be delivered to IM SSF). If there is a service information XML element provided in the HSS Filter Criteria for an AS (see 3GPP TS 29.228 [12]), then it shall be included in the REGISTER message body within the <service-info> XML element as described in subclause 7.6. For the messages including the 3GPP IMS XML body, set the value of the Content-Type header to include the MIME type specified in subclause 7.6.

h) for initial registration, the P-Charging-Vector header shall contain the same icid parameter that the S-CSCF received in the original REGISTER request from the UE;

5.4.2 Subscription and notification

Editors Note: This should be handled in a generic way

5.4.2.1 Subscriptions to S-CSCF events

5.4.2.1.1 Subscription to the event providing registration state

When an incoming SUBSCRIBE request addressed to S-CSCF arrives containing the Event header with the registration-state event package, the S-CSCF shall generate a 2xx response acknowledging the SUBSCRIBE request and indicating that the subscription was successful. Furthermore, the response shall include:

- an Expires header which either contains the same or a decreased value as the Expires in SUBSCRIBE request; and
- a Contact header which is an identifier generated within the S-CSCF that will help to correlate refreshes for the SUBSCRIBE.

Editor's note: Authorization needs to be applied before subscribing for the event providing information about the registration state. This is FFS.

Afterwards the S-CSCF shall perform the procedures for notification about registration state as described in subclause 5.4.2.1.2.

5.4.2.1.2 Notification about registration state

If the registration state of one or more public user identities changes, the S-CSCF shall generate a NOTIFY request on all dialogs which have been established due to subscription to the registration-state event package of that user. For each NOTIFY request, the S-CSCF shall:

- set the Request-URI and Route header to the saved route information during subscription;
- set the Event header to the "registration-state" value;
- indicate registration state "open" for all public user identities which are currently registered;
- indicate registration state "closed" for all public user identities which are currently deregistered; and
- indicate within the "<detail>" information of those public user identities which will be automatically reregistered the "automatically by" information, followed by the specific public user identity which will cover the reregistration.

EXAMPLE: If sip:user1_public1@home1.net is reregistered, the public user identity sip:user1_public2@home1.net was automatically be registered. Therefore the entries in the body of the NOTIFY message look like:

```
<tuple name="sip:user1_public1@home1.net">
  <status><value>open</value></status>
</tuple>

<tuple name="sip:user1_public2@home1.net">
  <status> <value>open</value> </status>
  <detail>automatically by sip:user1_public1@home1.net</detail>
</tuple>
```

Afterwards the S-CSCF shall send the generated NOTIFY request on the dialog and await a 2xx response.

5.4.2.2 Proxy behaviour for SUBSCRIBE / NOTIFY

Void.

5.4.3 General treatment for all dialogs and standalone transactions excluding requests terminated by the S-CSCF

5.4.3.1 Requests initiated by the served user

When the S-CSCF receives from the served user an initial request for a dialog or a request for a standalone transaction, prior to forwarding the request, the S-CSCF shall:

- remove its own SIP URL from the topmost Route header;
- if the outgoing Request-URI is a TEL URL, the S-CSCF shall translate the E.164 address (see RFC 2806 [16]) to a globally routable SIP URL using an ENUM/DNS translation mechanism with the format specified in RFC 2916 [18]. Databases aspects of ENUM are outside the scope of the present document. If this translation fails, the request may be forwarded to a BGCF or any other appropriate entity (e.g a MRFC to play an announcement) in the originator's home network or an appropriate SIP response shall be sent to the originator;
- check if <original-dialog-id> XML element is present in the payload of the incoming request. If present, it indicates an association with an existing dialog, the request has been sent from an Application Server in response to a previously sent request. The <od-to>, <od-from> and <od-call-id> XML element values from the <original-dialog-id> XML element may be used as additional parameters when searching for existing dialogs. Local data shall be updated to indicate that this Application Server has been contacted for the initial request. The S-CSCF shall determine the next hop using initial filter criteria and local data on status of which Application Servers have been contacted. If the next hop is another Application Server, the S-CSCF shall retain the <original-dialog-id> XML element in the message body of the request. If the next hop is not an Application Server, the S-CSCF shall leave out the <original-dialog-id> XML element from the payload of the request;

- check whether the initial request matches the initial filter criteria of the application servers assigned for the public user identity as described in 3GPP TS 23.218 [5] subclause 6.4. Depending on the result of the previous check, the S-CSCF may contact one or more application server(s) before processing the outgoing Request-URI. In case of contacting one or more application server(s) the S-CSCF shall:
 - insert the AS URL to be contacted into the Route header as the topmost entry followed by its own URL; and
 - initialise local data to track the status of contacting each application server specified in the service profile. Additionally S-CSCF shall also populate the <original-dialog-id> XML element in the message body with the original To, From and Call-ID headers received in the request. See subclause 5.4.3.3 for further information on the original dialog identifier.
- store the value of the <cid> XML element parameter received in the ~~message body (see subclause 7.6)~~ P-Charging-Vector header and retain the <cid> XML element parameter in the ~~message body~~ P-Charging-Vector header. Optionally, the S-CSCF may generate a new, globally unique cid and insert the new value in the cid parameter of the P-Charging-Vector header when forwarding the message. If the S-CSCF creates a new cid, then it is responsible for maintaining the two cid values in the subsequent messaging;
- insert an ioi-originating parameter into the P-Charging-Vector header if the next hop is an AS, I-CSCF or outside of the current network. The ioi-originating parameter shall be set to a value that identifies the sending network. The ioi-terminating parameter shall not be included;
- determine the destination address (e.g. DNS access) using the URL placed in the topmost Route header if present, otherwise based on the Request-URI; and
- in case of an initial request for a dialog the S-CSCF shall create a Record-Route header containing its own SIP URL and save the necessary header fields from the request (and from its appropriate responses) in order to release the dialog when needed.

When the S-CSCF receives from the served user a refresh request for a dialog, prior to forwarding the request the S-CSCF shall:

- remove its own URL from the topmost Route header;
- create a Record-Route header containing its own SIP URL and save the necessary header fields from the request (and from its appropriate responses) in order to release the dialog when needed; and
- route the request based on the topmost Route header.

When the S-CSCF receives from the served user a subsequent request other than refresh request for a dialog, prior to forwarding the request the S-CSCF shall:

- remove its own URL from the topmost Route header; and
- route the request based on the topmost Route header.

5.4.3.2 Requests terminated at the served user

When the S-CSCF receives, destined for the served user, an initial request for a dialog or a request for a standalone transaction, prior to forwarding the request, the S-CSCF shall:

- remove its own URL from the topmost Route header;
- check if <original-dialog-id> XML element is present in the payload of the incoming request. If present, it indicates an association with an existing dialog, the request has been sent from an Application Server in response to a previously sent request. The <od-to>, <od-from> and <od-call-id> XML element values from the <original-dialog-id> XML element may be used as additional parameters when searching for existing dialogs. Local data shall be updated to indicate that this Application Server has been contacted for the initial request. The S-CSCF shall determine the next hop using initial filter criteria and local data on status of which Application Servers have been contacted. If the next hop is another Application Server, the S-CSCF shall retain the <original-dialog-id> XML element in the message body of the request. If the next hop is not an Application Server, the S-CSCF shall leave out the <original-dialog-id> XML element from the payload of the request;
- check whether the initial request matches the initial filter criteria of the application servers assigned for the public user identity as described in 3GPP TS 23.218 [5] subclause 6.5. Depending on the result of the previous

check the S-CSCF may contact one or more application server(s) before contacting an I-CSCF/P-CSCF respectively. In case of contacting one or more application server(s) the S-CSCF shall:

- insert the AS URL to be contacted into the Route header as the topmost entry followed by its own URL; and
- initialise local data to track the status of contacting each application server specified in the service profile. Additionally S-CSCF shall also populate the <original-dialog-id> XML element in the message body with the original To, From and Call-ID headers received in the request. See subclause 5.4.3.3 for further information on the original dialog identifier.
- store the value of the <icid> XML element received in the message body (see subclause 7.6) and retain the <icid> XML element in the message body;
- in case there are no Route headers in the request, then determine, from the destination public user identity, the list of preloaded routes saved during registration or re-registration, as described in subclause 5.4.1.2.1;
- determine, from the destination public user identity, the saved Contact URL where the user is reachable saved at registration or reregistration, as described in subclause 5.4.1.2.1;
- build the Request-URI and Request header field values from the preloaded routes and saved Contact URL, as described in RFC 2543bis [20];
- insert a P-Called-Party-ID SIP header field including the Request-URI received in the INVITE;
- in case of an initial request for a dialog create a Record-Route header containing its own SIP URL and save the necessary header fields from the request (and from its appropriate responses) in order to release the dialog when needed;
- replace the Request-URI with the contents of the user Contact URL saved by the S-CSCF at registration time; and
- forward the request based on the topmost Route header.

When the S-CSCF receives, destined for the served user, a refresh request for a dialog, prior to forwarding the request, the S-CSCF shall:

- remove its own URL from the topmost Route header;
- create a Record-Route header containing its own SIP URL and save the necessary header fields from the request (and from its appropriate responses) in order to release the dialog when needed; and
- forward the request based on the topmost Route header.

When the S-CSCF receives, destined for the served user, a subsequent request other than refresh request for a dialog, prior to forwarding the request, the S-CSCF shall:

- remove its own URL from the topmost Route header; and
- forward the request based on the topmost Route header.

5.4.3.3 Original dialog identifier

The original dialog identifier is coded as the <original-dialog-id> XML element within the SIP message body as described in subclause 7.6.

For the messages including the <original-dialog-ID> XML element, set the value of the Content-Type header to include the MIME type specified in subclause 7.6, which may be one part of a multipart message body.

5.4.3.4 Abnormal cases

The S-CSCF shall, when contacting application servers based on the initial filter criteria, expect either a final response from the application server as the session terminates there, or the initial request message, that may be modified. In either case the message should be identified (using <original-dialog-id> XML element) as belonging to the original request forwarded by the S-CSCF.

If the S-CSCF receives a message including an <original-dialog-id> XML element that does not match any that it has forwarded to the application server it shall:

- respond to the application server with 481 Call Leg/Transaction Does Not Exist.

5.4.4 Call initiation

5.4.4.1 Initial INVITE

Void.

5.4.4.1.1 Determination of served user

Void.

5.4.4.1.2 Mobile-originating case

Void.

5.4.3.1.3 Mobile-terminating case

Void.

5.4.4.2 Subsequent requests

Editor's Note: PRACK and COMET can be handled in a generic way.

5.4.4.2.1 Mobile-originating case

When the S-CSCF receives the 183 response, the S-CSCF shall store the value of the received ioi-terminating parameter received in the P-Charging-Vector header, if present. The ioi-terminating parameter identifies the sending network of the response message. The ioi-terminating parameter shall only be retained in the P-Charging-Vector header if the next hop is to an AS.

When the S-CSCF receives the ~~COMET-UPDATE~~ request, the S-CSCF shall ~~remove and~~ store the <gprs-charging-id>info XML element parameter from the ~~message body (see subclause 7.6)~~P-Charging-Vector header. The gprs-charging-info parameter shall be retained in the P-Charging-Vector header when the request is forwarded to an AS. However, the <gprs-charging-id>info XML element parameter is shall not be included in the message body P-Charging-Vector header when the COMET-UPDATE request is forwarded outside the home network of the S-CSCF.

5.4.3.2.2 Mobile-terminating case

When the S-CSCF sends the 183 response, the S-CSCF shall insert an ioi-terminating parameter in the P-Charging-Vector header of the outgoing response if the response is sent to another network, an AS or an I-CSCF. The ioi-terminating parameter shall be set to a value that identifies the sending network of the response and the ioi-originating parameter is set to the previously received value of ioi-originating.

When the S-CSCF receives 180 (Ringing) ~~and/or~~ 200 (OK) (to INVITE) responses, the S-CSCF shall ~~remove and~~ store the <gprs-charging-id>info XML element parameter from the ~~message body (see subclause 7.6)~~P-Charging-Vector header. The gprs-charging-info parameter shall be retained in the P-Charging-Vector header when the response is forwarded to an AS. However, the <gprs-charging-id>info XML element parameter is shall not be included in the message body P-Charging-Vector header when the 180-Ringing response is forwarded outside the home network of the S-CSCF.

5.4.5 Call release

5.4.5.1 S-CSCF-initiated session release

Void.

5.4.5.1.1 Cancellation of a session currently being established

Upon receipt of a network internal indication to release a session which is currently being established, the S-CSCF shall cancel the related dialogs by sending the CANCEL request according to the procedures described in draft-ietf-sip-rfc2543bis-05 [20].

5.4.5.1.2 Release of an existing session

Upon receipt of a network internal indication to release an existing multimedia session, the S-CSCF shall:

- 1) generate a first BYE message for the called user based on the information saved for the related dialog, including:
 - a Request-URI, set to the topmost entry of the stored routing information towards the called user;
 - a To header, set to the To header value as received in the 200 OK response for the initial INVITE request;
 - a From header, set to the From header value as received in the initial INVITE request;
 - a Call-ID header, set to the Call-Id header value as received in the initial INVITE request;
 - a CSeq header, set to the CSeq value that was stored for the direction from the calling to the called user, incremented by one;
 - a Route header, set to the routing information towards the called user as stored for the dialog, exclusively the topmost entry (which appears in the Request-URI);
 - further headers, based on local policy or the requested session release reason.
- 2) generate a second BYE message for the calling user based on the information saved for the related dialog, including:
 - a Request-URI, set to the topmost entry of the stored routing information towards the calling user;
 - a To header, set to the From header value as received in the initial INVITE request;
 - a From header, set to the To header value as received in the 200 OK response for the initial INVITE request;
 - a Call-ID header, set to the Call-Id header value as received in the initial INVITE request;
 - a CSeq header, set to the CSeq value that was stored for the direction from the called to the calling user, incremented by one – if no CSeq value was stored for that session it shall generate and apply a random number within the valid range for CSeqs;
 - a Route header, set to the routing information towards the calling user as stored for the dialog, exclusively the topmost entry (which appears in the Request-URI);
 - further headers, based on local policy or the requested session release reason.
- 3) If the S-CSCF serves the calling user it shall:
 - treat the first BYE message as if received directly from the calling user, i.e. send it to internal service control and based on the outcome further on towards the called user;
 - send the second BYE message directly to the calling user.
- 4) If the S-CSCF serves the called user it shall:
 - send the first BYE message directly to the called user;
 - treat the second BYE message as if received directly from the called user, i.e. shall send it to internal service control and based on the outcome further on towards to the called user.

Upon receipt of the 2xx responses for both BYE requests, the S-CSCF shall release all information related to the dialog and the related multimedia session.

5.4.4.1.3 Abnormal cases

Upon receipt of a request on a dialog for which the S-CSCF initiated session release, the S-CSCF shall terminate the received request and answer it with a 481 Call/Transaction Does Not Exist response.

5.4.4.2 Session release initiated by any other entity

Upon receipt of a 2xx response for a BYE request matching an existing dialog, the S-CSCF shall delete all the stored information related to the dialog.

5.4.6 Call-related requests

5.4.6.1 ReINVITE

5.4.6.1.1 Determination of served user

Void.

5.4.6.1.2 Mobile-originating case

For a reINVITE request from the UE, when the S-CSCF receives the ~~COMET-UPDATE~~ request, the S-CSCF shall ~~remove and~~ store the updated ~~<gprs-charging-id>info XML element~~parameter from the ~~message body (see subclause 7.6)~~P-Charging-Vector header. ~~The gprs-charging-info parameter shall be retained in the P-Charging-Vector header when the request is forwarded to an AS. The~~However, the ~~<gprs-charging-id>info XML element~~parameter ~~is~~shall not be included in the ~~message body~~P-Charging-Vector header when the ~~COMET-UPDATE~~ request is forwarded outside the home network of the S-CSCF.

5.4.6.1.3 Mobile-terminating case

For a reINVITE request destined towards the UE, when the S-CSCF receives the 200 (OK) response (to the INVITE), the S-CSCF shall ~~remove and~~ store the updated ~~<gprs-charging-id>info XML element~~parameter from the ~~message body (see subclause 7.6)~~P-Charging-Vector). ~~The gprs-charging-info parameter shall be retained in the P-Charging-Vector header when the response is forwarded to an AS. The~~However, the ~~<gprs-charging-id>info XML element~~parameter ~~is~~shall not be included in the ~~message body~~P-Charging-Vector header when the 200 (OK) response is forwarded outside the home network of the S-CSCF.

5.4.6.2 REFER

5.4.6.2.1 Mobile-originating case

Void.

5.4.6.2.2 Mobile-terminating case

Void.

5.4.6.2.3 REFER initiating a new session

Void.

5.4.6.2.4 REFER replacing an existing session

Void.

5.4.6.3 INFO

Editor's Note: It has to be determined which of these requests can be handled in a generic way.

5.4.7 Further initial requests

Editor's Note: Generic handling of e.g. OPTIONS should be described here

5.5 Procedures at the MGCF

5.5.1 General

The MGCF, although acting as a UA, does not initiate any registration of its associated addresses. These are assumed to be known by peer-to-peer arrangements within the IM CN subsystem. Therefore the dependencies of table 0.3/1 and table 0.3/2 shall not apply.

The use of the Path header shall not be supported by the MGCF.

5.5.2 Subscription and notification

5.5.2.1 Subscriptions to MGCF events

Void.

5.5.2.2 Gateway behaviour for SUBSCRIBE / NOTIFY

Void.

5.5.3 Call initiation

5.5.3.1 Initial INVITE

5.5.3.1.1 Calls originated from circuit-switched networks

When the MGCF receives an indication of an incoming call from a circuit-switched network, the MGCF shall:

- generate and send an INVITE request:
 - set the Request-URI to the "tel" format using an E.164 address;
 - set the Supported header to "100rel" (see draft-ietf-sip-manyfolks-resource [22]); and
 - create a new, globally unique value for the ~~<cid> XML-element~~[parameter](#) and insert it into the ~~message body~~
~~(see subclause 7.6)~~[P-Charging-Vector header](#); and
 - insert an ioi-originating parameter into the P-Charging-Vector header. The ioi-originating parameter shall be set to a value that identifies the sending circuit-switched network and the ioi-terminating parameter shall not be included.

5.5.3.1.2 Calls terminating in circuit-switched networks

When the MGCF receives an initial INVITE request, the MGCF shall:

- send 100 "Trying" response;
- assuming the "100rel" indicator was received and a matching codec is found, send 183 "Session Progress" response:
 - set the Require header to the value of "100rel";
 - set the Content-Disposition header to the value of "precondition"; and

- store the value of the <icid> XML element parameter received in the message body (see subclause 7.6) P-Charging-Vector header.

Editor's note: must receive Supports header with value of 100rel in the INVITE.

Editor's note: need text to describe error legs.

5.5.3.2 Subsequent requests

5.5.3.2.1 Calls originating in circuit-switched networks

When the MGCF receives 200 OK response to a PRACK request and notification that bearer setup is complete, the MGCF shall:

- send a COMET request.

5.5.3.2.2 Calls terminating in circuit-switched networks

When the MGCF receives an indication of a ringing for the called party of outgoing call to a circuit-switched network, the MGCF shall:

- send 180 "Ringing" to the UE.

When the MGCF receives an indication of answer for the called party of outgoing call to a circuit-switched network, the MGCF shall:

- send 200 OK to the UE.

5.5.4 Call release

5.5.4.1 Call release initiated by a circuit-switched network

When the MGCF receives an indication of call release from a circuit-switched network, the MGCF shall:

- send a BYE request to the UE.

5.5.4.2 S-CSCF-initiated call release

5.5.4.3 MGW-initiated call release

When the MGCF receives an indication from the MGW that the bearer was lost, the MGCF shall:

- send a BYE request towards the UE.

Editor's note: should the Error-Info header be used to indicate an error case for the session release?

5.5.5 Call-related requests

5.5.5.1 ReINVITE

5.5.5.1.1 Calls originating from circuit-switched networks

Editor's Note: When the bearer on the circuit-switched network side is halted/resumed, should the MGCF notify the UE with a reINVITE?

5.5.5.1.2 Calls terminating in circuit-switched networks

When the MGCF receives a reINVITE request for hold/resume operation, the MGCF shall:

- send 100 Trying response;

- after performing interaction with MGW to hold/resume the media flow, send 200 OK response.

5.5.5.2 REFER

5.5.5.2.1 Calls originating from circuit-switched networks

Void.

5.5.5.2.2 Calls terminating in circuit-switched networks

Void.

5.5.5.2.3 REFER initiating a new session

Void.

5.5.5.2.4 REFER replacing an existing session

Void.

5.5.5.3 INFO

Void.

5.5.6 Further initial requests

When the MGCF responds to an OPTIONS request with a 200 OK response, the MGCF may include a message body with an indication of the DTMF capabilities and supported codecs of the MGCF/MGW.

Editor's note: it is FFS how to identify the resources of the MGCF/MGW.

5.6 Procedures at the BGCF

5.6.1 General

The use of the Path header shall not be supported by the BGCF.

5.6.2 Session initiation transaction

When the BGCF receives an INVITE request, the BGCF shall forward the request either to an MGCF within its own network, or to another network containing an MGCF. The BGCF need not Record-Route the INVITE request. The BGCF shall store the value of the `<icid>` ~~XML element~~parameter received in the ~~message body (see subclause 7.6)~~P-Charging-Vector header and retain the `<icid>` ~~XML element~~parameter in the ~~message body~~P-Charging-Vector header.

NOTE: The means by which the decision is made to forward to an MGCF or to another network is outside the scope of the present document, but may be by means of a lookup to an external database, or may be by data held internally to the BGCF.

5.7 Procedures at the Application Server (AS)

NOTE: This subclause defines only the requirements on the application server that relate to SIP. Other requirements are defined in 3GPP TS 23.218 [5].

5.7.1 Common Application Server (AS) Procedures

5.7.1.1 Notification about registration status

The AS may support the REGISTER method in order to discover the registration status of the user. If a REGISTER request arrives containing information about the user's registration status and the AS supports the REGISTER method, the AS shall store the Expires parameter from the request and generate a 200 OK or an appropriate failure response. For the success case, the 200 OK response shall contain Expires value equal to the value received in the REGISTER request. [Also, the AS shall store the value of the icid parameter in the P-Charging-Vector header from the REGISTER request.](#)

5.7.1.2 Extracting charging correlation information

When an AS receives an initial request for a dialog or a request for a standalone transaction, the AS shall store the values ~~of the <icid> XML element received in the P-Charging-Vector header, e.g. icid parameter, received in the message body (see subclause 7.6)~~ and retain the [P-Charging-Vector header <icid> XML element](#) in the message ~~body~~.

5.7.2 Application Server (AS) acting as terminating UA, or redirect server

Editors Note: When acting as a terminating UA the AS shall behave as defined for a UE in 5.1.4.

The S-CSCF may forward received initial requests to the application server based on initial filter criteria being met. If the S-CSCF includes an <original-dialog-id> XML element in these requests, the AS shall include this <original-dialog-id> XML element in any responses and/or subsequent requests sent on this dialog.

An Application Server acting as redirect server shall propagate any received 3GPP message body in the redirected message.

5.7.3 Application Server (AS) acting as originating UA

Editors Note: When acting as an originating UA the AS shall behave as defined for a UE in 5.1.3.

When an AS acting as originating UA generates an initial request for a dialog or a request for a standalone transaction, the AS shall create a new, globally unique value for the [<icid> XML element parameter](#) and insert it into the ~~message body (see subclause 7.6)~~[P-Charging-Vector header](#).

5.7.4 Application Server (AS) acting as a SIP proxy

The S-CSCF may forward received initial requests to the application server based on initial filter criteria being met. If the S-CSCF includes an <original-dialog-id> XML element in these requests, the AS shall include this <original-dialog-id> XML element in any responses and/or subsequent requests sent on this dialog.

When the AS acting as a SIP proxy receives a request from the S-CSCF, prior to forwarding the request it shall:

- remove its own URL from the topmost Route header; and
- after executing the required services, route the request based on the topmost Route header.

The AS may modify the SIP requests based on service logic, prior to forwarding the request back to the S-CSCF.

An Application Server acting as a SIP proxy shall propagate any received 3GPP message body in the forwarded message.

5.7.5 Application Server (AS) performing 3rd party call control

5.7.5.1 General

The AS performing 3rd party call control acts as a B2BUA. The B2BUA AS will internally map the message headers between the two dialogs that it manages. It is responsible for correlating the dialog identifiers and will decide when to

simply translate a message from one dialog to the other, or when to perform other functions. These decisions are specific to each AS and are outside the scope of the present document.

The AS, although acting as a UA, does not initiate any registration of its associated addresses. These are assumed to be known by peer-to-peer arrangements within the IM CN subsystem.

5.7.5.2 Call initiation

5.7.5.2.1 Initial INVITE

When the AS receives an initial INVITE request, it will contain the AS's SIP URL in the Request-URI. Before generating a new INVITE back to the S-CSCF, the AS:

- performs the Application Server specific functions. See 3GPP TS 23.218 [5]; and
- if successful, generate and send a new INVITE request to the S-CSCF to establish a new dialog. The AS shall look for the presence of the <original-dialog-id> XML element in the message body of the initial INVITE request and populate the same <original-dialog-id> XML element in the message body of the new INVITE request.

5.7.5.2.2 Subsequent requests

Editor's Note: subsequent requests can be handled in a generic way. Is there anything needed here?

5.7.5.3 Call release

5.7.5.4 Call-related requests

Editor's Note: call-related requests can be handled in a generic way. Is there anything needed here?

An Application Server may initiate a call release. See 3GPP TS 23.218 [5] for possible reasons. The BYE request shall be sent simultaneously for both dialogs managed by the B2BUA.

5.7.5.5 Further initial requests

Editor's Note: call-related requests can be handled in a generic way. Is there anything needed here?

5.8 Procedures at the MRFC

5.8.1 General

Void.

5.8.2 Call initiation

5.8.2.1 Initial INVITE

5.8.2.1.1 MRFC-terminating case

When the MRFC receives an initial INVITE request, the MRFC shall store the values ~~of the <icid> XML element~~ received in the ~~message body (see subclause 7.6)~~ P-Charging-Vector header, e.g. icid parameter.

5.8.2.1.1.1 Tones and announcements

The MRFC can receive INVITE requests to set up a session to play tones and announcements. The MRFC acts as terminating UA in this case.

When the MRFC receives an INVITE request with an indicator for a tone or announcement, the MRFC shall:

- send 100 Trying response.

Editor's note: it is FFS how to identify the tone or announcement to be played.

5.8.2.1.1.2 Ad-hoc conferences

The MRFC can receive INVITE requests to set up an ad-hoc conferencing session (e.g. Multiparty Call) or to add parties from the conference. The MRFC acts as terminating UA in this case.

When the MRFC receives an INVITE request with an indicator to initiate ad hoc conferencing, the MRFC shall:

- send 100 Trying response; and
- after the MRFP indicates that the conference resources are available, send 200 OK response with an MRFC conference identifier. If the MRFC chooses to send a 183 Session Progress response prior to the 200 OK, then the conference identifier may also be included in the 183 Session Progress response.

When the MRFC receives an INVITE request with an indicator to add a party to an existing ad hoc conference (i.e. MRFC conference identifier), the MRFC shall:

- send 100 Trying response; and
- after the MRFP indicates that the conferencing request is granted, send 200 OK response with the MRFC conference identifier. If the MRFC chooses to send a 183 Session Progress response prior to the 200 OK, then the conference identifier may also be included in the 183 Session Progress response.

Editor's note: it is FFS how to identify the resources of the MRFC/MRFP.

5.8.2.1.1.3 Transcoding

The MRFC may receive INVITE requests to set up transcoding between endpoints with incompatible codecs. The MRFC acts as terminating UA in this case.

When the MRFC receives an INVITE request with an indicator for transcoding and a codec is supplied in SDP, the MRFC shall:

- send 100 Trying response; and
- after the MRFP indicates that the transcoding request is granted, send 200 OK response.

When the MRFC receives an INVITE request with an indicator for transcoding but no SDP, the MRFC shall:

- send 183 Session Progress response with list of codecs supported by the MRFC/MRFP.

5.8.2.1.2 MRFC-originating case

Void.

5.8.2.2 Subsequent requests

Editor's Note: PRACK and COMET can be handled in a generic way.

5.8.2.2.1 Tones and announcements

When the MRFC receives an ACK request for a session, this may be considered as an event to direct the MRFP to start the playing of a tone or announcement.

5.8.3 Call release

5.8.3.1 S-CSCF-initiated call release

5.8.3.1.1 Tones and announcements

When the MRFC receives a BYE request for a session, the MRFC shall direct the MRFP to stop the playing of a tone or announcement.

5.8.3.2 MRFC-initiated call release

5.8.3.2.1 Tones and announcements

When the MRFC has a timed session to play tones and announcements and the time expires, the MRFC shall:

- send a BYE request towards the UE.

When the MRFC is informed by the MRFP that tone or announcement resource has been released, the MRFC shall:

- send a BYE request towards the UE.

5.8.2.2.2 Transcoding

When the MRFC receives a PRACK request (in response to the 183) with an indicator for transcoding and codec supplied in SDP, the MRFC shall:

- after the MRFP indicates that the transcoding request is granted, send 200 OK response.

5.8.4 Call-related requests

5.8.4.1 ReINVITE

5.8.4.1.1 MRFC-terminating case

5.8.4.1.1.1 Ad-hoc conferences

The MRFC can receive reINVITE requests to modify an ad-hoc conferencing session (e.g. Multiparty Call) for purposes of floor control and for parties to leave and rejoin the conference.

When the MRFC receives a reINVITE request, the MRFC shall:

- send 100 Trying response; and
- after the MRFP indicates that the conferencing request is granted, send 200 OK response with the MRFC conference identifier. If the MRFC chooses to send a 183 Session Progress response prior to the 200 OK, then the conference identifier may also be included in the 183 Session Progress response.

Editor's note: it is FFS how to identify the resources of the MRFC/MRFP.

5.8.4.1.2 MRFC-originating case

Void.

5.8.4.2 REFER

5.8.4.2.1 MRFC-terminating case

Void.

5.8.4.2.2 MRFC-originating case

Void.

5.8.4.2.3 REFER initiating a new session

Void.

5.8.4.2.4 REFER replacing an existing session

Void.

5.8.4.3 INFO

Editor's Note: It has to be determined which of these requests can be handled in a generic way.

5.8.5 Further initial requests

When the MRFC responds to an OPTIONS request with a 200 OK response, the MRFC may include a message body with an indication of the supported tones/announcement packages, DTMF capabilities, supported codecs and conferencing options of the MRFC/MRFP.

Editor's note: it is FFS how to identify the resources of the MRFC/MRFP.

End of first change

Start of second change

7 Extensions within the present document

7.1 SIP methods defined within the present document

There are no SIP methods defined within the present document over and above those defined in the referenced IETF specifications.

7.2 SIP headers defined within the present document

7.2.1 Path header

7.2.1.1 Introduction

Path header is a mechanism whereby a P-CSCF, I-CSCFs, and S-CSCF can request to be on a signalling path for the initial INVITE exchanged between the UE and the S-CSCF. The path-establishment procedure is originated by the P-CSCF during the registration process. The procedure is performed during the initial registration of each public user identity and all subsequent reregistrations. The list of Path headers obtained by a reregistration overwrites the existing list of Path headers at the S-CSCF. Each reregistration of the same public user identity may result in new list of Path headers. The P-CSCF uses the list of Path headers to construct a list of Route headers. When initiating a call pertaining to a given public user identity, the list of Route headers will be pre-loaded into the initial INVITE request. If a CSCF wants to receive subsequent requests, it will insert its own name to the Record Route header of the initial INVITE request. Once on the route, a CSCF remains on the route for the duration of the call. The path learned while reregistering during an active call does not affect the existing call, since the routing path for the respective call has already been established. The list of Path headers is not forwarded to the UE.

7.2.1.2 Syntax

The Path header field has the syntax described in table 7.1.

Table 7.1: Syntax of path header

```
Path = "Path" ":" 1#(name-addr *(";rr-param))
rr-param = generic-param
```

7.2.1.3 Operation

The operation of this header is described in clause 5.

7.2.2 P-Called-Party-ID header

7.2.2.1 Introduction

The P-Called-Party-ID header is the mechanism whereby the terminating UE learns the dialled public user identity that triggered the current session initiation.

The S-CSCF inserts the header in all terminating INVITE and reINVITE requests. The header is not used in any other request or response.

7.2.2.2 Syntax

The P-Called-Party-ID header field has the syntax described in table 7.2.

Table 7.2: Syntax of P-Called-Party-ID header

```
P-Called-Party-ID = "P-Called-Party-ID" HCOLON 1#
                    (name-addr *( SEMI p-cdpid-param))
p-cdpid-param = generic-param
```

Table 7.3 is an extension of tables 2 and 3 in RFC 2543bis [20] and table in subclause 7.5 in the SIP-specific event notification [23].

Table 7.3: P-Called-Party-ID header

Header field	where	proxy	ACK	BYE	CAN	INV	OPT	REG	PRA	SUB	NOT
P-Called-Party-ID	R	am	-	-	-	o	-	-	-	-	-

7.2.2.3 Operation

The operation of this header is described in subclause 5.4.3.2.

[7.2.5 P-Charging-Vector header](#)

[7.2.5.1 Introduction](#)

[The P-Charging-Vector header is the mechanism whereby the charging correlation information may be shared by IM CN subsystem functional entities. The charging correlation information consists of the following:](#)

IMS Charging Identifier (ICID), which is a globally unique identifier created per IMS dialog that is stored in all related CDRs.

Inter Operator Identifier (IOI), which are globally unique identifiers for a particular network.

Access Network Charging Information, where the GPRS is the initially supported access network. For GPRS there are the following components to track: GGSN address and one or more GPRS Charging Identifiers (GCID). Each GCID consists of an identifier of the PDP context assigned, and the associated flow index into the SDP from the SIP signalling and the authorization token associated with the PDP context.

The first IM CN subsystem functional entity involved with a dialog or standalone transaction inserts the header with the icid parameter. Additional parameters are inserted into the P-Charging-Vector header by other entities as the processing continues. The header may be included in requests and responses.

7.2.5.2 Syntax

The P-Charging-Vector header field has the syntax described in table 7.x, which is extracted from draft-henrikson-sip-charging-information [33]. and extended Table 7.x describes extensions required for 3GPP to specify further details.

Table 7.x: Syntax of extensions to P-Charging-Vector header

```

P-Charging-Vector = "P-Charging-Vector" HCOLON
    ( "icid" EQUAL icid )
    [COMMA "ioi-originating" EQUAL ioi-originating]
    [COMMA "ioi-terminating" EQUAL ioi-terminating]
    [COMMA "access-network-charging-info" EQUAL
        access-network-charging-info]

icid = gen-value
ioi-originating = gen-value
ioi-terminating = gen-value

access-network-charging-info = (gprs-charging-info / gen-value)
gprs-charging-info = "gprs-charging-info" SEMI
    "ggsn" EQUAL ggsn *(SEMI "gcid" EQUAL gcid)
    [COMMA extension-param]

ggsn = gen-value
gcid = "pdp-indexid" EQUAL pdp-indexid COMMA "flow-indexpdp-id" EQUAL pdp-idflow-index
    COMMA "auth-token" EQUAL auth-token
pdp-indexid = gen-value
pdp-idflow-index = gen-value
auth-token = gen-value
extension-param = token [EQUAL (token | quoted-string)]

```

The gprs-charging-info parameter contains one ggsn child parameter and one or more child gcid parameters. Each gcid child parameter within gprs-charging-info corresponds to a PDP context that was established at the GGSN for a UE. Each gcid parameter contains pdp-id, flow-index and auth-token child parameters. The pdp-id parameter is the PDP context identifier that the P-CSCF obtained from the GGSN. The flow-index parameter is the relative index to the media stream in the SDP for the PDP context. The auth-token parameter is the authorization token associated with the PDP context. For more information about the PDP contexts for media, see subclause 9.2.5. For the case of a primary PDP context that is used for signalling, the flow-id and auth-token parameters are set to 0.

Table 7.y is an extension of table 2 in RFC 3261 [20].

Table 7.y: P-Charging-Vector header

Header field	where	proxy	ACK	BYE	CAN	INV	OPT	REG	PRA	SUB	NOT
P-Charging-Vector	ard	o	o	o	o	o	o	o	o	o	o

7.2.5.3 Operation

The operation of this header is described in subclauses 5.2, 5.3, 5.4, 5.5, 5.6, 5.7 and 5.8.

7.3 Option-tags defined within the present document

7.3.1 "path" option-tag

A new option-tag "path" is added to the list of option-tags allowed for both Require and Proxy-Require headers.

The operation of this option tag is described in clause 5.

7.4 Status-codes defined within the present document

There are no status-codes defined within the present document over and above those defined in the referenced IETF specifications.

7.5 Session description types defined within the present document

There are no session description types defined within the present document over and above those defined in the referenced IETF specifications.

7.6 3GPP IM CN subsystem XML body, version 1

7.6.1 General

This subclause describes the Document Type Definition that is applicable for the 3GPP IM CN Subsystem XML body.

Any SIP User Agent or proxy may insert or remove the 3GPP IM CN subsystem XML body or parts of it, as required, in any SIP message. ~~The <icid> XML element is an exception to this rule; it may only be removed by the P-CSCF.~~ The 3GPP IM CN subsystem XML body shall not be forwarded outside a 3GPP network.

The associated MIME type with the 3GPP IMX XML body is "application/3gpp-ims+xml".

7.6.2 Document Type Definition

```
<?xml version="1.0" ?>
<!-- Draft DTD for the 3GPP IMS XML body. -->

<!DOCTYPE ims-3gpp [
  <!-- ims-3gpp element: root element -->

  <!ELEMENT ims-3gpp (vnid?, cell-id?,
    original-dialog-id?, destination-public-user-id?,
    access?, charging-vector?, service-info?)>
  <!ATTLIST ims-3gpp version CDATA #REQUIRED>

  <!-- vnid element: Visited network identity -->
  <!ELEMENT vnid          (#PCDATA)>

  <!-- cell-id element: The Cell-Global-ID -->
  <!ELEMENT cell-id      (mcc, mnc, lac, ci)>
  <!ELEMENT mcc          (#PCDATA)>
  <!ELEMENT mnc          (#PCDATA)>
  <!ELEMENT lac          (#PCDATA)>
  <!ELEMENT ci           (#PCDATA)>
  <!ATTLIST cell-id rat (utran | geran) #REQUIRED>

  <!-- original-dialog-id: original dialog ID -->
  <!ELEMENT original-dialog-id (od-from, od-to, od-call-id)>
  <!ELEMENT od-from       (#PCDATA)>
  <!ELEMENT od-to        (#PCDATA)>
  <!ELEMENT od-call-id   (#PCDATA)>

  <!-- public-user-id: public user ID -->
```



```

<!ELEMENT destination-public-user-id    (#PCDATA)>
<!-- access: the type of access network -->
<!ELEMENT access                        (access-type, technology?)>
<!ELEMENT access-type                   (gprs | wlan | fixed | (#PCDATA))>
<!ELEMENT technology                    (utran| geran | 802.11a |
    802.11b | sat | adsl | (#PCDATA))>

<!-- charging vector element: Charging Vector -->
<!-- ELEMENT charging-vector            (icid, gprs-charging-id?)>

<!-- icid element: IMS charging identifier -->
<!-- ELEMENT icid                      (#PCDATA)>
<!-- gprs charging id element: GPRS charging identifiers -->
<!-- ELEMENT gprs charging id          (ggsn, pdp-info+)>
<!-- ELEMENT ggsn                      (#PCDATA)>
<!-- ELEMENT pdp-info                   (pdp-index, pdp-id)>
<!-- ELEMENT pdp-index                  (#PCDATA)>
<!-- ELEMENT pdp-id                     (#PCDATA)>

<!-- service-info element: The transparent data received from HSS for AS -->
<!-- ELEMENT service-info              (#CDATA)>

<!-- alternative-service: alternative-service used in emergency sessions -->
<!-- ELEMENT alternative-service        (type, reason)>
<!-- ELEMENT type                       (emergency)>
<!-- ELEMENT reason                     (#PCDATA)>

]>

```

7.6.3 DTD description

This section describes the elements of the 3GPP IMS Document Type Definition.

<ims-3gpp>: This is the root element of the 3GPP IMS XML body. It shall always be present. The version described in the present document is 1.

<vnid>: Visited network identifier. Optional element that describes the P-CSCF network name. The vnid value is a string of characters that identifies the P-CSCF network at the user's network home.

<cell-id>: This element describes the identity of the cell that is serving the user.

The <cell-id> element contains the <ran> attribute that identifies the coding of the cell-id, according to whether the cell-id was received from the GERAN or UTRAN.

The <cell-id> element comprises four children elements: <mcc>, <mnc>, <lac> and <ci>. They represent, respectively, the Mobile Country Code, Mobile Network Code, Location Area Code and Cell Identity, as described in [3].

<original-dialog-id>: The original dialog, as received by the S-CSCF. This element helps the S-CSCF to correlate dialogues when the Application Server is behaving as a B2BUA, and therefore, modifies then dialogue.

The original-dialog-id element comprises three children elements: <od-from>, <od-to>, <od-call-id>. Their values contain, respectively, a copy of the From, To and Call-ID header values as received in the SIP message at the S-CSCF.

<destination-public-user-id>: The destination public-user-id URL of the current session.

<access>: The access element, if present, identifies the access that the UE is utilized to connect to the network. The element contains two children elements: <ant> and <technology>.

The <access-type> child element describes the access type. The predefined values are:

- gprs: the user is accessing the network through a GRPS access;
- wlan: the user is accessing the network through a wireless local area network;
- fixed: the user is accessing the network through a fixed access.

The <technology> child element, if present, describes the access technology. The pre-defined values are:

- utran: UTRAN, as defined in [3];
- geran: GERAN, as defined in [3];
- 802.11a: wireless local area network according to the 802.11a technology;
- 802.11b: wireless local area network according to the 802.11b technology;
- sat: satellite access;
- adsl: asymmetric digital subscriber line.

~~<charging-vector>: the charging vector element, if present, identifies charging correlation information. The element contains two children elements: <icid> and <gprs-charging-id>.~~

~~The <icid> child element contains an IMS charging identifier that is globally unique and is associated with the end-to-end session.~~

~~The <gprs-charging-id> child element, if present, contains GPRS charging identifiers comprised of the following: <ggsn> and <pdp-info>:~~

~~—<ggsn>: identifier of the GGSN;~~

~~—<pdp-info>: one or more instances of information for a PDP context, which is comprised of two children elements: <pdp-index> and <pdp-id>:~~

~~—<pdp-index>: relative index of PDP context as it correlates to a media stream in the SDP;~~

~~—<pdp-id>: unique identifier of the PDP context from the GGSN.~~

<service-info>: the transparent element received from the HSS for a particular Application Server are placed within this optional element.

<alternative-service>: in the present document, the alternative service is used as a response for an attempt to establish an emergency session within the IM CN subsystem. The element describes an alternative service where the call should succeed. The alternative service is described by the type of service information. A possible reason cause why an alternative service is suggested may be included.

The <alternative-service> element contains a <type> element that indicates the type of alternative service. In the present document, the <type> element contains only the value "emergency".

The <reason> element contains an explanatory text with the reason why the session setup has been redirected. A UE may use this information to give an indication to the user.

End of second change

CHANGE REQUEST

⌘ **24.229 CR 096** ⌘ rev **1** ⌘ Current version: **5.0.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Procedures for charging-function-addresses P-header		
Source:	⌘ Lucent Technologies, NEC Corporation		
Work item code:	⌘ IMS-CCR	Date:	⌘ May 6, 2002
Category:	⌘ F	Release:	⌘ REL-5
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ 3GPP has currently proposed an XML-based solution for passing charging-function-addresses. IETF has indicated a preference for a header based solution using the P-header mechanism. An internet-draft has been submitted for a P-header version of charging-function-addresses. If it is approved, then the definition and use of the charging-function-addresses needs to be updated in 24.229 to align with the change.
Summary of change:	⌘ The XML definitions are removed. Procedures are modified to describe using the P-header fields instead of the XML elements for charging-function-addresses. Revision 1 has the following changes: Added note to 5.2.1 to clarify that charging function addresses are not passed from the S-CSCF to the P-CSCF in the visited network. Removed changes to 5.4.3.2, which are now covered by CR 008 (tdoc N1-021454) Removed duplicated information from the internet draft in clause 7.2.4.
Consequences if not approved:	⌘ XML-based solution will be used to pass charging-function-addresses. This is appropriate if IETF does not approve the P-header internet-draft. However, if IETF does approve the P-header internet-draft then the effort will be wasted if the corresponding changes are not implemented in 24.229.

Clauses affected:	⌘ 2, 5.2.1, 5.2.2, 5.2.6.2, 5.2.6.3, 5.3.2.1, 5.3.3.1, 5.4.1.7, 5.4.3.1, 5.4.4.2.1, 5.4.4.2.2, 5.5.1, 5.5.3.1.2, 5.5.3.2.1, 5.6.1, 5.6.2, 5.7.1.1, 5.7.1.2, 5.8.1, 5.8.2.1.1, 7.2.4 (new subclause)
Other specs affected:	⌘ <input checked="" type="checkbox"/> Other core specifications ⌘ 24.228 <input type="checkbox"/> Test specifications

O&M Specifications

Other comments: ☞ If this CR is approved, which depends on IETF acceptance of the internet-draft that defines P-Charging-Function-Addresses, then CR 013 (tdoc N1-020924) should be rejected because it has the XML-based alternative.

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☞ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Start of first change

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 23.002: "Network architecture".
- [3] 3GPP TS 23.003: "Numbering, addressing and identification".
- [4] 3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2".
- [5] 3GPP TS 23.218: "IP Multimedia (IM) Session Handling; IM call model".
- [6] 3GPP TS 23.221: "Architectural requirements".
- [7] 3GPP TS 23.228: "IP multimedia subsystem; Stage 2".
- [8] 3GPP TS 24.008: "Mobile radio interface layer 3 specification; Core Network protocols; Stage 3".
- [9] 3GPP TS 25.304: "UE Procedures in Idle Mode and Procedures for Cell Reselection in Connected Mode".
- [10] 3GPP TS 26.235: "Packet switched conversational multimedia applications; Default codecs".
- [11] 3GPP TS 29.208: "End to end Quality of Service (QoS) signalling flows".
- [12] 3GPP TS 29.228: "IP Multimedia (IM) Subsystem Cx Interface; Signalling flows and message contents".
- [13] 3GPP TS 33.102: "3G Security; Security architecture".
- [14] 3GPP TS 33.203: "Access security for IP based services".
- [15] 3GPP TS 44.018: "Mobile radio interface layer 3 specification, Radio Resource Control Protocol".
- [16] RFC 2806: "URLs for Telephone Calls".
- [17] RFC 2833 (May 2000): "RTP Payload for DTMF Digits, Telephony Tones and Telephony Signals".
- [18] RFC 2916: "E.164 number and DNS".
- [19] RFC 2976 (October 2000): "The SIP INFO method".
- [20] draft-ietf-sip-rfc2543bis-07 (January 2002): "SIP: Session Initiation Protocol".

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

- [21] draft-ietf-sip-100rel-05 (February 2002): "Reliability of provisional responses in SIP".

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

[22] draft-sip-manyfolks- resource-03 (November 2001): "Integration of resource management and SIP".

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

[23] draft-ietf-sip-events-02.txt (February 2002): "SIP-Specific Event Notification".

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

[24] draft-ietf-sip-callerprefs-05 (November 2001): "SIP caller preferences and callee capabilities".

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

[25] draft-ietf-sip-refer-02 (October 2001): "The REFER method".

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

[26] draft-ietf-sip-session-timer-08 (October 2001): "The SIP session timer".

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

[27] draft- sip-privacy-03 (November 2001): "SIP extensions for caller identity and privacy".

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

[28] draft- sip-state-02 (August 2001): "SIP extensions for supporting distributed call state".

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

[29] draft- sip-call-auth-03 (November 2001): "SIP extensions for media authorization".

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

[30] draft-ietf-mmusic-sdp-new-04 (November 2001): "SDP: Session Description Protocol".

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

[33] [draft-henrikson-sip-charging-information-01 \(May 2002\): "Private SIP Extension for Mobile Charging Information"](#).

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

End of first change

Start of second change

5.2 Procedures at the P-CSCF

5.2.1 General

The P-CSCF shall support use of the Path header.

NOTE_1: The Path header is only applicable to the REGISTER request and its 200 OK response.

When the P-CSCF sends any request or response to the UE, before sending the message the P-CSCF shall:

- remove the P-Charging-Function-Addresses and P-Charging-Vector headers, if present.

When the P-CSCF receives any request or response from the UE, the P-CSCF shall:

- remove the P-Charging-Function-Addresses and P-Charging-Vector headers, if present. Also, the P-CSCF shall ignore any data received in the P-Charging-Function-Addresses and P-Charging-Vector headers; and

- may insert previously saved values into the P-Charging-Function-Addresses and P-Charging-Vector headers before forwarding the message.

NOTE 2: When the P-CSCF is located in the visited network, then it will not receive the P-Charging-Function-Addresses header from the S-CSCF or I-CSCF. Instead, the P-CSCF discovers charging function addresses by other means not specified in this document.

5.2.2 Registration

When the P-CSCF receives a REGISTER request from the UE that pertains to a given public user identity, the P-CSCF shall:

- insert a Path header in the request. The P-CSCF shall include in the Path header an entry containing the SIP URL identifying the P-CSCF;
- insert a Require header and a Proxy-Require header both containing the option tag "path";
- if the REGISTER request was received with a valid integrity check, add information to the REGISTER request to indicate that the REGISTER request was received with a valid integrity check; and

Editor's Note : The exact mechanism for this is FFS.

- determine the I-CSCF of the home network and forward the request to that I-CSCF.

When the P-CSCF receives a 200 OK response to a REGISTER request, the P-CSCF shall check the value of the Expires header field and/or Expires parameter in the Contact header. When the value of the Expires header field and/or expires parameter in the Contact header is different than zero, then the P-CSCF shall:

- 1) remove its SIP URL from the list of Path headers, reverses the order of the list and save the resulting list of Path headers. This list shall be stored during the entire registration period of the respective public user identity. This list shall be used to preload the routing information into the initial requests originated by the UE. If this registration is a reregistration, the P-CSCF shall replace the already existing Path headers with the new list;
- 2) associate the Path header information with the registered public user identity;
- 3) remove the list of Path headers and "path" option-tags from the 200 OK response before forwarding the response to the UE.

When the P-CSCF receives a 200 (OK) response to a REGISTER request, the P-CSCF shall store the values received in the P-Charging-Function-Addresses header.

When the P-CSCF receives a 401 Unauthorized response to a REGISTER request, the P-CSCF shall remove and store the CK and IK values contained in the 401 Unauthorized response. The 401 Unauthorized response shall be forwarded to the UE if and only if the CK and IK have been removed.

Editor's Note: The P-CSCF behaviour when 3xx or 4xx responses other than 401 Unauthorized are received is FFS.

Editor's Note: The text above assumes that public user identities are registered one by one. Public user identity might need to be changed to Service Profile in the case when public user identities can be implicitly registered.

NOTE: The P-CSCF will maintain two Route lists. The first Route list - created during the registration procedure - is used only to pre-load the routing information into the initial INVITE request that originated at the UE. This list is valid during the entire registration of the respective public user identity. The second Route list - constructed from the Record Route headers in the initial INVITE and associated response - is used during the duration of the call. Once the call is terminated, the second Route list is discarded.

When the P-CSCF receives a 420 Bad Extension response to the above REGISTER request, the P-CSCF shall check the value of the Unsupported header field. When the value of the Unsupported header field is path, the P-CSCF shall take OA&M actions to indicate an error, in addition to passing on the 420 response to the UE. In all other cases, the P-CSCF shall proxy the 420 Bad Extension response.

5.2.3 Subscription to the users registration-state event package

Upon receipt of a 2xx response to the initial REGISTER request of an user, the P-CSCF shall subscribe to the users registration-state event package at the users registrar (S-CSCF). Therefore the P-CSCF shall generate a SUBSCRIBE request with the following elements:

- a Request-URI set to the topmost entry of the path information that was obtained during the users registration;
- a From header set to a SIP URL that contains the P-CSCF's FQDN;
- a To header, set to a SIP URL that contains the public user identity that was previously registered;
- an Event header set to the "registration-state" event package;
- an Expires header set to a value higher then the Expires header of the before sent REGISTER request from the user; and
- a Route header according to the path information that was obtained during the users registration. Th S-CSCF shall set the last Route header entry to the resource to which it wants to subscribe to, i.e. to a SIP URL the public user identity that was previously registered.

Afterwards the P-CSCF shall send out the so generated SUBSCRIBE request.

Upon receipt of a 2xx response to the SUBSCRIBE message, the P-CSCF shall store the information for the so established dialog and the expiration time as indicated in the Expires header of the received response.

5.2.4 Registration of multiple public user identities

Upon receipt of a NOTIFY message on the dialog which was generated during subscription to the registration-state event package, the P-CSCF shall perform the following actions:

- if a registration state value "open", i.e. registered is received for one or more public user identities, the P-CSCF shall bind the indicated public user identities as registered to the contact information of the user;
- if a registration state value "closed", i.e. deregistered is received for one or more public user identities, the P-CSCF shall release all stored information for these public user identities.

NOTE: There may be public user identities which are automatically registered within the registrar (S-CSCF) of the user upon registration of one public user identity. These automatically registered public user identities belong to the same service profile of the user and they are not available at the P-CSCF, i.e. P-CSCF does not know that they have been registered. The here-described procedures provide a mechanism to inform the UE about these automatically registered public user identities.

5.2.5 Deregistration

5.2.5.1 User-initiated deregistration

When the P-CSCF receives a 200 OK response to a REGISTER request (sent according to subclause 5.2.2), it shall check the value of the Expires header field and/or expires parameter in the Contact header field. When the value of the Expires header field or expires parameter equals zero, then the P-CSCF shall remove the public user identity found in the To header field from the registered public user identities list and all related stored information.

NOTE: There is no requirement to distinguish a REGISTER request relating to a registration from that relation to a deregistration. For administration reasons the P-CSCF may distinguish such requests, however this has no impact on the SIP procedures.

5.2.5.2 Network-initiated deregistration

If the P-CSCF has subscribed for the event providing registration state information of a certain public user identity and an incoming NOTIFY request addressed to P-CSCF arrives containing information about network-initiated deregistration, then the P-CSCF shall remove the deregistered public user identity from the registered public user identities list and all related stored information.

Editor's note: The above text came from N1-011984, the text below from N1-011988. The two texts are attempting to specify the same thing. This conflict needs to be resolved in a future contribution.

Upon receipt of a NOTIFY message on the dialog which was generated during subscription to the registration-state event package as described in subclause 5.2.3, which contains the registration state value "closed", i.e. deregistered, for one or more public user identities that were previously stored as registered, the P-CSCF shall release all stored information for that public user identity of that user.

If all public user identities that have been bound to one contact information are marked as deregistered, the P-CSCF shall release all resources for that specific user, i.e. the user then is treated as deregistered from the IM CN subsystem.

5.2.6 General treatment for all dialogs and standalone transactions excluding the REGISTER method

5.2.6.1 Introduction

The procedures of subclause 5.2.6 and its subclauses are general to all requests and responses, except those for the REGISTER method. Procedures in subsequent clauses to subclause 5.2.6 apply in addition to the procedures of subclause 5.2.6.

5.2.6.2 Requests initiated by the UE

When the P-CSCF receives from the UE an initial request for a dialog, and a Path header list exists for the initiator of the request, the P-CSCF shall:

- remove any Route header from the request;
- select the list of Route headers that was created during the registration or reregistration of the respective public user identity utilizing the Path mechanism (see subclause 5.2.3);
- pre-load the list of Route headers to the request;
- create a Record-Route header containing its own SIP URL;
- create a new, globally unique value for the <icid> XML element and insert it into the message body (see subclause 7.6); and
- forward the request based on the topmost Route header.

When the P-CSCF receives a 1xx or 2xx response to the above request, the P-CSCF shall:

- [store the values received in the P-Charging-Function-Addresses header](#);
- remove the list of Record-Route headers from the received response; and
- create a new list of stored Route headers, with the newly received list of Record-Route headers. The Contact header received in the response shall not be appended to the bottom of the stored list of Route headers.

When the P-CSCF receives any other response to the above request, the P-CSCF shall:

- remove any list of Record-Route headers, even though not allowed, from the received response and forward it to the UE.

When the P-CSCF receives from the UE a refresh request for a dialog, the P-CSCF shall:

- remove any Route header from the request;
- select the list of Route headers that was created during the exchange of the initial request and its associated response;
- pre-load the list of Route headers to the request;
- create a Record-Route header containing its own SIP URL; and

- forward the request based on the topmost Route header.

When the P-CSCF receives a 1xx or 2xx response to the above request, the P-CSCF shall:

- remove the list of Record-Route headers from the received response; and
- overwrite any existing list of stored Route headers, or create a new list of stored Route headers, with the newly received list of Record-Route headers. The Contact header received in the response shall not be appended to the bottom of the stored list of Route headers.

When the P-CSCF receives any other response to the above request, the P-CSCF shall:

- remove any list of Record-Route headers, even though not allowed, from the received response and forward it to the UE.

When the P-CSCF receives from the UE the request for a standalone transaction, and a Path header list exists for the initiator of the request, the P-CSCF shall:

- remove any Route header from the request;
- select the list of Route headers that was created during the registration or reregistration of the respective public user identity utilizing the Path mechanism (see subclause 7.2.1);
- pre-load the list of Route headers to the request;
- create a new, globally unique value for the <icid> XML element and insert it into the message body (see subclause 7.6); and
- forward the request based on the topmost Route header.

When the P-CSCF receives any response to the above request, the P-CSCF shall:

- [store the values received in the P-Charging-Function-Addresses header; and](#)

- remove any list of Record-Route headers, even though not allowed, from the received response and forward it to the UE.

When the P-CSCF receives from the UE subsequent requests other than a refreshing request that pertains to an existing dialog, the P-CSCF shall:

- select the list of Route headers that was created during the exchange of the initial request and associated response for this call;
- pre-load the list of Route headers to the request; and
- forward the request based on the topmost Route header.

When the P-CSCF receives any response to the above request, the P-CSCF shall:

- remove any list of Record-Route headers, valid or not, from the received response and forward it to the UE.

When the P-CSCF receives from the UE an initial request for a dialog, a refresh request for a dialog, or the request of a standalone transaction, and a Path header list does not exist for the initiator of the request, the P-CSCF shall:

- send a 403 Forbidden response back to the UE containing a warning header.

Editor's Note: how to find out whether the user has a valid registration in the P-CSCF is FFS.

Editor's Note: The correct value for the warning code is yet to be assigned by IANA.

When the P-CSCF receives from the UE the request for an unknown method, and a Path header list exists for the initiator of the request, the P-CSCF shall:

- select the list of Route headers that was created during the registration or reregistration of the respective public user identity utilizing the Path mechanism (see subclause 7.2.1);
- pre-load the list of Route headers to the request, and

- forward the request based on the topmost Route header.

When the P-CSCF receives any response to the above request, the P-CSCF shall:

- remove any list of Record-Route headers, even though invalid, from the received response and forward it to the UE.

When the P-CSCF receives any request or response from the UE, the P-CSCF shall:

- remove the <charging-vector> XML element (see subclause 7.6), if present, from the message body of the received request or response.

5.2.6.3 Requests terminated by the UE

When the P-CSCF receives, destined for the UE, an initial request for a dialog, or a refresh request for a dialog, prior to forwarding the request, the P-CSCF shall:

- remove its own SIP URL from the topmost Route header;
- remove the list of Record-Route headers, and shall convert it into a list of Route headers. The Contact header shall not be appended to the bottom of the list of Route headers. The P-CSCF shall save this list of Route headers and append this list to all UE originated requests for this dialog;
- add itself on the top of the removed list of Record-Route headers and save the list. The list will be appended to UE originated response to the SUBSCRIBE request;
- remove and store the list of received Via headers from the received request and shall place its own address in the Via header with locally unique token to identify the saved values as a branch parameter . The P-CSCF shall append the list of Via headers to the UE originated response for this request; ~~and~~
- [store the values received in the P-Charging-Function-Addresses header; and](#)
- remove and store the <icid> XML element from the message body (see subclause 7.6).

When the P-CSCF receives a 1xx or 2xx response to the above request, the P-CSCF shall:

- append the saved list of Record-Route headers to the response; and,
- append the saved list of Via headers to the response.

When the P-CSCF receives any other response to the above request, the P-CSCF shall:

- append the saved list of Via headers to the response.

When the P-CSCF receives, destined for the UE, a subsequent request for a dialog that is not a refresh request, or a request for a stand-alone transaction, prior to forwarding the request, the P-CSCF shall:

- remove and store the list of received Via headers from the received request and shall place its own address in the Via header with locally unique token to identify the saved values as a branch parameter . The P-CSCF shall append this list of Via headers to the UE originated response for this transaction; ~~and~~
- [store the values received in the P-Charging-Function-Addresses header; and](#)
- remove and store the <icid> XML element from the message body (see subclause 7.6).

When the P-CSCF any response to the above request, the P-CSCF shall:

- append the saved list of Via headers to the response.

When the P-CSCF sends any request or response to the UE, the P-CSCF shall:

- remove the <charging-vector> XML element (see subclause 7.6) from the message body of the request or response.

5.2.7 Initial INVITE

5.2.7.1 Determination MO or MT case

Editor's Note: It has to be discussed whether this section is needed or if the determination of MO/MT case at the P-CSCF shall be left implementation dependent.

5.2.7.2 Mobile-originating case

The P-CSCF shall respond to all INVITE requests with a 100 Trying response.

Upon receiving a response (e.g. 183 Session Progress, 200 OK) to the initial INVITE request, the P-CSCF:

Editor's note: the case when the P-CSCF acts on behalf of the UE is FFS.

- if a media authorization token is generated by the PCF (i.e. when service-based local policy control is applied), insert the Media Authorization header containing that media authorization token.

When the P-CSCF sends the COMET request towards the S-CSCF, the P-CSCF shall also include the <gprs-charging-id> XML element in the message body. See subclause 5.2.7.4 for further information on the GPRS charging identifier.

5.2.7.3 Mobile-terminating case

When the P-CSCF receives an initial INVITE request destined for the UE, it will contain the URL of the UE in the Request-URI, and a single pre-loaded Route header. The received initial INVITE will also have a list of Record-Route headers. Prior to forwarding the initial INVITE to the URL found in the Request-URI, the P-CSCF shall:

Editor's note: the case when the P-CSCF acts on behalf of the UE is FFS.

- if a media authorization token is generated by the PCF (i.e. when service-based local policy control is applied), insert the Media Authorization header containing that media authorization token.

In addition, the P-CSCF shall respond to all INVITE requests with a 100 Trying response.

When the P-CSCF sends 180 Ringing towards the S-CSCF, the P-CSCF shall also include the <gprs-charging-id> XML element in the message body. See subclause 5.2.7.4 for further information on the GPRS charging identifier.

5.2.7.4 GPRS charging identifier

The GPRS charging identifier is coded as the <gprs-charging-id> XML element within the SIP message body as described in subclause 7.6.

The <gprs-charging-id> XML element contains one <ggsn> child element and one or more <pdp-info> child elements. Each <pdp-info> child XML element within <gprs-charging-id> corresponds to a PDP context that was established at the GGSN for a UE. Each <pdp-info> XML element contains <pdp-id> and <pdp-index> child elements, where <pdp-id> is the PDP context identifier that the P-CSCF obtained from the GGSN and <pdp-index> is the relative index to the media stream in the SDP for the PDP context. The numbering for the <pdp-index> will start at 1 and will be associated with the 'm' lines in the SDP, where the counting is done from top to bottom.

For the messages including the <gprs-charging-id> XML element, set the value of the Content-Type header to include the MIME type specified in subclause 7.6, which may be one part of a multipart message body.

5.2.8 Call release

5.2.8.1 P-CSCF-initiated call release

5.2.8.1.1 Cancellation of a session currently being established

Upon receipt of an indication that radio coverage is no longer available for a served user, for whom one or more ongoing multimedia sessions are currently being established, the P-CSCF shall cancel the related dialogs by sending out a CANCEL request according to the procedures described in draft-ietf-sip-rfc2543bis-05 [20].

5.2.8.1.2 Release of an existing session

Upon receipt of an indication that radio coverage is no longer available for a served user, for whom one or more ongoing session exists, the P-CSCF shall release each of the related dialogs by applying the following steps:

- 1) If the P-CSCF serves the calling user of a session it shall generate a BYE message based on the information saved for the related dialog, including:
 - a Request-URI, set to the topmost entry of the stored routing information towards the called user;
 - a To header, set to the To header value as received in the 200 OK response for the initial INVITE request;
 - a From header, set to the From header value as received in the initial INVITE request;
 - a Call-ID header, set to the Call-Id header value as received in the initial INVITE request;
 - a CSeq header, set to the CSeq value that was stored for the direction from the calling to the called user, incremented by one;
 - a Route header, set to the routing information towards the called user as stored for the dialog, exclusively the topmost entry (which appears in the Request-URI);
 - further headers, based on local policy or the requested session release reason.
- 2) If the P-CSCF serves the called user of a session it shall generate a BYE message based on the information saved for the related dialog, including:
 - a Request-URI, set to the topmost entry of the stored routing information towards the calling user;
 - a To header, set to the From header value as received in the initial INVITE request;
 - a From header, set to the To header value as received in the 200 OK response for the initial INVITE request;
 - a Call-ID header, set to the Call-Id header value as received in the initial INVITE request;
 - a CSeq header, set to the CSeq value that was stored for the direction from the called to the calling user, incremented by one – if no CSeq value was stored for that session it shall generate and apply a random number within the valid range for CSeqs;
 - a Route header, set to the routing information towards the calling user as stored for the dialog, exclusively the topmost entry (which appears in the Request-URI);
 - further headers, based on local policy or the requested session release reason.
- 3) Afterwards the P-CSCF shall send the so generated BYE message towards the indicated user.
- 4) Upon receipt of the 2xx responses for the BYE request, the P-CSCF shall delete all information related to the dialog and the related multimedia session.

5.2.8.1.3 Abnormal cases

Upon receipt of a request on a dialog for which the P-CSCF initiated session release, the P-CSCF shall terminate this received request and answer it with a 481 Call/Transaction Does Not Exist response.

5.2.8.2 Call release initiated by any other entity

When the P-CSCF receives a 2xx response for a BYE request matching an existing dialog, it shall delete all the stored information related to the dialog.

5.2.9 Subsequent requests

5.2.9.1 Mobile-originating case

For a reINVITE request from the UE, when the P-CSCF sends the COMET request towards the S-CSCF, the P-CSCF shall include the updated <gprs-charging-id> XML element in the message body. See subclause 5.2.7.4 for further information on the GPRS charging identifier.

5.2.9.2 Mobile-terminating case

For a reINVITE request destined towards the UE, when the P-CSCF sends 200 OK response (to the INVITE) towards the S-CSCF, the P-CSCF shall include the updated <gprs-charging-id> XML element in the message body. See subclause 5.2.7.4 for further information on the GPRS charging identifier.

5.2.10 Further initial requests

5.2.10.1 Mobile-originating case

Void.

5.2.10.2 Mobile-terminating case

Void.

5.2.11 Emergency service

The P-CSCF shall inspect the Request URI of all INVITE requests for known emergency numbers and emergency URLs from a configurable list. If the P-CSCF detects that the Request-URI of the INVITE request matches one of the numbers in this list, the INVITE request shall not be forwarded. The P-CSCF shall answer the INVITE request with a 380 Alternative Service response.

The 380 Alternative Service response shall contain a Content-Type header field with the value set to associated MIME type of the 3GPP IMS XML body as described in subclause 7.6.1.

The 3GPP IMS XML body shall contain an <alternative-service> element that indicates the parameters of the alternative service. The <type> child element shall be set to "emergency" to indicate that it was an emergency call. An operator configurable <reason> child element shall be included with a reason phrase.

The P-CSCF shall have a configurable list of emergency numbers and emergency URLs (e.g. sos@domain). The list is used to determine whether the INVITE is destined for an emergency centre or not.

5.3 Procedures at the I-CSCF

5.3.1 Registration procedure

Editor's note: The text on routeing needs to be enhanced to ensure interworking with RFC 2543 and RFC 2543bis networks.

5.3.1.1 General

During the registration procedure the I-CSCF shall behave as a stateful proxy.

5.3.1.2 Normal procedures

When I-CSCF receives a REGISTER request, the I-CSCF starts the user registration status query procedure to the HSS as specified in 3GPP TS 29.228 [12].

If the user registration status query response from the HSS includes a valid SIP URI, the I-CSCF shall:

- 1) replace the Request-URI of the received REGISTER request with the SIP URL received from the HSS in the Server-Name AVP;
- 2) apply the procedures as described in subclause 5.3.3 if topology hiding is required; and
- 3) forward the REGISTER request to the indicated S-CSCF.

If the user registration status query response from the HSS includes a list of capabilities, the I-CSCF shall:

- 1) select a S-CSCF that fulfils the indicated mandatory capabilities – if more than one S-CSCFs fulfils the indicated mandatory capabilities the S-CSCF which fulfils most of the possibly additionally indicated optional capabilities;
- 2) replace the Request-URI of the received REGISTER request with the URI of the S-CSCF;
- 3) apply the procedures as described in subclause 5.3.3 if topology hiding is required; and
- 4) forward the REGISTER request to the selected S-CSCF.

When the I-CSCF receives a 2xx response to a REGISTER request, the I-CSCF shall proxy the 2xx response to the P-CSCF.

5.3.1.3 Abnormal cases

If the HSS sends a negative response to the user registration status query request, the I-CSCF shall send back a 403 Forbidden response.

If the user registration status query procedure cannot be completed, e.g. due to time-out or incorrect information from the HSS, the I-CSCF shall send back a 480 Temporarily Unavailable response to the UE.

If a selected S-CSCF:

- does not respond to the REGISTER request and its retransmissions by the I-CSCF; or
- sends back a 3xx or 480 Temporarily Unavailable response;

the I-CSCF shall select a new S-CSCF as described in subclause 5.3.1.2, based on the capabilities indicated from the HSS. The newly selected S-CSCF shall not be one of any S-CSCFs selected previously during this same registration procedure.

If the I-CSCF cannot select a S-CSCF which fulfils the mandatory capabilities indicated by the HSS, the I-CSCF shall send back a 600 Busy Everywhere response to the user.

When the I-CSCF receives a 420 Bad Extension response to a REGISTER request, and the Unsupported header contains the value path, the I-CSCF shall take OA&M actions to indicate an error. If the algorithm to select the S-CSCF in 1. above enables an alternative S-CSCF to be selected, then the I-CSCF shall repeat steps 1 through 5 to this new S-CSCF. If no alternative S-CSCF can be selected, the I-CSCF shall proxy the 420 Bad Extension response. In all other cases, the I-CSCF shall proxy the 420 Bad Extension response.

5.3.2 Further initial requests

5.3.2.1 Normal procedures

The I-CSCF may behave as a stateful proxy for further initial requests.

When the I-CSCF receives an initial request, not containing a Route header, the I-CSCF shall start the user location query procedure to the HSS as specified in 3GPP TS 29.228 [12] for the called user, indicated in the Request-URI.

Upon successful user location query, the I-CSCF shall:

- 1) insert the URL received from the HSS as the topmost Route header;
- 2) store the value of the <icid> XML element received in the message body (see subclause 7.6) and retain the <icid> XML element in the message body. If no <icid> XML element was found, then create a new, globally unique value for the <icid> XML element and insert it into the message body;

- 3) apply the procedures as described in subclause 5.3.3 if topology hiding is required; and
- 4) forward the request based on the topmost Route header.

When the I-CSCF receives an initial request containing a Route header, the I-CSCF shall:

- remove its own SIP URL from the topmost Route header;
- apply the procedures as described in subclause 5.3.3; and
- forward the request based on the topmost Route header if present, or based on the Request-URI, in case no topmost Route header is available.

NOTE: In accordance with SIP the I-CSCF can add its own routeable SIP URL to the top of the Record-Route header to any request, independently of whether it is an initial request, or whether topology hiding is performed. The P-CSCF will ignore any Record-Route header that is not in the initial request of a dialog.

When the I-CSCF receives a response to an initial request (e.g. 183 or 2xx), the I-CSCF shall store the values from the P-Charging-Function-Addresses header, if present. If the next hop is outside of the current network, then the I-CSCF shall remove the P-Charging-Function-Addresses header prior to forwarding the message.

5.3.2.2 Abnormal cases

If the HSS sends a negative response to the user location query, the I-CSCF shall send back a 404 Not Found response.

Editor's Note: The procedures for selection of a default S-CSCF are ffs.

If the I-CSCF receives a CANCEL request and if the I-CSCF finds an internal state indicating a pending Cx transaction with the HSS, the I-CSCF:

- shall answer the CANCEL with a 200 OK;
- shall answer the original request with a 487 Request Terminated; and
- shall silently discard the later arriving (pending) Cx answer message from the HSS.

5.3.3 THIG functionality in the I-CSCF(THIG)

5.3.3.1 General

The following procedures shall only be applied if topology hiding is required by the network. The network requiring topology hiding is called the hiding network.

NOTE: Requests and responses are handled independently therefore no state information is needed for that purpose within an I-CSCF(THIG).

All headers which reveal topology information, such as Via, Route, Record-Route, Path, shall be subject to topology hiding. The Refer-To header shall not be subject to topology hiding.

Upon receiving an incoming REGISTER request for which topology hiding has to be applied and which includes a Path header, the I-CSCF(THIG) shall add the routeable SIP URL of an I-CSCF(THIG) to the top of the Path header.

Upon receiving an incoming initial request for which topology hiding has to be applied and which includes a Record-Route header, the I-CSCF(THIG) shall add its own routeable SIP URL to the top of the Record-Route header.

Upon receiving an outgoing initial request for which topology hiding has to be applied and which includes P-Charging-Function-Addresses header, the I-CSCF(THIG) shall remove the P-Charging-Function-Addresses header prior to forwarding the message.

5.3.3.2 Encryption for topology hiding

Upon receiving an outgoing request/response from the hiding network the I-CSCF(THIG) shall perform the encryption for topology hiding purposes, i.e. the I-CSCF(THIG) shall:

- 1) use the whole header values which were added by one or more specific entity of the hiding network as input to encryption, besides the UE entry;
- 2) not change the order of the headers subject to encryption when performing encryption;
- 3) use for one encrypted string all received consecutive header entries subject to encryption, regardless if they appear in separate consecutive headers or if they are consecutive entries in a comma separated list in one header;
- 4) add after the encrypted string a "tokenized-by=" tag, indicating the encrypting network as a parameter;
- 5) form one valid entry for the specific header out of the resulting string, e.g. add "SIP/2.0/UDP" for Via headers and "sip:" for Route and Record-Route headers.

NOTE 1: Even if consecutive entries of the same network in a specific header are encrypted, they will result in only one encrypted header entry. For example:

```
Via: SIP/2.0/UDP icscf1_s.home1.net,
     SIP/2.0/UDP Token( SIP/2.0/UDP scscf1.home1.net,
                       SIP/2.0/UDP pcscf1.home1.net);tokenized-by=home1.net,
     SIP/2.0/UDP [5555::aaa:bbb:ccc:ddd]
```

NOTE 2: If multiple entries of the same network are within the same type of headers, but they are not consecutive, then these entries will be tokenized to different strings. For example:

```
Route: sip:icscf1_s.home1.net,
       sip:Token(sip:scscf1.home1.net);tokenized-by=home1.net,
       sip:as1.foreign.net,
       sip:Token(sip:scscf1.home1.net,
                sip:pcscf1.home1.net);tokenized-by=home1.net,
       sip:[5555::aaa:bbb:ccc:ddd]
```

5.3.3.3 Decryption for Topology Hiding

Upon receiving and incoming requests/response to the hiding network the I-CSCF(THIG) shall perform the decryption for topology hiding purposes, i.e. the I-CSCF shall:

- 1) identify encrypted strings within all headers of the incoming message;
- 2) use all those encrypted strings that carry the identification of the hiding network within the value of the tokenized-by tag as input to decryption;
- 3) use as encrypted string the data between the sent-protocol (for Via Headers, e.g. "SIP/2.0/UDP") or the URI scheme (for Route and Record-Route Headers, e.g. "sip:") and the tokenized-by tag;
- 4) replace all content of the received header which carries encrypted information with the entries resulting from decryption.

EXAMPLE: An encrypted entry to a Via header that looks like:

```
Via: SIP/2.0/UDP Token(SIP/1.0/UDP scscf1.home1.net,
                      SIP/1.0/UDP pcscf1.home1.net);tokenized-by=home1.net
```

will be replaced with the following entries:

```
Via: SIP/1.0/UDP scscf1.home1.net, SIP/1.0/UDP pcscf1.home1.net
```

NOTE: Motivations for these decryption procedures are e.g. to allow the correct routing of a response through the hiding network, to enable loop avoidance within the hiding network, or to allow the entities of the hiding network to change their entries within e.g. the Record-Route header.

5.4 Procedures at the S-CSCF

Editor's note: The text on routing needs to be enhanced to ensure interworking with RFC 2543 and RFC 2543bis networks.

5.4.1 Registration and authentication

5.4.1.1 Introduction

The S-CSCF shall act as the SIP registrar for all UAs of the IM CN subsystem with public user identities, (see table A.150/2 and other capabilities in annex A dependent on that major capability).

The S-CSCF shall support the use of the Path header. The S-CSCF must also support the Require and Proxy-Require headers. The Path header is only applicable to the REGISTER request and its 200-OK response.

The network operator defines minimum and maximum times for each registration. These values are provided within the S-CSCF.

The procedures for notification concerning automatically registered public user identities of a user are described in subclause 5.4.2.1.2.

5.4.1.2 Initial registration and user-initiated reregistration

5.4.1.2.1 Normal procedures

When the S-CSCF receives a REGISTER request, the S-CSCF shall verify that the "path" option-tag is contained in the Proxy-Require header. If the "path" option-tag is present, the S-CSCF shall store the information contained in the Path header so that it can be used for mobile terminated requests.

Editor's Note: If the S-CSCF receives a Path header without the "path" option tag in the Proxy-Require header, we have an error condition in the I-CSCF. The I-CSCF behavior for this scenario is FFS.

The S-CSCF shall:

- check the existence of a Path header in the request;

Editor's note: The action S-CSCF has to take when a Path header is not present in the request is FFS.

- when a Path header exists in the request, insert its own FQDN, or IP address, in the form of SIP URL at the top of the list found in the Path header saved from the REGISTER request;
- save the Contact header value for the entire duration of the registration;
- construct a list of preloaded Route headers from the list of entries in the Path header. The order in the lists is preserved;
- include an expiration time in the 200 OK response, using one value provided within the S-CSCF, according to the local policy of the network, if this expiration time is shorter than the requested expiry time received from the UE;
- save the list of preloaded Route headers for the entire duration of the registration;

NOTE 1: If this registration is a reregistration, then a list of pre-loaded Route headers will already exist. The new list replaces the old list.

- bind to each individual public user identity all contact information under which the public user identity has been registered (either manually by means of a REGISTER message or automatically upon the registration of another public user identity);

NOTE 2: There might be more than one contact information available for one public user identity.

- bind to each contact information the respective Path header entries, that were received in the same REGISTER message as that contact information;
- add its Path header on the top of the received list of Path headers, and returns this list in the 200 OK response;
- check whether the message contains information indicating that it was received with a valid integrity check by the P-CSCF; and

Editor's Note: The method by which the P-CSCF indicates this is FFS.

- send a third-party REGISTER request, as described in subclause 5.4.1.7, to each Application Server that matches the Filter Criteria from the HSS for the REGISTER event.

On receiving a failure response to one of the third-party REGISTER requests, the S-CSCF may initiate network-initiated deregistration procedure based on the information in the Filter Criteria. If the Filter Criteria does not contain instruction to the S-CSCF regarding the failure of the contact to the Application Server, the S-CSCF shall not initiate network-initiated deregistration procedure.

The S-CSCF may require authentication of the user for any REGISTER request, and shall always require authentication for initial registration. The information that a REGISTER has a valid integrity check may be used as part of the decision to authenticate the registration. The S-CSCF shall request authentication by responding to the REGISTER request with a 401 Unauthorized with:

- the Authorization header containing the authentication parameters (RAND, AUTN, CK and IK).

5.4.1.2.2 Abnormal cases

In the case that the authentication response from the UE is incorrect the S-CSCF shall either:

- attempt a further authentication challenge; or
- deregister the user and terminate any ongoing sessions for all public user identities associated with the private user identity being authenticated, and release resources allocated to those sessions.

In the case that the response from the UE is incorrect for three consecutive attempts then the S-CSCF shall deregister the user and terminate any ongoing sessions for all public user identities associated with the private user identity being authenticated, and release resources allocated to those sessions.

In the case that the S-CSCF determines that no response will be received from the UE (e.g. it may be unreachable due to loss of radio coverage), the S-CSCF shall either:

- attempt a further authentication challenge; or
- deregister the user and terminate any ongoing sessions for all public user identities associated with the private user identity being authenticated, and release resources allocated to those sessions.

In the case that the response from the UE indicates that the authentication challenge was invalid with no RES or AUTS parameter in the subsequent REGISTER message, the S-CSCF shall:

- respond with the relevant 4xx response (e.g. 401 Unauthorized to initiate a further authentication attempt, or 403 Forbidden if the authentication attempt is to be abandoned).

In the case that the response from the UE indicates that the authentication challenge was invalid with the AUTS parameter in the subsequent REGISTER message, the S-CSCF shall:

- fetch new authentication vectors from the HSS, including AUTS and RAND in the request to indicate a resynchronisation; and
- on receipt of the new vectors send a 401 Unauthorized to initiate a further authentication attempt, using these new vectors.

In the case that the expiration timer from the UE is too short to be accepted by the S-CSCF, the S-CSCF shall:

- reject the REGISTER with a 423 Registration Too Brief, containing a Min-Expires header with the minimum registration time the S-CSCF will accept.

5.4.1.3 Authentication and reauthentication

Authentication and reauthentication is performed by the registration procedures as described in subclause 5.4.1.2.

5.4.1.4 User-initiated deregistration

When the S-CSCF receives a REGISTER request, it shall verify that the "path" option-tag is contained in the Proxy-Require header. If the "path" option-tag is present, the S-CSCF shall store the information contained in the Path header so that it can be used for mobile terminated requests.

Editor's Note: If the S-CSCF receives a Path header without the "path" option tag in the Proxy-Require header, we have an error condition in the I-CSCF. The I-CSCF behavior for this scenario is FFS.

When S-CSCF receives a REGISTER request with the Expires header field containing the value zero, the S-CSCF shall:

- deregister the subscriber and remove all related stored information;
- insert its own FQDN or IP address in the form of SIP URL at the top of the list found in the Path header saved from the REGISTER request;
- add its Path header on the top of the received list of Path headers, and returns this list in the 200 OK response; and
- send a third-party REGISTER request, as described in subclause 5.4.1.7, to each Application Server that matches the Filter Criteria from the HSS for the REGISTER event.

5.4.1.5 Network-initiated deregistration

When a network-initiated deregistration event occurs for a public user identity, and the UE has subscribed for that event, the S-CSCF shall generate a NOTIFY request in order to inform the UE of the network-initiated deregistration event for that public user identity. The S-CSCF shall set the event header to the name of the event package, which provides information about the registration state of the UE.

When a network-initiated deregistration event occurs for a public user identity, and the P-CSCF has subscribed for registration events for that public user identity, the S-CSCF shall generate a NOTIFY request in order to inform the P-CSCF of the network initiated deregistration event for that public user identity. The S-CSCF shall set the event header to the name of the event package, which provides information about the registration state of the UE.

If the network-initiated deregistration is for a set of public user identities associated with the subscriber, the NOTIFY shall send the registration state of all public user identities of the subscriber.

Editor's note: The possible values of the event header are: presence, registration-state, a new subpackage of presence.

Also, the S-CSCF shall send a third-party REGISTER request, as described in subclause 5.4.1.7, to each Application Server that matches the Filter Criteria from the HSS for the REGISTER event.

5.4.1.6 Network-initiated reauthentication

The S-CSCF may request a subscriber to reauthenticate at any time, based on a number of possible operator settable triggers as described in subclause 5.4.1.2.

If the S-CSCF is informed that a private user identity needs to be re-authenticated, the S-CSCF shall generate a NOTIFY request on all dialogs (i.e. the dialog between S-CSCF and the UE and additionally between S-CSCF and P-CSCF) which have been established due to subscription to the registration-state event package of that user. The S-CSCF shall populate the content of the NOTIFY request and additionally shall:

- set the Request-URI and Route header to the saved route information during subscription;
- set the Event header to the "registration-state" value; and
- indicate a public user identity of the user for which the private user identity needs to be re-authenticated in the body of the NOTIFY request with registration state "re-authenticate".

Afterwards the S-CSCF shall:

- wait for the user to reauthenticate (see subclause 5.4.1.2).

NOTE: Network initiated re-authentication might be requested from the HSS or may occur due to internal processing within the S-CSCF.

In case S-CSCF receives no data it can authenticate the subscriber from, the S-CSCF may as an implementation option try to request the UE by other means to re-authenticate, e.g. by sending a REFER method in order to request a REGISTER message.

If UE does not re-authenticate within a certain period of time, the S-CSCF shall deregister the private user identity as described in subclause 5.4.1.5 and terminate the ongoing sessions of that user.

5.4.1.7 Notification of Application Servers about registration status

If the registration procedure described in subclauses 5.4.1.2, 5.4.1.4 or 5.4.1.5 (as appropriate) was successful, the S-CSCF shall send a third-party REGISTER request to each Application Server with the following information:

- a) the Request-URI shall contain the FQDN or IP address of the AS in the form of a SIP URL;
- b) the From header shall contain the FQDN or IP address of the S-CSCF in the form of a SIP URL;
- c) the To header shall contain the public user identity as contained in the REGISTER request received from the UE;
- d) the Contact header shall contain the FQDN or IP address of the S-CSCF in the form of a SIP URL;
- e) for initial registration and user-initiated reregistration (subclause 5.4.1.2), the Expires header shall contain the same value that the S-CSCF returned in the 200 OK response for the REGISTER request received from the UE;
- f) for user-initiated deregistration (subclause 5.4.1.4) and network-initiated deregistration (subclause 5.4.1.5), the Expires header shall contain the value zero;
- g) for initial registration and user-initiated reregistration (subclause 5.4.1.2), a message body shall be included in the REGISTER request if there is Filter Criteria indicating the need to include HSS provided data for the REGISTER event (e.g. HSS may provide AS specific data to be included in the third-party REGISTER, such as IMSI to be delivered to IM SSF). If there is a service information XML element provided in the HSS Filter Criteria for an AS (see 3GPP TS 29.228 [12]), then it shall be included in the REGISTER message body within the <service-info> XML element as described in subclause 7.6. For the messages including the 3GPP IMS XML body, set the value of the Content-Type header to include the MIME type specified in subclause 7.6.

i) for initial registration, a P-Charging-Function-Addresses header (see subclause 7.2.4) shall be populated with values received from the HSS if the message is forwarded within the S-CSCF home network.

5.4.2 Subscription and notification

Editors Note: This should be handled in a generic way

5.4.2.1 Subscriptions to S-CSCF events

5.4.2.1.1 Subscription to the event providing registration state

When an incoming SUBSCRIBE request addressed to S-CSCF arrives containing the Event header with the registration-state event package, the S-CSCF shall generate a 2xx response acknowledging the SUBSCRIBE request and indicating that the subscription was successful. Furthermore, the response shall include:

- an Expires header which either contains the same or a decreased value as the Expires in SUBSCRIBE request; and
- a Contact header which is an identifier generated within the S-CSCF that will help to correlate refreshes for the SUBSCRIBE.

Editor's note: Authorization needs to be applied before subscribing for the event providing information about the registration state. This is FFS.

Afterwards the S-CSCF shall perform the procedures for notification about registration state as described in subclause 5.4.2.1.2.

5.4.2.1.2 Notification about registration state

If the registration state of one or more public user identities changes, the S-CSCF shall generate a NOTIFY request on all dialogs which have been established due to subscription to the registration-state event package of that user. For each NOTIFY request, the S-CSCF shall:

- set the Request-URI and Route header to the saved route information during subscription;
- set the Event header to the "registration-state" value;
- indicate registration state "open" for all public user identities which are currently registered;
- indicate registration state "closed" for all public user identities which are currently deregistered; and
- indicate within the "<detail>" information of those public user identities which will be automatically reregistered the "automatically by" information, followed by the specific public user identity which will cover the reregistration.

EXAMPLE: If sip:user1_public1@home1.net is reregistered, the public user identity sip:user1_public2@home1.net was automatically be registered. Therefore the entries in the body of the NOTIFY message look like:

```
<tuple name="sip:user1_public1@home1.net">
  <status><value>open</value></status>
</tuple>

<tuple name="sip:user1_public2@home1.net">
  <status> <value>open</value> </status>
  <detail>automatically by sip:user1_public1@home1.net</detail>
</tuple>
```

Afterwards the S-CSCF shall send the generated NOTIFY request on the dialog and await a 2xx response.

5.4.2.2 Proxy behaviour for SUBSCRIBE / NOTIFY

Void.

5.4.3 General treatment for all dialogs and standalone transactions excluding requests terminated by the S-CSCF

5.4.3.1 Requests initiated by the served user

When the S-CSCF receives from the served user an initial request for a dialog or a request for a standalone transaction, prior to forwarding the request, the S-CSCF shall:

- remove its own SIP URL from the topmost Route header;
- if the outgoing Request-URI is a TEL URL, the S-CSCF shall translate the E.164 address (see RFC 2806 [16]) to a globally routable SIP URL using an ENUM/DNS translation mechanism with the format specified in RFC 2916 [18]. Databases aspects of ENUM are outside the scope of the present document. If this translation fails, the request may be forwarded to a BGCF or any other appropriate entity (e.g a MRFC to play an announcement) in the originator's home network or an appropriate SIP response shall be sent to the originator;
- check if <original-dialog-id> XML element is present in the payload of the incoming request. If present, it indicates an association with an existing dialog, the request has been sent from an Application Server in response to a previously sent request. The <od-to>, <od-from> and <od-call-id> XML element values from the <original-dialog-id> XML element may be used as additional parameters when searching for existing dialogs. Local data shall be updated to indicate that this Application Server has been contacted for the initial request. The S-CSCF shall determine the next hop using initial filter criteria and local data on status of which Application Servers have been contacted. If the next hop is another Application Server, the S-CSCF shall retain the <original-dialog-id> XML element in the message body of the request. If the next hop is not an Application Server, the S-CSCF shall leave out the <original-dialog-id> XML element from the payload of the request;

- check whether the initial request matches the initial filter criteria of the application servers assigned for the public user identity as described in 3GPP TS 23.218 [5] subclause 6.4. Depending on the result of the previous check, the S-CSCF may contact one or more application server(s) before processing the outgoing Request-URI. In case of contacting one or more application server(s) the S-CSCF shall:
 - insert the AS URL to be contacted into the Route header as the topmost entry followed by its own URL; and
 - initialise local data to track the status of contacting each application server specified in the service profile. Additionally S-CSCF shall also populate the <original-dialog-id> XML element in the message body with the original To, From and Call-ID headers received in the request. See subclause 5.4.3.3 for further information on the original dialog identifier.
- store the value of the <icid> XML element received in the message body (see subclause 7.6) and retain the <icid> XML element in the message body;
- insert a P-Charging-Function-Addresses header (see subclause 7.2.4) populated with values received from the HSS if the message is forwarded within the S-CSCF home network, including towards AS;
- determine the destination address (e.g. DNS access) using the URL placed in the topmost Route header if present, otherwise based on the Request-URI; and
- in case of an initial request for a dialog the S-CSCF shall create a Record-Route header containing its own SIP URL and save the necessary header fields from the request (and from its appropriate responses) in order to release the dialog when needed.

When the S-CSCF receives from the served user a refresh request for a dialog, prior to forwarding the request the S-CSCF shall:

- remove its own URL from the topmost Route header;
- create a Record-Route header containing its own SIP URL and save the necessary header fields from the request (and from its appropriate responses) in order to release the dialog when needed; and
- route the request based on the topmost Route header.

When the S-CSCF receives from the served user a subsequent request other than refresh request for a dialog, prior to forwarding the request the S-CSCF shall:

- remove its own URL from the topmost Route header; and
- route the request based on the topmost Route header.

5.4.3.2 Requests terminated at the served user

When the S-CSCF receives, destined for the served user, an initial request for a dialog or a request for a standalone transaction, prior to forwarding the request, the S-CSCF shall:

- remove its own URL from the topmost Route header;
- check if <original-dialog-id> XML element is present in the payload of the incoming request. If present, it indicates an association with an existing dialog, the request has been sent from an Application Server in response to a previously sent request. The <od-to>, <od-from> and <od-call-id> XML element values from the <original-dialog-id> XML element may be used as additional parameters when searching for existing dialogs. Local data shall be updated to indicate that this Application Server has been contacted for the initial request. The S-CSCF shall determine the next hop using initial filter criteria and local data on status of which Application Servers have been contacted. If the next hop is another Application Server, the S-CSCF shall retain the <original-dialog-id> XML element in the message body of the request. If the next hop is not an Application Server, the S-CSCF shall leave out the <original-dialog-id> XML element from the payload of the request;
- check whether the initial request matches the initial filter criteria of the application servers assigned for the public user identity as described in 3GPP TS 23.218 [5] subclause 6.5. Depending on the result of the previous check the S-CSCF may contact one or more application server(s) before contacting an I-CSCF/P-CSCF respectively. In case of contacting one or more application server(s) the S-CSCF shall:
 - insert the AS URL to be contacted into the Route header as the topmost entry followed by its own URL; and

- initialise local data to track the status of contacting each application server specified in the service profile. Additionally S-CSCF shall also populate the <original-dialog-id> XML element in the message body with the original To, From and Call-ID headers received in the request. See subclause 5.4.3.3 for further information on the original dialog identifier.
- store the value of the <icid> XML element received in the message body (see subclause 7.6) and retain the <icid> XML element in the message body;
- in case there are no Route headers in the request, then determine, from the destination public user identity, the list of preloaded routes saved during registration or re-registration, as described in subclause 5.4.1.2.1;
- determine, from the destination public user identity, the saved Contact URL where the user is reachable saved at registration or reregistration, as described in subclause 5.4.1.2.1;
- build the Request-URI and Request header field values from the preloaded routes and saved Contact URL, as described in RFC 2543bis [20];
- insert a P-Called-Party-ID SIP header field including the Request-URI received in the INVITE;
- in case of an initial request for a dialog create a Record-Route header containing its own SIP URL and save the necessary header fields from the request (and from its appropriate responses) in order to release the dialog when needed;
- replace the Request-URI with the contents of the user Contact URL saved by the S-CSCF at registration time; and
- forward the request based on the topmost Route header.

When the S-CSCF receives, destined for the served user, a refresh request for a dialog, prior to forwarding the request, the S-CSCF shall:

- remove its own URL from the topmost Route header;
- create a Record-Route header containing its own SIP URL and save the necessary header fields from the request (and from its appropriate responses) in order to release the dialog when needed; and
- forward the request based on the topmost Route header.

When the S-CSCF receives, destined for the served user, a subsequent request other than refresh request for a dialog, prior to forwarding the request, the S-CSCF shall:

- remove its own URL from the topmost Route header; and
- forward the request based on the topmost Route header.

5.4.3.3 Original dialog identifier

The original dialog identifier is coded as the <original-dialog-id> XML element within the SIP message body as described in subclause 7.6.

For the messages including the <original-dialog-ID> XML element, set the value of the Content-Type header to include the MIME type specified in subclause 7.6, which may be one part of a multipart message body.

5.4.3.4 Abnormal cases

The S-CSCF shall, when contacting application servers based on the initial filter criteria, expect either a final response from the application server as the session terminates there, or the initial request message, that may be modified. In either case the message should be identified (using <original-dialog-id> XML element) as belonging to the original request forwarded by the S-CSCF.

If the S-CSCF receives a message including an <original-dialog-id> XML element that does not match any that it has forwarded to the application server it shall:

- respond to the application server with 481 Call Leg/Transaction Does Not Exist.

5.4.4 Call initiation

5.4.4.1 Initial INVITE

Void.

5.4.4.1.1 Determination of served user

Void.

5.4.4.1.2 Mobile-originating case

Void.

5.4.3.1.3 Mobile-terminating case

Void.

5.4.4.2 Subsequent requests

Editor's Note: PRACK and COMET can be handled in a generic way.

5.4.4.2.1 Mobile-originating case

When the S-CSCF receives the 183 response, the S-CSCF shall insert a P-Charging-Function-Addresses header (see subclause 7.2.4) populated with values received from the HSS if the message is forwarded within the S-CSCF home network, including towards AS.

When the S-CSCF receives the COMET request, the S-CSCF shall remove and store the <gprs-charging-id> XML element from the message body (see subclause 7.6). The <gprs-charging-id> XML element is not included in the message body when the COMET request is forwarded.

When the S-CSCF receives any request or response related to a mobile-originated dialog or standalone transaction, the S-CSCF may insert previously saved values into P-Charging-Vector and P-Charging-Function-Addresses headers before forwarding the message within the S-CSCF home network, including towards AS.

5.4.3.2.2 Mobile-terminating case

When the S-CSCF receives the 183 response, the S-CSCF shall insert a P-Charging-Function-Addresses header (see subclause 7.2.4) populated with values received from the HSS if the message is forwarded within the S-CSCF home network, including towards AS.

When the S-CSCF receives 180 Ringing response, the S-CSCF shall remove and store the <gprs-charging-id> XML element from the message body (see subclause 7.6). The <gprs-charging-id> XML element is not included in the message body when the 180 Ringing response is forwarded.

When the S-CSCF receives any request or response related to a mobile-originated dialog or standalone transaction, the S-CSCF may insert previously saved values into P-Charging-Vector and P-Charging-Function-Addresses headers before forwarding the message within the S-CSCF home network, including towards AS.

5.4.5 Call release

5.4.5.1 S-CSCF-initiated session release

Void.

5.4.5.1.1 Cancellation of a session currently being established

Upon receipt of a network internal indication to release a session which is currently being established, the S-CSCF shall cancel the related dialogs by sending the CANCEL request according to the procedures described in draft-ietf-sip-rfc2543bis-05 [20].

5.4.5.1.2 Release of an existing session

Upon receipt of a network internal indication to release an existing multimedia session, the S-CSCF shall:

- 1) generate a first BYE message for the called user based on the information saved for the related dialog, including:
 - a Request-URI, set to the topmost entry of the stored routing information towards the called user;
 - a To header, set to the To header value as received in the 200 OK response for the initial INVITE request;
 - a From header, set to the From header value as received in the initial INVITE request;
 - a Call-ID header, set to the Call-Id header value as received in the initial INVITE request;
 - a CSeq header, set to the CSeq value that was stored for the direction from the calling to the called user, incremented by one;
 - a Route header, set to the routing information towards the called user as stored for the dialog, exclusively the topmost entry (which appears in the Request-URI);
 - further headers, based on local policy or the requested session release reason.
- 2) generate a second BYE message for the calling user based on the information saved for the related dialog, including:
 - a Request-URI, set to the topmost entry of the stored routing information towards the calling user;
 - a To header, set to the From header value as received in the initial INVITE request;
 - a From header, set to the To header value as received in the 200 OK response for the initial INVITE request;
 - a Call-ID header, set to the Call-Id header value as received in the initial INVITE request;
 - a CSeq header, set to the CSeq value that was stored for the direction from the called to the calling user, incremented by one – if no CSeq value was stored for that session it shall generate and apply a random number within the valid range for CSeqs;
 - a Route header, set to the routing information towards the calling user as stored for the dialog, exclusively the topmost entry (which appears in the Request-URI);
 - further headers, based on local policy or the requested session release reason.
- 3) If the S-CSCF serves the calling user it shall:
 - treat the first BYE message as if received directly from the calling user, i.e. send it to internal service control and based on the outcome further on towards the called user;
 - send the second BYE message directly to the calling user.
- 4) If the S-CSCF serves the called user it shall:
 - send the first BYE message directly to the called user;
 - treat the second BYE message as if received directly from the called user, i.e. shall send it to internal service control and based on the outcome further on towards to the called user.

Upon receipt of the 2xx responses for both BYE requests, the S-CSCF shall release all information related to the dialog and the related multimedia session.

5.4.4.1.3 Abnormal cases

Upon receipt of a request on a dialog for which the S-CSCF initiated session release, the S-CSCF shall terminate the received request and answer it with a 481 Call/Transaction Does Not Exist response.

5.4.4.2 Session release initiated by any other entity

Upon receipt of a 2xx response for a BYE request matching an existing dialog, the S-CSCF shall delete all the stored information related to the dialog.

5.4.6 Call-related requests

5.4.6.1 ReINVITE

5.4.6.1.1 Determination of served user

Void.

5.4.6.1.2 Mobile-originating case

For a reINVITE request from the UE, when the S-CSCF receives the COMET request, the S-CSCF shall remove and store the updated <gprs-charging-id> XML element from the message body (see subclause 7.6). The <gprs-charging-id> XML element is not included in the message body when the COMET request is forwarded.

5.4.6.1.3 Mobile-terminating case

For a reINVITE request destined towards the UE, when the S-CSCF receives the 200 OK response (to the INVITE), the S-CSCF shall remove and store the updated <gprs-charging-id> XML element from the message body (see subclause 7.6). The <gprs-charging-id> XML element is not included in the message body when the 200 OK response is forwarded.

5.4.6.2 REFER

5.4.6.2.1 Mobile-originating case

Void.

5.4.6.2.2 Mobile-terminating case

Void.

5.4.6.2.3 REFER initiating a new session

Void.

5.4.6.2.4 REFER replacing an existing session

Void.

5.4.6.3 INFO

Editor's Note: It has to be determined which of these requests can be handled in a generic way.

5.4.7 Further initial requests

Editor's Note: Generic handling of e.g. OPTIONS should be described here

5.5 Procedures at the MGCF

5.5.1 General

The MGCF, although acting as a UA, does not initiate any registration of its associated addresses. These are assumed to be known by peer-to-peer arrangements within the IM CN subsystem. Therefore the dependencies of table 0.3/1 and table 0.3/2 shall not apply.

The use of the Path header shall not be supported by the MGCF.

When the MGCF sends any request or response related to a dialog or standalone transaction, the MGCF may insert previously saved values into P-Charging-Vector and P-Charging-Function-Addresses headers before sending the message.

5.5.2 Subscription and notification

5.5.2.1 Subscriptions to MGCF events

Void.

5.5.2.2 Gateway behaviour for SUBSCRIBE / NOTIFY

Void.

5.5.3 Call initiation

5.5.3.1 Initial INVITE

5.5.3.1.1 Calls originated from circuit-switched networks

When the MGCF receives an indication of an incoming call from a circuit-switched network, the MGCF shall:

- generate and send an INVITE request:
 - set the Request-URI to the "tel" format using an E.164 address;
 - set the Supported header to "100rel" (see draft-ietf-sip-manyfolks-resource [22]); and
 - create a new, globally unique value for the <icid> XML element and insert it into the message body (see subclause 7.6).

5.5.3.1.2 Calls terminating in circuit-switched networks

When the MGCF receives an initial INVITE request, the MGCF shall:

- send 100 "Trying" response;
- assuming the "100rel" indicator was received and a matching codec is found, send 183 "Session Progress" response:
 - set the Require header to the value of "100rel";
 - set the Content-Disposition header to the value of "precondition"; ~~and~~
 - store the values received in the P-Charging-Function-Addresses header; and
 - store the value of the <icid> XML element received in the message body (see subclause 7.6).

Editor's note: must receive Supports header with value of 100rel in the INVITE.

Editor's note: need text to describe error legs.

5.5.3.2 Subsequent requests

5.5.3.2.1 Calls originating in circuit-switched networks

When the MGCF receives 183 response to an INVITE request, the MGCF shall:

- store the values received in the P-Charging-Function-Addresses header.

When the MGCF receives 200 OK response to a PRACK request and notification that bearer setup is complete, the MGCF shall:

- send a COMET request.

5.5.3.2.2 Calls terminating in circuit-switched networks

When the MGCF receives an indication of a ringing for the called party of outgoing call to a circuit-switched network, the MGCF shall:

- send 180 "Ringing" to the UE.

When the MGCF receives an indication of answer for the called party of outgoing call to a circuit-switched network, the MGCF shall:

- send 200 OK to the UE.

5.5.4 Call release

5.5.4.1 Call release initiated by a circuit-switched network

When the MGCF receives an indication of call release from a circuit-switched network, the MGCF shall:

- send a BYE request to the UE.

5.5.4.2 S-CSCF-initiated call release

5.5.4.3 MGW-initiated call release

When the MGCF receives an indication from the MGW that the bearer was lost, the MGCF shall:

- send a BYE request towards the UE.

Editor's note: should the Error-Info header be used to indicate an error case for the session release?

5.5.5 Call-related requests

5.5.5.1 ReINVITE

5.5.5.1.1 Calls originating from circuit-switched networks

Editor's Note: When the bearer on the circuit-switched network side is halted/resumed, should the MGCF notify the UE with a reINVITE?

5.5.5.1.2 Calls terminating in circuit-switched networks

When the MGCF receives a reINVITE request for hold/resume operation, the MGCF shall:

- send 100 Trying response;
- after performing interaction with MGW to hold/resume the media flow, send 200 OK response.

5.5.5.2 REFER

5.5.5.2.1 Calls originating from circuit-switched networks

Void.

5.5.5.2.2 Calls terminating in circuit-switched networks

Void.

5.5.5.2.3 REFER initiating a new session

Void.

5.5.5.2.4 REFER replacing an existing session

Void.

5.5.5.3 INFO

Void.

5.5.6 Further initial requests

When the MGCF responds to an OPTIONS request with a 200 OK response, the MGCF may include a message body with an indication of the DTMF capabilities and supported codecs of the MGCF/MGW.

Editor's note: it is FFS how to identify the resources of the MGCF/MGW.

5.6 Procedures at the BGCF

5.6.1 General

The use of the Path header shall not be supported by the BGCF.

When the BGCF receives any request or response related to a dialog or standalone transaction, the BGCF may insert previously saved values into P-Charging-Vector and P-Charging-Function-Addresses headers before forwarding the message.

5.6.2 Session initiation transaction

When the BGCF receives an INVITE request, the BGCF shall forward the request either to an MGCF within its own network, or to another network containing an MGCF. The BGCF need not Record-Route the INVITE request. The BGCF shall store the values received in the P-Charging-Function-Addresses header. The BGCF shall store the value of the <icid> XML element received in the message body (see subclause 7.6) and retain the <icid> XML element in the message body.

NOTE: The means by which the decision is made to forward to an MGCF or to another network is outside the scope of the present document, but may be by means of a lookup to an external database, or may be by data held internally to the BGCF.

5.7 Procedures at the Application Server (AS)

NOTE: This subclause defines only the requirements on the application server that relate to SIP. Other requirements are defined in 3GPP TS 23.218 [5].

5.7.1 Common Application Server (AS) Procedures

5.7.1.1 Notification about registration status

The AS may support the REGISTER method in order to discover the registration status of the user. If a REGISTER request arrives containing information about the user's registration status and the AS supports the REGISTER method, the AS shall store the Expires parameter from the request and generate a 200 OK or an appropriate failure response. For the success case, the 200 OK response shall contain Expires value equal to the value received in the REGISTER request. [The AS shall store the values received in P-Charging-Function-Addresses header.](#)

5.7.1.2 Extracting charging correlation information

When an AS receives an initial request for a dialog or a request for a standalone transaction, the AS shall store the value of the <icid> XML element received in the message body (see subclause 7.6) and retain the <icid> XML element in the message body. [The AS shall store the values received in the P-Charging-Function-Addresses header and retain the P-Charging-Function-Addresses header in the message.](#)

[When an AS sends any request or response related to a dialog or standalone transaction, the AS may insert previously saved values into the P-Charging-Vector and P-Charging-Function-Addresses headers before sending the message.](#)

5.7.2 Application Server (AS) acting as terminating UA, or redirect server

Editors Note: When acting as a terminating UA the AS shall behave as defined for a UE in 5.1.4.

The S-CSCF may forward received initial requests to the application server based on initial filter criteria being met. If the S-CSCF includes an <original-dialog-id> XML element in these requests, the AS shall include this <original-dialog-id> XML element in any responses and/or subsequent requests sent on this dialog.

An Application Server acting as redirect server shall propagate any received 3GPP message body in the redirected message.

5.7.3 Application Server (AS) acting as originating UA

Editors Note: When acting as an originating UA the AS shall behave as defined for a UE in 5.1.3.

When an AS acting as originating UA generates an initial request for a dialog or a request for a standalone transaction, the AS shall create a new, globally unique value for the <icid> XML element and insert it into the message body (see subclause 7.6).

5.7.4 Application Server (AS) acting as a SIP proxy

The S-CSCF may forward received initial requests to the application server based on initial filter criteria being met. If the S-CSCF includes an <original-dialog-id> XML element in these requests, the AS shall include this <original-dialog-id> XML element in any responses and/or subsequent requests sent on this dialog.

When the AS acting as a SIP proxy receives a request from the S-CSCF, prior to forwarding the request it shall:

- remove its own URL from the topmost Route header; and
- after executing the required services, route the request based on the topmost Route header.

The AS may modify the SIP requests based on service logic, prior to forwarding the request back to the S-CSCF.

An Application Server acting as a SIP proxy shall propagate any received 3GPP message body in the forwarded message.

5.7.5 Application Server (AS) performing 3rd party call control

5.7.5.1 General

The AS performing 3rd party call control acts as a B2BUA. The B2BUA AS will internally map the message headers between the two dialogs that it manages. It is responsible for correlating the dialog identifiers and will decide when to simply translate a message from one dialog to the other, or when to perform other functions. These decisions are specific to each AS and are outside the scope of the present document.

The AS, although acting as a UA, does not initiate any registration of its associated addresses. These are assumed to be known by peer-to-peer arrangements within the IM CN subsystem.

5.7.5.2 Call initiation

5.7.5.2.1 Initial INVITE

When the AS receives an initial INVITE request, it will contain the AS's SIP URL in the Request-URI. Before generating a new INVITE back to the S-CSCF, the AS:

- performs the Application Server specific functions. See 3GPP TS 23.218 [5]; and
- if successful, generate and send a new INVITE request to the S-CSCF to establish a new dialog. The AS shall look for the presence of the <original-dialog-id> XML element in the message body of the initial INVITE request and populate the same <original-dialog-id> XML element in the message body of the new INVITE request.

5.7.5.2.2 Subsequent requests

Editor's Note: subsequent requests can be handled in a generic way. Is there anything needed here?

5.7.5.3 Call release

5.7.5.4 Call-related requests

Editor's Note: call-related requests can be handled in a generic way. Is there anything needed here?

An Application Server may initiate a call release. See 3GPP TS 23.218 [5] for possible reasons. The BYE request shall be sent simultaneously for both dialogs managed by the B2BUA.

5.7.5.5 Further initial requests

Editor's Note: call-related requests can be handled in a generic way. Is there anything needed here?

5.8 Procedures at the MRFC

5.8.1 General

[When the MRFC sends any request or response related to a dialog or standalone transaction, the MRFC may insert previously saved values into P-Charging-Vector and P-Charging-Function-Addresses headers before sending the message.](#)

~~Void.~~

5.8.2 Call initiation

5.8.2.1 Initial INVITE

5.8.2.1.1 MRFC-terminating case

When the MRFC receives an initial INVITE request, the MRFC shall store the value of the <icid> XML element received in the message body (see subclause 7.6). [The MRFC shall store the values received in the P-Charging-Function-Addresses header.](#)

5.8.2.1.1.1 Tones and announcements

The MRFC can receive INVITE requests to set up a session to play tones and announcements. The MRFC acts as terminating UA in this case.

When the MRFC receives an INVITE request with an indicator for a tone or announcement, the MRFC shall:

- send 100 Trying response.

Editor's note: it is FFS how to identify the tone or announcement to be played.

5.8.2.1.1.2 Ad-hoc conferences

The MRFC can receive INVITE requests to set up an ad-hoc conferencing session (e.g. Multiparty Call) or to add parties from the conference. The MRFC acts as terminating UA in this case.

When the MRFC receives an INVITE request with an indicator to initiate ad hoc conferencing, the MRFC shall:

- send 100 Trying response; and
- after the MRFP indicates that the conference resources are available, send 200 OK response with an MRFC conference identifier. If the MRFC chooses to send a 183 Session Progress response prior to the 200 OK, then the conference identifier may also be included in the 183 Session Progress response.

When the MRFC receives an INVITE request with an indicator to add a party to an existing ad hoc conference (i.e. MRFC conference identifier), the MRFC shall:

- send 100 Trying response; and
- after the MRFP indicates that the conferencing request is granted, send 200 OK response with the MRFC conference identifier. If the MRFC chooses to send a 183 Session Progress response prior to the 200 OK, then the conference identifier may also be included in the 183 Session Progress response.

Editor's note: it is FFS how to identify the resources of the MRFC/MRFP.

5.8.2.1.1.3 Transcoding

The MRFC may receive INVITE requests to set up transcoding between endpoints with incompatible codecs. The MRFC acts as terminating UA in this case.

When the MRFC receives an INVITE request with an indicator for transcoding and a codec is supplied in SDP, the MRFC shall:

- send 100 Trying response; and
- after the MRFP indicates that the transcoding request is granted, send 200 OK response.

When the MRFC receives an INVITE request with an indicator for transcoding but no SDP, the MRFC shall:

- send 183 Session Progress response with list of codecs supported by the MRFC/MRFP.

5.8.2.1.2 MRFC-originating case

Void.

5.8.2.2 Subsequent requests

Editor's Note: PRACK and COMET can be handled in a generic way.

5.8.2.2.1 Tones and announcements

When the MRFC receives an ACK request for a session, this may be considered as an event to direct the MRFP to start the playing of a tone or announcement.

5.8.3 Call release

5.8.3.1 S-CSCF-initiated call release

5.8.3.1.1 Tones and announcements

When the MRFC receives a BYE request for a session, the MRFC shall direct the MRFP to stop the playing of a tone or announcement.

5.8.3.2 MRFC-initiated call release

5.8.3.2.1 Tones and announcements

When the MRFC has a timed session to play tones and announcements and the time expires, the MRFC shall:

- send a BYE request towards the UE.

When the MRFC is informed by the MRFP that tone or announcement resource has been released, the MRFC shall:

- send a BYE request towards the UE.

5.8.2.2.2 Transcoding

When the MRFC receives a PRACK request (in response to the 183) with an indicator for transcoding and codec supplied in SDP, the MRFC shall:

- after the MRFP indicates that the transcoding request is granted, send 200 OK response.

5.8.4 Call-related requests

5.8.4.1 ReINVITE

5.8.4.1.1 MRFC-terminating case

5.8.4.1.1.1 Ad-hoc conferences

The MRFC can receive reINVITE requests to modify an ad-hoc conferencing session (e.g. Multiparty Call) for purposes of floor control and for parties to leave and rejoin the conference.

When the MRFC receives a reINVITE request, the MRFC shall:

- send 100 Trying response; and
- after the MRFP indicates that the conferencing request is granted, send 200 OK response with the MRFC conference identifier. If the MRFC chooses to send a 183 Session Progress response prior to the 200 OK, then the conference identifier may also be included in the 183 Session Progress response.

Editor's note: it is FFS how to identify the resources of the MRFC/MRFP.

5.8.4.1.2 MRFC-originating case

Void.

5.8.4.2 REFER

5.8.4.2.1 MRFC-terminating case

Void.

5.8.4.2.2 MRFC-originating case

Void.

5.8.4.2.3 REFER initiating a new session

Void.

5.8.4.2.4 REFER replacing an existing session

Void.

5.8.4.3 INFO

Editor's Note: It has to be determined which of these requests can be handled in a generic way.

5.8.5 Further initial requests

When the MRFC responds to an OPTIONS request with a 200 OK response, the MRFC may include a message body with an indication of the supported tones/announcement packages, DTMF capabilities, supported codecs and conferencing options of the MRFC/MRFP.

Editor's note: it is FFS how to identify the resources of the MRFC/MRFP.

End of second change

Start of third change

7 Extensions within the present document

7.1 SIP methods defined within the present document

There are no SIP methods defined within the present document over and above those defined in the referenced IETF specifications.

7.2 SIP headers defined within the present document

7.2.1 Path header

7.2.1.1 Introduction

Path header is a mechanism whereby a P-CSCF, I-CSCFs, and S-CSCF can request to be on a signalling path for the initial INVITE exchanged between the UE and the S-CSCF. The path-establishment procedure is originated by the P-CSCF during the registration process. The procedure is performed during the initial registration of each public user identity and all subsequent reregistrations. The list of Path headers obtained by a reregistration overwrites the existing list of Path headers at the S-CSCF. Each reregistration of the same public user identity may result in new list of Path headers. The P-CSCF uses the list of Path headers to construct a list of Route headers. When initiating a call pertaining to a given public user identity, the list of Route headers will be pre-loaded into the initial INVITE request. If a CSCF wants to receive subsequent requests, it will insert its own name to the Record Route header of the initial INVITE request. Once on the route, a CSCF remains on the route for the duration of the call. The path learned while reregistering during an active call does not affect the existing call, since the routing path for the respective call has already been established. The list of Path headers is not forwarded to the UE.

7.2.1.2 Syntax

The Path header field has the syntax described in table 7.1.

Table 7.1: Syntax of path header

```
Path = "Path" ":" 1#(name-addr *(";rr-param"))
rr-param = generic-param
```

7.2.1.3 Operation

The operation of this header is described in clause 5.

7.2.2 P-Called-Party-ID header

7.2.2.1 Introduction

The P-Called-Party-ID header is the mechanism whereby the terminating UE learns the dialled public user identity that triggered the current session initiation.

The S-CSCF inserts the header in all terminating INVITE and reINVITE requests. The header is not used in any other request or response.

7.2.2.2 Syntax

The P-Called-Party-ID header field has the syntax described in table 7.2.

Table 7.2: Syntax of P-Called-Party-ID header

```
P-Called-Party-ID = "P-Called-Party-ID" HCOLON 1#
                    (name-addr *( SEMI p-cdpid-param))
p-cdpid-param = generic-param
```

Table 7.3 is an extension of tables 2 and 3 in RFC 2543bis [20] and table in subclause 7.5 in the SIP-specific event notification [23].

Table 7.3: P-Called-Party-ID header

Header field	where	proxy	ACK	BYE	CAN	INV	OPT	REG	PRA	SUB	NOT
P-Called-Party-ID	R	am	-	-	-	o	-	-	-	-	-

7.2.2.3 Operation

The operation of this header is described in subclause 5.4.3.2.

7.2.4 P-Charging-Function-Addresses header

7.2.4.1 Introduction

The P-Charging-Function-Addresses header is the mechanism whereby the S-CSCF may distribute a common set of addresses for charging functions to other network entities within the same network as the S-CSCF. The primary Charging Correlation Function (CCF) address is a required parameter for offline charging. The secondary CCF address is optional. Both the primary and secondary Event Charging Function (ECF) addresses for online charging are optional.

The S-CSCF inserts the header at the first opportunity when initialising dialogs and with standalone transactions. The header may be included in requests and responses.

7.2.4.2 Syntax

The P-Charging-Function-Addresses header field has the syntax described in ~~table 7.x, which is extracted from draft-henrikson-sip-charging-information~~ [33].

Table 7.x: Syntax of P-Charging-Function-Addresses header

```

P-Charging-Function-Addresses =
    "P-Charging-Function-Addresses" HCOLON
    ( ("primary-ecf" EQUAL primary-ecf )
      [COMMA "secondary-ecf" EQUAL secondary-ecf]
      [COMMA "primary-ecf" EQUAL primary-ecf]
      [COMMA "secondary-ecf" EQUAL secondary-ecf]
    )
primary-ecf = gen-value
secondary-ecf = gen-value
primary-ecf = gen-value
secondary-ecf = gen-value
    
```

~~Table 7.y is an extension of table 2 in RFC 3261 [20].~~

Table 7.y: P-Charging-Function-Addresses header

Header field	where	proxy	ACK	BYE	CAN	INV	OPT	REG	PRA	SUB	NOT
P-Charging-Function-Addresses		ard				o	o	o	o	o	o

7.2.4.3 Operation

The operation of this header is described in subclauses 5.2, 5.3, 5.4, 5.5, 5.6, 5.7 and 5.8.

End of third change

CR-Form-v5

CHANGE REQUEST

⌘ **24.229 CR 097** ⌘ rev **1** ⌘ Current version: **5.0.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ SDP types		
Source:	⌘ Lucent Technologies		
Work item code:	⌘ IMS-CCR	Date:	⌘ 2002-05-16
Category:	⌘ F	Release:	⌘ REL-5
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ Currently the SDP tables in the document 24.229 do not describe the usage of the SDP descriptors in the IMS CN subsystem.
Summary of change:	⌘ The entries in the SDP tables reflect their usage in the IMS CN subsystem.
Consequences if not approved:	⌘ Incomplete specification.

Clauses affected:	⌘ A.3.2.2 , A.3.2.3		
Other specs affected:	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘ Revision 1 includes additional text pertaining to the "b" descriptor that was requested by the H3G.		

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

A.3.2.2 SDP types

Table A.295: SDP types

Item	Type	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
Session level description							
1	v= (protocol version)	[30] 6	m	m	[30] 6	m	m
2	o= (owner/creator and session identifier)	[30] 6	m	m	[30] 6	m	m
3	s= (session name)	[30] 6	m	m	[30] 6	m	m
4	i= (session information)	[30] 6	o		[30] 6		
5	u= (URI of description)	[30] 6	o	n/a	[30] 6		e3n/a
6	e= (email address)	[30] 6	o	e2n/a	[30] 6		e3n/a
7	p= (phone number)	[30] 6	o	e2n/a	[30] 6		e3n/a
8	c= (connection information)	[30] 6	o		[30] 6		
9	b= (bandwidth information)	[30] 6	o	o (NOTE 1)	[30] 6		
Time description (one or more per description)							
10	t= (time the session is active)	[30] 6	m	m	[30] 6	m	m
11	r= (zero or more repeat times)	[30] 6	o	e4n/a	[30] 6		e3n/a
Session level description (continued)							
12	z= (time zone adjustments)	[30] 6	o	e4n/a	[30] 6		e3n/a
13	k= (encryption key)	[30] 6	o		[30] 6		
14	a= (zero or more session attribute lines)	[30] 6	o		[30] 6		
Media description (zero or more per description)							
15	m= (media name and transport address)	[30] 6	o	o	[30] 6	m	m
16	i= (media title)	[30] 6	o		[30] 6		
17	c= (connection information)	[30] 6	c1	c1	[30] 6		
18	b= (bandwidth information)	[30] 6	o	o (NOTE 1)	[30] 6		
19	k= (encryption key)	[30] 6	o		[30] 6		
20	a= (zero or more media attribute lines)	[30] 6	o		[30] 6		
c1:	IF A.295/15 THEN m ELSE n/a. It shall be present. For unicast streams a single space character (0x20) should be used.						
e2:	It should not be sent.						
e3:	When received, it shall be ignored.						
e4:	It shall not be sent.						
e5:	NOTE 1: For "video" and "audio" media types that utilise RTP/RTCP, it shall be specified. For other media types, it may be specified.						
e6:	IF A.295/15 THEN m ELSE n/a						

Prerequisite A.295/14 OR A.295/20 - - a= (zero or more session/media attribute lines)

Table A.296: zero or more session / media attribute lines (a=)

Item	Field	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	category (a=cat)	[30] 6			[30] 6		
2	keywords (a=keywds)	[30] 6			[30] 6		
3	name and version of tool (a=tool)	[30] 6			[30] 6		
4	packet time (a=ptime)	[30] 6			[30] 6		
5	maximum packet time (a=maxptime)	[30] 6			[30] 6		
6	receive-only mode (a=recvonly)	[30] 6			[30] 6		
7	send and receive mode (a=sendrecv)	[30] 6			[30] 6		
8	send-only mode (a=sendonly)	[30] 6			[30] 6		
9	whiteboard orientation (a=orient)	[30] 6			[30] 6		
10	conference type (a=type)	[30] 6			[30] 6		
11	character set (a=charset)	[30] 6			[30] 6		
12	language tag (a=sdplang)	[30] 6			[30] 6		
13	language tag (a=lang)	[30] 6			[30] 6		
14	frame rate (a=framerate)	[30] 6			[30] 6		
15	quality (a=quality)	[30] 6			[30] 6		
16	format specific parameters (a=fmtp)	[30] 6			[30] 6		
17	rtpmap attribute (a=rtpmap)	[30] 6			[30] 6		
18	qos-attribute (a=qos)	[22] 5	c1	c1	[22] 5	c2	c2
c1:		IF A.294/22 THEN o ELSE n/a.					
c2:		IF A.294/22 THEN m ELSE n/a.					

A.3.2.3 SDP types parameters

Prerequisite A.295/2 - - o= (owner/creator and session identifier)

Table A.297: owner/creator and session identifier type (o=)

Item	Field	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	username	[30] 6	m	m	[30] 6	m	m n/a
2	session id	[30] 6	m	m	[30] 6	m	m
3	version	[30] 6	m	m	[30] 6	m	m
4	network type	[30] 6	m	m	[30] 6	m	m n/a
5	address type	[30] 6	m	m	[30] 6	m	m n/a
6	address	[30] 6	m	m	[30] 6	m	m n/a
e1:		Hyphen should be used.					
e2:		When received, it should be ignored.					
e3:		It shall be 64 bit signed integer.					
e4:		When received, it should be ignored.					

Prerequisite A.295/10 - - t= (time the session is active)

Table A.298: time the session is active type (bt=)

Item	Field	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	start time	[30] 6	m	e1m	[30] 6	m	e2n/a
2	stop time	[30] 6	m	e1m	[30] 6	m	e2n/a
e1: When sent, the value shall be zero. e2: When received, it shall be ignored.							

Prerequisite A.295/11 - - r= (zero or more repeat times)

Table A.299: zero or more repeat times (r=)

Item	Field	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	repeat interval	[30] 6		e1n/a	[30] 6		e2n/a
2	active duration	[30] 6		e1n/a	[30] 6		e2n/a
3	list of offsets from start-time	[30] 6		e1n/a	[30] 6		e2n/a
e1: It shall not be sent. e2: When received, it shall be ignored.							

Prerequisite A.295/12 - - z= (time zone adjustments)

Table A.300: time zone adjustments type (z=)

Item	Field	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	adjustment time	[30] 6		e1n/a	[30] 6		e2n/a
2	offset	[30] 6		e1n/a	[30] 6		e2n/a
3	adjustment time	[30] 6		e1n/a	[30] 6		e2n/a
4	offset	[30] 6		e1n/a	[30] 6		e2n/a
e1: It shall not be sent. e2: When received, it shall be ignored.							

Prerequisite A.295/13 - - k= (encryption key)

Table A.301: encryption key type (k=)

Item	Field	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	method	[30] 6			[30] 6		
2	encryption key	[30] 6			[30] 6		

Prerequisite A.295/15 - - m= (media name and transport address)

Table A.302: media name and transport address type (m=)

Item	Field	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	media - ``audio" - ``video" - ``application" - ``data" - ``control"	[30] 6			[30] 6		
2	port	[30] 6			[30] 6		
3	transport	[30] 6			[30] 6		
4	fmt list	[30] 6			[v] 6		

Editor's note: It is expected that this table will be expanded, as this is the principle table that will distinguish operation of different entities within the IM CN subsystem.

Prerequisite A.295/17 - - c= (connection information)

Table A.303: connection type (c=)

Item	Field	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	network type	[30] 6			[30] 6		
2	address type	[30] 6			[30] 6		
3	connection address	[30] 6			[30] 6		

Prerequisite A.295/18 - - b= (bandwidth information)

Table A.304: bandwidth information (b=)

Item	Field	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	modifier	[30] 6		e1 o (NOTE 1)	[30] 6		
2	bandwidth-value	[30] 6		e2 o (NOTE 2)	[30] 6		

~~e1~~:NOTE 1: For "video" and "audio" media types that utilise RTP/RTCP, the value shall be AS.

~~e2~~:NOTE 2: For "video" and "audio" media types that utilise RTP/RTCP, it shall be specified. For other media types, it may be specified.

CR-Form-v5

CHANGE REQUEST

⌘ **24.229 CR 100** ⌘ rev **-** ⌘ Current version: **5.0.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Removal of State from profile tables		
Source:	⌘ Lucent Technologies		
Work item code:	⌘ IMS-CCR	Date:	⌘ 30/04/02
Category:	⌘ F	Release:	⌘ Rel-5
	<i>Use <u>one</u> of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use <u>one</u> of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ The profile tables should only show extensions of SIP and SDP that have achieved RFC status by the time that 24.229 is frozen. It is clear that the state draft in its current form will not achieve that date. Therefore the State header should be removed from the release 5 version of 24.229; if the associated draft achieves RFC status within the timescales of release 6, then it can be reinserted in the release 6 version of 24.229. It should be noted that the inclusion of the State header in the profile tables is merely to indicate that the header is not supported in the 3GPP profile of SIP.
Summary of change:	⌘ The reference to the state draft is removed from clause 2. The row relating to the extension is removed from the major capabilities table for both UA and proxy roles. The row relating to the State header is removed from all the PDU tables for both UA and proxy roles. Removal of reference from Proxy-Require, Require and Supported header rows. Removal from one conditional of dependency on state extension for supported header.
Consequences if not approved:	⌘ None, except that the rows relating to the State header will then have to be completed within the timescales of release 5.

Clauses affected:	⌘ 2, Annex A		
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘		

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

FIRST PROPOSED CHANGE

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 23.002: "Network architecture".
- [3] 3GPP TS 23.003: "Numbering, addressing and identification".
- [4] 3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2".
- [5] 3GPP TS 23.218: "IP Multimedia (IM) Session Handling; IM call model".
- [6] 3GPP TS 23.221: "Architectural requirements".
- [7] 3GPP TS 23.228: "IP multimedia subsystem; Stage 2".
- [8] 3GPP TS 24.008: "Mobile radio interface layer 3 specification; Core Network protocols; Stage 3".
- [9] 3GPP TS 25.304: "UE Procedures in Idle Mode and Procedures for Cell Reselection in Connected Mode".
- [10] 3GPP TS 26.235: "Packet switched conversational multimedia applications; Default codecs".
- [11] 3GPP TS 29.208: "End to end Quality of Service (QoS) signalling flows".
- [12] 3GPP TS 29.228: "IP Multimedia (IM) Subsystem Cx Interface; Signalling flows and message contents".
- [13] 3GPP TS 33.102: "3G Security; Security architecture".
- [14] 3GPP TS 33.203: "Access security for IP based services".
- [15] 3GPP TS 44.018: "Mobile radio interface layer 3 specification, Radio Resource Control Protocol".
- [16] RFC 2806: "URLs for Telephone Calls".
- [17] RFC 2833 (May 2000): "RTP Payload for DTMF Digits, Telephony Tones and Telephony Signals".
- [18] RFC 2916: "E.164 number and DNS".
- [19] RFC 2976 (October 2000): "The SIP INFO method".
- [20] draft-ietf-sip-rfc2543bis-07 (January 2002): "SIP: Session Initiation Protocol".

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

[21] draft-ietf-sip-100rel-05 (February 2002): "Reliability of provisional responses in SIP".

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

[22] draft-sip-manyfolks-resource-03 (November 2001): "Integration of resource management and SIP".

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

[23] draft-ietf-sip-events-02.txt (February 2002): "SIP-Specific Event Notification".

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

[24] draft-ietf-sip-callerprefs-05 (November 2001): "SIP caller preferences and callee capabilities".

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

[25] draft-ietf-sip-refer-02 (October 2001): "The REFER method".

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

[26] draft-ietf-sip-session-timer-08 (October 2001): "The SIP session timer".

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

[27] draft-sip-privacy-03 (November 2001): "SIP extensions for caller identity and privacy".

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

[28] ~~draft-sip-state-02 (August 2001): "SIP extensions for supporting distributed call state"~~[Void](#).

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

[29] draft-sip-call-auth-03 (November 2001): "SIP extensions for media authorization".

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

[30] draft-ietf-mmusic-sdp-new-04 (November 2001): "SDP: Session Description Protocol".

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

FIRST PROPOSED CHANGE

A.2 Profile definition for the Session Initiation Protocol as used in the present document

A.2.1 User agent role

A.2.1.1 Introduction

This subclause contains the ICS proforma tables related to the user role. They need to be completed only for UA implementations:

Prerequisite: A.2/1 -- user agent role.

A.2.1.2 Major capabilities

Table A.3: Major capabilities

Item	Does the implementation support	Reference	RFC status	Profile status
Capabilities within main protocol				
1	client behaviour for registration?	[20]	m	m
2	server behaviour for registration?	[20]	n/a	n/a
3	registrar?	[20]	n/a	n/a
4	client behaviour for session requests?	[20]	m	o
5	server behaviour for session requests?	[20]	m	o
6	session release?	[20]	m	c1
7	timestamping of requests?	[20]	o	o
8	authentication between UA and UA?	[20] subclause 22.4	o	o
9	authentication between UA and registrar?	[20] subclause 22.4	o	n/a
10	insertion of date in requests and responses?	[20] subclause 24.17	o	o
11	downloading of alerting information?	[20] subclause 22.4	o	o
Extensions				
12	The SIP INFO method?	[19]	o	n/a
13	Reliability of provisional responses in SIP?	[21]	o	m
14	SIP caller preferences and callee capabilities?	[24]	o	o
15	the REFER method?	[25]	o	o
16	The SIP session timer?	[26]	o	o
17	Integration of resource management and SIP?	[22]	o	m
18	SIP extensions for caller identity and privacy?	[27]	o	m
19	SIP extensions for supporting distributed call state?	[28]	e	e
20	SIP extensions for media authorization?	[29]	o	m
21	SIP specific event notification	[23]	o	o
22	acting as the notifier of event information	[23]	c2	c2
23	acting as the recipient of event information	[23]	c2	c2
c1: IF A.3/4 OR A.3/5 THEN m ELSE o. c2: IF A.3/21 THEN o.1 ELSE n/a. o.1: At least one of these capabilities is supported.				

A.2.1.3 PDUs

Table A.4: Supported methods

Item	PDU	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	ACK request	[20] 13	m	m	[20] 13	m	m
2	BYE request	[20] 15.1	o		[20] 15.1	o	
3	BYE response	[20] 15.1	o		[20] 15.1	o	
4	CANCEL request	[20] 16.9	o		[20] 16.9	o	
5	CANCEL response	[20] 16.9	o		[20] 16.9	o	
6	COMET request	[22] 5	o		[22] 5	o	
7	COMET response	[22] 5	o		[22] 5	o	
8	INFO request	[19] 2	c2	n/a	[19] 2	c2	n/a
9	INFO response	[19] 2	c2	n/a	[19] 2	c2	n/a
10	INVITE request	[20] 13	m	m	[20] 13	m	m
11	INVITE response	[20] 13	m	m	[20] 13	m	m
12	NOTIFY request	[23] 7.4.2	c4	c4	[23] 7.4.2	c3	c3
13	NOTIFY response	[23] 7.4.2	c3	c3	[23] 7.4.2	c4	c4
14	OPTIONS request	[20] 11	m	m	[20] 11	m	m
15	OPTIONS response	[20] 11	m	m	[20] 11	m	m
16	PRACK request	[21] 6	c5	c5	[21] 6	c5	c5
17	PRACK response	[21] 6	c5	c5	[21] 6	c5	c5
18	REFER request	[25] 3	c1	c1	[25] 3	c1	c1
19	REFER response	[25] 3	c1	c1	[25] 3	c1	c1
20	REGISTER request	[20] 10	o		[20] 10	n/a	
21	REGISTER response	[20] 10	n/a		[20] 10	m	
22	SUBSCRIBE request	[23] 7.4.1	c3	c3	[23] 7.4.1	c4	c4
23	SUBSCRIBE response	[23] 7.4.1	c4	c4	[23] 7.4.1	c3	c3
c2:		IF A.3/12 THEN m ELSE n/a.					
c1:		IF A.3/15 THEN m ELSE n/a.					
c3:		IF A.3/23 THEN m ELSE n/a.					
c4:		IF A.3/22 THEN m ELSE n/a.					
c5:		IF A.3/13 THEN m ELSE n/a - - reliability of provisional responses.					

Editor's note: Optional status of BYE in RFC status is given because RFC states SHOULD (client and server).

Editor's note: Optional status of REGISTER in RFC status is given because RFC states RECOMMENDED (client); for the UAS, not statement is made, but it is assumed that this therefore means n/a.

A.2.1.4 PDU parameters

A.2.1.4.1 Status-codes

Table A.5: Supported status-codes

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	"100" Trying	[20] 23.1.1	n/a	n/a	[20] 23.1.1	m	m
2	"180" Ringing	[20] 23.1.2	c2	c2	[20] 23.1.2	c1	c1
3	"181" Call Is Being Forwarded	[20] 23.1.3	c2	c2	[20] 23.1.3	c1	c1
4	"182" Queued	[20] 23.1.4	c2	c2	[20] 23.1.4	c1	c1
5	"183" Session Progress	[20] 23.1.5	c1	c1	[20] 23.1.5	c1	c1
6	"200" OK						
7	"202" Accepted	[23] 7.6.1	c3	c3	[23] 7.6.1	c3	c3
8	"300" Multiple Choices						
9	"301" Moved Permanently						
10	"302" Moved Temporarily						
11	"305" Use Proxy						
12	"380" Alternative Service						
13	"400" Bad Request						
14	"401" Unauthorized						
15	"402" Payment Required						
16	"403" Forbidden						
17	"404" Not Found						
18	"405" Method Not Allowed						
19	"406" Not Acceptable						
20	"407" Proxy Authentication Required						
21	"408" Request Timeout						
22	"409" Conflict						
23	"410" Gone						
24	"411" Length Required						
25	"413" Request Entity Too Large						
26	"414" Request-URI Too Large						
27	"415" Unsupported Media Type						
28	"420" Bad Extension						
29	"421" Extension Required"						
30	"423" Registration Too Brief	[20] 25.4.17	c4	c4	[20] 25.4.17	m	m
31	"480" Temporarily not available						
32	"481" Call Leg/Transaction Does Not Exist						
33	"482" Loop Detected						
34	"483" Too Many Hops						
35	"484" Address Incomplete						
36	"485" Ambiguous						
37	"486" Busy Here						
38	"487" Request Cancelled						
39	"488" Not Acceptable Here						
40	"489" Bad Events	[23] 7.6.2	c3	c3	[23] 7.6.2	c3	c3
41	"500" Internal Server Error						
42	"501" Not Implemented						
43	"502" Bad Gateway						
44	"503" Service Unavailable						
45	"504" Gateway Time-out						
46	"505" SIP Version not supported						
47	"580" Precondition Failure						

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
48	"600" Busy Everywhere						
49	"603" Decline						
50	"604" Does not exist anywhere						
51	"606" Not Acceptable						
c1:	IF A.4/11 THEN m ELSE n/a.						
c2:	IF A.4/11 THEN o ELSE n/a.						
c3:	IF A.3/21 THEN m ELSE n/a.						
c4:	IF A.4/21 OR A.4/23 THEN m ELSE n/a - - REGISTER response or SUBSCRIBE response.						

A.2.1.4.2 ACK method

Prerequisite A.4/1 – ACK request

Table A.6: Supported headers within the ACK request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow	[20] 24.5	o		[20] 24.5	o	
2	Allow-Events	[23] 7.5.2	c1	c1	[23] 7.5.2	c2	c2
3	Authorization	[20] 24.7	c3	c3	[20] 24.7	c3	c3
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Contact	[20] 24.10	o		[20] 24.10	o	
6	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
7	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
8	Content-Language	[20] 24.13	o		[20] 24.13	o	
9	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
10	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
11	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
12	Date	[20] 24.17	c4	c4	[20] 24.17	m	m
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	Max-Forwards	[20] 24.22	o	o	[20] 24.22	n/a	n/a
15	MIME-Version	[20] 24.24	o		[20] 24.24	o	
16	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
17	Proxy-Require	[20] 24.29	o	n/a	[20] 24.29	n/a	n/a
18	Record-Route	[20] 24.31	o	o	[20] 24.31	m	m
19	Referred-By	[25] 3.3	c5	c5	[25] 3.3	c6	c6
20	Require	[20] 24.33, [28] 3	o	o	[20] 24.33, [28] 3	m	m
21	Route	[20] 24.35	m	m	[20] 24.35	n/a	n/a
22	State	[28] 5.1	e		[28] 5.1	e	
23	Timestamp	[20] 24.40	c7	c7	[20] 24.40	m	m
24	To	[20] 24.41	m	m	[20] 24.41	m	m
25	User-Agent	[20] 24.43	o		[20] 24.43	o	
26	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:	IF A.3/21 THEN o ELSE n/a.						
c2:	IF A.3/21 THEN m ELSE n/a.						
c3:	IF A.3/8 THEN m ELSE n/a.						
c4:	IF A.3/10 THEN o ELSE n/a.						
c5:	IF A.3/15 THEN o ELSE n/a.						
c6:	IF A.3/15 THEN m ELSE n/a.						
c7:	IF A.3/7 THEN o ELSE n/a.						

Editor's note: Is the following table a suitable way of showing the contents of message bodies.

Table A.7: Supported message bodies within the ACK request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.1.4.3 BYE method

Prerequisite A.4/2 – BYE request

Table A.8: Supported headers within the BYE request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
3	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
4	Accept-Language	[20] 24.3	o		[20] 24.3	o	
5	Allow-Events	[23] 7.5.2	c1	c1	[23] 7.5.2	c2	c2
6	Authorization	[20] 24.7	c3	c3	[20] 24.7	c3	c3
7	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
8	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
9	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
10	Content-Language	[20] 24.13	o		[20] 24.13	o	
11	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
12	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
13	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
14	Date	[20] 24.17	c4	c4	[20] 24.17	m	m
15	From	[20] 24.20	m	m	[20] 24.20	m	m
16	Max-Forwards	[20] 24.22	o	o	[20] 24.22	n/a	n/a
17	MIME-Version	[20] 24.24	o		[20] 24.24	o	
18	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
19	Proxy-Require	[20] 24.29	o	n/a	[20] 24.29, [28] 3	n/a	n/a
20	Record-Route	[20] 24.31	o		[20] 24.31	o	
21	Referred-By	[25] 3.3	c5	c5	[25] 3.3	c6	c6
22	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
23	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
24	Require	[20] 24.33, [28] 3	o	o	[20] 24.33, [28] 3	m	m
25	Route	[20] 24.35	m	m	[20] 24.35	n/a	n/a
26	State	[28] 5.1	e		[28] 5.1	e	
27	Supported	[20] 24.39, [26] 7.1	c7	c7	[20] 24.39, [26] 7.1	m	m
28	Timestamp	[20] 24.40	c8	c8	[20] 24.40	m	m
29	To	[20] 24.41	m	m	[20] 24.41	m	m
30	User-Agent	[20] 24.43	o		[20] 24.43	o	
31	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:		IF A.3/21 THEN o ELSE n/a.					
c2:		IF A.3/21 THEN m ELSE n/a.					
c3:		IF A.3/8 THEN m ELSE n/a.					
c4:		IF A.3/10 THEN o ELSE n/a.					
c5:		IF A.3/15 THEN o ELSE n/a.					
c6:		IF A.3/15 THEN m ELSE n/a.					
c7:		IF A.3/16 THEN m ELSE o -- support of timer extension.					
c8:		IF A.3/7 THEN o ELSE n/a.					

Table A.9: Supported message bodies within the BYE request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.4/3 – BYE response

Prerequisite A.5/27 -- "415" Unsupported Media Type

Table A.10: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
12	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Require	[20] 24.33	m	m	[20] 24.33	m	m
16	Server	[20] 24.37	o	o	[20] 24.37	o	o
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	m	m
19	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/3 – BYE response

Prerequisite: A.5/18 -- "405" Method Not Allowed

Table A.11: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow	[20] 24.5	m		[20] 24.5	m	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/3 - - BYE response

Prerequisite: A.5/8 OR A.5/9 OR A.5/10 OR A.5/11 OR A.5/12 OR A.5/36 - - 3xx or 485 "Ambiguous"

Table A.12: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Contact	[20] 24.10	o		[20] 24.10	o	
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/3 – BYE response

Prerequisite: A.5/8 OR A.5/9 OR A.5/10 OR A.5/11 OR A.5/12 – 401

Table A.13: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
13	Record-Route	[20] 24.31	o		[20] 24.31	o	
14	Require	[20] 24.33	m	m	[20] 24.33	m	m
15	Server	[20] 24.37	o	o	[20] 24.37	o	o
16	State	[28] 5.1	e		[28] 5.1	e	
17	Supported	[20] 24.39	m	m	[20] 24.39	m	m
18	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
19	To	[20] 24.41	m	m	[20] 24.41	m	m
20	User-Agent	[20] 24.43	o		[20] 24.43	o	
21	Via	[20] 24.44	m	m	[20] 24.44	m	m
22	Warning	[20] 24.45	o		[20] 24.45	o	
23	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/3 – BYE response

Prerequisite: A.5/8 OR A.5/9 OR A.5/10 OR A.5/11 OR A.5/12 – 407

Table A.14: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/3 – BYE response

Prerequisite: A.5/6 – 2xx

Table A.15: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Authentication-Info	[20] 24.6	o		[20] 24.6	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Record-Route	[20] 24.31	o		[20] 24.31	o	
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN o ELSE n/a.						

Prerequisite A.4/3 – BYE response

Prerequisite: A.5/35 – 484

Table A.16: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Record-Route	[20] 24.31	o		[20] 24.31	o	
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN o ELSE n/a.					

Prerequisite A.4/3 – BYE response

Prerequisite: A.5/1 – 100 Trying

Table A.17: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	n/a	n/a	[20] 24.8	m	m
2	Content-Length	[20] 24.14	n/a	n/a	[20] 24.14	m	m
3	Cseq	[20] 24.16	n/a	n/a	[20] 24.16	m	m
4	Date	[20] 24.17	n/a	n/a	[20] 24.17	m	m
5	From	[20] 24.20	n/a	n/a	[20] 24.20	m	m
6	To	[20] 24.41	n/a	n/a	[20] 24.41	m	m
7	Via	[20] 24.44	n/a	n/a	[20] 24.44	m	m

Prerequisite A.4/3 – BYE response

Prerequisite: A.5/28 – 420

Table A.18: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Require	[20] 24.33	m	m	[20] 24.33	m	m
13	Server	[20] 24.37	o	o	[20] 24.37	o	o
14	State	[28] 5.1	e		[28] 5.1	e	
15	Supported	[20] 24.39	m	m	[20] 24.39	m	m
16	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
17	To	[20] 24.41	m	m	[20] 24.41	m	m
18	Unsupported	[20] 24.42	m	m	[20] 24.42	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/3 – BYE response

Prerequisite: A.5/17 OR A.5/25 OR A.5/31 OR A.5/37 OR A.5/41 OR A.5/44 OR A.5/48 OR A.5/49 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.19: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Require	[20] 24.33	m	m	[20] 24.33	m	m
13	Retry-After	[20] 24.34	o	o	[20] 24.34	o	o
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Table A.20: Supported message bodies within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.1.4.4 CANCEL method

Prerequisite A.4/4 – CANCEL request

Table A.21: Supported headers within the CANCEL request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
3	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
4	Accept-Language	[20] 24.3	o		[20] 24.3	o	
5	Allow-Events	[23] 7.5.2	c1	c1	[23] 7.5.2	c2	c2
6	Authorization	[20] 24.7	c3	c3	[20] 24.7	c3	c3
7	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
8	Content-Language	[20] 24.13	o		[20] 24.13	o	
9	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	c4	c4	[20] 24.17	m	m
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	Max-Forwards	[20] 24.22	o	o	[20] 24.22	n/a	n/a
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
16	Proxy-Require	[20] 24.29	o	n/a	[20] 24.29, [28] 3	n/a	n/a
17	Record-Route	[20] 24.31	o		[20] 24.31	o	
18	Referred-By	[25] 3.3	c5	c5	[25] 3.3	c6	c6
19	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
20	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
21	Require	[20] 24.33, [28] 3	o	o	[20] 24.33, [28] 3	m	m
22	Route	[20] 24.35	m	m	[20] 24.35	n/a	n/a
23	State	[28] 5.1	e		[28] 5.1	e	
24	Supported	[20] 24.39, [26] 7.1	c7	c7	[20] 24.39, [26] 7.1	m	m
25	Timestamp	[20] 24.40	c8	c8	[20] 24.40	m	m
26	To	[20] 24.41	m	m	[20] 24.41	m	m
27	User-Agent	[20] 24.43	o		[20] 24.43	o	
28	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:		IF A.3/21 THEN o ELSE n/a.					
c2:		IF A.3/21 THEN m ELSE n/a.					
c3:		IF A.3/8 THEN m ELSE n/a.					
c4:		IF A.3/10 THEN o ELSE n/a.					
c5:		IF A.3/15 THEN o ELSE n/a.					
c6:		IF A.3/15 THEN m ELSE n/a.					
c7:		IF A.3/16 THEN m ELSE o -- support of timer extension.					
c8:		IF A.3/7 THEN o ELSE n/a.					

Table A.22: Supported message bodies within the CANCEL request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.4/5 – CANCEL response

Prerequisite: A.5/8 OR A.5/9 OR A.5/10 OR A.5/11 OR A.5/12 – 401

Table A.23: Supported headers within the CANCEL response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Language	[20] 24.13	o		[20] 24.13	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
5	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
6	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
7	From	[20] 24.20	m	m	[20] 24.20	m	m
8	MIME-Version	[20] 24.24	o		[20] 24.24	o	
9	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
10	Record-Route	[20] 24.31	o		[20] 24.31	o	
11	Require	[20] 24.33	m	m	[20] 24.33	m	m
12	State	[28] 5.1	e		[28] 5.1	e	
13	Supported	[20] 24.39	m	m	[20] 24.39	m	m
14	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
15	To	[20] 24.41	m	m	[20] 24.41	m	m
16	User-Agent	[20] 24.43	o		[20] 24.43	o	
17	Via	[20] 24.44	m	m	[20] 24.44	m	m
18	Warning	[20] 24.45	o		[20] 24.45	o	
19	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Prerequisite A.4/5 – CANCEL response

Prerequisite: A.5/6 – 200

Table A.24: Supported headers within the CANCEL response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Language	[20] 24.13	o		[20] 24.13	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
5	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
6	From	[20] 24.20	m	m	[20] 24.20	m	m
7	MIME-Version	[20] 24.24	o		[20] 24.24	o	
8	Record-Route	[20] 24.31	o		[20] 24.31	o	
9	Require	[20] 24.33	m	m	[20] 24.33	m	m
10	State	[28] 5.1	e		[28] 5.1	e	
11	Supported	[20] 24.39	m	m	[20] 24.39	m	m
12	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
13	To	[20] 24.41	m	m	[20] 24.41	m	m
14	User-Agent	[20] 24.43	o		[20] 24.43	o	
15	Via	[20] 24.44	m	m	[20] 24.44	m	m
16	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Prerequisite A.4/5 – CANCEL response

Prerequisite: A.5/35 – 484

Table A.25: Supported headers within the CANCEL response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Language	[20] 24.13	o		[20] 24.13	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
5	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
6	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
7	From	[20] 24.20	m	m	[20] 24.20	m	m
8	MIME-Version	[20] 24.24	o		[20] 24.24	o	
9	Record-Route	[20] 24.31	o		[20] 24.31	o	
10	Require	[20] 24.33	m	m	[20] 24.33	m	m
11	State	[28] 5.1	e		[28] 5.1	e	
12	Supported	[20] 24.39	m	m	[20] 24.39	m	m
13	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
14	To	[20] 22.37	m	m	[20] 22.37	m	m
15	User-Agent	[20] 24.43	o		[20] 24.43	o	
16	Via	[20] 24.44	m	m	[20] 24.44	m	m
17	Warning	[20] 24.45	o		[20] 24.45	o	

c1: IF A.3/10 THEN o ELSE n/a

c2: IF A.3/7 THEN m ELSE n/a

Prerequisite A.4/5 – CANCEL response

Prerequisite: A.5/28 – 420

Table A.26: Supported headers within the CANCEL response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Language	[20] 24.13	o		[20] 24.13	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
5	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
6	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
7	From	[20] 24.20	m	m	[20] 24.20	m	m
8	MIME-Version	[20] 24.24	o		[20] 24.24	o	
9	Require	[20] 24.33	m	m	[20] 24.33	m	m
10	State	[28] 5.1	e		[28] 5.1	e	
11	Supported	[20] 24.39	m	m	[20] 24.39	m	m
12	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
13	To	[20] 24.41	m	m	[20] 24.41	m	m
14	Unsupported	[20] 24.42	m	m	[20] 24.42	m	m
15	User-Agent	[20] 24.43	o		[20] 24.43	o	
16	Via	[20] 24.44	m	m	[20] 24.44	m	m
17	Warning	[20] 24.45	o		[20] 24.45	o	

c1: IF A.3/10 THEN o ELSE n/a.

c2: IF A.3/7 THEN m ELSE n/a.

Prerequisite A.4/5 – CANCEL response

Prerequisite: A.5/17 OR A.5/25 OR A.5/31 OR A.5/41 OR A.5/44 OR A.5/48 OR A.5/49 – 404, 413, 480, 500, 503, 600, 603

Table A.27: Supported headers within the CANCEL response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Language	[20] 24.13	o		[20] 24.13	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
5	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
6	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
7	From	[20] 24.20	m	m	[20] 24.20	m	m
8	MIME-Version	[20] 24.24	o		[20] 24.24	o	
9	Require	[20] 24.33	m	m	[20] 24.33	m	m
10	State	[28] 5.1	e		[28] 5.1	e	
11	Supported	[20] 24.39	m	m	[20] 24.39	m	m
12	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
13	To	[20] 24.41	m	m	[20] 24.41	m	m
14	User-Agent	[20] 24.43	o		[20] 24.43	o	
15	Via	[20] 24.44	m	m	[20] 24.44	m	m
16	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Table A.28: Supported message bodies within the CANCEL response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.1.4.5 COMET method

Prerequisite A.4/6 – COMET request

Table A.29: Supported headers within the COMET request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
3	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
4	Accept-Language	[20] 24.3	o		[20] 24.3	o	
5	Allow-Events	[23] 7.5.2	c1	c1	[23] 7.5.2	c2	c2
6	Authorization	[20] 24.7	c3	c3	[20] 24.7	c3	c3
7	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
8	Contact	[20] 24.10	o		[20] 24.10	o	
9	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
10	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
11	Content-Language	[20] 24.13	o		[20] 24.13	o	
12	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
13	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
14	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
15	Date	[20] 24.17	c4	c4	[20] 24.17	m	m
16	Expires	[20] 24.19	o		[20] 24.19	o	
17	From	[20] 24.20	m	m	[20] 24.20	m	m
18	Max-Forwards	[20] 24.22	o	o	[20] 24.22	n/a	n/a
19	MIME-Version	[20] 24.24	o		[20] 24.24	o	
20	Organization	[20] 24.25	o		[20] 24.25	o	
21	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
22	Proxy-Require	[20] 24.29	o	n/a	[20] 24.29, [28] 3	n/a	n/a
23	Record-Route	[20] 24.31	o		[20] 24.31	o	
24	Referred-By	[25] 3.3	c5	c5	[25] 3.3	c6	c6
25	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
26	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
27	Require	[20] 24.33, [28] 3	o	o	[20] 24.33, [28] 3	m	m
28	Route	[20] 24.35	m	m	[20] 24.35	n/a	n/a
29	State	[28] 5.1	e		[28] 5.1	e	
30	Subject	[20] 24.38	o		[20] 24.38	o	
31	Supported	[20] 24.39, [26] 7.1	c7	c7	[20] 24.39, [26] 7.1	m	m
32	Timestamp	[20] 24.40	c8	c8	[20] 24.40	m	m
33	To	[20] 24.41	m	m	[20] 24.41	m	m
34	User-Agent	[20] 24.43	o		[20] 24.43	o	
35	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:	IF A.3/21 THEN o ELSE n/a.						
c2:	IF A.3/21 THEN m ELSE n/a.						
c3:	IF A.3/8 THEN m ELSE n/a.						
c4:	IF A.3/10 THEN o ELSE n/a.						
c5:	IF A.3/15 THEN o ELSE n/a.						
c6:	IF A.3/15 THEN m ELSE n/a.						
c7:	IF A.3/16 THEN m ELSE o -- support of timer extension.						
c8:	IF A.3/7 THEN o ELSE n/a.						

Table A.30: Supported message bodies within the COMET request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.4/7 – COMET response

Prerequisite: A.5/27 -- "415" Unsupported Media Type

Table A.31: Supported headers within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
12	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	MIME-Version	[20] 24.24	o		[20] 24.24	o	
16	Organization	[20] 24.25	o		[20] 24.25	o	
17	Require	[20] 24.33	m	m	[20] 24.33	m	m
18	Server	[20] 24.37	o	o	[20] 24.37	o	o
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	m	m
21	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/7 – COMET response

Prerequisite: A.5/18 -- "405" Method Not Allowed

Table A.32: Supported headers within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow	[20] 24.5	m		[20] 24.5	m	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	m	m
16	Server	[20] 24.37	o	o	[20] 24.37	o	o
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	m	m
19	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/7 – COMET response

Prerequisite: A.5/8 OR A.5/9 OR A.5/10 OR A.5/11 OR A.5/12 OR A.5/36 – 3xx or 485 "Ambiguous"

Table A.33: Supported headers within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Contact	[20] 24.10	o		[20] 24.10	o	
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	m	m
16	Server	[20] 24.37	o	o	[20] 24.37	o	o
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	m	m
19	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/7 – COMET response

Prerequisite: A.5/8 OR A.5/9 OR A.5/10 OR A.5/11 OR A.5/12 – 3xx

Table A.34: Supported headers within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Contact	[20] 24.10	o		[20] 24.10	o	
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	m	m
16	Server	[20] 24.37	o	o	[20] 24.37	o	o
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	m	m
19	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/7 – COMET response

Prerequisite: A.5/20 – 407

Table A.35: Supported headers within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
24	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
25	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
26	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
27	Content-Language	[20] 24.13	o		[20] 24.13	o	
28	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
29	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
30	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
31	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
32	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
33	Expires	[20] 24.19	o		[20] 24.19	o	
34	From	[20] 24.20	m	m	[20] 24.20	m	m
35	MIME-Version	[20] 24.24	o		[20] 24.24	o	
36	Organization	[20] 24.25	o		[20] 24.25	o	
37	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
38	Require	[20] 24.33	m	m	[20] 24.33	m	m
39	Server	[20] 24.37	o	o	[20] 24.37	o	o
40	State	[28] 5.1	e		[28] 5.1	e	
41	Supported	[20] 24.39	m	m	[20] 24.39	m	m
42	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
43	To	[20] 24.41	m	m	[20] 24.41	m	m
44	User-Agent	[20] 24.43	o		[20] 24.43	o	
45	Via	[20] 24.44	m	m	[20] 24.44	m	m
46	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/7 – COMET response

Prerequisite: A.5/6 – 2xx

Table A.36: Supported headers within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow	[20] 24.5	m		[20] 24.5	m	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	Expires	[20] 24.19	o		[20] 24.19	o	
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Organization	[20] 24.25	o		[20] 24.25	o	
14	Record-Route	[20] 24.31	o		[20] 24.31	o	
15	Require	[20] 24.33	m	m	[20] 24.33	m	m
16	Server	[20] 24.37	o	o	[20] 24.37	o	o
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	m	m
19	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Prerequisite A.4/7 – COMET response

Prerequisite: A.5/1 – 100 Trying

Table A.37: Supported headers within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	n/a	n/a	[20] 24.8	m	m
2	Content-Length	[20] 24.14	n/a	n/a	[20] 24.14	m	m
3	Cseq	[20] 24.16	n/a	n/a	[20] 24.16	m	m
4	Date	[20] 24.17	n/a	n/a	[20] 24.17	m	m
5	From	[20] 24.20	n/a	n/a	[20] 24.20	m	m
6	To	[20] 24.41	n/a	n/a	[20] 24.41	m	m
7	Via	[20] 24.44	n/a	n/a	[20] 24.44	m	m

Prerequisite A.4/7 – COMET response

Prerequisite: A.5/28 – 420

Table A.38: Supported headers within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	Expires	[20] 24.19	o		[20] 24.19	o	
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Organization	[20] 24.25	o		[20] 24.25	o	
14	Require	[20] 24.33	m	m	[20] 24.33	m	m
15	Server	[20] 24.37	o	o	[20] 24.37	o	o
16	State	[28] 5.1	e		[28] 5.1	e	
17	Supported	[20] 24.39	m	m	[20] 24.39	m	m
18	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
19	To	[20] 24.41	m	m	[20] 24.41	m	m
20	Unsupported	[20] 24.42	m	m	[20] 24.42	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/7 – COMET response

Prerequisite: A.5/17 OR A.5/25 OR A.5/31 OR A.5/37 OR A.5/41 OR A.5/44 OR A.5/48 OR A.5/49 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.39: Supported headers within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	Expires	[20] 24.19	o		[20] 24.19	o	
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Organization	[20] 24.25	o		[20] 24.25	o	
14	Require	[20] 24.33	m	m	[20] 24.33	m	m
15	Retry-After	[20] 24.34 24.3424.34	o	o	[20] 24.34	o	o
16	Server	[20] 24.37	o	o	[20] 24.37	o	o
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	m	m
19	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Table A.40: Supported message bodies within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.1.4.6 INFO method

Prerequisite A.4/8 – INFO request

Table A.41: Supported headers within the INFO request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
3	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
4	Accept-Language	[20] 24.3	o		[20] 24.3	o	
5	Allow-Events	[23] 7.5.2	c1	c1	[23] 7.5.2	c2	c2
6	Authorization	[20] 24.7	c3	c3	[20] 24.7	c3	c3
7	Call-ID	[20] 24.8	m		[20] 24.8	m	
8	Contact	[20] 24.10	o		[20] 24.10	o	
9	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
10	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
11	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
12	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
13	Date	[20] 24.17	c4	c4	[20] 24.17	m	m
14	Expires	[20] 24.19	o		[20] 24.19	o	
15	From	[20] 24.20	m	m	[20] 24.20	m	m
16	Max-Forwards	[20] 24.22	o	o	[20] 24.22	n/a	n/a
17	Organization	[20] 24.25	o		[20] 24.25	o	
18	Priority	[20] 24.26	o	o	[20] 24.26	o	o
19	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
20	Proxy-Require	[20] 24.29	o	n/a	[20] 24.29, [28] 3	n/a	n/a
21	Record-Route	[20] 24.31	o		[20] 24.31	o	
22	Referred-By	[25] 3.3	c5	c5	[25] 3.3	c6	c6
23	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
24	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
25	Require	[20] 24.33, [28] 3	o	o	[20] 24.33, [28] 3	m	m
26	Route	[20] 24.35	m	m	[20] 24.35	n/a	n/a
27	State	[28] 5.1	e		[28] 5.1	e	
28	Subject	[20] 24.38	o		[20] 24.38	o	
29	Supported	[20] 24.39, [26] 7.1	c7	c7	[20] 24.39, [26] 5, [28] 3	m	m
30	Timestamp	[20] 24.40	c8	c8	[20] 24.40	m	m
31	To	[20] 24.41	m	m	[20] 24.41	m	m
32	User-Agent	[20] 24.43	o		[20] 24.43	o	
33	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:		IF A.3/21 THEN o ELSE n/a.					
c2:		IF A.3/21 THEN m ELSE n/a.					
c3:		IF A.3/8 THEN m ELSE n/a.					
c4:		IF A.3/10 THEN o ELSE n/a.					
c5:		IF A.3/15 THEN o ELSE n/a.					
c6:		IF A.3/15 THEN m ELSE n/a.					
c7:		IF A.3/16 THEN m ELSE o -- support of timer extension.					
c8:		IF A.3/7 THEN o ELSE n/a.					

Table A.42: Supported message bodies within the INFO request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.4/9 – INFO response

Prerequisite: A.5/27 -- "415" Unsupported Media Type @@@ combine

Table A.43: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
5	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
6	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
7	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
8	Expires	[20] 24.19	o		[20] 24.19	o	
9	From	[20] 24.20	m	m	[20] 24.20	m	m
10	Organization	[20] 24.25	o		[20] 24.25	o	
11	Require	[20] 24.33	m	m	[20] 24.33	m	m
12	Server	[20] 24.37	o	o	[20] 24.37	o	o
13	State	[28] 5.1	e		[28] 5.1	e	
14	Supported	[20] 24.39	m	m	[20] 24.39	m	m
15	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
16	To	[20] 24.41	m	m	[20] 24.41	m	m
17	User-Agent	[20] 24.43	o		[20] 24.43	o	
18	Via	[20] 24.44	m	m	[20] 24.44	m	m
19	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Prerequisite A.4/9 – INFO response

Prerequisite: A.5/18 -- "405" Method Not Allowed

Table A.44: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow	[20] 24.5	m		[20] 24.5	m	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
5	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
6	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
7	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
8	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
9	Expires	[20] 24.19	o		[20] 24.19	o	
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	Organization	[20] 24.25	o		[20] 24.25	o	
12	Require	[20] 24.33	m	m	[20] 24.33	m	m
13	Server	[20] 24.37	o	o	[20] 24.37	o	o
14	State	[28] 5.1	e		[28] 5.1	e	
15	Supported	[20] 24.39	m	m	[20] 24.39	m	m
16	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
17	To	[20] 24.41	m	m	[20] 24.41	m	m
18	User-Agent	[20] 24.43	o		[20] 24.43	o	
19	Via	[20] 24.44	m	m	[20] 24.44	m	m
20	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Prerequisite A.4/9 – INFO response

Prerequisite: A.5/8 OR A.5/9 OR A.5/10 OR A.5/11 OR A.5/12 OR A.5/36 – 3xx or 485 "Ambiguous" @@@ combine

Table A.45: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
5	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
6	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
7	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
8	Expires	[20] 24.19	o		[20] 24.19	o	
9	From	[20] 24.20	m	m	[20] 24.20	m	m
10	Organization	[20] 24.25	o		[20] 24.25	o	
11	Require	[20] 24.33	m	m	[20] 24.33	m	m
12	Server	[20] 24.37	o	o	[20] 24.37	o	o
13	State	[28] 5.1	e		[28] 5.1	e	
14	Supported	[20] 24.39	m	m	[20] 24.39	m	m
15	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
16	To	[20] 24.41	m	m	[20] 24.41	m	m
17	User-Agent	[20] 24.43	o		[20] 24.43	o	
18	Via	[20] 24.44	m	m	[20] 24.44	m	m
19	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Prerequisite A.4/9 – INFO response

Prerequisite: A.5/14 – 401

Table A.46: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
5	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
6	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
7	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
8	Expires	[20] 24.19	o		[20] 24.19	o	
9	From	[20] 24.20	m	m	[20] 24.20	m	m
10	Organization	[20] 24.25	o		[20] 24.25	o	
11	Require	[20] 24.33	m	m	[20] 24.33	m	m
12	Server	[20] 24.37	o	o	[20] 24.37	o	o
13	State	[28] 5.1	e		[28] 5.1	e	
14	Supported	[20] 24.39	m	m	[20] 24.39	m	m
15	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
16	To	[20] 24.41	m	m	[20] 24.41	m	m
17	User-Agent	[20] 24.43	o		[20] 24.43	o	
18	Via	[20] 24.44	m	m	[20] 24.44	m	m
19	Warning	[20] 24.45	o		[20] 24.45	o	
20	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Prerequisite A.4/9 – INFO response

Prerequisite: A.5/8 OR A.5/9 OR A.5/10 OR A.5/11 OR A.5/12 – 3xx

Table A.47: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
5	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
6	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
7	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
8	Expires	[20] 24.19	o		[20] 24.19	o	
9	From	[20] 24.20	m	m	[20] 24.20	m	m
10	Organization	[20] 24.25	o		[20] 24.25	o	
11	Require	[20] 24.33	m	m	[20] 24.33	m	m
12	Server	[20] 24.37	o	o	[20] 24.37	o	o
13	State	[28] 5.1	e		[28] 5.1	e	
14	Supported	[20] 24.39	m	m	[20] 24.39	m	m
15	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
16	To	[20] 24.41	m	m	[20] 24.41	m	m
17	User-Agent	[20] 24.43	o		[20] 24.43	o	
18	Via	[20] 24.44	m	m	[20] 24.44	m	m
19	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Prerequisite A.4/9 – INFO response

Prerequisite: A.5/6 – 2xx

Table A.48: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow	[20] 24.5	m		[20] 24.5	m	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
5	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
6	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
7	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
8	Expires	[20] 24.19	o		[20] 24.19	o	
9	From	[20] 24.20	m	m	[20] 24.20	m	m
10	Organization	[20] 24.25	o		[20] 24.25	o	
11	Record-Route	[20] 24.31	o		[20] 24.31	o	
12	Require	[20] 24.33	m	m	[20] 24.33	m	m
13	Server	[20] 24.37	o	o	[20] 24.37	o	o
14	State	[28] 5.1	e		[28] 5.1	e	
15	Supported	[20] 24.39	m	m	[20] 24.39	m	m
16	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
17	To	[20] 24.41	m	m	[20] 24.41	m	m
18	User-Agent	[20] 24.43	o		[20] 24.43	o	
19	Via	[20] 24.44	m	m	[20] 24.44	m	m
20	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Prerequisite A.4/9 - - INFO response

Prerequisite: A.5/35 - - 484

Table A.49: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
5	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
6	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
7	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
8	Expires	[20] 24.19	o		[20] 24.19	o	
9	From	[20] 24.20	m	m	[20] 24.20	m	m
10	Organization	[20] 24.25	o		[20] 24.25	o	
11	Require	[20] 24.33	m	m	[20] 24.33	m	m
12	Server	[20] 24.37	o	o	[20] 24.37	o	o
13	State	[28] 5.1	e		[28] 5.1	e	
14	Supported	[20] 24.39	m	m	[20] 24.39	m	m
15	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
16	To	[20] 24.41	m	m	[20] 24.41	m	m
17	User-Agent	[20] 24.43	o		[20] 24.43	o	
18	Via	[20] 24.44	m	m	[20] 24.44	m	m
19	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Prerequisite A.4/9 – INFO response

Prerequisite: A.5/1 – 100 Trying

Table A.50: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 10.8	n/a	n/a	[20] 10.8	m	m
2	Content-Length	[20] 10.14	n/a	n/a	[20] 10.14	m	m
3	Cseq	[20] 24.16	n/a	n/a	[20] 24.16	m	m
4	Date	[20] 10.17	n/a	n/a	[20] 10.17	m	m
5	From	[20] 24.20	n/a	n/a	[20] 24.20	m	m
6	To	[20] 24.41	n/a	n/a	[20] 24.41	m	m
7	Via	[20] 24.44	n/a	n/a	[20] 24.44	m	m

Prerequisite A.4/9 – INFO response

Prerequisite: A.5/28 – 420

Table A.51: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 10.8	m	m	[20] 10.8	m	m
2	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
3	Content-Length	[20] 10.14	m	m	[20] 10.14	m	m
4	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
5	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
6	Date	[20] 10.17	c1	c1	[20] 10.17	m	m
7	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
8	Expires	[20] 24.19	o		[20] 24.19	o	
9	From	[20] 24.20	m	m	[20] 24.20	m	m
10	Organization	[20] 24.25	o		[20] 24.25	o	
11	Require	[20] 24.33	m	m	[20] 24.33	m	m
12	Server	[20] 24.37	o	o	[20] 24.37	o	o
13	State	[28] 5.1	e		[28] 5.1	e	
14	Supported	[20] 24.39	m	m	[20] 24.39	m	m
15	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
16	To	[20] 24.41	m	m	[20] 24.41	m	m
17	Unsupported	[20] 24.42	m	m	[20] 24.42	m	m
18	User-Agent	[20] 24.43	o		[20] 24.43	o	
19	Via	[20] 24.44	m	m	[20] 24.44	m	m
20	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Prerequisite A.4/9 – INFO response

Prerequisite: A.5/17 OR A.5/25 OR A.5/31 OR A.5/37 OR A.5/41 OR A.5/44 OR A.5/48 OR A.5/49 – 404, 413, 480, 486, 500, 503, 600, 603

Table A.52: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 10.8	m	m	[20] 10.8	m	m
2	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
3	Content-Length	[20] 10.14	m	m	[20] 10.14	m	m
4	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
5	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
6	Date	[20] 10.17	c1	c1	[20] 10.17	m	m
7	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
8	Expires	[20] 24.19	o		[20] 24.19	o	
9	From	[20] 24.20	m	m	[20] 24.20	m	m
10	Organization	[20] 24.25	o		[20] 24.25	o	
11	Require	[20] 24.33	m	m	[20] 24.33	m	m
12	Retry-After	[20] 24.34	o	o	[20] 24.34	o	o
13	Server	[20] 24.37	o	o	[20] 24.37	o	o
14	State	[28] 5.1	e		[28] 5.1	e	
15	Supported	[20] 24.39	m	m	[20] 24.39	m	m
16	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
17	To	[20] 24.41	m	m	[20] 24.41	m	m
18	User-Agent	[20] 24.43	o		[20] 24.43	o	
19	Via	[20] 24.44	m	m	[20] 24.44	m	m
20	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Table A.53: Supported message bodies within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.1.4.7 INVITE method

Prerequisite A.4/10 – INVITE request

Table A.54: Supported headers within the INVITE request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
3	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
4	Accept-Language	[20] 24.3	o		[20] 24.3	o	
5	Alert-Info	[20] 24.4	o	o	[20] 24.4	c1	c1
6	Allow	[20] 24.5, [20] 5.1	o		[20] 24.5,[20] 5.1	o	
7	Allow-Events	[23] 7.5.2	c2	c2	[23] 7.5.2	c2	c2
8	Anonymity	[27] 5.2	o		[27] 5.2		
9	Authorization	[20] 24.7	c3	c3	[20] 24.7	c3	c3
10	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
11	Call-Info	[20] 24.9	o		[20] 24.9	o	
12	Contact	[20] 24.10	m		[20] 24.10	m	
13	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
14	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
15	Content-Language	[20] 24.13	o		[20] 24.13	o	
16	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
17	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
18	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
19	Date	[20] 24.17	c4	c4	[20] 24.17	m	m
20	Expires	[20] 24.19	o		[20] 24.19	o	
21	From	[20] 24.20	m	m	[20] 24.20	m	m
22	In-Reply-To	[20] 24.21	o	o	[20] 24.21	o	o
23	Max-Forwards	[20] 24.22	o	o	[20] 24.22	n/a	n/a
24	MIME-Version	[20] 24.24	o		[20] 24.24	o	
25	Organization	[20] 24.25	o		[20] 24.25	o	
26	Priority	[20] 24.26	o	o	[20] 24.26	o	o
27	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
28	Proxy-Require	[20] 24.29, [26] 4, [27] 4	c5	c5	[20] 24.29, [26] 4, [27] 4, [28] 3	n/a	n/a
29	Record-Route	[20] 24.31	o		[20] 24.31	o	
30	Referred-By	[25] 3.3	c6	c6	[25] 3.3	c7	c7
31	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
32	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
33	Reply-To	[20] 24.32	o	o	[20] 24.32	o	o
34	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
35	Require	[20] 24.33, [26] 4, [28] 3	c8	o	[20] 24.33, [26] 4, [28] 3	m	m
36	Route	[20] 24.35	m	m	[20] 24.35	n/a	n/a
37	Session expires	[26] 3	o		[26] 3	o	
38	State	[28] 5.1	e		[28] 5.1	e	
39	Subject	[20] 24.38	o		[20] 24.38	o	

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
40	Supported	[20] 24.39, [26] 7.1, [28] 5	c9	m	[20] 24.39, [26] 7.1, [28] 5	m	m
41	Timestamp	[20] 24.40	c10	c10	[20] 24.40	m	m
42	To	[20] 24.41	m	m	[20] 24.41	m	m
43	User-Agent	[20] 24.43	o		[20] 24.43	o	
44	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:	IF A.3/11 THEN m ELSE n/a.						
c2:	IF A.3/21 THEN m ELSE n/a.						
c3:	IF A.3/8 THEN m ELSE n/a.						
c4:	IF A.3/10 THEN o ELSE n/a.						
c5:	IF A.3/18 THEN m ELSE o -- (note).						
c6:	IF A.3/15 THEN o ELSE n/a.						
c7:	IF A.3/15 THEN m ELSE n/a.						
c8:	IF A.3/13 THEN o.1 ELSE o -- Reliable transport.						
c9:	IF A.3/16 OR A.3/19 THEN m ELSE IF A.3/13 THEN o.1 ELSE o -- support of timer or state extension , support of reliable transport.						
c10:	IF A.3/7 THEN o ELSE n/a.						
o.1:	At least one of these shall be supported.						
NOTE:	No distinction has been made in these tables between first use of a request on a From/To/Call-ID combination, and the usage in a subsequent one. Therefore the use of "o" etc. above has been included from a viewpoint of first usage.						

Table A.55: Supported message bodies within the INVITE request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.4/11 – INVITE response

Prerequisite: A.5/27 -- "415" Unsupported Media Type

Table A.56: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Anonymity	[27] 5.2	o		[27] 5.2		
5	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
6	Call-Info	[20] 24.9	o		[20] 24.9	o	
7	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
8	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
9	Content-Language	[20] 24.13	o		[20] 24.13	o	
10	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
11	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
12	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
13	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
14	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
15	Expires	[20] 24.19	o		[20] 24.19	o	
16	From	[20] 24.20	m	m	[20] 24.20	m	m
17	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
18	MIME-Version	[20] 24.24	o		[20] 24.24	o	
19	Organization	[20] 24.25	o		[20] 24.25	o	
20	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
21	Require	[20] 24.33	m	m	[26] 5.2	m	m
22	Server	[20] 24.37	o	o	[20] 24.37	o	o
23	Session expires	[26] 3	o		[26] 3	o	
24	State	[28] 5.1	e		[28] 5.1	e	
25	Supported	[20] 24.39	m	m	[20] 24.39	m	m
26	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
27	To	[20] 24.41	m	m	[20] 24.41	m	m
28	User-Agent	[20] 24.43	o		[20] 24.43	o	
29	Via	[20] 24.44	m	m	[20] 24.44	m	m
30	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/11 – INVITE response

Prerequisite: A.5/18 -- "405" Method Not Allowed

Table A.57: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Allow	[20] 24.5	m		[20] 24.5	m/o	
3	Anonymity	[27] 5.2	o		[27] 5.2	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Call-Info	[20] 24.9	o		[20] 24.9	o	
6	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
7	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
8	Content-Language	[20] 24.13	o		[20] 24.13	o	
9	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
10	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
11	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
12	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
13	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
14	Expires	[20] 24.19	o		[20] 24.19	o	
15	From	[20] 24.20	m	m	[20] 24.20	m	m
16	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
17	MIME-Version	[20] 24.24	o		[20] 24.24	o	
18	Organization	[20] 24.25	o		[20] 24.25	o	
19	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
20	Require	[20] 24.33	m	m	[20] 24.33	m	m
21	Server	[20] 24.37	o	o	[20] 24.37	o	o
22	Session expires	[26] 3	o		[26] 3	o	
23	State	[28] 5.1	e		[28] 5.1	e	
24	Supported	[20] 24.39	m	m	[20] 24.39	m	m
25	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
26	To	[20] 24.41	m	m	[20] 24.41	m	m
27	User-Agent	[20] 24.43	o		[20] 24.43	o	
28	Via	[20] 24.44	m	m	[20] 24.44	m	m
29	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/11 – INVITE response

Prerequisite: A.5/8 OR A.5/9 OR A.5/10 OR A.5/11 OR A.5/12 OR A.5/35 – 3xx or 485 "Ambiguous"

Table A.58: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Anonymity	[27] 5.2	o		[27] 5.2		
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Contact	[20] 24.10	o		[20] 24.10	o/m	
6	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
7	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
8	Content-Language	[20] 24.13	o		[20] 24.13	o	
9	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
10	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
11	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
12	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
13	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
14	Expires	[20] 24.19	o		[20] 24.19	o	
15	From	[20] 24.20	m	m	[20] 24.20	m	m
16	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
17	MIME-Version	[20] 24.24	o		[20] 24.24	o	
18	Organization	[20] 24.25	o		[20] 24.25	o	
19	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
20	Require	[20] 24.33	m	m	[20] 24.33	m	m
21	Server	[20] 24.37	o	o	[20] 24.37	o	o
22	Session expires	[26] 3	o		[26] 3	o	
23	State	[28] 5.1	e		[28] 5.1	e	
24	Supported	[20] 24.39	m	m	[20] 24.39	m	m
25	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
26	To	[20] 24.41	m	m	[20] 24.41	m	m
27	User-Agent	[20] 24.43	o		[20] 24.43	o	
28	Via	[20] 24.44	m	m	[20] 24.44	m	m
29	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/11 – INVITE response

Prerequisite: A.5/14 – 401

Table A.59: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Anonymity	[27] 5.2	o		[27] 5.2		
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
12	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
16	MIME-Version	[20] 24.24	o		[20] 24.24	o	
17	Organization	[20] 24.25	o		[20] 24.25	o	
18	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
19	Record-Route	[20] 24.31	o		[20] 24.31	o	
20	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
21	Require	[20] 24.33	m	m	[20] 24.33	m	m
22	Server	[20] 24.37	o	o	[20] 24.37	o	o
23	Session expires	[26] 3	o		[26] 3	o	
24	State	[28] 5.1	e		[28] 5.1	e	
25	Supported	[20] 24.39	m	m	[20] 24.39	m	m
26	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
27	To	[20] 24.41	m	m	[20] 24.41	m	m
28	User-Agent	[20] 24.43	o		[20] 24.43	o	
29	Via	[20] 24.44	m	m	[20] 24.44	m	m
30	Warning	[20] 24.45	o		[20] 24.45	o	
31	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/11 – INVITE response

Prerequisite: A.5/20 – 407

Table A.60: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Anonymity	[27] 5.2	o		[27] 5.2		
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
12	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
16	MIME-Version	[20] 24.24	o		[20] 24.24	o	
17	Organization	[20] 24.25	o		[20] 24.25	o	
18	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
19	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
20	Require	[20] 24.33	m	m	[20] 24.33	m	m
21	Server	[20] 24.37	o	o	[20] 24.37	o	o
22	Session expires	[26] 3	o		[26] 3	o	
23	State	[28] 5.1	e		[28] 5.1	e	
24	Supported	[20] 24.39	m	m	[20] 24.39	m	m
25	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
26	To	[20] 24.41	m	m	[20] 24.41	m	m
27	User-Agent	[20] 24.43	o		[20] 24.43	o	
28	Via	[20] 24.44	m	m	[20] 24.44	m	m
29	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/11 – INVITE response

Prerequisite: A.5/6 – 2xx

Table A.61: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Allow	[20] 24.5	o		[20] 24.5	o	
3	Anonymity	[27] 5.2	o		[27] 5.2		
4	Authentication-Info	[20] 24.6	o		[20] 24.6	o	
5	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
6	Call-Info	[20] 24.9	o		[20] 24.9	o	
7	Contact	[20] 24.10	m		[20] 24.10	m	
8	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
9	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
10	Content-Language	[20] 24.13	o		[20] 24.13	o	
11	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
12	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
13	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
14	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
15	Expires	[20] 24.19	o		[20] 24.19	o	
16	From	[20] 24.20	m	m	[20] 24.20	m	m
17	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
18	MIME-Version	[20] 24.24	o		[20] 24.24	o	
19	Organization	[20] 24.25	o		[20] 24.25	o	
20	Record-Route	[20] 24.31	o		[20] 24.31	o	
21	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
22	Require	[20] 24.33	m	m	[20] 24.33	m	m
23	Server	[20] 24.37	o	o	[20] 24.37	o	o
24	Session expires	[26] 3	o		[26] 3	o	
25	State	[28] 5.1	e		[28] 5.1	e	
26	Supported	[20] 24.39	m	m	[20] 24.39	m	m
27	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
28	To	[20] 24.41	m	m	[20] 24.41	m	m
29	User-Agent	[20] 24.43	o		[20] 24.43	o	
30	Via	[20] 24.44	m	m	[20] 24.44	m	m
31	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/11 – INVITE response

Prerequisite: A.5/35 – 484

Table A.62: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Anonymity	[27] 5.2	o		[27] 5.2		
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
12	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
16	MIME-Version	[20] 24.24	o		[20] 24.24	o	
17	Organization	[20] 24.25	o		[20] 24.25	o	
18	Record-Route	[20] 24.31	o		[20] 24.31	o	
19	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
20	Require	[20] 24.33	m	m	[20] 24.33	m	m
21	Server	[20] 24.37	o	o	[20] 24.37	o	o
22	Session expires	[26] 3	o		[26] 3	o	
23	State	[28] 5.1	e		[28] 5.1	e	
24	Supported	[20] 24.39	m	m	[20] 24.39	m	m
25	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
26	To	[20] 24.41	m	m	[20] 24.41	m	m
27	User-Agent	[20] 24.43	o		[20] 24.43	o	
28	Via	[20] 24.44	m	m	[20] 24.44	m	m
29	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Prerequisite A.4/11 – BYE response

Prerequisite: A.5/1 – 100 Trying

Table A.63: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	n/a	n/a	[20] 24.8	m	m
2	Content-Length	[20] 24.14	n/a	n/a	[20] 24.14	m	m
3	Cseq	[20] 24.16	n/a	n/a	[20] 24.16	m	m
4	Date	[20] 24.17	n/a	n/a	[20] 24.17	m	m
5	From	[20] 24.20	n/a	n/a	[20] 24.20	m	m
6	To	[20] 24.41	n/a	n/a	[20] 24.41	m	m
7	Via	[20] 24.44	n/a	n/a	[20] 24.44	m	m

Prerequisite A.4/11 – INVITE response

Prerequisite: A.5/2 OR A.5/3 OR A.5/4 OR A.5/5 – 1xx

Table A.64: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Anonymity	[27] 5.2	o		[27] 5.2		
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Contact	[20] 24.10	o		[20] 24.10	o/m	
6	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
7	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
8	Content-Language	[20] 24.13	o		[20] 24.13	o	
9	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
10	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
11	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
12	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
16	MIME-Version	[20] 24.24	o		[20] 24.24	o	
17	Organization	[20] 24.25	o		[20] 24.25	o	
18	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
19	Require	[20] 24.33	m	m	[20] 24.33	m	m
20	Rseq	[21] 7.1	c2	m	[21] 7.1	c3	m
21	Server	[20] 24.37	o	o	[20] 24.37	o	o
22	Session expires	[26] 3	o		[26] 3	o	
23	State	[28] 5.1	e		[28] 5.1	e	
24	Supported	[20] 24.39	m	m	[20] 24.39	m	m
25	Timestamp	[20] 24.40	m	m	[20] 24.40	c4	c4
26	To	[20] 24.41	m	m	[20] 24.41	m	m
27	User-Agent	[20] 24.43	o		[20] 24.43	o	
28	Via	[20] 24.44	m	m	[20] 24.44	m	m
29	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/13 THEN o ELSE n/a - - reliability of provisional responses.						
c3:	IF A.3/13 THEN m ELSE n/a - - reliability of provisional responses.						
c4:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/11 – INVITE response

Prerequisite: A.5/28 – 420

Table A.65: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Anonymity	[27] 5.2	o		[27] 5.2		
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
12	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
16	MIME-Version	[20] 24.24	o		[20] 24.24	o	
17	Organization	[20] 24.25	o		[20] 24.25	o	
18	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
19	Require	[20] 24.33	m	m	[20] 24.33	m	m
20	Server	[20] 24.37	o	o	[20] 24.37	o	o
21	Session expires	[26] 3	o		[26] 3	o	
22	State	[28] 5.1	e		[28] 5.1	e	
23	Supported	[20] 24.39	m	m	[20] 24.39	m	m
24	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
25	To	[20] 24.41	m	m	[20] 24.41	m	m
26	Unsupported	[20] 24.42	m	m	[20] 24.42	m	m
27	User-Agent	[20] 24.43	o		[20] 24.43	o	
28	Via	[20] 24.44	m	m	[20] 24.44	m	m
29	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/11 – INVITE response

Prerequisite: A.5/17 OR A.5/25 OR A.5/31 OR A.5/37 OR A.5/48 OR A.5/49 - - 404, 413, 480, 486, 600, 603

Table A.66: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Anonymity	[27] 5.2	o		[27] 5.2		
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
12	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
16	MIME-Version	[20] 24.24	o		[20] 24.24	o	
17	Organization	[20] 24.25	o		[20] 24.25	o	
18	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
19	Require	[20] 24.33	m	m	[20] 24.33	m	m
20	Retry-After	[20] 24.34	o	o	[20] 24.34	o	o
21	Server	[20] 24.37	o	o	[20] 24.37	o	o
22	Session expires	[26] 3	o		[26] 3	o	
23	State	[28] 5.1	e		[28] 5.1	e	
24	Supported	[20] 24.39	m	m	[20] 24.39	m	m
25	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
26	To	[20] 24.41	m	m	[20] 24.41	m	m
27	User-Agent	[20] 24.43	o		[20] 24.43	o	
28	Via	[20] 24.44	m	m	[20] 24.44	m	m
29	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/11 – INVITE response

Prerequisite: A.5/41 - - 500

Table A.67: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Anonymity	[27] 5.2	o		[27] 5.2		
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
12	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
16	MIME-Version	[20] 24.24	o		[20] 24.24	o	
17	Organization	[20] 24.25	o		[20] 24.25	o	
18	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
19	Require	[20] 24.33	m	m	[20] 24.33	m	m
20	Retry-After	[20] 24.34	m	m	[20] 24.34	o	o
21	Server	[20] 24.37	o	o	[20] 24.37	o	o
22	Session expires	[26] 3	o		[26] 3	o	
23	State	[28] 5.1	e		[28] 5.1	e	
24	Supported	[20] 24.39	m	m	[20] 24.39	m	m
25	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
26	To	[20] 24.41	m	m	[20] 24.41	m	m
27	User-Agent	[20] 24.43	o		[20] 24.43	o	
28	Via	[20] 24.44	m	m	[20] 24.44	m	m
29	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/11 – INVITE response

Prerequisite: A.5/44 - - 503

Table A.68: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Anonymity	[27] 5.2	o		[27] 5.2		
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
12	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
16	MIME-Version	[20] 24.24	o		[20] 24.24	o	
17	Organization	[20] 24.25	o		[20] 24.25	o	
18	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
19	Require	[20] 24.33	m	m	[20] 24.33	m	m
20	Retry-After	[20] 24.34	o	o	[20] 24.34	o	m
21	Server	[20] 24.37	o	o	[20] 24.37	o	o
22	Session expires	[26] 3	o		[26] 3	o	
23	State	[28] 5.1	e		[28] 5.1	e	
24	Supported	[20] 24.39	m	m	[20] 24.39	m	m
25	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
26	To	[20] 24.41	m	m	[20] 24.41	m	m
27	User-Agent	[20] 24.43	o		[20] 24.43	o	
28	Via	[20] 24.44	m	m	[20] 24.44	m	m
29	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Table A.69: Supported message bodies within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.1.4.8 NOTIFY method

Prerequisite A.4/12 - - NOTIFY request

Table A.70: Supported headers within the NOTIFY request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
3	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
4	Accept-Language	[20] 24.3	o		[20] 24.3	o	
5	Allow-Events	[23] 7.5.2	c1	c1	[23] 7.5.2	c2	c2
6	Authorization	[20] 24.7	c3	c3	[20] 24.7	c3	c3
7	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
8	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
9	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
10	Content-Language	[20] 24.13	o		[20] 24.13	o	
11	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
12	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
13	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
14	Date	[20] 24.17	c4	c4	[20] 24.17	m	m
15	Event	[23] 7.5.1	m	m	[23] 7.5.1	m	m
16	From	[20] 24.20	m	m	[20] 24.20	m	m
17	Max-Forwards	[20] 24.22	o	o	[20] 24.22	n/a	n/a
18	MIME-Version	[20] 24.24	o		[20] 24.24	o	
19	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
20	Proxy-Require	[20] 24.29	o	n/a	[20] 24.29, [28] 3	n/a	n/a
21	Record-Route	[20] 24.31	o		[20] 24.31	o	
22	Referred-By	[20] 3.3	c5	c5	[20] 3.3	c6	c6
23	Reject-Contact	[20] 5.3	o		[20] 5.3	o	
24	Request-Disposition	[20] 5.5	o		[20] 5.5	o	
25	Require	[20] 24.33, [28] 3	o	o	[20] 24.33, [28] 3	m	m
26	Route	[20] 24.35	m	m	[20] 24.35	n/a	n/a
27	State	[28] 5.1	e		[28] 5.1	e	
28	Subscription-State	[23] 7.5.3	m	m	[23] 7.5.3	m	m
29	Supported	[20] 24.39, [26] 7.1	c7	c7	[20] 24.39, [26] 7.1	m	m
30	Timestamp	[20] 24.40	c8	c8	[20] 24.40	m	m
31	To	[20] 24.41	m	m	[20] 24.41	m	m
32	User-Agent	[20] 24.43	o		[20] 24.43	o	
33	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:		IF A.3/21 THEN o ELSE n/a.					
c2:		IF A.3/21 THEN m ELSE n/a.					
c3:		IF A.3/8 THEN m ELSE n/a.					
c4:		IF A.3/10 THEN o ELSE n/a.					
c5:		IF A.3/15 THEN o ELSE n/a.					
c6:		IF A.3/15 THEN m ELSE n/a.					
c7:		IF A.3/16 THEN m ELSE o -- support of timer extension.					
c8:		IF A.3/7 THEN o ELSE n/a.					

Table A.71: Supported message bodies within the NOTIFY request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.4/13 - - NOTIFY response

Prerequisite A.5/27 -- "415" Unsupported Media Type

Table A.72: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
12	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Require	[20] 24.33	m	m	[20] 24.33	m	m
16	Server	[20] 24.37	o	o	[20] 24.37	o	o
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	m	m
19	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/13 - - NOTIFY response

Prerequisite: A.5/18 -- "405" Method Not Allowed

Table A.73: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow	[20] 24.5	m		[20] 24.5	m	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/13 - - NOTIFY response

Prerequisite: A.5/8 OR A.5/9 OR A.5/10 OR A.5/11 OR A.5/12 OR A.5/36 - - 3xx or 485 "Ambiguous"

Table A.74: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Contact	[20] 24.10	o		[20] 24.10	o	
3	ContentDisposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/13 - - NOTIFY response

Prerequisite: A.5/14 - - 401

Table A.75: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
13	Record-Route	[20] 24.31	o		[20] 24.31	o	
14	Require	[20] 24.33	m	m	[20] 24.33	m	m
15	Server	[20] 24.37	o	o	[20] 24.37	o	o
16	State	[28] 5.1	e		[28] 5.1	e	
17	Supported	[20] 24.39	m	m	[20] 24.39	m	m
18	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
19	To	[20] 24.41	m	m	[20] 24.41	m	m
20	User-Agent	[20] 24.43	o		[20] 24.43	o	
21	Via	[20] 24.44	m	m	[20] 24.44	m	m
22	Warning	[20] 24.45	o		[20] 24.45	o	
23	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/13 - - NOTIFY response

Prerequisite: A.5/20 - - 407

Table A.76: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/13 - - NOTIFY response

Prerequisite: A.5/6 and A.5/7 - - 2xx

Table A.77: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Authentication-Info	[20] 24.6	o		[20] 24.6	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Record-Route	[20] 24.31	o		[20] 24.31	o	
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN o ELSE n/a.						

Prerequisite A.4/13 - - NOTIFY response

Prerequisite: A.5/35 - - 484

Table A.78: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Record-Route	[20] 24.31	o		[20] 24.31	o	
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN o ELSE n/a.						

Prerequisite A.4/13 - - NOTIFY response

Prerequisite: A.5/28 - - 420

Table A.79: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Require	[20] 24.33	m	m	[20] 24.33	m	m
13	Server	[20] 24.37	o	o	[20] 24.37	o	o
14	State	[28] 5.1	e		[28] 5.1	e	
15	Supported	[20] 24.39	m	m	[20] 24.39	m	m
16	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
17	To	[20] 24.41	m	m	[20] 24.41	m	m
18	Unsupported	[20] 24.42	m	m	[20] 24.42	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/13 - - NOTIFY response

Prerequisite: A.5/17 OR A.5/25 OR A.5/31 OR A.5/37 OR A.5/41 OR A.5/44 OR A.5/48 OR A.5/49 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.80: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Require	[20] 24.33	m	m	[20] 24.33	m	m
13	Retry-After	[20] 24.34	o	o	[20] 24.34	o	o
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/13 - - NOTIFY response

Prerequisite: A.5/40 - - 489

Table A.81: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow-Events	[23] 7.5.2	m	m	[23] 7.5.2	m	m
2	Authentication-Info	[20] 24.6	o		[20] 24.6	o	
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
11	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Require	[20] 24.33	m	m	[20] 24.33	m	m
15	Server	[20] 24.37	o	o	[20] 24.37	o	o
16	State	[28] 5.1	e		[28] 5.1	e	
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN o ELSE n/a.					

Table A.82: Supported message bodies within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.1.4.9 OPTIONS method

Prerequisite A.4/14 – OPTIONS request

Table A.83: Supported headers within the OPTIONS request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
3	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
4	Accept-Language	[20] 24.3	o		[20] 24.3	o	
5	Allow-Events	[23] 7.5.2	c1	c1	[23] 7.5.2	c1	c1
6	Authorization	[20] 24.7	c2	c2	[20] 24.7	c2	c2
7	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
8	Call-Info	[20] 24.9	o		[20] 24.9	o	
9	Contact	[20] 24.10	m		[20] 24.10	m	
10	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
11	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
12	Content-Language	[20] 24.13	o		[20] 24.13	o	
13	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
14	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
15	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
16	Date	[20] 24.17	c3	c3	[20] 24.17	m	m
17	From	[20] 24.20	m	m	[20] 24.20	m	m
18	Max-Forwards	[20] 24.22	o	o	[20] 24.22	n/a	n/a
19	MIME-Version	[20] 24.24	o		[20] 24.24	o	
20	Organization	[20] 24.25	o		[20] 24.25	o	
21	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
22	Proxy-Require	[20] 24.29	o	o (note)	[20] 24.29, [28] 3	n/a	n/a
23	Record-Route	[20] 24.31	o		[20] 24.31	o	
24	Referred-By	[25] 3.3	c4	c4	[25] 3.3	c5	c5
25	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
26	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
27	Require	[20] 24.33, [28] 3	o	o	[20] 24.33, [28] 3	m	m
28	Route	[20] 24.35	m	m	[20] 24.35	n/a	n/a
29	State	[28] 5.1	e		[28] 5.1	e	
30	Supported	[20] 24.39, [26] 7.1	c6	c6	[20] 24.39, [26] 5, [28] 3	m	m
31	Timestamp	[20] 24.40	c7	c7	[20] 24.40	m	m
32	To	[20] 24.41	m	m	[20] 24.41	m	m
33	User-Agent	[20] 24.43	o		[20] 24.43	o	
34	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:	IF A.3/21 THEN m ELSE n/a.						
c2:	IF A.3/8 THEN m ELSE n/a.						
c3:	IF A.3/10 THEN o ELSE n/a.						
c4:	IF A.3/15 THEN o ELSE n/a.						
c5:	IF A.3/15 THEN m ELSE n/a.						
c6:	IF A.3/16 THEN m ELSE o -- support of timer extension.						
c7:	IF A.3/7 THEN o ELSE n/a.						
NOTE:	No distinction has been made in these tables between first use of a request on a From/To/Call-ID combination, and the usage in a subsequent one. Therefore the use of "o" etc. above has been included from a viewpoint of first usage.						

Table A.84: Supported message bodies within the OPTIONS request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.4/15 – OPTIONS response

Prerequisite: A.5/27 -- "415" Unsupported Media Type

Table A.85: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Call-Info	[20] 24.9	o		[20] 24.9	o	
6	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
7	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
8	Content-Language	[20] 24.13	o		[20] 24.13	o	
9	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
10	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
11	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
12	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
13	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	MIME-Version	[20] 24.24	o		[20] 24.24	o	
16	Organization	[20] 24.25	o		[20] 24.25	o	
17	Require	[20] 24.33	m	m	[20] 24.33	m	m
18	Server	[20] 24.37	o	o	[20] 24.37	o	o
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	m	m
21	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF 0.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/15 – OPTIONS response

Prerequisite: A.5/18 -- "405" Method Not Allowed

Table A.86: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Allow	[20] 24.5	m	m	[20] 24.5	m	m
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
12	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Organization	[20] 24.25	o		[20] 24.25	o	
16	Require	[20] 24.33	m	m	[20] 24.33	m	m
17	Server	[20] 24.37	o	o	[20] 24.37	o	o
18	State	[28] 5.1	e		[28] 5.1	e	
19	Supported	[20] 24.39	m	m	[20] 24.39	m	m
20	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
21	To	[20] 24.41	m	m	[20] 24.41	m	m
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/15 – OPTIONS response

Prerequisite: A.5/8 OR A.5/9 OR A.5/10 OR A.5/11 OR A.5/12 OR A.5/36 – 3xx or 485 "Ambiguous"

Table A.87: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Contact	[20] 24.10	o		[20] 24.10	o	
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
12	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Organization	[20] 24.25	o		[20] 24.25	o	
16	Require	[20] 24.33	m	m	[20] 24.33	m	m
17	Server	[20] 24.37	o	o	[20] 24.37	o	o
18	State	[28] 5.1	e		[28] 5.1	e	
19	Supported	[20] 24.39	m	m	[20] 24.39	m	m
20	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
21	To	[20] 24.41	m	m	[20] 24.41	m	m
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/15 – OPTIONS response

Prerequisite: A.5/14 – 401

Table A.88: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
11	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
16	Require	[20] 24.33	m	m	[20] 24.33	m	m
17	Server	[20] 24.37	o	o	[20] 24.37	o	o
18	State	[28] 5.1	e		[28] 5.1	e	
19	Supported	[20] 24.39	m	m	[20] 24.39	m	m
20	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
21	To	[20] 24.41	m	m	[20] 24.41	m	m
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
25	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/15 – OPTIONS response

Prerequisite: A.5/20 – 407

Table A.89: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
11	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
16	Require	[20] 24.33	m	m	[20] 24.33	m	m
17	Server	[20] 24.37	o	o	[20] 24.37	o	o
18	State	[28] 5.1	e		[28] 5.1	e	
19	Supported	[20] 24.39	m	m	[20] 24.39	m	m
20	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
21	To	[20] 24.41	m	m	[20] 24.41	m	m
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/15 – OPTIONS response

Prerequisite: A.5/6 – 2xx

Table A.90: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Allow	[20] 24.5	o		[20] 24.5	o/m	
3	Authentication-Info	[20] 24.6	o		[20] 24.6	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Call-Info	[20] 24.9	o		[20] 24.9	o	
6	Contact	[20] 24.10	o		[20] 24.10	o	
7	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
8	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
9	Content-Language	[20] 24.13	o		[20] 24.13	o	
10	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
11	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
12	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
13	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	MIME-Version	[20] 24.24	o		[20] 24.24	o	
16	Organization	[20] 24.25	o		[20] 24.25	o	
17	Record-Route	[20] 24.31	o		[20] 24.31	o	
18	Require	[20] 24.33	m	m	[20] 24.33	m	m
19	Server	[20] 24.37	o	o	[20] 24.37	o	o
20	State	[28] 5.1	e		[28] 5.1	e	
21	Supported	[20] 24.39	m	m	[20] 24.39	m	m
22	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
23	To	[20] 24.41	m	m	[20] 24.41	m	m
24	User-Agent	[20] 24.43	o		[20] 24.43	o	
25	Via	[20] 24.44	m	m	[20] 24.44	m	m
26	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/15 – OPTIONS response

Prerequisite: A.5/35 – 484

Table A.91: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Contact	[20] 24.10	o		[20] 24.10	o	
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
12	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Organization	[20] 24.25	o		[20] 24.25	o	
16	Record-Route	[20] 24.31	o		[20] 24.31	o	
17	Require	[20] 24.33	m	m	[20] 24.33	m	m
18	Server	[20] 24.37	o	o	[20] 24.37	o	o
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	m	m
21	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/15 – OPTIONS response

Prerequisite: A.5/1 – 100 Trying

Table A.92: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	n/a	n/a	[20] 24.8	m	m
2	Content-Length	[20] 24.14	n/a	n/a	[20] 24.14	m	m
3	Cseq	[20] 24.16	n/a	n/a	[20] 24.16	m	m
4	Date	[20] 24.17	n/a	n/a	[20] 24.17	m	m
5	From	[20] 24.20	n/a	n/a	[20] 24.20	m	m
6	To	[20] 24.41	n/a	n/a	[20] 24.41	m	m
7	Via	[20] 24.44	n/a	n/a	[20] 24.44	m	m
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/15 – OPTIONS response

Prerequisite: A.5/28 – 420

Table A.93: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
11	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	m	m
16	Server	[20] 24.37	o	o	[20] 24.37	o	o
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	m	m
19	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	Unsupported	[20] 24.42	m	m	[20] 24.42	m	m
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/15 - - OPTIONS response

Prerequisite: A.5/17 OR A.5/25 OR A.5/31 OR A.5/37 OR A.5/41 OR A.5/44 OR A.5/48 OR A.5/49 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.94: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
11	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	m	m
16	Retry-After	[20] 24.34	o	o	[20] 24.34	o	o
17	Server	[20] 24.37	o	o	[20] 24.37	o	o
18	State	[28] 5.1	e		[28] 5.1	e	
19	Supported	[20] 24.39	m	m	[20] 24.39	m	m
20	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
21	To	[20] 24.41	m	m	[20] 24.41	m	m
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Table A.95: Supported message bodies within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.1.3.10 PRACK method

Prerequisite A.4/16 – PRACK request

Table A.96: Supported headers within the PRACK request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
3	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
4	Accept-Language	[20] 24.3	o		[20] 24.3	o	
5	Allow-Events	[23] 7.5.2	c1	c1	[23] 7.5.2	c2	c2
6	Authorization	[20] 24.7	c3	c3	[20] 24.7	c3	c3
7	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
8	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
9	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
10	Content-Language	[20] 24.13	o		[20] 24.13	o	
11	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
12	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
13	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
14	Date	[20] 24.17	c4	c4	[20] 24.17	m	m
15	From	[20] 24.20	m	m	[20] 24.20	m	m
16	Max-Forwards	[20] 24.22	o	o	[20] 24.22	n/a	n/a
17	MIME-Version	[20] 24.24	o		[20] 24.24	o	
18	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
19	Proxy-Require	[20] 24.29	o	n/a	[20] 24.29, [28] 3	n/a	n/a
20	RAck	[21] 7.2	m	m	[21] 7.2	m	m
21	Record-Route	[20] 24.31	o		[20] 24.31	o	
22	Referred-By	[25] 3.3	c5	c5	[25] 3.3	c6	c6
23	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
24	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
25	Require	[20] 24.33, [28] 3	o	o	[20] 24.33, [28] 3	m	m
26	Route	[20] 24.35	m	m	[20] 24.35	n/a	n/a
27	State	[28] 5.1	e		[28] 5.1	e	
28	Supported	[20] 24.39, [26] 7.1	c7	c7	[20] 24.39, [26] 7.1	m	m
29	Timestamp	[20] 24.40	c8	c8	[20] 24.40	m	m
30	To	[20] 24.41	m	m	[20] 24.41	m	m
31	User-Agent	[20] 24.43	o		[20] 24.43	o	
32	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:		IF A.3/21 THEN o ELSE n/a.					
c2:		IF A.3/21 THEN m ELSE n/a.					
c3:		IF A.3/8 THEN m ELSE n/a.					
c4:		IF A.3/10 THEN o ELSE n/a.					
c5:		IF A.3/15 THEN o ELSE n/a.					
c6:		IF A.3/15 THEN m ELSE n/a.					
c7:		IF A.3/16 THEN m ELSE o -- support of timer extension.					
c8:		IF A.3/7 THEN o ELSE n/a.					

Table A.97: Supported message bodies within the PRACK request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.4/17 – PRACK response

Prerequisite: A.5/27 -- "415" Unsupported Media Type

Table A.98: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
12	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Require	[20] 24.33	m	m	[20] 24.33	m	m
16	Server	[20] 24.37	o	o	[20] 24.37	o	o
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	m	m
19	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/17 – PRACK response

Prerequisite: A.5/18 -- "405" Method Not Allowed

Table A.99: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow	[20] 24.5	m		[20] 24.5	m	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/17 - - PRACK response

Prerequisite: A.5/8 OR A.5/9 OR A.5/10 OR A.5/11 OR A.5/12 OR A.5/36 - - 3xx or 485 "Ambiguous"

Table A.100: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Contact	[20] 24.10	o		[20] 24.10	o	
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/17 - - PRACK response

Prerequisite: A.5/14 - - 401

Table A.101: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
13	Record-Route	[20] 24.31	o		[20] 24.31	o	
14	Require	[20] 24.33	m	m	[20] 24.33	m	m
15	Server	[20] 24.37	o	o	[20] 24.37	o	o
16	State	[28] 5.1	e		[28] 5.1	e	
17	Supported	[20] 24.39	m	m	[20] 24.39	m	m
18	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
19	To	[20] 24.41	m	m	[20] 24.41	m	m
20	User-Agent	[20] 24.43	o		[20] 24.43	o	
21	Via	[20] 24.44	m	m	[20] 24.44	m	m
22	Warning	[20] 24.45	o		[20] 24.45	o	
23	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/17 - - PRACK response

Prerequisite: A.5/20 - - 407

Table A.102: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Prerequisite A.4/17 – PRACK response

Prerequisite: A.5/6 – 2xx

Table A.103: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	From	[20] 24.20	m	m	[20] 24.20	m	m
10	MIME-Version	[20] 24.24	o		[20] 24.24	o	
11	Record-Route	[20] 24.31	o		[20] 24.31	o	
12	Require	[20] 24.33	m	m	[20] 24.33	m	m
13	Server	[20] 24.37	o	o	[20] 24.37	o	o
14	State	[28] 5.1	e		[28] 5.1	e	
15	Supported	[20] 24.39	m	m	[20] 24.39	m	m
16	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
17	To	[20] 24.41	m	m	[20] 24.41	m	m
18	User-Agent	[20] 24.43	o		[20] 24.43	o	
19	Via	[20] 24.44	m	m	[20] 24.44	m	m
20	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Prerequisite A.4/17 – PRACK response

Prerequisite: A.5/35 – 484

Table A.104: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Record-Route	[20] 24.31	o		[20] 24.31	o	
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Prerequisite A.4/17 - PRACK response

Prerequisite: A.5/1 – 100 Trying

Table A.105: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	n/a	n/a	[20] 24.8	m	m
2	Content-Length	[20] 24.14	n/a	n/a	[20] 24.14	m	m
3	Cseq	[20] 24.16	n/a	n/a	[20] 24.16	m	m
4	Date	[20] 24.17	n/a	n/a	[20] 24.17	m	m
5	From	[20] 24.20	n/a	n/a	[20] 24.20	m	m
6	To	[20] 24.41	n/a	n/a	[20] 24.41	m	m
7	Via	[20] 24.44	n/a	n/a	[20] 24.44	m	m

Prerequisite A.4/17 - PRACK response

Prerequisite: A.5/28 - 420@@@combine

Table A.106: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Require	[20] 24.33	m	m	[20] 24.33	m	m
13	Server	[20] 24.37	o	o	[20] 24.37	o	o
14	State	[28] 5.1	e		[28] 5.1	e	
15	Supported	[20] 24.39	m	m	[20] 24.39	m	m
16	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
17	To	[20] 24.41	m	m	[20] 24.41	m	m
18	User-Agent	[20] 24.43	o		[20] 24.43	o	
19	Via	[20] 24.44	m	m	[20] 24.44	m	m
20	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/17 – PRACK response

Prerequisite: A.5/17 OR A.5/25 OR A.5/31 OR A.5/37 OR A.5/41 OR A.5/44 OR A.5/48 OR A.5/49 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.107: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Require	[20] 24.33	m	m	[20] 24.33	m	m
13	Retry-After	[20] 24.34	o	o	[20] 24.34	o	o
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Table A.108: Supported message bodies within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.1.4.11 REFER method

Prerequisite A.4/18 – REFER request

Table A.109: Supported headers within the REFER request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
2	Accept-Language	[20] 24.3	o		[20] 24.3	o	
3	Allow-Events	[23] 7.5.2	c1	c1	[23] 7.5.2	c2	c2
4	Authorization	[20] 24.7	c3	c3	[20] 24.7	c3	c3
5	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
6	Contact	[20] 24.10	o		[20] 24.10	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	c4	c4	[20] 24.17	m	m
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	Max-Forwards	[20] 24.22	o	o	[20] 24.22	n/a	n/a
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Organization	[20] 24.25	o		[20] 24.25	o	
16	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
17	Proxy-Require	[20] 24.29	o	n/a	[20] 24.29, [28] 3	n/a	n/a
18	Record-Route	[20] 24.31	o		[20] 24.31	o	
19	Refer-To	[25] 3.3	m	m	[25] 3.3	m	m
20	Referred-By	[25] 3.3	m	m	[25] 3.3	m	m
21	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
22	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
23	Require	[20] 24.33, [28] 3	o	o	[20] 24.33, [28] 3	m	m
24	Route	[20] 24.35	m	m	[20] 24.35	n/a	n/a
25	State	[28] 5.1	e		[28] 5.1	e	
26	Supported	[20] 24.39, [20] 7.1	c5	c5	[20] 24.39, [20] 7.1	m	m
27	Timestamp	[20] 24.40	c6	c6	[20] 24.40	m	m
28	To	[20] 24.41	m	m	[20] 24.41	m	m
29	User-Agent	[20] 24.43	o		[20] 24.43	o	
30	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:	IF A.3/21 THEN o ELSE n/a.						
c2:	IF A.3/21 THEN m ELSE n/a.						
c3:	IF A.3/8 THEN m ELSE n/a.						
c4:	IF A.3/10 THEN o ELSE n/a.						
c5:	IF A.3/16 THEN m ELSE o -- support of timer extension.						
c6:	IF A.3/7 THEN o ELSE n/a.						

Table A.110: Supported message bodies within the REFER request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.4/19 – REFER response

Prerequisite: A.5/27 -- "415" Unsupported Media Type

Table A.111: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
11	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
12	Expires	[20] 24.19	o		[20] 24.19	o	
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Organization	[20] 24.25	o		[20] 24.25	o	
16	Require	[20] 24.33	m	m	[20] 24.33	m	m
17	Server	[20] 24.37	o	o	[20] 24.37	o	o
18	State	[28] 5.1	e		[28] 5.1	e	
19	Supported	[20] 24.39	m	m	[20] 24.39	m	m
20	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
21	To	[20] 24.41	m	m	[20] 24.41	m	m
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/19 – REFER response

Prerequisite: A.5/18 -- "405" Method Not Allowed

Table A.112: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Allow	[20] 24.5	m	m	[20] 24.5	m	m
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	Expires	[20] 24.19	o		[20] 24.19	o	
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Organization	[20] 24.25	o		[20] 24.25	o	
14	Require	[20] 24.33	m	m	[20] 24.33	m	m
15	Server	[20] 24.37	o	o	[20] 24.37	o	o
16	State	[28] 5.1	e		[28] 5.1	e	
17	Supported	[20] 24.39	m	m	[20] 24.39	m	m
18	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
19	To	[20] 24.41	m	m	[20] 24.41	m	m
20	User-Agent	[20] 24.43	o		[20] 24.43	o	
21	Via	[20] 24.44	m	m	[20] 24.44	m	m
22	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/19 - - REFER response

Prerequisite: A.5/8 OR A.5/9 OR A.5/10 OR A.5/11 OR A.5/12 OR A.5/36 - - 3xx or 485 "Ambiguous"@@@combine

Table A.113: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Contact	[20] 24.10	o		[20] 24.10	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	m	m
16	Server	[20] 24.37	o	o	[20] 24.37	o	o
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	m	m
19	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/19 – REFER response

Prerequisite: A.5/8 OR A.5/9 OR A.5/10 OR A.5/11OR A.5/12 – 401

Table A.114: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	Expires	[20] 24.19	o		[20] 24.19	o	
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Organization	[20] 24.25	o		[20] 24.25	o	
14	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
15	Require	[20] 24.33	m	m	[20] 24.33	m	m
16	Server	[20] 24.37	o	o	[20] 24.37	o	o
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	m	m
19	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
24	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/19 – REFER response

Prerequisite: A.5/20 – 407

Table A.115: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Contact	[20] 24.10	o		[20] 24.10	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	Expires	[20] 24.19	o		[20] 24.19	o	
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Organization	[20] 24.25	o		[20] 24.25	o	
14	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
15	Require	[20] 24.33	m	m	[20] 24.33	m	m
16	Server	[20] 24.37	o	o	[20] 24.37	o	o
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	m	m
19	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/19 – REFER response

Prerequisite: A.5/7 - - 202

Table A.116: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Authentication-Info	[20] 24.6	o		[20] 24.6	o	
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Contact	[20] 24.10	o		[20] 24.10	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Record-Route	[20] 24.31	o		[20] 24.31	o	
16	Require	[20] 24.33	m	m	[20] 24.33	m	m
17	Server	[20] 24.37	o	o	[20] 24.37	o	o
18	State	[28] 5.1	e		[28] 5.1	e	
19	Supported	[20] 24.39	m	m	[20] 24.39	m	m
20	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
21	To	[20] 24.41	m	m	[20] 24.41	m	m
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/19 – REFER response

Prerequisite: A.5/35 – 484@@@combine

Table A.117: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Contact	[20] 24.10	o		[20] 24.10	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	m	m
16	Server	[20] 24.37	o	o	[20] 24.37	o	o
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	m	m
19	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Prerequisite A.4/19 – REFER response

Prerequisite: A.5/1 – 100 Trying

Table A.118: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	n/a	n/a	[20] 24.8	m	m
2	Content-Length	[20] 24.14	n/a	n/a	[20] 24.14	m	m
3	Cseq	[20] 24.16	n/a	n/a	[20] 24.16	m	m
4	Date	[20] 24.17	n/a	n/a	[20] 24.17	m	m
5	From	[20] 24.20	n/a	n/a	[20] 24.20	m	m
6	To	[20] 24.41	n/a	n/a	[20] 24.41	m	m
7	Via	[20] 24.44	n/a	n/a	[20] 24.44	m	m

Prerequisite A.4/19 – REFER response

Prerequisite: A.5/28 – 420

Table A.119: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Contact	[20] 24.10	o		[20] 24.10	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	m	m
16	Server	[20] 24.37	o	o	[20] 24.37	o	o
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	m	m
19	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	Unsupported	[20] 24.42	m	m	[20] 24.42	m	m
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/19 - - REFER response

Prerequisite: A.5/17 OR A.5/25 OR A.5/31 OR A.5/37 OR A.5/41 OR A.5/44 OR A.5/48 OR A.5/49 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.120: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Contact	[20] 24.10	o		[20] 24.10	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	m	m
16	Retry-After	[20] 24.34	o	o	[20] 24.34	o	o
17	Server	[20] 24.37	o	o	[20] 24.37	o	o
18	State	[28] 5.1	e		[28] 5.1	e	
19	Supported	[20] 24.39	m	m	[20] 24.39	m	m
20	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
21	To	[20] 24.41	m	m	[20] 24.41	m	m
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Table A.121: Supported message bodies within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.1.4.12 REGISTER method

Prerequisite A.4/20 - - REGISTER request

Table A.122: Supported headers within the REGISTER request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Allow-Events	[23] 7.5.2	c1	c1	[23] 7.5.2	c1	c1
5	Authorization	[20] 24.7	c2	n/a	[20] 24.7	c2	n/a
6	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
7	Call-Info	[20] 24.9	o		[20] 24.9	o	
8	Contact	[20] 24.10	m		[20] 24.10	m	
9	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
10	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
11	Content-Language	[20] 24.13	o		[20] 24.13	o	
12	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
13	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
14	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
15	Date	[20] 24.17	c3	c3	[20] 24.17	m	m
16	Expires	[20] 24.19	o		[20] 24.19	o	
17	From	[20] 24.20	m	m	[20] 24.20	m	m
18	Max-Forwards	[20] 24.22	o	o	[20] 24.22	n/a	n/a
19	MIME-Version	[20] 24.24	o		[20] 24.24	o	
20	Organization	[20] 24.25	o		[20] 24.25	o	
21	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
22	Proxy-Require	[20] 24.29	o	o (note)	[20] 24.29, [28] 3	n/a	n/a
23	Record-Route	[20] 24.31	o		[20] 24.31	o	
24	Referred-By	[25] 3.3	c4	c4	[25] 3.3	c5	c5
25	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
26	Require	[20] 24.33, [28] 3	o	o	[20] 24.33, [28] 3	m	m
27	Route	[20] 24.35	o	n/a	[20] 24.35	n/a	n/a
28	State	[28] 5.1	e		[28] 5.1	e	
29	Supported	[20] 24.39, [26] 7.1	c6	c6	[20] 24.39, [26] 7.1	m	m
30	Timestamp	[20] 24.40	m	m	[20] 24.40	c7	c7
31	To	[20] 24.41	m	m	[20] 24.41	m	m
32	User-Agent	[20] 24.43	o		[20] 24.43	o	
33	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:	IF A.3/21 THEN m ELSE n/a.						
c2:	IF A.3/9 THEN m ELSE n/a.						
c3:	IF A.3/10 THEN o ELSE n/a.						
c4:	IF A.3/15 THEN o ELSE n/a.						
c5:	IF A.3/15 THEN m ELSE n/a.						
c6:	IF A.3/16 THEN m ELSE o -- support of timer extension.						
c7:	IF A.3/7 THEN m ELSE n/a.						
NOTE:	No distinction has been made in these tables between first use of a request on a From/To/Call-ID combination, and the usage in a subsequent one. Therefore the use of "o" etc. above has been included from a viewpoint of first usage..						

Table A.123: Supported message bodies within the REGISTER request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.4/21 – REGISTER response

Prerequisite: A.5/27 -- "415" Unsupported Media Type

Table A.124: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Call-Info	[20] 24.9	o		[20] 24.9	o	
6	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
7	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
8	Content-Language	[20] 24.13	o		[20] 24.13	o	
9	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
10	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
11	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
12	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
13	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
14	Expires	[20] 24.19	o	o	[20] 24.19	o	o
15	From	[20] 24.20	m	m	[20] 24.20	m	m
16	Organization	[20] 24.25	o		[20] 24.25	o	
17	MIME-Version	[20] 24.24	o		[20] 24.24	o	
18	Require	[20] 24.33	m	m	[20] 24.33	m	m
19	Server	[20] 24.37	o	o	[20] 24.37	o	o
20	State	[28] 5.1	e		[28] 5.1	e	
21	Supported	[20] 24.39	m	m	[20] 24.39	m	m
22	Timestamp	[20] 24.40	c2	c2	[20] 24.40	m	m
23	To	[20] 24.41	m	m	[20] 24.41	m	m
24	User-Agent	[20] 24.43	o		[20] 24.43	o	
25	Via	[20] 24.44	m	m	[20] 24.44	m	m
26	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN o ELSE n/a.						

Prerequisite A.4/21 – REGISTER response

Prerequisite: A.5/18 -- "405" Method Not Allowed

Table A.125: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Allow	[20] 24.5	m		[20] 24.5	m	
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
12	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	Organization	[20] 24.25	o		[20] 24.25	o	
16	MIME-Version	[20] 24.24	o		[20] 24.24	o	
17	Require	[20] 24.33	m	m	[20] 24.33	m	m
18	Server	[20] 24.37	o	o	[20] 24.37	o	o
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	m	m
21	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/21 - - REGISTER response

Prerequisite: A.5/8 OR A.5/9 OR A.5/10 OR A.5/11 OR A.5/12 OR A.5/36 - - 3xx or 485 "Ambiguous"

Table A.126: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Contact	[20] 24.10	o		[20] 24.10	o	
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
12	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	Organization	[20] 24.25	o		[20] 24.25	o	
16	MIME-Version	[20] 24.24	o		[20] 24.24	o	
17	Require	[20] 24.33	m	m	[20] 24.33	m	m
18	Server	[20] 24.37	o	o	[20] 24.37	o	o
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	m	m
21	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/21 – REGISTER response

Prerequisite: A.5/14 – 401

Table A.127: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
11	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
12	Expires	[20] 24.19	o		[20] 24.19	o	
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	MIME-Version	[20] 24.24	o		[20] 24.24	o	
16	Record-Route	[20] 24.31	o		[20] 24.31	o	
17	Require	[20] 24.33	m	m	[20] 24.33	m	m
18	Server	[20] 24.37	o	o	[20] 24.37	o	o
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	m	m
21	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
26	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/21 – REGISTER response

Prerequisite: A.5/20 – 407

Table A.128: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
11	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
12	Expires	[20] 24.19	o		[20] 24.19	o	
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	MIME-Version	[20] 24.24	o		[20] 24.24	o	
16	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
17	Require	[20] 24.33	m	m	[20] 24.33	m	m
18	Server	[20] 24.37	o	o	[20] 24.37	o	o
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	m	m
21	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/21 – REGISTER response

Prerequisite: A.5/6 – 2xx

Table A.129: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Allow	[20] 24.5	o		[20] 24.5	o	
3	Authentication-Info	[20] 24.6	o		[20] 24.6	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Call-Info	[20] 24.9	o		[20] 24.9	o	
6	Contact	[20] 24.10	o		[20] 24.10	o	
7	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
8	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
9	Content-Language	[20] 24.13	o		[20] 24.13	o	
10	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
11	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
12	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
13	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
14	Expires	[20] 24.19	o		[20] 24.19	o	
15	From	[20] 24.20	m	m	[20] 24.20	m	m
16	Organization	[20] 24.25	o		[20] 24.25	o	
17	MIME-Version	[20] 24.24	o		[20] 24.24	o	
18	Record-Route	[20] 24.31	o		[20] 24.31	o	
19	Require	[20] 24.33	m	m	[20] 24.33	m	m
20	Server	[20] 24.37	o	o	[20] 24.37	o	o
21	State	[28] 5.1	e		[28] 5.1	e	
22	Supported	[20] 24.39	m	m	[20] 24.39	m	m
23	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
24	To	[20] 24.41	m	m	[20] 24.41	m	m
25	User-Agent	[20] 24.43	o		[20] 24.43	o	
26	Via	[20] 24.44	m	m	[20] 24.44	m	m
27	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/21 - - REGISTER response

Prerequisite: A.5/35 - - 484

Table A.130: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1			[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
11	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
12	Expires	[20] 24.19	o		[20] 24.19	o	
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	MIME-Version	[20] 24.24	o		[20] 24.24	o	
16	Record-Route	[20] 24.31	o		[20] 24.31	o	
17	Require	[20] 24.33	m	m	[20] 24.33	m	m
18	Server	[20] 24.37	o	o	[20] 24.37	o	o
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	m	m
21	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Prerequisite A.4/21 - - REGISTER response

Prerequisite: A.5/1 - - 100 Trying

Table A.131: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	n/a	n/a	[20] 24.8	m	m
2	Content-Length	[20] 24.14	n/a	n/a	[20] 24.14	m	m
3	Cseq	[20] 24.16	n/a	n/a	[20] 24.16	m	m
4	Date	[20] 24.17	n/a	n/a	[20] 24.17	m	m
5	From	[20] 24.20	n/a	n/a	[20] 24.20	m	m
6	To	[20] 24.41	n/a	n/a	[20] 24.41	m	m
7	Via	[20] 24.44	n/a	n/a	[20] 24.44	m	m

Prerequisite A.4/21 - - REGISTER response

Prerequisite: A.5/28 - - 420

Table A.132: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
11	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
12	Expires	[20] 24.19	o		[20] 24.19	o	
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	MIME-Version	[20] 24.24	o		[20] 24.24	o	
16	Require	[20] 24.33	m	m	[20] 24.33	m	m
17	Server	[20] 24.37	o	o	[20] 24.37	o	o
18	State	[28] 5.1	e		[28] 5.1	e	
19	Supported	[20] 24.39	m	m	[20] 24.39	m	m
20	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
21	To	[20] 24.41	m	m	[20] 24.41	m	m
22	Unsupported	[20] 24.42	m	m	[20] 24.42	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/21 - - REGISTER response

Prerequisite: A.5/17 OR A.5/25 OR A.5/31 OR A.5/37 OR A.5/41 OR A.5/44 OR A.5/48 OR A.5/49 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.133: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
11	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
12	Expires	[20] 24.19	o		[20] 24.19	o	
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	MIME-Version	[20] 24.24	o		[20] 24.24	o	
16	Require	[20] 24.33	m	m	[20] 24.33	m	m
17	Retry-After	[20] 24.34	o	o	[20] 24.34	o	o
18	Server	[20] 24.37	o	o	[20] 24.37	o	o
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	m	m
21	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/21 - - REGISTER response

Prerequisite: A.5/30 - - 423

Table A.120a: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
11	Error-Info	[20] 24.18	o		[20] 24.18	o	
12	Expires	[20] 24.19	o		[20] 24.19	o	
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Min-Expires	[20] 24.23	m	m	[20] 24.23	m	m
16	Organization	[20] 24.25	o		[20] 24.25	o	
17	Require	[20] 24.33	m	m	[20] 24.33	m	m
18	Server	[20] 24.37	o		[20] 24.37	o	
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	m	m
21	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Table A.134: Supported message bodies within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.1.4.13 SUBSCRIBE method

Prerequisite A.4/22 - - SUBSCRIBE request

Table A.135: Supported headers within the SUBSCRIBE request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
3	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
4	Accept-Language	[20] 24.3	o		[20] 24.3	o	
5	Allow-Events	[23] 7.5.2	c1	c1	[23] 7.5.2	c2	c2
6	Authorization	[20] 24.7	c3	c3	[20] 24.7	c3	c3
7	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
8	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
9	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
10	Content-Language	[20] 24.13	o		[20] 24.13	o	
11	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
12	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
13	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
14	Date	[20] 24.17	c4	c4	[20] 24.17	m	m
15	Event	[23] 7.5.1	m	m	[23] 7.5.1	m	m
16	Expires	[20] 24.19	m	m	[20] 24.19	m	m
17	From	[20] 24.20	m	m	[20] 24.20	m	m
18	Max-Forwards	[20] 24.22	o	o	[20] 24.22	n/a	n/a
19	MIME-Version	[20] 24.24	o		[20] 24.24	o	
20	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
21	Proxy-Require	[20] 24.29	o	n/a	[20] 24.29, [28] 3	n/a	n/a
22	Record-Route	[20] 24.31	o		[20] 24.31	o	
23	Referred-By	[25] 3.3	c5	c5	[25] 3.3	c6	c6
24	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
25	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
26	Require	[20] 24.33, [28] 3	o	o	[20] 24.33, [28] 3	m	m
27	Route	[20] 24.35	m	m	[20] 24.35	n/a	n/a
28	State	[28] 5.1	e		[28] 5.1	e	
29	Supported	[20] 24.39, [26] 7.1	c7	c7	[20] 24.39, [26] 7.1	m	m
30	Timestamp	[20] 24.40	c8	c8	[20] 24.40	m	m
31	To	[20] 24.41	m	m	[20] 24.41	m	m
32	User-Agent	[20] 24.43	o		[20] 24.43	o	
33	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:		IF A.3/21 THEN o ELSE n/a.					
c2:		IF A.3/21 THEN m ELSE n/a.					
c3:		IF A.3/8 THEN m ELSE n/a.					
c4:		IF A.3/10 THEN o ELSE n/a.					
c5:		IF A.3/15 THEN o ELSE n/a.					
c6:		IF A.3/15 THEN m ELSE n/a.					
c7:		IF A.3/16 THEN m ELSE o -- support of timer extension.					
c8:		IF A.3/7 THEN o ELSE n/a.					

Table A.136: Supported message bodies within the SUBSCRIBE request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.4/23 - - SUBSCRIBE response

Prerequisite A.5/27 -- "415" Unsupported Media Type

Table A.137: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
12	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Require	[20] 24.33	m	m	[20] 24.33	m	m
16	Server	[20] 24.37	o	o	[20] 24.37	o	o
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	m	m
19	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/23 - - SUBSCRIBE response

Prerequisite: A.5/18 -- "405" Method Not Allowed

Table A.138: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow	[20] 24.5	m		[20] 24.5	m	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/23 - - SUBSCRIBE response

Prerequisite: A.5/8 OR A.5/9 OR A.5/10 OR A.5/11 OR A.5/12 OR A.5/36 - - 3xx or 485 "Ambiguous"

Table A.139: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Contact	[20] 24.10	o		[20] 24.10	o	
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/23 - - SUBSCRIBE response

Prerequisite: A.5/14 - - 401

Table A.140: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
13	Record-Route	[20] 24.31	o		[20] 24.31	o	
14	Require	[20] 24.33	m	m	[20] 24.33	m	m
15	Server	[20] 24.37	o	o	[20] 24.37	o	o
16	State	[28] 5.1	e		[28] 5.1	e	
17	Supported	[20] 24.39	m	m	[20] 24.39	m	m
18	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
19	To	[20] 24.41	m	m	[20] 24.41	m	m
20	User-Agent	[20] 24.43	o		[20] 24.43	o	
21	Via	[20] 24.44	m	m	[20] 24.44	m	m
22	Warning	[20] 24.45	o		[20] 24.45	o	
23	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/23 - - SUBSCRIBE response

Prerequisite: A.5/20 - - 407

Table A.141: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/23 - - SUBSCRIBE response

Prerequisite: A.5/6 and A.5/7 - - 2xx

Table A.142: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Authentication-Info	[20] 24.6	o		[20] 24.6	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
10	Expires	[20] 24.19	m	m	[20] 24.19	m	m
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Record-Route	[20] 24.31	o		[20] 24.31	o	
14	Require	[20] 24.33	m	m	[20] 24.33	m	m
15	Server	[20] 24.37	o	o	[20] 24.37	o	o
16	State	[28] 5.1	e		[28] 5.1	e	
17	Supported	[20] 24.39	m	m	[20] 24.39	m	m
18	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
19	To	[20] 24.41	m	m	[20] 24.41	m	m
20	User-Agent	[20] 24.43	o		[20] 24.43	o	
21	Via	[20] 24.44	m	m	[20] 24.44	m	m
22	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN o ELSE n/a.						

Prerequisite A.4/23 - - SUBSCRIBE response

Prerequisite: A.5/35 - - 484

Table A.143: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Record-Route	[20] 24.31	o		[20] 24.31	o	
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN o ELSE n/a.						

Prerequisite A.4/23 - - SUBSCRIBE response

Prerequisite: A.5/28 - - 420

Table A.144: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Require	[20] 24.33	m	m	[20] 24.33	m	m
13	Server	[20] 24.37	o	o	[20] 24.37	o	o
14	State	[28] 5.1	e		[28] 5.1	e	
15	Supported	[20] 24.39	m	m	[20] 24.39	m	m
16	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
17	To	[20] 24.41	m	m	[20] 24.41	m	m
18	Unsupported	[20] 24.42	m	m	[20] 24.42	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/23 - - SUBSCRIBE response

Prerequisite: A.5/17 OR A.5/25 OR A.5/31 OR A.5/37 OR A.5/41 OR A.5/48 OR A.5/49 - - 404, 413, 480, 486, 500, 600, 603

Table A.145: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Require	[20] 24.33	m	m	[20] 24.33	m	m
13	Retry-After	[20] 24.34	o		[20] 24.34	o	
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/23 - - SUBSCRIBE response

Prerequisite: A.5/44 - - 503

Table A.146: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Require	[20] 24.33	m	m	[20] 24.33	m	m
13	Retry-After	[20] 24.34	o	o	[20] 24.34	o	m
14	Server	[20] 24.37	o	o	[20] 24.37	o	o
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN m ELSE n/a.						

Prerequisite A.4/23 - - SUBSCRIBE response

Prerequisite: A.5/40 - - 489

Table A.147: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow-Events	[23] 7.5.2	m	m	[23] 7.5.2	m	m
2	Authentication-Info	[20] 24.6	o		[20] 24.6	o	
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
11	Error-Info	[20] 24.18	o	o	[20] 24.18	o	o
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Require	[20] 24.33	m	m	[20] 24.33	m	m
15	Server	[20] 24.37	o	o	[20] 24.37	o	o
16	State	[28] 5.1	e		[28] 5.1	e	
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/10 THEN o ELSE n/a.						
c2:	IF A.3/7 THEN o ELSE n/a.						

Prerequisite A.4/23 - - SUBSCRIBE response

Prerequisite: A.5/30 - - 423

Table A. 148: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	c1	c1	[20] 24.17	m	m
9	Error-Info	[20] 24.18	o		[20] 24.18	o	
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Min-Expires	[20] 24.23	m	m	[20] 24.23	m	m
13	Require	[20] 24.33	m	m	[20] 24.33	m	m
14	Server	[20] 24.37	o		[20] 24.37	o	
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	m	m
17	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/10 THEN o ELSE n/a.					
c2:		IF A.3/7 THEN m ELSE n/a.					

Table A.149: Supported message bodies within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.2 Proxy role

A.2.2.1 Introduction

This subclause contains the ICS proforma tables related to the proxy role. They need to be completed only for proxy implementations.

Prerequisite: A.2/2 -- proxy role

A.2.2.2 Major capabilities

Table A.150: Major capabilities

Item	Does the implementation support	Reference	RFC status	Profile status
Capabilities within main protocol				
1	client behaviour for registration?	[20]	m	m
2	server behaviour for registration?	[20]	m	m
3	registrar?	[20]	o	
4	client behaviour for session requests?	[20]	m	m
5	server behaviour for session requests?	[20]	m	m
6	session release?	[20]	m	m
7	Stateless proxy behaviour?	[20]	o.1	
8	Stateful proxy behaviour?	[20]	o.1	
9	insertion of date in requests and responses	[20] 24.17	o	o
10	suppression or modification of alerting information data	[20] 22.4	o	o
11	reading the contents of the Require header before proxying the request or response	[20] 24.33	o	o
12	adding or modifying the contents of the Require header before proxying the REGISTER request or response	[20] 24.33	o	m
13	adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER	[20] 24.33	o	o
14	reading the contents of the Supported header before proxying the response	[20] 24.39	o	o
15	reading the contents of the Unsupported header before proxying the 420 response to a REGISTER	[20] 24.42	o	m
16	reading the contents of the Unsupported header before proxying the 420 response to a method other than REGISTER	[20] 24.42	o	o
17	the inclusion of the Error-Info header in 3xx - 6xx responses	[20] 24.42	o	o
Extensions				
18	The SIP INFO method?	[19]	o	o
19	Reliability of provisional responses in SIP?	[21]	o	m
20	SIP caller preferences and callee capabilities?	[24]	o	o
21	the REFER method?	[25]	o	o
22	The SIP session timer?	[26]	o	o
23	Integration of resource management and SIP?	[22]	o	m
24	SIP extensions for caller identity and privacy?	[27]	o	m
25	SIP extensions for supporting distributed call state?	[28]	e	e
26	SIP extensions for media authorization?	[29]	o	m
27	SIP specific event notification	[23]	o	o
o.1:	It is mandatory to support at least one of these items.			

A.2.2.3 PDUs

Table A.151: Supported methods

Item	PDU	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	ACK request	[20] 13	m	m	[20] 13	m	m
2	BYE request	[20] 15.1	o	m	[20] 15.1	o	m
3	BYE response	[20] 15.1	o	m	[20] 15.1	o	m
4	CANCEL request	[20] 16.9	o	m	[20] 16.9	o	m
5	CANCEL response	[20] 16.9	o	m	[20] 16.9	o	m
6	COMET request	[22] 5	o	m	[22] 5	o	m
7	COMET response	[22] 5	o	m	[22] 5	o	m
8	INFO request	[19] 2	c2	c2	[19] 2	c2	c2
9	INFO response	[19] 2	c2	c2	[19] 2	c2	c2
10	INVITE request	[20] 13	m	m	[20] 13	m	m
11	INVITE response	[20] 13	m	m	[20] 13	m	m
12	NOTIFY request	[23] 7.4.2	c3	c3	[23] 7.4.2	c3	c3
13	NOTIFY response	[23] 7.4.2	c3	c3	[23] 7.4.2	c3	c3
14	OPTIONS request	[20] 11	m	m	[20] 11	m	m
15	OPTIONS response	[20] 11	m	m	[20] 11	m	m
16	PRACK request	[21] 6	m	m	[21] 6	m	m
17	PRACK response	[21] 6	m	m	[21] 6	m	m
18	REFER request	[25] 3	c1	c1	[25] 3	c1	c1
19	REFER response	[25] 3	c1	c1	[25] 3	c1	c1
20	REGISTER request	[20] 10	m	m	[20] 10	m	m
21	REGISTER response	[20] 10	m	m	[20] 10	m	m
22	SUBSCRIBE request	[23] 7.4.1	c3	c3	[23] 7.4.1	c3	c3
23	SUBSCRIBE response	[23] 7.4.1	c3	c3	[23] 7.4.1	c3	c3
c1:	IF A.150/21 THEN m ELSE n/a.						
c2:	IF A.150/18 THEN m ELSE n/a.						
c3:	IF A.150/27 THEN m ELSE n/a.						

A.2.2.4 PDU parameters

A.2.2.4.1 Status-codes

Table A.152: Supported-status codes

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	"100" Trying	[20] 23.1.1	c1	c1	[20] 23.1.1	c2	c2
2	"180" Ringing	[20] 23.1.2	c3	c3	[20] 23.1.2	c3	c3
3	"181" Call Is Being Forwarded	[20] 23.1.3	c3	c3	[20] 23.1.3	c3	c3
4	"182" Queued	[20] 23.1.4	c3	c3	[20] 23.1.4	c3	c3
5	"183" Session Progress	[20] 23.1.5	c3	c3	[20] 23.1.5	c3	c3
6	"200" OK						
7	"202" Accepted	[23] 7.6.1	c4	c4	[23] 7.6.1	c4	c4
8	"300" Multiple Choices						
9	"301" Moved Permanently						
10	"302" Moved Temporarily						
11	"305" Use Proxy						
12	"380" Alternative Service						
13	"400" Bad Request						
14	"401" Unauthorized						
15	"402" Payment Required						
16	"403" Forbidden						
17	"404" Not Found						
18	"405" Method Not Allowed						
19	"406" Not Acceptable						
20	"407" Proxy Authentication Required						
21	"408" Request Timeout						
22	"409" Conflict						
23	"410" Gone						
24	"411" Length Required						
25	"413" Request Entity Too Large						
26	"414" Request-URI Too Large						
27	"415" Unsupported Media Type						
28	"420" Bad Extension						
29	"421" Extension Required"						
30	"423" Registration Too Brief	[20] 25.4.17	c5	c5	[20] 25.4.17	c6	c6
31	"480" Temporarily not available						
32	"481" Call Leg/Transaction Does Not Exist						
33	"482" Loop Detected						
34	"483" Too Many Hops						
35	"484" Address Incomplete						
36	"485" Ambiguous						
37	"486" Busy Here						
38	"487" Request Cancelled						
39	"488" Not Acceptable Here						
40	"489" Bad Events	[23] 7.6.2	c4	c4	[23] 7.6.2	c4	c4
41	"500" Internal Server Error						
42	"501" Not Implemented						
43	"502" Bad Gateway						
44	"503" Service Unavailable						
45	"504" Gateway Time-out						

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
46	"505" SIP Version not supported						
47	"580" Precondition Failure						
48	"600" Busy Everywhere						
49	"603" Decline						
50	"604" Does not exist anywhere						
51	"606" Not Acceptable						
c1:	IF A.150/8 THEN m ELSE n/a.						
c2:	IF A.150/8 THEN m ELSE i.						
c3:	IF A.151/11 THEN m ELSE n/a.						
c4:	IF A.150/27 THEN m ELSE n/a.						
c5:	IF A.151/21 OR A.151/23 THEN m ELSE n/a - - REGISTER response or SUBSCRIBE response.						
c6:	IF A.151/21 OR A.151/23 THEN i ELSE n/a - - REGISTER response or SUBSCRIBE response.						

A.2.2.4.2 ACK method

Prerequisite A.151/1 – ACK request

Table A.153: Supported headers within the ACK request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow	[20] 24.5	o		[20] 24.5	o	
2	Allow-Events	[23] 7.5.2	m	m	[23] 7.5.2	c1	c1
3	Authorization	[20] 24.7	m	m	[20] 24.7	i	i
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Contact	[20] 24.10	o		[20] 24.10	o	
6	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
7	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
8	Content-Language	[20] 24.13	o		[20] 24.13	o	
9	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
10	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
11	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
12	Date	[20] 24.17	m	m	[20] 24.17	c2	c2
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	Max-Forwards	[20] 24.22	m	m	[20] 24.22	m	m
15	MIME-Version	[20] 24.24	o		[20] 24.24	o	
16	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
17	Proxy-Require	[20] 24.29	m	m	[20] 24.29	m	m
18	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
19	Referred-By	[25] 3.3	c3	c3	[25] 3.3	c4	c4
20	Require	[20] 24.33	m	m	[20] 24.33	c5	c5
21	Route	[20] 24.35	m	m	[20] 24.35	m	m
22	State	[28] 5.1	e		[28] 5.1	e	
23	Timestamp	[20] 24.40	m	m	[20] 24.40	i	i
24	To	[20] 24.41	m	m	[20] 24.41	m	m
25	User-Agent	[20] 24.43	o		[20] 24.43	o	
26	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:	IF A.3/21 THEN m ELSE i.						
c2:	IF A.150/9 THEN m ELSE i.						
c3:	IF A.150/21 THEN m ELSE n/a.						
c4:	IF A.150/21 THEN i ELSE n/a.						
c5:	IF A.150/11 OR A.150/13 THEN m ELSE i.						
NOTE:	c1 refers to the UA role major capability as this is the case of a proxy that also acts as a UA specifically for SUBSCRIBE and NOTIFY.						

Editor's note: Is the following table a suitable way of showing the contents of message bodies.

Table A.154: Supported message bodies within the ACK request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.2.4.3 BYE method

Prerequisite A.151/2 – BYE request

Table A.155: Supported headers within the BYE request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
3	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
4	Accept-Language	[20] 24.3	o		[20] 24.3	o	
5	Allow-Events	[23] 7.5.2	m	m	[23] 7.5.2	c1	c1
6	Authorization	[20] 24.7	m	m	[20] 24.7	i	i
7	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
8	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
9	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
10	Content-Language	[20] 24.13	o		[20] 24.13	o	
11	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
12	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
13	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
14	Date	[20] 24.17	m	m	[20] 24.17	c2	c2
15	From	[20] 24.20	m	m	[20] 24.20	m	m
16	Max-Forwards	[20] 24.22	m	m	[20] 24.22	m	m
17	MIME-Version	[20] 24.24	o		[20] 24.24	o	
18	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
19	Proxy-Require	[20] 24.29, [[28]] 3	m	m	[20] 24.29, [[28]] 3	m	m
20	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
21	Referred-By	[25] 3.3	c3	c3	[25] 3.3	c4	c4
22	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
23	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
24	Require	[20] 24.33, [[28]] 3	m	m	[20] 24.33, [[28]] 3	c5	c5
25	Route	[20] 24.35	m	m	[20] 24.35	m	m
26	State	[28] 5.1	e		[28] 5.1	e	
27	Supported	[20] 24.39, [26] 8.1	m	m	[20] 24.39, [26] 8.1	c6	c6
28	Timestamp	[20] 24.40	m	m	[20] 24.40	i	i
29	To	[20] 24.41	m	m	[20] 24.41	m	m
30	User-Agent	[20] 24.43	o		[20] 24.43	o	
31	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:	IF A.3/21 THEN m ELSE i.						
c2:	IF A.150/9 THEN m ELSE i.						
c3:	IF A.150/21 THEN m ELSE n/a.						
c4:	IF A.150/21 THEN i ELSE n/a.						
c5:	IF A.150/11 OR A.150/13 THEN m ELSE i.						
c6:	IF A.150/14 THEN m ELSE i.						
NOTE:	c1 refers to the UA role major capability as this is the case of a proxy that also acts as a UA specifically for SUBSCRIBE and NOTIFY.						

Table A.156: Supported message bodies within the BYE request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.151/3 – BYE response

Prerequisite: A.152/27 -- "415" Unsupported Media Type

Table A.157: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
12	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
16	Server	[20] 24.37	m	m	[20] 24.37	i	i
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	i	i
19	Timestamp	[20] 24.40	o		[20] 24.40	o	
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/3 - - BYE response

Prerequisite: A.152/18 -- "405" Method Not Allowed

Table A.158: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow	[20] 24.5	m		[20] 24.5	m	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/3 - BYE response

Prerequisite: A.152/8 OR A.152/9 OR A.152/10 OR A.152/11 OR A.152/12 OR A.152/36 - 3xx or 485 "Ambiguous"

Table A.159: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Contact	[20] 24.10	o		[20] 24.10	o	
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/3 – BYE response

Prerequisite: A.152/8 OR A.152/9 OR A.152/10 OR A.152/11 OR A.152/12 - - 401

Table A.160: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
13	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
14	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
15	Server	[20] 24.37	m	m	[20] 24.37	i	i
16	State	[28] 5.1	e		[28] 5.1	e	
17	Supported	[20] 24.39	m	m	[20] 24.39	i	i
18	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
19	To	[20] 24.41	m	m	[20] 24.41	m	m
20	User-Agent	[20] 24.43	o		[20] 24.43	o	
21	Via	[20] 24.44	m	m	[20] 24.44	m	m
22	Warning	[20] 24.45	o		[20] 24.45	o	
23	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/3 – BYE response

Prerequisite: A.152/8 OR A.152/9 OR A.152/10 OR A.152/11 OR A.152/12 - - 407

Table A.161: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/3 – BYE response

Prerequisite: A.152/6 – 2xx

Table A.162: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Authentication-Info	[20] 24.6	o		p	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/3 - - BYE response

Prerequisite: A.152/35 - - 484

Table A.163: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Prerequisite A.151/3 - - BYE response

Prerequisite: A.152/1 - - 100 Trying

Table A.164: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
3	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
4	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
5	From	[20] 24.20	m	m	[20] 24.20	m	m
6	To	[20] 24.41	m	m	[20] 24.41	m	m
c1:		IF A.150/9 THEN m ELSE i.					

Prerequisite A.151/3 - - BYE response

Prerequisite: A.152/28 - - 420

Table A.165: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
13	Server	[20] 24.37	m	m	[20] 24.37	i	i
14	State	[28] 5.1	e		[28] 5.1	e	
15	Supported	[20] 24.39	m	m	[20] 24.39	i	i
16	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
17	To	[20] 24.41	m	m	[20] 24.41	m	m
18	Unsupported	[20] 24.42	m	m	[20] 24.42	c3	c3
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						
c3:	IF A.150/16 THEN m ELSE i.						

Prerequisite A.151/3 - - BYE response

Prerequisite: A.152/17 OR A.152/25 OR A.152/31 OR A.152/37 OR A.152/41 OR A.152/44 OR A.152/48 OR A.152/49 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.166: Supported headers within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
13	Retry-After	[20] 24.34	m	m	[20] 24.34	i	i
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Table A.167: Supported message bodies within the BYE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.2.4.4 CANCEL method

Prerequisite A.151/4 – CANCEL request

Table A.168: Supported headers within the CANCEL request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
3	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
4	Accept-Language	[20] 24.3	o		[20] 24.3	o	
5	Allow-Events	[23] 7.5.2	m	m	[23] 7.5.2	c1	c1
6	Authorization	[20] 24.7	m	m	[20] 24.7	i	i
7	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
8	Content-Language	[20] 24.13	o		[20] 24.13	o	
9	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	m	m	[20] 24.17	c2	c2
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	Max-Forwards	[20] 24.22	m	m	[20] 24.22	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
16	Proxy-Require	[20] 24.29, [28] 3	m	m	[20] 24.29, [28] 3	m	m
17	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
18	Referred-By	[25] 3.3	c3	c3	[25] 3.3	c4	c4
19	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
20	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
21	Require	[20] 24.33, [28] 3	m	m	[20] 24.33, [28] 3	c5	c5
22	Route	[20] 24.35	m	m	[20] 24.35	m	m
23	State	[28] 5.1	e		[28] 5.1	e	
24	Supported	[20] 24.39, [26] 8.1	m	m	[20] 24.39, [26] 8.1	c6	c6
25	Timestamp	[20] 24.40	m	m	[20] 24.40	i	i
26	To	[20] 24.41	m	m	[20] 24.41	m	m
27	User-Agent	[20] 24.43	o		[20] 24.43	o	
28	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:	IF A.3/21 THEN m ELSE i.						
c2:	IF A.150/9 THEN m ELSE i.						
c3:	IF A.150/21 THEN m ELSE n/a.						
c4:	IF A.150/21 THEN i ELSE n/a.						
c5:	IF A.150/11 OR A.150/13 THEN m ELSE i.						
c6:	IF A.150/14 THEN m ELSE i.						
NOTE:	c1 refers to the UA role major capability as this is the case of a proxy that also acts as a UA specifically for SUBSCRIBE and NOTIFY.						

Table A.169: Supported message bodies within the CANCEL request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.151/5 - - CANCEL response

Prerequisite: A.152/8 OR A.152/9 OR A.152/10 OR A.152/11 OR A.152/12 - - 401

Table A.170: Supported headers within the CANCEL response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Language	[20] 24.13	o		[20] 24.13	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
5	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
6	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
7	From	[20] 24.20	m	m	[20] 24.20	m	m
8	MIME-Version	[20] 24.24	o		[20] 24.24	o	
9	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
10	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
11	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
12	State	[28] 5.1	e		[28] 5.1	e	
13	Supported	[20] 24.39	m	m	[20] 24.39	i	i
14	Timestamp	[20] 24.40	m	m	[20] 24.40	i	i
15	To	[20] 24.41	m	m	[20] 24.41	m	m
16	User-Agent	[20] 24.43	o		[20] 24.43	o	
17	Via	[20] 24.44	m	m	[20] 24.44	m	m
18	Warning	[20] 24.45	o		[20] 24.45	o	
19	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Prerequisite A.151/5 - - CANCEL response

Prerequisite: A.152/6 - - 200

Table A.171: Supported headers within the CANCEL response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	p	m	m
2	Content-Language	[20] 24.13	o		[20] 24.13	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
5	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
6	From	[20] 24.20	m	m	[20] 24.20	m	m
7	MIME-Version	[20] 24.24	o		[20] 24.24	o	
8	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
9	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
10	State	[28] 5.1	e		[28] 5.1	e	
11	Supported	[20] 24.39	m	m	[20] 24.39	i	i
12	Timestamp	[20] 24.40	m	m	[20] 24.40	i	i
13	To	[20] 24.41	m	m	[20] 24.41	m	m
14	User-Agent	[20] 24.43	o		[20] 24.43	o	
15	Via	[20] 24.44	m	m	[20] 24.44	m	m
16	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Prerequisite A.151/5 - - CANCEL response

Prerequisite: A.152/35 - - 484

Table A.172: Supported headers within the CANCEL response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Language	[20] 24.13	o		[20] 24.13	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
5	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
6	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
7	From	[20] 24.20	m	m	[20] 24.20	m	m
8	MIME-Version	[20] 24.24	o		[20] 24.24	o	
9	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
10	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
11	State	[28] 5.1	e		[28] 5.1	e	
12	Supported	[20] 24.39	m	m	[20] 24.39	i	i
13	Timestamp	[20] 24.40	m	m	[20] 24.40	i	i
14	To	[20] 24.41	m	m	[20] 24.41	m	m
15	User-Agent	[20] 24.43	o		[20] 24.43	o	
16	Via	[20] 24.44	m	m	[20] 24.44	m	m
17	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Prerequisite A.151/5 - - CANCEL response

Prerequisite: A.152/28 - - 420

Table A.173: Supported headers within the CANCEL response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Language	[20] 24.13	o		[20] 24.13	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
5	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
6	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
7	From	[20] 24.20	m	m	[20] 24.20	m	m
8	MIME-Version	[20] 24.24	o		[20] 24.24	o	
9	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
10	State	[28] 5.1	e		[28] 5.1	e	
11	Supported	[20] 24.39	m	m	[20] 24.39	i	i
12	Timestamp	[20] 24.40	m	m	[20] 24.40	i	i
13	To	[20] 24.41	m	m	[20] 24.41	m	m
14	Unsupported	[20] 24.42	m	m	[20] 24.42	c3	c3
15	User-Agent	[20] 24.43	o		[20] 24.43	o	
16	Via	[20] 24.44	m	m	[20] 24.44	m	m
17	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					
c3:		IF A.150/16 THEN m ELSE i.					

Prerequisite A.151/5 - - CANCEL response

Prerequisite: A.152/17 OR A.152/25 OR A.152/31 OR A.152/41 OR A.152/44 OR A.152/48 OR A.152/49 - - 404, 413, 480, 500, 503, 600, 603

Table A.174: Supported headers within the CANCEL response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
18	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
19	Content-Language	[20] 24.13	o		[20] 24.13	o	
20	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
21	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
22	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
23	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
24	From	[20] 24.20	m	m	[20] 24.20	m	m
25	MIME-Version	[20] 24.24	o		[20] 24.24	o	
26	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
27	Retry-After	[20] 24.34	m	m	[20] 24.34	i	i
28	State	[28] 5.1	e		[28] 5.1	e	
29	Supported	[20] 24.39	m	m	[20] 24.39	i	i
30	Timestamp	[20] 24.40	m	m	[20] 24.40	i	i
31	To	[20] 24.41	m	m	[20] 24.41	m	m
32	User-Agent	[20] 24.43	o		[20] 24.43	o	
33	Via	[20] 24.44	m	m	[20] 24.44	m	m
34	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Table A.175: Supported message bodies within the CANCEL response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.2.4.5 COMET method

Prerequisite A.151/6 - - COMET request

Table A.176: Supported headers within the COMET request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
3	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
4	Accept-Language	[20] 24.3	o		[20] 24.3	o	
5	Allow-Events	[23] 7.5.2	m	m	[23] 7.5.2	c1	c1
6	Authorization	[20] 24.7	m	m	[20] 24.7	i	i
7	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
8	Contact	[20] 24.10	o		[20] 24.10	o	
9	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
10	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
11	Content-Language	[20] 24.13	o		[20] 24.13	o	
12	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
13	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
14	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
15	Date	[20] 24.17	m	m	[20] 24.17	c2	c2
16	Expires	[20] 24.19	o		[20] 24.19	o	
17	From	[20] 24.20	m	m	[20] 24.20	m	m
18	Max-Forwards	[20] 24.22	m	m	[20] 24.22	m	m
19	MIME-Version	[20] 24.24	o		[20] 24.24	o	
20	Organization	[20] 24.25	o		[20] 24.25	o	
21	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
22	Proxy-Require	[20] 24.29, [28] 3	m	m	[20] 24.29, [28] 3	m	m
23	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
24	Referred-By	[25] 3.3	c3	c3	[25] 3.3	c4	c4
25	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
26	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
27	Require	[20] 24.33, [28] 3	m	m	[20] 24.33, [28] 3	c5	c5
28	Route	[20] 24.35	m	m	[20] 24.35	m	m
29	State	[28] 5.1	e		[28] 5.1	e	
30	Subject	[20] 24.38	o		[20] 24.38	o	
31	Supported	[20] 24.39, [26] 8.1	m	m	[20] 24.39, [26] 8.1	c6	c6
32	Timestamp	[20] 24.40	m	m	[20] 24.40	i	i
33	To	[20] 24.41	m	m	[20] 24.41	m	m
34	User-Agent	[20] 24.43	o		[20] 24.43	o	
35	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:	IF A.3/21 THEN m ELSE i.						
c2:	IF A.150/9 THEN m ELSE i.						
c3:	IF A.150/21 THEN m ELSE n/a.						
c4:	IF A.150/21 THEN i ELSE n/a.						
c5:	IF A.150/11 OR A.150/13 THEN m ELSE i.						
c6:	IF A.150/14 THEN m ELSE i.						
NOTE:	c1 refers to the UA role major capability as this is the case of a proxy that also acts as a UA specifically for SUBSCRIBE and NOTIFY.						

Editors Note: IETF#50 Agreed that use of Record-Route inside an Invite transaction should be ignored at the UA. It is anticipated that this will be reflected in future IETF drafts and this table will then need to be updated accordingly

Editor's note to editor's note: It is believed that the above editors note refers to the use of record-route headers within reliable responses.

Table A.177: Supported message bodies within the COMET request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.151/7 - - COMET response

Prerequisite: A.152/27 -- "415" Unsupported Media Type

Table A.178: Supported headers within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
12	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	MIME-Version	[20] 24.24	o		[20] 24.24	o	
16	Organization	[20] 24.25	o		[20] 24.25	o	
17	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
18	Server	[20] 24.37	m	m	[20] 24.37	i	i
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	i	i
21	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/7 - - COMET response

Prerequisite: A.152/18 -- "405" Method Not Allowed

Table A.179: Supported headers within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow	[20] 24.5	m		[20] 24.5	m	
2	Call-ID	p	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
16	Server	[20] 24.37	m	m	[20] 24.37	i	i
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	i	i
19	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/7 - - COMET response

Prerequisite: A.152/8 OR A.152/9 OR A.152/10 OR A.152/11 OR A.152/12 OR A.152/36 - - 3xx or 485 "Ambiguous"

Table A.180: Supported headers within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Contact	[20] 24.10	o		[20] 24.10	o	
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
16	Server	[20] 24.37	m	m	[20] 24.37	i	i
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	i	i
19	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/7 - - COMET response

Prerequisite: A.152/8 OR A.152/9 OR A.152/10 OR A.152/11 OR A.152/12 - - 3xx

Table A.181: Supported headers within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Contact	[20] 24.10	o		[20] 24.10	o	
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
16	Server	[20] 24.37	m	m	[20] 24.37	i	i
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	i	i
19	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/7 - - COMET response

Prerequisite: A.152/20 - - 407

Table A.182: Supported headers within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	Expires	[20] 24.19	o		[20] 24.19	o	
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Organization	[20] 24.25	o		[20] 24.25	o	
14	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
15	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
16	Server	[20] 24.37	m	m	[20] 24.37	i	i
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	i	i
19	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/7 - - COMET response

Prerequisite: A.152/6 - - 2xx

Table A.183: Supported headers within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow	[20] 24.5	m		[20] 24.5	m	
2	Call-ID	p	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	Expires	[20] 24.19	o		[20] 24.19	o	
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Organization	[20] 24.25	o		[20] 24.25	o	
14	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
15	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
16	Server	[20] 24.37	m	m	[20] 24.37	i	i
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	i	i
19	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Editors Note: IETF#50 Agreed that use of Record-Route inside an Invite transaction should be ignored at the UA. It is anticipated that this will be reflected in future IETF drafts and this table will then need to be updated accordingly

Editor's note to editor's note: It is believed that the above editors note refers to the use of record-route headers within reliable responses.

Prerequisite A.151/7 - - COMET response

Prerequisite: A.152/1 - - 100 Trying

Table A.184: Supported headers within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
3	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
4	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
5	From	[20] 24.20	m	m	[20] 24.20	m	m
6	To	[20] 24.41	m	m	[20] 24.41	m	m
7	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:	IF A.150/9 THEN m ELSE i.						

Prerequisite A.151/7 - - COMET response

Prerequisite: A.152/28 - - 420

Table A.185: Supported headers within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	Expires	[20] 24.19	o		[20] 24.19	o	
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Organization	[20] 24.25	o		[20] 24.25	o	
14	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
15	Server	[20] 24.37	m	m	[20] 24.37	i	i
16	State	[28] 5.1	e		[28] 5.1	e	
17	Supported	[20] 24.39	m	m	[20] 24.39	i	i
18	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
19	To	[20] 24.41	m	m	[20] 24.41	m	m
20	Unsupported	[20] 24.42	m	m	[20] 24.42	c3	c3
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						
c3:	IF A.150/16 THEN m ELSE i.						

Prerequisite A.151/7 - - COMET response

Prerequisite: A.152/17 OR A.152/25 OR A.152/31 OR A.152/37 OR A.152/41 OR A.152/44 OR A.152/48 OR A.152/49 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.186: Supported headers within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	Expires	[20] 24.19	o		[20] 24.19	o	
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Organization	[20] 24.25	o		[20] 24.25	o	
14	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
15	Retry-After	[20] 24.34	m	m	[20] 24.34	i	i
16	Server	[20] 24.37	m	m	[20] 24.37	i	i
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	i	i
19	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Table A.187: Supported message bodies within the COMET response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.2.4.6 INFO method

Prerequisite A.151/8 - - INFO request

Table A.188: Supported headers within the INFO request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
3	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
4	Accept-Language	[20] 24.3	o		[20] 24.3	o	
5	Allow-Events	[23] 7.5.2	m	m	[23] 7.5.2	c1	c1
6	Authorization	[20] 24.7	m	m	[20] 24.7	i	i
7	Call-ID	[20] 24.8	m		[20] 24.8	m	
8	Contact	[20] 24.10	o		[20] 24.10	o	
9	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
10	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
11	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
12	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
13	Date	[20] 24.17	m	m	[20] 24.17	c2	c2
14	Expires	[20] 24.19	o		[20] 24.19	o	
15	From	[20] 24.20	m	m	[20] 24.20	m	m
16	Max-Forwards	[20] 24.22	m	m	[20] 24.22	m	m
17	Organization	[20] 24.25	o		[20] 24.25	o	
18	Priority	[20] 24.26	m	m	[20] 24.26	i	i
19	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
20	Proxy-Require	[20] 24.29, [28] 3	m	m	[20] 24.29, [28] 3	m	m
21	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
22	Referred-By	[25] 3.3	c3	c3	[25] 3.3	c4	c4
23	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
24	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
25	Require	[20] 24.33, [28] 3	m	m	[20] 24.33, [28] 3	c4	c5
26	Route	[20] 24.35	m	m	[20] 24.35	m	m
27	State	[28] 5.1	e		[28] 5.1	e	
28	Subject	[20] 24.38	o		[20] 24.38	o	
29	Supported	[20] 24.39, [26] 8.1	m	m	[20] 24.39, [26] 8.1	c6	c6
30	Timestamp	[20] 24.40	m	m	[20] 24.40	i	i
31	To	[20] 24.41	m	m	[20] 24.41	m	m
32	User-Agent	[20] 24.43	o		[20] 24.43	o	
33	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:	IF A.3/21 THEN m ELSE i.						
c2:	IF A.150/9 THEN m ELSE i.						
c3:	IF A.150/21 THEN m ELSE n/a.						
c4:	IF A.150/21 THEN i ELSE n/a.						
c5:	IF A.150/11 OR A.150/13 THEN m ELSE i.						
c6:	IF A.150/14 THEN m ELSE i.						
NOTE:	c1 refers to the UA role major capability as this is the case of a proxy that also acts as a UA specifically for SUBSCRIBE and NOTIFY.						

Table A.189: Supported message bodies within the INFO request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.151/9 – INFO response

Prerequisite: A.152/27 -- "415" Unsupported Media Type @@@ combine

Table A.190: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
5	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
6	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
7	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
8	Expires	[20] 24.19	o		[20] 24.19	o	
9	From	[20] 24.20	m	m	[20] 24.20	m	m
10	Organization	[20] 24.25	o		[20] 24.25	o	
11	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
12	Server	[20] 24.37	m	m	[20] 24.37	i	i
13	State	[28] 5.1	e		[28] 5.1	e	
14	Supported	[20] 24.39	m	m	[20] 24.39	i	i
15	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
16	To	[20] 24.41	m	m	[20] 24.41	m	m
17	User-Agent	[20] 24.43	o		[20] 24.43	o	
18	Via	[20] 24.44	m	m	[20] 24.44	m	m
19	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Prerequisite A.151/9 -- INFO response

Prerequisite: A.152/18 -- "405" Method Not Allowed

Table A.191: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow	[20] 24.5	m		[20] 24.5	m	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
5	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
6	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
7	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
8	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
9	Expires	[20] 24.19	o		[20] 24.19	o	
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	Organization	[20] 24.25	o		[20] 24.25	o	
12	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
13	Server	[20] 24.37	m	m	[20] 24.37	i	i
14	State	[28] 5.1	e		[28] 5.1	e	
15	Supported	[20] 24.39	m	m	[20] 24.39	i	i
16	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
17	To	[20] 24.41	m	m	[20] 24.41	m	m
18	User-Agent	[20] 24.43	o		[20] 24.43	o	
19	Via	[20] 24.44	m	m	[20] 24.44	m	m
20	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Prerequisite A.151/9 - - INFO response

Prerequisite: A.152/8 OR A.152/9 OR A.152/10 OR A.152/11 OR A.152/12 OR A.152/36 - - 3xx or 485 "Ambiguous" @@@ combine

Table A.192: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
5	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
6	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
7	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
8	Expires	[20] 24.19	o		[20] 24.19	o	
9	From	[20] 24.20	m	m	[20] 24.20	m	m
10	Organization	[20] 24.25	o		[20] 24.25	o	
11	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
12	Server	[20] 24.37	m	m	[20] 24.37	i	i
13	State	[28] 5.1	e		[28] 5.1	e	
14	Supported	[20] 24.39	m	m	[20] 24.39	i	i
15	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
16	To	[20] 24.41	m	m	[20] 24.41	m	m
17	User-Agent	[20] 24.43	o		[20] 24.43	o	
18	Via	[20] 24.44	m	m	[20] 24.44	m	m
19	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Prerequisite A.151/9 - - INFO response

Prerequisite: A.152/14 - - 401

Table A.193: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
5	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
6	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
7	Error-Info	[20] 2418	m	m	[20] 24.18	i	i
8	Expires	[20] 24.19	o		[20] 24.19	o	
9	From	[20] 24.20	m	m	[20] 24.20	m	m
10	Organization	[20] 24.25	o		[20] 24.25	o	
11	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
12	Server	[20] 24.37	m	m	[20] 24.37	i	i
13	State	[28] 5.1	e		[28] 5.1	e	
14	Supported	[20] 24.39	m	m	[20] 24.39	i	i
15	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
16	To	[20] 24.41	m	m	[20] 24.41	m	m
17	User-Agent	[20] 24.43	o		[20] 24.43	o	
18	Via	[20] 24.44	m	m	[20] 24.44	m	m
19	Warning	[20] 24.45	o		[20] 24.45	o	
20	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Prerequisite A.151/9 - - INFO response

Prerequisite: A.152/8 OR A.152/9 OR A.152/10 OR A.152/11 OR A.152/12 - - 3xx

Table A.194: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
5	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
6	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
7	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
8	Expires	[20] 24.19	o		[20] 24.19	o	
9	From	[20] 24.20	m	m	[20] 24.20	m	m
10	Organization	[20] 24.25	o		[20] 24.25	o	
11	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
12	Server	[20] 24.37	m	m	[20] 24.37	i	i
13	State	[28] 5.1	e		[28] 5.1	e	
14	Supported	[20] 24.39	m	m	[20] 24.39	i	i
15	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
16	To	[20] 24.41	m	m	[20] 24.41	m	m
17	User-Agent	[20] 24.43	o		[20] 24.43	o	
18	Via	[20] 24.44	m	m	[20] 24.44	m	m
19	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Prerequisite A.151/9 – INFO response

Prerequisite: A.152/6 - - 2xx

Table A.195: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow	[20] 24.5	m		[20] 24.5	m	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
5	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
6	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
7	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
8	Expires	[20] 24.19	o		[20] 24.19	o	
9	From	[20] 24.20	m	m	[20] 24.20	m	m
10	Organization	[20] 24.25	o		[20] 24.25	o	
11	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
12	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
22	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Prerequisite A.151/9 - - INFO response

Prerequisite: A.152/35 - - 484

Table A.196: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
23	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
24	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
25	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
26	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
27	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
28	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
29	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
30	Expires	[20] 24.19	o		[20] 24.19	o	
31	From	[20] 24.20	m	m	[20] 24.20	m	m
32	Organization	[20] 24.25	o		[20] 24.25	o	
33	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
34	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
35	Server	[20] 24.37	m	m	[20] 24.37	i	i
36	State	[28] 5.1	e		[28] 5.1	e	
37	Supported	[20] 24.39	m	m	[20] 24.39	i	i
38	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
39	To	[20] 24.41	m	m	[20] 24.41	m	m
40	User-Agent	[20] 24.43	o		[20] 24.43	o	
41	Via	[20] 24.44	m	m	[20] 24.44	m	m
42	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Prerequisite A.151/9 – INFO response

Prerequisite: A.152/1 – 100 Trying

Table A.197: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
3	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
4	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
5	From	[20] 24.20	m	m	[20] 24.20	m	m
6	To	[20] 24.41	m	m	[20] 24.41	m	m
7	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:		IF A.150/9 THEN m ELSE i.					

Prerequisite A.151/9 - - INFO response

Prerequisite: A.152/28 - - 420

Table A.198: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
5	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
6	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
7	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
8	Expires	[20] 24.19	o		[20] 24.19	o	
9	From	[20] 24.20	m	m	[20] 24.20	m	m
10	Organization	[20] 24.25	o		[20] 24.25	o	
11	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
12	Server	[20] 24.37	m	m	[20] 24.37	i	i
13	State	[28] 5.1	e		[28] 5.1	e	
14	Supported	[20] 24.39	m	m	[20] 24.39	i	i
15	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
16	To	[20] 24.41	m	m	[20] 24.41	m	m
17	Unsupported	[20] 24.42	m	m	[20] 24.42	c3	c3
18	User-Agent	[20] 24.43	o		[20] 24.43	o	
19	Via	[20] 24.44	m	m	[20] 24.44	m	m
20	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						
c3:	IF A.150/16 THEN m ELSE i.						

Prerequisite A.151/9 - - INFO response

Prerequisite: A.152/17 OR A.152/25 OR A.152/31 OR A.152/37 OR A.152/41 OR A.152/44 OR A.152/48 OR A.152/49 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.199: Supported headers within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
3	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
4	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
5	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
6	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
7	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
8	Expires	[20] 24.19	o		[20] 24.19	o	
9	From	[20] 24.20	m	m	[20] 24.20	m	m
10	Organization	[20] 24.25	o		[20] 24.25	o	
11	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
12	Retry-After	[20] 24.34	m	m	[20] 24.34	i	i
13	Server	[20] 24.37	m	m	[20] 24.37	i	i
14	State	[28] 5.1	e		[28] 5.1	e	
15	Supported	[20] 24.39	m	m	[20] 24.39	i	i
16	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
17	To	[20] 24.41	m	m	[20] 24.41	m	m
18	User-Agent	[20] 24.43	o		[20] 24.43	o	
19	Via	[20] 24.44	m	m	[20] 24.44	m	m
20	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Table A.200: Supported message bodies within the INFO response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.2.4.7 INVITE method

Prerequisite A.151/10 – INVITE request

Table A.201: Supported headers within the INVITE request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
3	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
4	Accept-Language	[20] 24.3	o		[20] 24.3	o	
5	Allow-Events	[23] 7.5.2	m	m	[23] 7.5.2	c1	c1
6	Alert-Info	[20] 24.4	c2	c2	[20] 24.4	c3	c3
7	Allow	[20] 24.5, [20] 13	o		[20] 24.5, [20] 13	o	
8	Anonymity	[27] 5.2	o		[27] 5.2		
9	Authorization	[20] 24.7	m	m	[20] 24.7	i	i
10	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
11	Call-Info	[20] 24.9	o		[20] 24.9	o	
12	Contact	[20] 24.10	m		[20] 24.10	m	
13	Content-Disposition	[20] 24.11	o		[20] 24.11	o	

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
14	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
15	Content-Language	[20] 24.13	o		[20] 24.13	o	
16	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
17	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
18	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
19	Date	[20] 24.17	m	m	[20] 24.17	c4	c4
20	Expires	[20] 24.19	o		[20] 24.19	o	
21	From	[20] 24.20	m	m	[20] 24.20	m	m
22	In-Reply-To	[20] 24.21	m	m	[20] 24.21	i	i
23	Max-Forwards	[20] 24.22	m	m	[20] 24.22	m	m
24	MIME-Version	[20] 24.24	o		[20] 24.24	o	
25	Organization	[20] 24.25	o		[20] 24.25	o	
26	Priority	[20] 24.26	m	m	[20] 24.26	i	i
27	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
28	Proxy-Require	[20] 24.29, [26] 4, [27] 4, [28] 3	m	m	[20] 24.29, [26] 4, [27] 4, [28] 3	m	m
29	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
30	Referred-By	p	c5	c5	[25] 3.3	c6	c6
31	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
32	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
33	Reply-To	[20] 24.32	m	m	[20] 24.32	i	i
34	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
35	Require	[20] 24.33, [26] 4, [28] 3	m	m	[20] 24.33, [26] 4, [28] 3	c7	c7
36	Route	[20] 24.35	m	m	[20] 24.35	m	m
37	Session expires	[26] 3	o		[26] 3	o	
38	State	[28] 5.1	e		[28] 5.1	e	
39	Subject	[20] 24.38	o		[20] 24.38	o	
40	Supported	[20] 24.39, [26] 8.1	m	m	[20] 24.39, [26] 8.1	c8	c8
41	Timestamp	[20] 24.40	m	m	[20] 24.40	i	i
42	To	[20] 24.41	m	m	[20] 24.41	m	m
43	User-Agent	[20] 24.43	o		[20] 24.43	o	
44	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:		IF A.3/21 THEN m ELSE i.					
c2:		IF A.150/10 THEN n/a ELSE m.					
c3:		IF A.150/10 THEN m ELSE i.					
c4:		IF A.150/9 THEN m ELSE i.					
c5:		IF A.150/21 THEN m ELSE n/a.					
c6:		IF A.150/21 THEN i ELSE n/a.					
c7:		IF A.150/11 OR A.150/13 THEN m ELSE i.					
c8:		IF A.150/14 THEN m ELSE i.					
NOTE:		c1 refers to the UA role major capability as this is the case of a proxy that also acts as a UA specifically for SUBSCRIBE and NOTIFY.					

Table A.202: Supported message bodies within the INVITE request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.151/11 – INVITE response

Prerequisite: A.152/27 -- "415" Unsupported Media Type

Table A.203: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Anonymity	[27] 5.2	o		[27] 5.2		
5	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
6	Call-Info	[20] 24.9	o		[20] 24.9	o	
7	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
8	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
9	Content-Language	[20] 24.13	o		[20] 24.13	o	
10	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
11	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
12	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
13	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
14	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
15	Expires	[20] 24.19	o		[20] 24.19	o	
16	From	[20] 24.20	m	m	[20] 24.20	m	m
17	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
18	MIME-Version	[20] 24.24	o		[20] 24.24	o	
19	Organization	[20] 24.25	o		[20] 24.25	o	
20	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
21	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
22	Server	[20] 24.37	m	m	[20] 24.37	i	i
23	Session expires	[26] 3	o		[26] 3	o	
24	State	[28] 5.1	e		[28] 5.1	e	
25	Supported	[20] 24.39	m	m	[20] 24.39	i	i
26	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
27	To	[20] 24.41	m	m	[20] 24.41	m	m
28	User-Agent	[20] 24.43	o		[20] 24.43	o	
29	Via	[20] 24.44	m	m	[20] 24.44	m	m
30	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/11 -- INVITE response

Prerequisite: A.152/18 -- "405" Method Not Allowed

Table A.204: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Allow	[20] 24.5	m		[20] 24.5	m/o	
3	Anonymity	[27] 5.2	o		[27] 5.2	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Call-Info	[20] 24.9	o		[20] 24.9	o	
6	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
7	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
8	Content-Language	[20] 24.13	o		[20] 24.13	o	
9	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
10	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
11	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
12	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
13	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
14	Expires	[20] 24.19	o		[20] 24.19	o	
15	From	[20] 24.20	m	m	[20] 24.20	m	m
16	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
17	MIME-Version	[20] 24.24	o		[20] 24.24	o	
18	Organization	[20] 24.25	o		[20] 24.25	o	
19	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
20	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
21	Server	[20] 24.37	m	m	[20] 24.37	i	i
22	Session expires	[26] 3	o		[26] 3	o	
23	State	[28] 5.1	e		[28] 5.1	e	
24	Supported	[20] 24.39	m	m	[20] 24.39	i	i
25	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
26	To	[20] 24.41	m	m	[20] 24.41	m	m
27	User-Agent	[20] 24.43	o		[20] 24.43	o	
28	Via	[20] 24.44	m	m	[20] 24.44	m	m
29	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/11 - - INVITE response

Prerequisite: A.152/8 OR A.152/9 OR A.152/10 OR A.152/11 OR A.152/12 OR A.152/36 - - 3xx or 485 "Ambiguous"

Table A.205: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Anonymity	[27] 5.2	o		[27] 5.2		
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Contact	[20] 24.10	o		[20] 24.10	o/m	
6	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
7	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
8	Content-Language	[20] 24.13	o		[20] 24.13	o	
9	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
10	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
11	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
12	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
13	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
14	Expires	[20] 24.19	o		[20] 24.19	o	
15	From	[20] 24.20	m	m	[20] 24.20	m	m
16	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
17	MIME-Version	[20] 24.24	o		[20] 24.24	o	
18	Organization	[20] 24.25	o		[20] 24.25	o	
19	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
20	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
21	Server	[20] 24.37	m	m	[20] 24.37	i	i
22	Session expires	[26] 3	o		[26] 3	o	
23	State	[28] 5.1	e		[28] 5.1	e	
24	Supported	[20] 24.39	m	m	[20] 24.39	i	i
25	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
26	To	[20] 24.41	m	m	[20] 24.41	m	m
27	User-Agent	[20] 24.43	o		[20] 24.43	o	
28	Via	[20] 24.44	m	m	[20] 24.44	m	m
29	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/11 - - INVITE response

Prerequisite: A.152/14 - - 401

Table A.206: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Anonymity	[27] 5.2	o		[27] 5.2		
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
12	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
16	MIME-Version	[20] 24.24	o		[20] 24.24	o	
17	Organization	[20] 24.25	o		[20] 24.25	o	
18	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
19	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
20	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
21	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
22	Server	[20] 24.37	m	m	[20] 24.37	i	i
23	Session expires	[26] 3	o		[26] 3	o	
24	State	[28] 5.1	e		[28] 5.1	e	
25	Supported	[20] 24.39	m	m	[20] 24.39	i	i
26	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
27	To	[20] 24.41	m	m	[20] 24.41	m	m
28	User-Agent	[20] 24.43	o		[20] 24.43	o	
29	Via	[20] 24.44	m	m	[20] 24.44	m	m
30	Warning	[20] 24.45	o		[20] 24.45	o	
31	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/11 - - INVITE response

Prerequisite: A.152/20 - - 407

Table A.207: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Anonymity	[27] 5.2	o		[27] 5.2		
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
12	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
16	MIME-Version	[20] 24.24	o		[20] 24.24	o	
17	Organization	[20] 24.25	o		[20] 24.25	o	
18	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
19	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
20	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
21	Server	[20] 24.37	m	m	[20] 24.37	i	i
22	Session expires	[26] 3	o		[26] 3	o	
23	State	[28] 5.1	e		[28] 5.1	e	
24	Supported	[20] 24.39	m	m	[20] 24.39	i	i
25	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
26	To	[20] 24.41	m	m	[20] 24.41	m	m
27	User-Agent	[20] 24.43	o		[20] 24.43	o	
28	Via	[20] 24.44	m	m	[20] 24.44	m	m
29	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/11 - - INVITE response

Prerequisite: A.152/6 – 2xx

Table A.208: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Allow	[20] 24.5	o		[20] 24.5	o	
3	Anonymity	[27] 5.2	o		[27] 5.2		
4	Authentication-Info	[20] 24.6	o		[20] 24.6	o	
5	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
6	Call-Info	[20] 24.9	o		[20] 24.9	o	
7	Contact	[20] 24.10	m		[20] 24.10	m	
8	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
9	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
10	Content-Language	[20] 24.13	o		[20] 24.13	o	
11	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
12	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
13	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
14	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
15	Expires	[20] 24.19	o		[20] 24.19	o	
16	From	[20] 24.20	m	m	[20] 24.20	m	m
17	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
18	MIME-Version	[20] 24.24	o		[20] 24.24	o	
19	Organization	[20] 24.25	o		[20] 24.25	o	
20	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
21	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
22	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
23	Server	[20] 24.37	m	m	[20] 24.37	i	i
24	Session expires	[26] 3	o		[26] 3	o	
25	State	[28] 5.1	e		[28] 5.1	e	
26	Supported	[20] 24.39	m	m	[20] 24.39	i	i
27	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
28	To	[20] 24.41	m	m	[20] 24.41	m	m
29	User-Agent	[20] 24.43	o		[20] 24.43	o	
30	Via	[20] 24.44	m	m	[20] 24.44	m	m
31	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/11 - - INVITE response

Prerequisite: A.152/35 - - 484

Table A.209: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Anonymity	[27] 5.2	o		[27] 5.2		
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
12	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
16	MIME-Version	[20] 24.24	o		[20] 24.24	o	
17	Organization	[20] 24.25	o		[20] 24.25	o	
18	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
19	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
20	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
21	Server	[20] 24.37	m	m	[20] 24.37	i	i
22	Session expires	[26] 3	o		[26] 3	o	
23	State	[28] 5.1	e		[28] 5.1	e	
24	Supported	[20] 24.39	m	m	[20] 24.39	i	i
25	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
26	To	[20] 24.41	m	m	[20] 24.41	m	m
27	User-Agent	[20] 24.43	o		[20] 24.43	o	
28	Via	[20] 24.44	m	m	[20] 24.44	m	m
29	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/11 - - BYE response

Prerequisite: A.152/1 - - 100 Trying

Table A.210: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
3	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
4	Date	[20] 24.17	c1	c1	[20] 24.17	c2	c2
5	From	[20] 24.20	m	m	[20] 24.20	m	m
6	To	[20] 24.41	m	m	[20] 24.41	m	m
7	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:	IF (A.150/9 AND A.150/8) OR A.150/7 THEN m ELSE n/a - - Stateful proxies that insert date, or stateless proxies.						
c2:	IF A.150/7 THEN i ELSE m - - Stateless proxy passes on.						

Prerequisite A.151/11 - - INVITE response

Prerequisite: A.152/2 OR A.152/3 OR A.152/4 OR A.152/5 – 1xx

Table A.211: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Anonymity	[27] 5.2	o		[27] 5.2		
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Contact	[20] 24.10	o		[20] 24.10	o/m	
6	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
7	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
8	Content-Language	[20] 24.13	o		[20] 24.13	o	
9	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
10	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
11	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
12	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
16	MIME-Version	[20] 24.24	o		[20] 24.24	o	
17	Organization	[20] 24.25	o		[20] 24.25	o	
18	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
19	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
20	Rseq	[21] 7.1	m	m	[21] 7.1	i	i
21	Server	[20] 24.37	m	m	[20] 24.37	i	i
22	Session expires	[26] 3	o		[26] 3	o	
23	State	[28] 5.1	e		[28] 5.1	e	
24	Supported	[20] 24.39	m	m	[20] 24.39	i	i
25	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
26	To	[20] 24.41	m	m	[20] 24.41	m	m
27	User-Agent	[20] 24.43	o		[20] 24.43	o	
28	Via	[20] 24.44	m	m	[20] 24.44	m	m
29	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/11 - - INVITE response

Prerequisite: A.152/28 - - 420

Table A.212: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Anonymity	[27] 5.2	o		[27] 5.2		
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
12	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
16	MIME-Version	[20] 24.24	o		[20] 24.24	o	
17	Organization	[20] 24.25	o		[20] 24.25	o	
18	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
19	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
20	Server	[20] 24.37	m	m	[20] 24.37	i	i
21	Session expires	[26] 3	o		[26] 3	o	
22	State	[28] 5.1	e		[28] 5.1	e	
23	Supported	[20] 24.39	m	m	[20] 24.39	i	i
24	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
25	To	[20] 24.41	m	m	[20] 24.41	m	m
26	Unsupported	[20] 24.42	m	m	[20] 24.42	c3	c3
27	User-Agent	[20] 24.43	o		[20] 24.43	o	
28	Via	[20] 24.44	m	m	[20] 24.44	m	m
29	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						
c3:	IF A.150/16 THEN m ELSE i.						

Prerequisite A.151/11 - - INVITE response

Prerequisite: A.152/17 OR A.152/25 OR A.152/31 OR A.152/37 OR A.152/41 OR A.152/44 OR A.152/48 OR A.152/49 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.213: Supported headers within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Anonymity	[27] 5.2	o		[27] 5.2		
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Content-Disposition	[20] 24.11, [22] 8.3	o		[20] 24.11, [22] 8.3	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
12	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	Media-Authorization	[29] 5.1	o		[29] 5.1	o	
16	MIME-Version	[20] 24.24	o		[20] 24.24	o	
17	Organization	[20] 24.25	o		[20] 24.25	o	
18	Remote-Party-ID	[27] 5.1	o		[27] 5.1	o	
19	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
20	Retry-After	[20] 24.34	m	m	[20] 24.34	i	i
21	Server	[20] 24.37	m	m	[20] 24.37	i	i
22	Session expires	[26] 3	o		[26] 3	o	
23	State	[28] 5.1	e		[28] 5.1	e	
24	Supported	[20] 24.39	m	m	[20] 24.39	i	i
25	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
26	To	[20] 24.41	m	m	[20] 24.41	m	m
27	User-Agent	[20] 24.43	o		[20] 24.43	o	
28	Via	[20] 24.44	m	m	[20] 24.44	m	m
29	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Table A.214: Supported message bodies within the INVITE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.2.4.8 NOTIFY method

Prerequisite A.151/12 - - NOTIFY request

Table A.215: Supported headers within the NOTIFY request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
3	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
4	Accept-Language	[20] 24.3	o		[20] 24.3	o	
5	Allow-Events	[23] 7.5.2	m	m	[23] 7.5.2	c1	c1
6	Authorization	[20] 24.7	m	m	[20] 24.7	i	i
7	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
8	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
9	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
10	Content-Language	[20] 24.13	o		[20] 24.13	o	
11	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
12	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
13	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
14	Date	[20] 24.17	m	m	[20] 24.17	c2	c2
15	Event	[23] 7.5.1	m	m	[23] 7.5.1	m	m
16	From	[20] 24.20	m	m	[20] 24.20	m	m
17	Max-Forwards	[20] 24.22	m	m	[20] 24.22	m	m
18	MIME-Version	[20] 24.24	o		[20] 24.24	o	
19	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
20	Proxy-Require	[20] 24.29, [28] 3	m	m	[20] 24.29, [28] 3	m	m
21	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
22	Referred-By	[25] 3.3	c3	c3	[25] 3.3	c4	c4
23	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
24	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
25	Require	[20] 24.33, [28] 3	m	m	[20] 24.33, [28] 3	c5	c5
26	Route	[20] 24.35	m	m	[20] 24.35	m	m
27	State	[28] 5.1	e		[28] 5.1	e	
28	Subscription-State	[23] 7.5.3	m	m	[23] 7.5.3	i	i
29	Supported	[20] 24.39, [26] 8.1	m	m	[20] 24.39, [26] 8.1	c6	c6
30	Timestamp	[20] 24.40	m	m	[20] 24.40	i	i
31	To	[20] 24.41	m	m	[20] 24.41	m	m
32	User-Agent	[20] 24.43	o		[20] 24.43	o	
33	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:	IF A.3/21 THEN m ELSE i.						
c2:	IF A.150/9 THEN m ELSE i.						
c3:	IF A.150/21 THEN m ELSE n/a.						
c4:	IF A.150/21 THEN i ELSE n/a.						
c5:	IF A.150/11 OR A.150/13 THEN m ELSE i.						
c6:	IF A.150/14 THEN m ELSE i.						
NOTE:	c1 refers to the UA role major capability as this is the case of a proxy that also acts as a UA specifically for SUBSCRIBE and NOTIFY.						

Table A.216: Supported message bodies within the NOTIFY request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.151/13 -- NOTIFY response

Prerequisite: A.152/27 -- "415" Unsupported Media Type

Table A.217: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
12	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
16	Server	[20] 24.37	m	m	[20] 24.37	i	i
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	i	i
19	Timestamp	[20] 24.40	o		[20] 24.40	o	
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/13 -- NOTIFY response

Prerequisite: A.152/18 -- "405" Method Not Allowed

Table A.218: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow	[20] 24.5	m		[20] 24.5	m	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/13 - - NOTIFY response

Prerequisite: A.152/8 OR A.152/9 OR A.152/10 OR A.152/11 OR A.152/12 OR A.152/36 - - 3xx or 485 "Ambiguous"

Table A.219: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Contact	[20] 24.10	o		[20] 24.10	o	
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/13 - - NOTIFY response

Prerequisite: A.152/14 - - 401

Table A.220: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
13	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
14	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
15	Server	[20] 24.37	m	m	[20] 24.37	i	i
16	State	[28] 5.1	e		[28] 5.1	e	
17	Supported	[20] 24.39	m	m	[20] 24.39	i	i
18	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
19	To	[20] 24.41	m	m	[20] 24.41	m	m
20	User-Agent	[20] 24.43	o		[20] 24.43	o	
21	Via	[20] 24.44	m	m	[20] 24.44	m	m
22	Warning	[20] 24.45	o		[20] 24.45	o	
23	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/13 - - NOTIFY response

Prerequisite: A.152/20 - - 407

Table A.221: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/13 - - NOTIFY response

Prerequisite: A.152/6 AND A.152/7 - - 2xx

Table A.222: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Authentication-Info	[20] 24.6	o		[20] 24.6	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/13 - - NOTIFY response

Prerequisite: A.152/35 - - 484

Table A.223: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/13 - - NOTIFY response

Prerequisite: A.152/28 - - 420

Table A.224: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
13	Server	[20] 24.37	m	m	[20] 24.37	i	i
14	State	[28] 5.1	e		[28] 5.1	e	
15	Supported	[20] 24.39	m	m	[20] 24.39	i	i
16	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
17	To	[20] 24.41	m	m	[20] 24.41	m	m
18	Unsupported	[20] 24.42	m	m	[20] 24.42	c3	c3
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						
c3:	IF A.150/16 THEN m ELSE i.						

Prerequisite A.151/13 - - NOTIFY response

Prerequisite: A.152/17 OR A.152/25 OR A.152/31 OR A.152/37 OR A.152/41 OR A.152/44 OR A.152/48 OR A.152/49 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.225: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
13	Retry-After	[20] 24.34	m	m	[20] 24.34	i	i
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/13 - - NOTIFY response

Prerequisite: A.152/40 - - 489

Table A.226: Supported headers within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
xx	Allow-Events	[23] 7.5.2	m	m	[23] 7.5.2	c1	c1
1	Authentication-Info	[20] 24.6	o		[20] 24.6	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c2	c2
10	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Require	[20] 24.33	m	m	[20] 24.33	c3	c3
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
17	To	[20] 24.41	m	m	[20] 24.41	m	m
18	User-Agent	[20] 24.43	o		[20] 24.43	o	
19	Via	[20] 24.44	m	m	[20] 24.44	m	m
20	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.3/21 THEN m ELSE i.					
c2:		IF A.150/9 THEN o ELSE n/a.					
c3:		IF A.150/11 OR A.150/13 THEN m ELSE i.					
NOTE:		c1 refers to the UA role major capability as this is the case of a proxy that also acts as a UA specifically for SUBSCRIBE and NOTIFY.					

Table A.227: Supported message bodies within the NOTIFY response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.2.4.9 OPTIONS method

Prerequisite A.151/14 – OPTIONS request

Table A.228: Supported headers within the OPTIONS request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
3	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
4	Accept-Language	[20] 24.3	o		[20] 24.3	o	
5	Allow-Events	[23] 7.5.2	m	m	[23] 7.5.2	c1	c1
6	Authorization	[20] 24.7	m	m	[20] 24.7	i	i
7	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
8	Call-Info	[20] 24.9	o		[20] 24.9	o	
9	Contact	[20] 24.10	m		[20] 24.10	m	
10	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
11	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
12	Content-Language	[20] 24.13	o		[20] 24.13	o	
13	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
14	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
15	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
16	Date	[20] 24.17	m	m	[20] 24.17	c2	c2
17	From	[20] 24.20	m	m	[20] 24.20	m	m
18	Max-Forwards	[20] 24.22	m	m	[20] 24.22	m	m
19	MIME-Version	[20] 24.24	o		[20] 24.24	o	
20	Organization	[20] 24.25	o		[20] 24.25	o	
21	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
22	Proxy-Require	[20] 24.29, [28] 3	m	m	[20] 24.29, [28] 3	m	m
23	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
24	Referred-By	[25] 3.3	c3	c3	[25] 3.3	c4	c4
25	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
26	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
27	Require	[20] 24.33, [28] 3	m	m	[20] 24.33, [28] 3	c5	c5
28	Route	[20] 24.35	m	m	[20] 24.35	m	m
29	State	[28] 5.1	e		[28] 5.1	e	
30	Supported	[20] 24.39, [26] 8.1	m	m	[20] 24.39, [26] 8.1	c6	c6
31	Timestamp	[20] 24.40	m	m	[20] 24.40	i	i
32	To	[20] 24.41	m	m	[20] 24.41	m	m
33	User-Agent	[20] 24.43	o		[20] 24.43	o	
34	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:	IF A.3/21 THEN m ELSE i.						
c2:	IF A.150/9 THEN m ELSE i.						
c3:	IF A.150/21 THEN m ELSE n/a.						
c4:	IF A.150/21 THEN i ELSE n/a.						
c5:	IF A.150/11 OR A.150/13 THEN m ELSE i.						
c6:	IF A.150/14 THEN m ELSE i.						
NOTE:	c1 refers to the UA role major capability as this is the case of a proxy that also acts as a UA specifically for SUBSCRIBE and NOTIFY.						

Table A.229: Supported message bodies within the OPTIONS request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.151/15 – OPTIONS response

Prerequisite: A.152/27 -- "415" Unsupported Media Type

Table A.230: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Call-Info	[20] 24.9	o		[20] 24.9	o	
6	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
7	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
8	Content-Language	[20] 24.13	o		[20] 24.13	o	
9	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
10	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
11	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
12	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
13	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	MIME-Version	[20] 24.24	o		[20] 24.24	o	
16	Organization	[20] 24.25	o		[20] 24.25	o	
17	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
18	Server	[20] 24.37	m	m	[20] 24.37	i	i
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	i	i
21	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/15 – OPTIONS response

Prerequisite: A.152/18 -- "405" Method Not Allowed

Table A.231: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Allow	[20] 24.5	m	m	[20] 24.5	m	m
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
12	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Organization	[20] 24.25	o		[20] 24.25	o	
16	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
17	Server	[20] 24.37	m	m	[20] 24.37	i	i
18	State	[28] 5.1	e		[28] 5.1	e	
19	Supported	[20] 24.39	m	m	[20] 24.39	i	i
20	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
21	To	[20] 24.41	m	m	[20] 24.41	m	m
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/15 – OPTIONS response

Prerequisite: A.152/8 OR A.152/9 OR A.152/10 OR A.152/11 OR A.152/12 OR A.152/36 - - 3xx or 485 "Ambiguous"

Table A.232: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Contact	[20] 24.10	o		[20] 24.10	o	
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
12	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Organization	[20] 24.25	o		[20] 24.25	o	
16	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
17	Server	[20] 24.37	m	m	[20] 24.37	i	i
18	State	[28] 5.1	e		[28] 5.1	e	
19	Supported	[20] 24.39	m	m	[20] 24.39	i	i
20	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
21	To	[20] 24.41	m	m	[20] 24.41	m	m
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/15 – OPTIONS response

Prerequisite: A.152/14 – 401

Table A.233: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
11	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
16	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
17	Server	[20] 24.37	m	m	[20] 24.37	i	i
18	State	[28] 5.1	e		[28] 5.1	e	
19	Supported	[20] 24.39	m	m	[20] 24.39	i	i
20	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
21	To	[20] 24.41	m	m	[20] 24.41	m	m
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
25	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/15 – OPTIONS response

Prerequisite: A.152/20 – 407

Table A.234: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
11	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
16	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
17	Server	[20] 24.37	m	m	[20] 24.37	i	i
18	State	[28] 5.1	e		[28] 5.1	e	
19	Supported	[20] 24.39	m	m	[20] 24.39	i	i
20	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
21	To	[20] 24.41	m	m	[20] 24.41	m	m
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/15 – OPTIONS response

Prerequisite: A.152/6 – 2xx

Table A.235: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Allow	[20] 24.5	o		[20] 24.5	o/m	
3	Authentication-Info	[20] 24.6	o		[20] 24.6	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Call-Info	[20] 24.9	o		[20] 24.9	o	
6	Contact	[20] 24.10	o		[20] 24.10	o	
7	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
8	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
9	Content-Language	[20] 24.13	o		[20] 24.13	o	
10	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
11	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
12	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
13	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	MIME-Version	[20] 24.24	o		[20] 24.24	o	
16	Organization	[20] 24.25	o		[20] 24.25	o	
17	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
18	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
19	Server	[20] 24.37	m	m	[20] 24.37	i	i
20	State	[28] 5.1	e		[28] 5.1	e	
21	Supported	[20] 24.39	m	m	[20] 24.39	i	i
22	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
23	To	[20] 24.41	m	m	[20] 24.41	m	m
24	User-Agent	[20] 24.43	o		[20] 24.43	o	
25	Via	[20] 24.44	m	m	[20] 24.44	m	m
26	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/15 – OPTIONS response

Prerequisite: A.152/35 – 484

Table A.236: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Contact	[20] 24.10	o		[20] 24.10	o	
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
12	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Organization	[20] 24.25	o		[20] 24.25	o	
16	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
17	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
18	Server	[20] 24.37	m	m	[20] 24.37	i	i
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	i	i
21	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Prerequisite A.151/15 – OPTIONS response

Prerequisite: A.152/1 – 100 Trying

Table A.237: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
3	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
4	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
5	From	[20] 24.20	m	m	[20] 24.20	m	m
6	To	[20] 24.41	m	m	[20] 24.41	m	m
7	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:		IF A.150/9 THEN m ELSE i.					

Prerequisite A.151/15 – OPTIONS response

Prerequisite: A.152/28 – 420

Table A.238: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
11	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
16	Server	[20] 24.37	m	m	[20] 24.37	i	i
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	i	i
19	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	Unsupported	[20] 24.42	m	m	[20] 24.42	c3	c3
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						
c3:	IF A.150/16 THEN m ELSE i.						

Prerequisite A.151/15 – OPTIONS response

Prerequisite: A.152/17 OR A.152/25 OR A.152/31 OR A.152/37 OR A.152/41 OR A.152/44 OR A.152/48 OR A.152/49 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.239: Supported headers within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
11	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
16	Retry-After	[20] 24.34	m	m	[20] 24.34	i	i
17	Server	[20] 24.37	m	m	[20] 24.37	i	i
18	State	[28] 5.1	e		[28] 5.1	e	
19	Supported	[20] 24.39	m	m	[20] 24.39	i	i
20	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
21	To	[20] 24.41	m	m	[20] 24.41	m	m
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Table A.240: Supported message bodies within the OPTIONS response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.2.4.10 PRACK method

Prerequisite A.151/16 – PRACK request

Table A.241: Supported headers within the PRACK request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
3	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
4	Accept-Language	[20] 24.3	o		[20] 24.3	o	
5	Allow-Events	[23] 7.5.2	m	m	[23] 7.5.2	c1	c1
6	Authorization	[20] 24.7	m	m	[20] 24.7	i	i
7	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
8	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
9	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
10	Content-Language	[20] 24.13	o		[20] 24.13	o	
11	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
12	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
13	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
14	Date	[20] 24.17	m	m	[20] 24.17	c2	c2
15	From	[20] 24.20	m	m	[20] 24.20	m	m
16	Max-Forwards	[20] 24.22	o	o	[20] 24.22	n/a	n/a
17	MIME-Version	[20] 24.24	o		[20] 24.24	o	
18	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
19	Proxy-Require	[20] 24.29, [28] 3	m	m	[20] 24.29, [28] 3	m	m
20	RAck	[21] 7.2	m	m	[21] 7.2	i	i
21	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
22	Referred-By	[25] 3.3	c3	c3	[25] 3.3	c4	c4
23	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
24	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
25	Require	[20] 24.33, [28] 3	m	m	[20] 24.33, [28] 3	c5	c5
26	Route	[20] 24.35	m	m	[20] 24.35	m	m
27	State	[28] 5.1	e		[28] 5.1	e	
28	Supported	[20] 24.39, [26] 8.1	m	m	[20] 24.39, [26] 8.1	c6	c6
29	Timestamp	[20] 24.40	m	m	[20] 24.40	i	i
30	To	[20] 24.41	m	m	[20] 24.41	m	m
31	User-Agent	[20] 24.43	o		[20] 24.43	o	
32	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:	IF A.3/21 THEN m ELSE i.						
c2:	IF A.150/9 THEN m ELSE i.						
c3:	IF A.150/21 THEN m ELSE n/a.						
c4:	IF A.150/21 THEN i ELSE n/a.						
c5:	IF A.150/11 OR A.150/13 THEN m ELSE i.						
c6:	IF A.150/14 THEN m ELSE i.						
NOTE:	c1 refers to the UA role major capability as this is the case of a proxy that also acts as a UA specifically for SUBSCRIBE and NOTIFY.						

Editors Note: IETF#50 Agreed that use of Record-Route inside an Invite transaction should be ignored at the UA. It is anticipated that this will be reflected in future IETF drafts and this table will then need to be updated accordingly

Editor's note to editor's note: It is believed that the above editors note refers to the use of record-route headers within reliable responses.

Table A.242: Supported message bodies within the PRACK request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.151/17 – PRACK response

Prerequisite: A.152/27 -- "415" Unsupported Media Type

Table A.243: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
12	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
16	Server	[20] 24.37	m	m	[20] 24.37	i	i
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	i	i
19	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/17 – PRACK response

Prerequisite: A.152/18 -- "405" Method Not Allowed

Table A.244: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow	[20] 24.5	m		[20] 24.5	m	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/17 – PRACK response

Prerequisite: A.152/8 OR A.152/9 OR A.152/10 OR A.152/11 OR A.152/12 OR A.152/36 - - 3xx or 485 "Ambiguous"

Table A.245: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Contact	[20] 24.10	o		[20] 24.10	o	
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/17 – PRACK response

Prerequisite: A.152/14 – 401

Table A.246: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
13	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
14	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
15	Server	[20] 24.37	m	m	[20] 24.37	i	i
16	State	[28] 5.1	e		[28] 5.1	e	
17	Supported	[20] 24.39	m	m	[20] 24.39	i	i
18	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
19	To	[20] 24.41	m	m	[20] 24.41	m	m
20	User-Agent	[20] 24.43	o		[20] 24.43	o	
21	Via	[20] 24.44	m	m	[20] 24.44	m	m
22	Warning	[20] 24.45	o		[20] 24.45	o	
23	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Editors Note: IETF#50 Agreed that use of Record-Route inside an Invite transaction should be ignored at the UA. It is anticipated that this will be reflected in future IETF drafts and this table will then need to be updated accordingly

Editor's note to editor's note: It is believed that the above editors note refers to the use of record-route headers within reliable responses.

Prerequisite A.151/17 – PRACK response

Prerequisite: A.152/20 – 407

Table A.247: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Prerequisite A.151/17 – PRACK response

Prerequisite: A.152/6 - - 2xx

Table A.248: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	From	[20] 24.20	m	m	[20] 24.20	m	m
10	MIME-Version	[20] 24.24	o		[20] 24.24	o	
11	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
12	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
13	Server	[20] 24.37	m	m	[20] 24.37	i	i
14	State	[28] 5.1	e		[28] 5.1	e	
15	Supported	[20] 24.39	m	m	[20] 24.39	i	i
16	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
17	To	[20] 24.41	m	m	[20] 24.41	m	m
18	User-Agent	[20] 24.43	o		[20] 24.43	o	
19	Via	[20] 24.44	m	m	[20] 24.44	m	m
20	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Editors Note: IETF#50 Agreed that use of Record-Route inside an Invite transaction should be ignored at the UA. It is anticipated that this will be reflected in future IETF drafts and this table will then need to be updated accordingly

Editor's note to editor's note: It is believed that the above editors note refers to the use of record-route headers within reliable responses.

Prerequisite A.151/17 - - PRACK response

Prerequisite: A.152/35 - - 484

Table A.249: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Editors Note: IETF#50 Agreed that use of Record-Route inside an Invite transaction should be ignored at the UA. It is anticipated that this will be reflected in future IETF drafts and this table will then need to be updated accordingly

Editor's note to editor's note: It is believed that the above editors note refers to the use of record-route headers within reliable responses.

Prerequisite A.151/17 – PRACK response

Prerequisite: A.152/1 – 100 Trying

Table A.250: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
3	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
4	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
5	From	[20] 24.20	m	m	[20] 24.20	m	m
6	To	[20] 24.41	m	m	[20] 24.41	m	m
7	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:	IF A.150/9 THEN m ELSE i.						

Prerequisite A.151/17 – PRACK response

Prerequisite: A.152/28 – 420@@@combine

Table A.251: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
13	Server	[20] 24.37	m	m	[20] 24.37	i	i
14	State	[28] 5.1	e		[28] 5.1	e	
15	Supported	[20] 24.39	m	m	[20] 24.39	i	i
16	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
17	To	[20] 24.41	m	m	[20] 24.41	m	m
18	User-Agent	[20] 24.43	o		[20] 24.43	o	
19	Via	[20] 24.44	m	m	[20] 24.44	m	m
20	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/17 – PRACK response

Prerequisite: A.152/17 OR A.152/25 OR A.152/31 OR A.152/37 OR A.152/41 OR A.152/44 OR A.152/48 OR A.152/49 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.252: Supported headers within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
13	Retry-After	[20] 24.34	m	m	[20] 24.34	i	i
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Table A.253: Supported message bodies within the PRACK response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.2.4.11 REFER method

Prerequisite A.151/18 – REFER request

Table A.254: Supported headers within the REFER request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
2	Accept-Language	[20] 24.3	o		[20] 24.3	o	
3	Allow-Events	[23] 7.5.2	m	m	[23] 7.5.2	c1	c1
4	Authorization	[20] 24.7	m	m	[20] 24.7	i	i
5	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
6	Contact	[20] 24.10	o		[20] 24.10	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	m	m	[20] 24.17	c2	c2
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	Max-Forwards	[20] 24.22	m	m	[20] 24.22	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Organization	[20] 24.25	o		[20] 24.25	o	
16	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
17	Proxy-Require	[20] 24.29, [28] 3	m	m	[20] 24.29, [28] 3	m	m
18	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
19	Refer-To	[25] 3.3	c3	c3	[25] 3.3	c4	c4
20	Referred-By	[25] 3.3	c3	c3	[25] 3.3	c4	c4
21	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
22	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
23	Require	[20] 24.33, [28] 3	m	m	[20] 24.33, [28] 3	c5	c5
24	Route	[20] 24.35	m	m	[20] 24.35	m	m
25	State	[28] 5.1	e		[28] 5.1	e	
26	Supported	[20] 24.39, [26] 8.1	m	m	[20] 24.39, [26] 8.1	c6	c6
27	Timestamp	[20] 24.40	m	m	[20] 24.40	i	i
28	To	[20] 24.41	m	m	[20] 24.41	m	m
29	User-Agent	[20] 24.43	o		[20] 24.43	o	
30	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:		IF A.3/21 THEN m ELSE i.					
c2:		IF A.150/9 THEN m ELSE i.					
c3:		IF A.150/21 THEN m ELSE n/a.					
c4:		IF A.150/21 THEN i ELSE n/a.					
c5:		IF A.150/11 OR A.150/13 THEN m ELSE i.					
c6:		IF A.150/14 THEN m ELSE i.					
NOTE:		c1 refers to the UA role major capability as this is the case of a proxy that also acts as a UA specifically for SUBSCRIBE and NOTIFY.					

Table A.255: Supported message bodies within the REFER request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.151/19 – REFER response

Prerequisite: A.152/27 -- "415" Unsupported Media Type

Table A.256: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
11	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
12	Expires	[20] 24.19	o		[20] 24.19	o	
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Organization	[20] 24.25	o		[20] 24.25	o	
16	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
17	Server	[20] 24.37	m	m	[20] 24.37	i	i
18	State	[28] 5.1	e		[28] 5.1	e	
19	Supported	[20] 24.39	m	m	[20] 24.39	i	i
20	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
21	To	[20] 24.41	m	m	[20] 24.41	m	m
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/19 – REFER response

Prerequisite: A.152/18 -- "405" Method Not Allowed

Table A.257: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Allow	[20] 24.5	m	m	[20] 24.5	m	m
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
16	Server	[20] 24.37	m	m	[20] 24.37	i	i
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	i	i
19	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/19 – REFER response

Prerequisite: A.152/8 OR A.152/9 OR A.152/10 OR A.152/11 OR A.152/12 OR A.152/36 - - 3xx or 485
 "Ambiguous"@@@combine

Table A.258: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Contact	[20] 24.10	o		[20] 24.10	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
16	Server	[20] 24.37	m	m	[20] 24.37	i	i
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	i	i
19	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/19 – REFER response

Prerequisite: A.152/8 OR A.152/9 OR A.152/10 OR A.152/11 OR A.152/12 – 401

Table A.259: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	Expires	[20] 24.19	o		[20] 24.19	o	
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Organization	[20] 24.25	o		[20] 24.25	o	
14	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
15	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
16	Server	[20] 24.37	m	m	[20] 24.37	i	i
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	i	i
19	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
24	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/19 – REFER response

Prerequisite: A.152/20 – 407

Table A.260: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Contact	[20] 24.10	o		[20] 24.10	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	Expires	[20] 24.19	o		[20] 24.19	o	
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Organization	[20] 24.25	o		[20] 24.25	o	
14	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
15	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
16	Server	[20] 24.37	m	m	[20] 24.37	i	i
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	i	i
19	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/19 – REFER response

Prerequisite: A.152/7 - - 202

Table A.261: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Authentication-Info	[20] 24.6	o		[20] 24.6	o	
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Contact	[20] 24.10	o		[20] 24.10	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
16	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
17	Server	[20] 24.37	m	m	[20] 24.37	i	i
18	State	[28] 5.1	e		[28] 5.1	e	
19	Supported	[20] 24.39	m	m	[20] 24.39	i	i
20	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
21	To	[20] 24.41	m	m	[20] 24.41	m	m
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/19 – REFER response

Prerequisite: A.152/35 – 484@@@combine

Table A.262: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Contact	[20] 24.10	o		[20] 24.10	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
16	Server	[20] 24.37	m	m	[20] 24.37	i	i
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	i	i
19	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/9 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Prerequisite A.151/19 – REFER response

Prerequisite: A.152/1 – 100 Trying

Table A.263: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
3	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
4	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
5	From	[20] 24.20	m	m	[20] 24.20	m	m
6	To	[20] 24.41	m	m	[20] 24.41	m	m
7	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:		IF A.150/9 THEN m ELSE i.					

Prerequisite A.151/19 – REFER response

Prerequisite: A.152/28 – 420

Table A.264: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Contact	[20] 24.10	o		[20] 24.10	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
16	Server	[20] 24.37	m	m	[20] 24.37	i	i
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	i	i
19	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	Unsupported	[20] 24.42	m	m	[20] 24.42	c3	c3
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						
c3:	IF A.150/16 THEN m ELSE i.						

Prerequisite A.151/19 – REFER response

Prerequisite: A.152/17 OR A.152/25 OR A.152/31 OR A.152/37 OR A.152/41 OR A.152/44 OR A.152/48 OR A.152/49 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.265: Supported headers within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Contact	[20] 24.10	o		[20] 24.10	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
11	Expires	[20] 24.19	o		[20] 24.19	o	
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
16	Retry-After	[20] 24.34	m	m	[20] 24.34	i	i
17	Server	[20] 24.37	m	m	[20] 24.37	i	i
18	State	[28] 5.1	e		[28] 5.1	e	
19	Supported	[20] 24.39	m	m	[20] 24.39	i	i
20	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
21	To	[20] 24.41	m	m	[20] 24.41	m	m
22	User-Agent	[20] 24.43	o		[20] 24.43	o	
23	Via	[20] 24.44	m	m	[20] 24.44	m	m
24	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Table A.266: Supported message bodies within the REFER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.2.4.12 REGISTER method

Prerequisite A.151/20 – REGISTER request

Table A.267: Supported headers within the REGISTER request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Allow-Events	[23] 7.5.2	m	m	[23] 7.5.2	c1	c1
5	Authorization	[20] 24.7	m	m	[20] 24.7	i	i
6	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
7	Call-Info	[20] 24.9	o		[20] 24.9	o	
8	Contact	[20] 24.10	m		[20] 24.10	m	
9	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
10	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
11	Content-Language	[20] 24.13	o		[20] 24.13	o	
12	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
13	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
14	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
15	Date	[20] 24.17	m	m	[20] 24.17	m	m
16	Expires	[20] 24.19	o		[20] 24.19	o	
17	From	[20] 24.20	m	m	[20] 24.20	m	m
18	Max-Forwards	[20] 24.22	m	m	[20] 24.22	m	m
19	MIME-Version	[20] 24.24	o		[20] 24.24	o	
20	Organization	[20] 24.25	o		[20] 24.25	o	
21	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
22	Proxy-Require	[20] 24.29; [28] 3	m	m	[20] 24.29; [28] 3	m	m
23	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
24	Referred-By	[25] 3.3	c2	c2	[25] 3.3	c3	c3
25	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
26	Require	[20] 24.33; [28] 3	m	m	[20] 24.33; [28] 3	c4	c4
27	Route	[20] 24.35	m	m	[20] 24.35	m	m
28	State	[28] 5.1	e		[28] 5.1	e	
29	Supported	[20] 24.39, [26] 8.1	m	m	[20] 24.39, [26] 8.1	c5	c5
30	Timestamp	[20] 24.40	m	m	[20] 24.40	c6	c6
31	To	[20] 24.41	m	m	[20] 24.41	m	m
32	User-Agent	[20] 24.43	o		[20] 24.43	o	
33	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:		IF A.3/21 THEN m ELSE i.					
c2:		IF A.150/21 THEN m ELSE n/a.					
c3:		IF A.150/21 THEN i ELSE n/a.					
c4:		IF A.150/11 OR A.150/12 THEN m ELSE i.					
c5:		IF A.150/14 THEN m ELSE i.					
c6:		IF A.150/3 THEN m ELSE i.					
NOTE:		c1 refers to the UA role major capability as this is the case of a proxy that also acts as a UA specifically for SUBSCRIBE and NOTIFY.					

Table A.268: Supported message bodies within the REGISTER request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.151/21 – REGISTER response

Prerequisite: A.152/27 -- "415" Unsupported Media Type

Table A.269: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Call-Info	[20] 24.9	o		[20] 24.9	o	
6	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
7	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
8	Content-Language	[20] 24.13	o		[20] 24.13	o	
9	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
10	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
11	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
12	Date	[20] 24.17	m	m	[20] 24.17	m	m
13	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
14	Expires	[20] 24.19	o		[20] 24.19	o	
15	From	[20] 24.20	m	m	[20] 24.20	m	m
16	Organization	[20] 24.25	o		[20] 24.25	o	
17	MIME-Version	[20] 24.24	o		[20] 24.24	o	
18	Require	[20] 24.33	m	m	[20] 24.33	c1	c1
19	Server	[20] 24.37	m	m	[20] 24.37	i	i
20	State	[28] 5.1	e		[28] 5.1	e	
21	Supported	[20] 24.39	m	m	[20] 24.39	i	i
22	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
23	To	[20] 24.41	m	m	[20] 24.41	m	m
24	User-Agent	[20] 24.43	o		[20] 24.43	o	
25	Via	[20] 24.44	m	m	[20] 24.44	m	m
26	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/11 OR A.150/12 THEN m ELSE i.						
c2:	IF A.150/3 THEN m ELSE i.						

Prerequisite A.151/21 – REGISTER response

Prerequisite: A.152/18 -- "405" Method Not Allowed

Table A.270: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Allow	[20] 24.5	m		[20] 24.5	m	
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Call-Info	[20] 24.9	o		[20] 24.9	o	
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	m	m	[20] 24.17	m	m
12	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	Organization	[20] 24.25	o		[20] 24.25	o	
16	MIME-Version	[20] 24.24	o		[20] 24.24	o	
17	Require	[20] 24.33	m	m	[20] 24.33	c1	c1
18	Server	[20] 24.37	m	m	[20] 24.37	i	i
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	i	i
21	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/11 OR A.150/12 THEN m ELSE i.						
c2:	IF A.150/3 THEN m ELSE i.						

Prerequisite A.151/21 – REGISTER response

Prerequisite: A.152/8 OR A.152/9 OR A.152/10 OR A.152/11 OR A.152/12 OR A.152/36 - - 3xx or 485 "Ambiguous"

Table A.271: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Contact	[20] 24.10	o		[20] 24.10	o	
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	m	m	[20] 24.17	m	m
12	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
13	Expires	[20] 24.19	o		[20] 24.19	o	
14	From	[20] 24.20	m	m	[20] 24.20	m	m
15	Organization	[20] 24.25	o		[20] 24.25	o	
16	MIME-Version	[20] 24.24	o		[20] 24.24	o	
17	Require	[20] 24.33	m	m	[20] 24.33	c1	c1
18	Server	[20] 24.37	m	m	[20] 24.37	i	i
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	i	i
21	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/11 OR A.150/12 THEN m ELSE i.						
c2:	IF A.150/3 THEN m ELSE i.						

Prerequisite A.151/21 – REGISTER response

Prerequisite: A.152/14 – 401

Table A.272: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	m	m	[20] 24.17	m	m
11	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
12	Expires	[20] 24.19	o		[20] 24.19	o	
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	MIME-Version	[20] 24.24	o		[20] 24.24	o	
16	Record-Route	[20] 24.31		n/a	[20] 24.31		n/a
17	Require	[20] 24.33	m	m	[20] 24.33	c1	c1
18	Server	[20] 24.37	m	m	[20] 24.37	i	i
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	i	i
21	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
26	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:	IF A.150/11 OR A.150/12 THEN m ELSE i.						
c2:	IF A.150/3 THEN m ELSE i.						

Editor's note: The RFC status for Record-Route has been left empty, because at the moment it is not clear what this status should be.

Prerequisite A.151/21 – REGISTER response

Prerequisite: A.152/20 – 407

Table A.273: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	m	m	[20] 24.17	m	m
11	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
12	Expires	[20] 24.19	o		[20] 24.19	o	
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	MIME-Version	[20] 24.24	o		[20] 24.24	o	
16	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
17	Require	[20] 24.33	m	m	[20] 24.33	c1	c1
18	Server	[20] 24.37	m	m	[20] 24.37	i	i
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	i	i
21	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/11 OR A.150/12 THEN m ELSE i.						
c2:	IF A.150/3 THEN m ELSE i.						

Prerequisite A.151/21 – REGISTER response

Prerequisite: A.152/6 – 2xx

Table A.274: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Allow	[20] 24.5	o		[20] 24.5	o	
3	Authentication-Info	[20] 24.6	o		[20] 24.6	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Call-Info	[20] 24.9	o		[20] 24.9	o	
6	Contact	[20] 24.10	o		[20] 24.10	o	
7	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
8	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
9	Content-Language	[20] 24.13	o		[20] 24.13	o	
10	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
11	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
12	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
13	Date	[20] 24.17	m	m	[20] 24.17	m	m
14	Expires	[20] 24.19	o		[20] 24.19	o	
15	From	[20] 24.20	m	m	[20] 24.20	m	m
16	Organization	[20] 24.25	o		[20] 24.25	o	
17	MIME-Version	[20] 24.24	o		[20] 24.24	o	
18	Record-Route	[20] 24.31		n/a	[20] 24.31		n/a
19	Require	[20] 24.33	m	m	[20] 24.33	c1	c1
20	Server	[20] 24.37	m	m	[20] 24.37	i	i
21	State	[28] 5.1	e		[28] 5.1	e	
22	Supported	[20] 24.39	m	m	[20] 24.39	i	i
23	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
24	To	[20] 24.41	m	m	[20] 24.41	m	m
25	User-Agent	[20] 24.43	o		[20] 24.43	o	
26	Via	[20] 24.44	m	m	[20] 24.44	m	m
27	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/11 OR A.150/12 THEN m ELSE i.						
c2:	IF A.150/3 THEN m ELSE i.						

Editor's note: The RFC status for Record-Route has been left empty, because at the moment it is not clear what this status should be.

Prerequisite A.151/21 – REGISTER response

Prerequisite: A.152/35 – 484

Table A.275: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	m	m	[20] 24.17	m	m
11	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
12	Expires	[20] 24.19	o		[20] 24.19	o	
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	MIME-Version	[20] 24.24	o		[20] 24.24	o	
16	Record-Route	[20] 24.31		n/a	[20] 24.31		n/a
17	Require	[20] 24.33	m	m	[20] 24.33	c1	c1
18	Server	[20] 24.37	m	m	[20] 24.37	i	i
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	i	i
21	Timestamp	[20] 24.40	m	m	[20] 24.40	c4	c4
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/11 OR A.150/12 THEN m ELSE i.					
c2:		IF A.150/3 THEN m ELSE i.					

Editor's note: The RFC status for Record-Route has been left empty, because at the moment it is not clear what this status should be.

Prerequisite A.151/21 – REGISTER response

Prerequisite: A.152/1 – 100 Trying

Table A.276: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
3	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
4	Date	[20] 24.17	m	m	[20] 24.17	m	m
5	From	[20] 24.20	m	m	[20] 24.20	m	m
6	To	[20] 24.41	m	m	[20] 24.41	m	m
7	Via	[20] 24.44	m	m	[20] 24.44	m	m

Prerequisite A.151/21 – REGISTER response

Prerequisite: A.152/28 – 420

Table A.277: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	m	m	[20] 24.17	m	m
11	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
12	Expires	[20] 24.19	o		[20] 24.19	o	
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	MIME-Version	[20] 24.24	o		[20] 24.24	o	
16	Require	[20] 24.33	m	m	[20] 24.33	c1	c1
17	Server	[20] 24.37	m	m	[20] 24.37	i	i
18	State	[28] 5.1	e		[28] 5.1	e	
19	Supported	[20] 24.39	m	m	[20] 24.39	i	i
20	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
21	To	[20] 24.41	m	m	[20] 24.41	m	m
22	Unsupported	[20] 24.42	m	m	[20] 24.42	c3	c3
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/11 OR A.150/12 THEN m ELSE i.						
c2:	IF A.150/3 THEN m ELSE i.						
c3:	IF A.150/15 THEN m ELSE i.						

Prerequisite A.151/21 – REGISTER response

Prerequisite: A.152/17 OR A.152/25 OR A.152/31 OR A.152/37 OR A.152/41 OR A.152/44 OR A.152/48 OR A.152/49 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.278: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	m	m	[20] 24.17	m	m
11	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
12	Expires	[20] 24.19	o		[20] 24.19	o	
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	Organization	[20] 24.25	o		[20] 24.25	o	
15	MIME-Version	[20] 24.24	o		[20] 24.24	o	
16	Require	[20] 24.33	m	m	[20] 24.33	c1	c1
17	Retry-After	[20] 24.34	m	m	[20] 24.34	i	i
18	Server	[20] 24.37	m	m	[20] 24.37	i	i
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	i	i
21	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/11 OR A.150/12 THEN m ELSE i.						
c2:	IF A.150/3 THEN m ELSE i.						

Prerequisite A.151/21 - - REGISTER response

Prerequisite: A.152/30 - - 423

Table A.239a: Supported headers within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Call-Info	[20] 24.9	o		[20] 24.9	o	
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	m	m	[20] 24.17	m	m
11	Error-Info	[20] 24.18	o		[20] 24.18	o	
12	Expires	[20] 24.19	o		[20] 24.19	o	
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Min-Expires	[20] 24.23	m	m	[20] 24.23	i	i
16	Organization	[20] 24.25	o		[20] 24.25	o	
17	Require	[20] 24.33	m	m	[20] 24.33	c1	c1
18	Server	[20] 24.37	o		[20] 24.37	o	
19	State	[28] 5.1	e		[28] 5.1	e	
20	Supported	[20] 24.39	m	m	[20] 24.39	i	i
21	Timestamp	[20] 24.40	m	m	[20] 24.40	c2	c2
22	To	[20] 24.41	m	m	[20] 24.41	m	m
23	User-Agent	[20] 24.43	o		[20] 24.43	o	
24	Via	[20] 24.44	m	m	[20] 24.44	m	m
25	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/11 OR A.150/13 THEN m ELSE i.					
c2:		IF A.150/3 THEN m ELSE i.					

Table A.279: Supported message bodies within the REGISTER response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

A.2.2.4.13 SUBSCRIBE method

Prerequisite A.151/22 - - SUBSCRIBE request

Table A.280: Supported headers within the SUBSCRIBE request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Contact	[24] 5.2	o		[24] 5.2	o	
3	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
4	Accept-Language	[20] 24.3	o		[20] 24.3	o	
5	Allow-Events	[23] 7.5.2	m	m	[23] 7.5.2	c1	c1
6	Authorization	[20] 24.7	m	m	[20] 24.7	i	i
7	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
8	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
9	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
10	Content-Language	[20] 24.13	o		[20] 24.13	o	
11	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
12	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
13	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
14	Date	[20] 24.17	m	m	[20] 24.17	c2	c2
15	Event	[23] 7.5.1	m	m	[23] 7.5.1	m	m
16	Expires	[20] 24.19	m	m	[20] 24.19	i	i
17	From	[20] 24.20	m	m	[20] 24.20	m	m
18	Max-Forwards	[20] 24.22	m	m	[20] 24.22	m	m
19	MIME-Version	[20] 24.24	o		[20] 24.24	o	
20	Proxy-Authorization	[20] 24.28	o		[20] 24.28	o	
21	Proxy-Require	[20] 24.29, [28] 3	m	m	[20] 24.29, [28] 3	m	m
22	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
23	Referred-By	[25] 3.3	c3	c3	[25] 3.3	c4	c4
24	Reject-Contact	[24] 5.3	o		[24] 5.3	o	
25	Request-Disposition	[24] 5.5	o		[24] 5.5	o	
26	Require	[20] 24.33, [28] 3	m	m	[20] 24.33, [28] 3	c5	c5
27	Route	[20] 24.35	m	m	[20] 24.35	m	m
28	State	[28] 5.1	e		[28] 5.1	e	
29	Supported	[20] 24.39, [26] 8.1	m	m	[20] 24.39, [26] 8.1	c6	c6
30	Timestamp	[20] 24.40	m	m	[20] 24.40	i	i
31	To	[20] 24.41	m	m	[20] 24.41	m	m
32	User-Agent	[20] 24.43	o		[20] 24.43	o	
33	Via	[20] 24.44	m	m	[20] 24.44	m	m
c1:		IF A.3/21 THEN m ELSE i.					
c2:		IF A.150/9 THEN m ELSE i.					
c3:		IF A.150/21 THEN m ELSE n/a.					
c4:		IF A.150/21 THEN i ELSE n/a.					
c5:		IF A.150/11 OR A.150/13 THEN m ELSE i.					
c6:		IF A.150/14 THEN m ELSE i.					
NOTE:		c1 refers to the UA role major capability as this is the case of a proxy that also acts as a UA specifically for SUBSCRIBE and NOTIFY.					

Table A.281: Supported message bodies within the SUBSCRIBE request

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							

Prerequisite A.151/23 -- SUBSCRIBE response

Prerequisite: A.152/27 -- "415" Unsupported Media Type

Table A.282: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Accept	[20] 24.1	o		[20] 24.1	o	
2	Accept-Encoding	[20] 24.2	o		[20] 24.2	o	
3	Accept-Language	[20] 24.3	o		[20] 24.3	o	
4	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
5	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
6	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
7	Content-Language	[20] 24.13	o		[20] 24.13	o	
8	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
9	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
10	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
11	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
12	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
13	From	[20] 24.20	m	m	[20] 24.20	m	m
14	MIME-Version	[20] 24.24	o		[20] 24.24	o	
15	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
16	Server	[20] 24.37	m	m	[20] 24.37	i	i
17	State	[28] 5.1	e		[28] 5.1	e	
18	Supported	[20] 24.39	m	m	[20] 24.39	i	i
19	Timestamp	[20] 24.40	o		[20] 24.40	o	
20	To	[20] 24.41	m	m	[20] 24.41	m	m
21	User-Agent	[20] 24.43	o		[20] 24.43	o	
22	Via	[20] 24.44	m	m	[20] 24.44	m	m
23	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/23 -- SUBSCRIBE response

Prerequisite: A.152/18 -- "405" Method Not Allowed

Table A.283: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow	[20] 24.5	m		[20] 24.5	m	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/23 - - SUBSCRIBE response

Prerequisite: A.152/8 OR A.152/9 OR A.152/10 OR A.152/11 OR A.152/12 OR A.152/36 - - 3xx or 485 "Ambiguous"

Table A.284: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Contact	[20] 24.10	o		[20] 24.10	o	
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/23 - - SUBSCRIBE response

Prerequisite: A.152/14 - - 401

Table A.285: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
13	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
14	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
15	Server	[20] 24.37	m	m	[20] 24.37	i	i
16	State	[28] 5.1	e		[28] 5.1	e	
17	Supported	[20] 24.39	m	m	[20] 24.39	i	i
18	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
19	To	[20] 24.41	m	m	[20] 24.41	m	m
20	User-Agent	[20] 24.43	o		[20] 24.43	o	
21	Via	[20] 24.44	m	m	[20] 24.44	m	m
22	Warning	[20] 24.45	o		[20] 24.45	o	
23	WWW-Authenticate	[20] 24.46	o		[20] 24.46	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/23 - - SUBSCRIBE response

Prerequisite: A.152/20 - - 407

Table A.286: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Proxy-Authenticate	[20] 24.27	o		[20] 24.27	o	
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/23 -- SUBSCRIBE response

Prerequisite: A.152/6 AND A.152/7 -- 2xx

Table A.287: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Authentication-Info	[20] 24.6	o		[20] 24.6	o	
2	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
3	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
4	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
5	Content-Language	[20] 24.13	o		[20] 24.13	o	
6	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
7	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
8	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
9	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
10	Expires	[20] 24.19	m	m	[20] 24.19	i	i
11	From	[20] 24.20	m	m	[20] 24.20	m	m
12	MIME-Version	[20] 24.24	o		[20] 24.24	o	
13	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
14	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
15	Server	[20] 24.37	m	m	[20] 24.37	i	i
16	State	[28] 5.1	e		[28] 5.1	e	
17	Supported	[20] 24.39	m	m	[20] 24.39	i	i
18	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
19	To	[20] 24.41	m	m	[20] 24.41	m	m
20	User-Agent	[20] 24.43	o		[20] 24.43	o	
21	Via	[20] 24.44	m	m	[20] 24.44	m	m
22	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/23 - - SUBSCRIBE response

Prerequisite: A.152/35 - - 484

Table A.288: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Record-Route	[20] 24.31	m	m	[20] 24.31	m	m
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/23 - - SUBSCRIBE response

Prerequisite: A.152/28 - - 420

Table A.289: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
13	Server	[20] 24.37	m	m	[20] 24.37	i	i
14	State	[28] 5.1	e		[28] 5.1	e	
15	Supported	[20] 24.39	m	m	[20] 24.39	i	i
16	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
17	To	[20] 24.41	m	m	[20] 24.41	m	m
18	Unsupported	[20] 24.42	m	m	[20] 24.42	c3	c3
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						
c3:	IF A.150/16 THEN m ELSE i.						

Prerequisite A.151/23 - - SUBSCRIBE response

Prerequisite: A.152/17 OR A.152/25 OR A.152/31 OR A.152/37 OR A.152/41 OR A.152/44 OR A.152/48 OR A.152/49 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.290: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
13	Retry-After	[20] 24.34	m	m	[20] 24.34	i	i
14	Server	[20] 24.37	m	m	[20] 24.37	i	i
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.150/9 THEN m ELSE i.						
c2:	IF A.150/11 OR A.150/13 THEN m ELSE i.						

Prerequisite A.151/23 - - SUBSCRIBE response

Prerequisite: A.152/40 - - 489

Table A.291: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Allow-Events	[23] 7.5.2	m	m	[23] 7.5.2	c1	c1
2	Authentication-Info	[20] 24.6	o		[20] 24.6	o	
3	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
4	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
5	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
6	Content-Language	[20] 24.13	o		[20] 24.13	o	
7	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
8	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
9	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
10	Date	[20] 24.17	m	m	[20] 24.17	c2	c2
11	Error-Info	[20] 24.18	m	m	[20] 24.18	i	i
12	From	[20] 24.20	m	m	[20] 24.20	m	m
13	MIME-Version	[20] 24.24	o		[20] 24.24	o	
14	Require	[20] 24.33	m	m	[20] 24.33	c3	c3
15	Server	[20] 24.37	m	m	[20] 24.37	i	i
16	State	[28] 5.1	e		[28] 5.1	e	
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:	IF A.3/21 THEN m ELSE i.						
c2:	IF A.150/9 THEN o ELSE n/a.						
c3:	IF A.150/11 OR A.150/13 THEN m ELSE i.						
NOTE:	c1 refers to the UA role major capability as this is the case of a proxy that also acts as a UA specifically for SUBSCRIBE and NOTIFY.						

Prerequisite A.151/23 -- SUBSCRIBE response

Prerequisite: A.152/30 -- 423

Table A. 292: Supported headers within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1	Call-ID	[20] 24.8	m	m	[20] 24.8	m	m
2	Content-Disposition	[20] 24.11	o		[20] 24.11	o	
3	Content-Encoding	[20] 24.12	o		[20] 24.12	o	
4	Content-Language	[20] 24.13	o		[20] 24.13	o	
5	Content-Length	[20] 24.14	m	m	[20] 24.14	m	m
6	Content-Type	[20] 24.15	m	m	[20] 24.15	m	m
7	Cseq	[20] 24.16	m	m	[20] 24.16	m	m
8	Date	[20] 24.17	m	m	[20] 24.17	c1	c1
9	Error-Info	[20] 24.18	o		[20] 24.18	o	
10	From	[20] 24.20	m	m	[20] 24.20	m	m
11	MIME-Version	[20] 24.24	o		[20] 24.24	o	
12	Min-Expires	[20] 24.23	m	m	[20] 24.23	i	i
13	Require	[20] 24.33	m	m	[20] 24.33	c2	c2
14	Server	[20] 24.37	o		[20] 24.37	o	
15	State	[28] 5.1	e		[28] 5.1	e	
16	Supported	[20] 24.39	m	m	[20] 24.39	i	i
17	Timestamp	[20] 24.40	i	i	[20] 24.40	i	i
18	To	[20] 24.41	m	m	[20] 24.41	m	m
19	User-Agent	[20] 24.43	o		[20] 24.43	o	
20	Via	[20] 24.44	m	m	[20] 24.44	m	m
21	Warning	[20] 24.45	o		[20] 24.45	o	
c1:		IF A.150/3 THEN m ELSE i.					
c2:		IF A.150/11 OR A.150/13 THEN m ELSE i.					

Table A.293: Supported message bodies within the SUBSCRIBE response

Item	Header	Sending			Receiving		
		Ref.	RFC status	Profile status	Ref.	RFC status	Profile status
1							