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Universal Mobile Telecommunications System (UMTS);
IP Multimedia Call Control Protocol based on SIP and SDP;
Stage 3
(3GPP TS 24.229 version 5.4.0 Release 5)**



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

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

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
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Foreword

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1 Scope

The present document defines a call control protocol for use in the IP Multimedia (IM) Core Network (CN) subsystem based on the Session Initiation Protocol (SIP), and the associated Session Description Protocol (SDP).

The present document is applicable to:

- the interface between the User Equipment (UE) and the Call Session Control Function (CSCF);
- the interface between the CSCF and any other CSCF;
- the interface between the CSCF and an Application Server (AS);
- the interface between the CSCF and the Media Gateway Control Function (MGCF);
- the interface between the S-CSCF and the Media Resource Function Controller (MRFC)
- the interface between the CSCF and the Breakout Gateway Control Function (BGCF);
- the interface between the BGCF and the MGCF;
- the interface between the BGCF and any other BGCF; and
- the interface between the CSCF and an external Multimedia IP network.

Where possible the present document specifies the requirements for this protocol by reference to specifications produced by the IETF within the scope of SIP and SDP. Where this is not possible, extensions to SIP and SDP are defined within the present document. The document has therefore been structured in order to allow both forms of specification.

NOTE: The present document covers only the usage of SIP and SDP to communicate with the entities of the IM CN subsystem. It is possible, and not precluded, to use the capabilities of GPRS to allow a terminal containing a SIP UA to communicate with SIP servers or SIP UAs outside the IM CN subsystem, and therefore utilise the services provided by those SIP servers. The usage of SIP and SDP for communicating with SIP servers or SIP UAs outside the IM CN subsystem is outside the scope of the present document.

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.
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- [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".
- [9A] 3GPP TS 25.331: "Radio Resource Control (RRC); Protocol Specification".
- [10] 3GPP TS 26.235: "Packet switched conversational multimedia applications; Default codecs".
- [10A] 3GPP TS 27.060: "Mobile Station (MS) supporting Packet Switched Services".
- [11] 3GPP TS 29.061: "Interworking between the Public Land Mobile Network (PLMN) supporting Packet Based Services and Packet Data Networks (PDN)".
- [12] 3GPP TS 29.207: "Policy control over Gs interface".
- [13] 3GPP TS 29.208: "End to end Quality of Service (QoS) signalling flows".
- [14] 3GPP TS 29.228: "IP Multimedia (IM) Subsystem Cx and Dx Interfaces; Signalling flows and message contents".
- [15] 3GPP TS 29.229: "Cx and Dx Interfaces based on the Diameter protocol, Protocol details".
- [16] 3GPP TS 32.200: "Telecommunication management; Charging management; Charging principles".
- [17] 3GPP TS 32.225: "Telecommunication management; Charging management; Charging data description for the IP Multimedia subsystem".
- [18] 3GPP TS 33.102: "3G Security; Security architecture".
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- [25] RFC 2976 (October 2000): "The SIP INFO method".
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- [28] RFC 3265 (June 2002): "Session Initiation Protocol (SIP) Specific Event Notification".
- [29] RFC 3311 (September 2002): "The Session Initiation Protocol (SIP) UPDATE method".
- [30] RFC 3312 (October 2002): "Integration of resource management and Session Initiation Protocol (SIP)".
- [31] RFC 3313 (January 2003): "Private Session Initiation Protocol (SIP) Extensions for Media Authorization".
- [32] RFC 3320 (March 2002): "Signaling Compression (SigComp)".
- [33] RFC 3323 (November 2002): "A Privacy Mechanism for the Session Initiation Protocol (SIP)".

[34] RFC 3325 (November 2002): "Private Extensions to the Session Initiation Protocol (SIP) for Network Asserted Identity within Trusted Networks".

[35] RFC 3327 (December 2002): "Session Initiation Protocol Extension Header Field for Registering Non-Adjacent Contacts".

[36] draft-ietf-sip-refer-05 (June 2002): "The REFER method".

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

[37] RFC 3420 (November 2002): "Internet Media Type message/sipfrag".

[38] draft-ietf-sip-scvrtdisco-01 (August 2002): "Session Initiation Protocol Extension Header Field for Service Route Discovery During Registration".

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

[39] draft-ietf-mmusic-sdp-new-10 (May 2002): "SDP: Session Description Protocol".

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

[40] draft-ietf-dhc-dhcpv6-26 (June 2002): "Dynamic Host Configuration Protocol for IPv6 (DHCPv6)".

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

[42] RFC 3485 (February 2003): "The Session Initiation Protocol (SIP) and Session Description Protocol (SDP) static dictionary for Signaling Compression (SigComp)".

[43] draft-ietf-sipping-reg-event-00 (October 2002): "A Session Initiation Protocol (SIP) Event Package for Registrations".

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

[44] Void.

[45] Void.

[46] Void.

[47] Void.

[48] RFC 3329 (January 2003): "Security Mechanism Agreement for the Session Initiation Protocol (SIP)".

[49] RFC 3310 (September 2002): "Hypertext Transfer Protocol (HTTP) Digest Authentication Using Authentication and Key Agreement (AKA)".

[50] RFC 3428 (December 2002): "Session Initiation Protocol (SIP) Extension for Instant Messaging".

[51] Void.

[52] RFC 3455 (January 2003): "Private Header (P-Header) Extensions to the Session Initiation Protocol (SIP) for the 3rd-Generation Partnership Project (3GPP)".

[53] RFC 3388 (December 2002): "Grouping of Media Lines in Session Description Protocol".

[54] draft-ietf-mmusic-reservation-flows-01.txt (October 2002): "Mapping of Media Streams to Resource Reservation Flows".

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

[55] RFC 3486 (February 2003): "Compressing the Session Initiation Protocol (SIP)"

3 Definitions and abbreviations

3.1 Definitions

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

For the purposes of the present document, the following terms and definitions given in RFC 3261 [26] apply (unless otherwise specified see clause 6).

- Back-to-Back User Agent (B2BUA)**
- Client**
- Dialog**
- Final response**
- Header**
- Header field**
- Loose routing**
- Method**
- Option-tag** (see RFC 3261 [26] subclause 19.2)
- Provisional response**
- Proxy, proxy server**
- Redirect server**
- Registrar**
- Request**
- Response**
- Server**
- Session**
- (SIP) transaction**
- Stateful proxy**
- Stateless proxy**
- Status-code** (see RFC 3261 [26] subclause 7.2)
- Tag** (see RFC 3261 [26] subclause 19.3)
- Target Refresh Request**
- 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)**
- Subscription Locator Function (SLF)**

For the purposes of the present document, the following terms and definitions given in 3GPP TS 23.218 [5] subclause 3.1 apply:

- Filter criteria**
- Initial filter criteria**
- Initial request**
- Standalone transaction**
- Subsequent request**

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)**
- Policy Decision Function (PDF)**
- 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)

For the purposes of the present document, the following terms and definitions given in RFC 2401 [20A] Appendix A apply:

Security association

NOTE: A number of different security associations exist within the IM CN subsystem. Within this document the term specifically applies to the security association that exists between the UE and the P-CSCF, as this is the only security association that has direct impact on SIP.

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 |
| APN | Access Point Name |
| AUTN | Authentication Token |
| B2BUA | Back-to-Back User Agent |
| BGCF | Breakout Gateway Control Function |
| c | conditional |
| CCF | Charging Collection Function |
| CDR | Charging Data Record |
| CK | Ciphering Key |
| CN | Core Network |
| CSCF | Call Session Control Function |
| DHCP | Dynamic Host Configuration Protocol |
| DNS | Domain Name System |
| DTD | Document Type Definition |
| ECF | Event Charging Function |
| GCID | GPRS Charging Identifier |
| GGSN | Gateway GPRS Support Node |
| GPRS | General Packet Radio Service |
| i | irrelevant |
| I-CSCF | Interrogating CSCF |
| ICID | IM CN subsystem Charging Identifier |
| IK | Integrity Key |
| IM | IP Multimedia |
| IMS | IP Multimedia core network Subsystem |
| IMSI | International Mobile Subscriber Identity |
| IOI | Inter Operator Identifier |
| IP | Internet Protocol |
| IPv4 | Internet Protocol version 4 |
| IPv6 | Internet Protocol version 6 |
| ISC | IP multimedia Subsystem Service Control |
| ISIM | IMS Subscriber Identity Module |
| m | mandatory |
| MAC | Message Authentication Code |
| MCC | Mobile Country Code |
| MGCF | Media Gateway Control Function |
| MGW | Media Gateway |
| MNC | Mobile Network Code |
| MRFC | Multimedia Resource Function Controller |
| MRFP | Multimedia Resource Function Processor |
| PDP | Packet Data Protocol |

| | |
|--------|--------------------------------------|
| PLMN | Public Land Mobile Network |
| PSTN | Public Switched Telephone Network |
| n/a | not applicable |
| NAI | Network Access Identifier |
| o | optional |
| P-CSCF | Proxy CSCF |
| PDU | Protocol Data Unit |
| RAND | RANDom challenge |
| RES | RESponse |
| RTCP | Real-time Transport Control Protocol |
| RTP | Real-time Transport Protocol |
| S-CSCF | Serving CSCF |
| SDP | Session Description Protocol |
| SGSN | Serving GPRS Support Node |
| SIP | Session Initiation Protocol |
| SLF | Subscription Locator Function |
| SQN | SeQuence Number |
| UA | User Agent |
| UAC | User Agent Client |
| UAS | User Agent Server |
| UE | User Equipment |
| UICC | Universal Integrated Circuit Card |
| URI | Universal Resource Identifier |
| URL | Universal Resource Locator |
| USIM | UMTS Subscriber Identity Module |
| x | prohibited |
| XMAC | expected MAC |
| XML | eXtensible Markup Language |

4 General

4.1 Conformance of IM CN subsystem entities to SIP, SDP and other protocols

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 to SIP as described in subclause 5.1, with the exceptions and additional capabilities to SDP as described in subclause 6.1, and with the exceptions and additional capabilities to SigComp as described in subclause 8.1. The UE shall also provide the access dependent procedures described in subclause 9.2.
- The P-CSCF shall provide the proxy role, with the exceptions and additional capabilities to SIP as described in subclause 5.2, with the exceptions and additional capabilities to SDP as described in subclause 6.2, and with the exceptions and additional capabilities to SigComp as described in subclause 8.2. Under certain circumstances as described in subclause 5.2, the P-CSCF shall provide the UA role with the additional capabilities, as follows:

- a) when acting as a subscriber to or the recipient of event information; and
 - b) when performing P-CSCF initiated dialog-release the P-CSCF shall provide the UA role, even when acting as a proxy for the remainder of the dialog.
- 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, and with the exceptions and additional capabilities to SDP as described in subclause 6.3. Under certain circumstances as described in subclause 5.4, the S-CSCF shall provide the UA role with the additional capabilities, as follows:
 - a) the S-CSCF shall also act as a registrar. When acting as a registrar, or for the purposes of executing a third-party registration, the S-CSCF shall provide the UA role;
 - b) as the notifier of event information the S-CSCF shall provide the UA role;
 - c) when providing a messaging mechanism by sending the MESSAGE method, the S-CSCF shall provide the UA role; and
 - d) when performing S-CSCF initiated dialog release the S-CSCF shall provide the UA role, even when acting as a proxy for the remainder of the dialog.
 - The MGCF shall provide the UA role, with the exceptions and additional capabilities as described in subclause 5.5, and with the exceptions and additional capabilities to SDP as described in subclause 6.4.
 - The BGCF shall provided the proxy 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] subclause 9.1.1.1), 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] subclause 9.1.1.2), 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] subclause 9.1.1.3), shall provided 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] subclause 9.1.1.4), shall provide the UA role, with the exceptions and additional capabilities as described in subclause 5.7.5.
 - The AS, receiving third-party registration requests, shall provide the UA role, with the exceptions and additional capabilities as described in subclause 5.7.
 - The MRFC shall provide the UA role, with the exceptions and additional capabilities as described in subclause 5.8, and with the exceptions and additional capabilities to SDP as described in subclause 6.5.

NOTE 1: Annex A can change the status of requirements in referenced specifications. Particular attention is drawn to table A.4 and table A.162 for capabilities within referenced SIP specifications, and to table A.317 and table A.328 for capabilities within referenced SDP specifications. The remaining tables build on these initial tables.

NOTE 2: The allocated roles defined in this clause are the starting point of the requirements from the IETF SIP specifications, and are then the basis for the description of further requirements. Some of these extra requirements formally change the proxy role into a B2BUA. Thus, for example, a P-CSCF is a B2BUA in that it inspects and may modify SDP message bodies, and terminates Record-Route headers on behalf of the UA, but in all other respects other than those more completely described in subclause 5.2 it implements proxy requirements. Despite being a B2BUA a P-CSCF does not implement UA requirements from the IETF RFCs, except as indicated in this specification, e.g., relating to registration event subscription.

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 SIP URLs. Other IM CN subsystem entities may be allocated SIP URLs. For example sip:pcscf.home1.net and sip:<impl-specific-info>@pcscf.home1.net are valid SIP URIs. If the user part exists, it is an essential part of the address and shall not be omitted when copying or moving the address. How these addresses are assigned to the logical entities is up to the network operator. For example, a single SIP URL may be assigned to all I-CSCFs, and the load shared between various physical boxes by underlying IP capabilities, or separate SIP URLs may be assigned to each I-CSCF, and the load shared between various physical boxes using DNS SRV capabilities.
- 2) All IM CN subsystem entities are allocated IPv6 addresses in accordance with the constraints specified in 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 ISIM application, if present, on the UICC. Where no ISIM application is present, the private user identity is derived from the IMSI, which is contained on the USIM (see 3GPP TS 23.003 [3]). This private user identity is available to the SIP application within the UE.

NOTE: The SIP URLs 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 ISIM application, if present, on the UICC. Where no ISIM application is present, the UE shall derive a temporary public user identity from the IMSI contained on the USIM (see 3GPP TS 23.003 [3]). All registered public user identities are available to the SIP application within the UE, after registration.
- 5) For the purpose of access to the IM CN subsystem, UEs are assigned IPv6 prefixes in accordance with the constraints specified in 3GPP TS 23.221 [6] subclause 5.1 (see subclause 9.2.1 for the assignment procedures).

4.2A Transport mechanisms

This document makes no requirement on the transport protocol used to transfer signalling information over and above that specified in RFC 3261 [26] clause 18. However, the UE and IM CN subsystem entities shall transport SIP messages longer than 1300 bytes according to the procedures of RFC 3261 [26] subclause 18.1.1, even if a mechanism exists of discovering a maximum transmission unit size longer than 1500 bytes.

4.3 Routing principles of IM CN subsystem entities

Each IM CN subsystem functional entity shall apply loose routing policy as described in RFC 3261 [26], when processing a SIP request. In cases where the I-CSCF or the S-CSCF may interact with strict routers in non IM CN subsystem networks, the routing procedures defined in RFC 3261 [26] that ensure interoperability with strict routers shall be used by the I-CSCF and S-CSCF.

4.4 Trust domain

RFC 3325 [34] provides for the existence and trust of an asserted identity within a trust domain. For the IM CN subsystem, this trust domain consists of the P-CSCF, the I-CSCF, the S-CSCF, the BGCF, the MGCF, the MRFC, and all ASs that are not provided by third-party service providers. ASs provided by third-party service providers are outside the trust domain.

For the purpose of the P-Access-Network-Info header, a trust domain also applies. This trust domain is identical to that of the P-Asserted-Identity.

NOTE: In addition to the procedures specified in clause 5, procedures of RFC 3325 [34] in relation to transmission of P-Asserted-Identity headers and their contents outside the trust domain also apply.

4.5 Charging correlation principles for IM CN subsystems

4.5.1 Overview

This subclause describes charging correlation principles to aid with the readability of charging related procedures in clause 5. See 3GPP TS 32.200 [16] and 3GPP TS 32.225 [17] for further information on charging. The interface between the PDF and P-CSCF is not defined in this release.

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

1. IM CN subsystem 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).

How to use and where to generate the parameters in IM CN subsystems are described further in the subclauses that follow. The charging correlation information is encoded in the P-Charging-Vector header as defined in subclause 7.2A.5. The P-Charging-Vector header contains the following parameters: icid, access network information and ioi.

The offline and online charging function addresses are encoded in the P-Charging-Function-Addresses as defined in RFC 3455 [52]. The P-Charging-Function-Addresses header contains the following parameters: CCF and ECF.

4.5.2 IM CN subsystem charging identifier (ICID)

The ICID is the session level data shared among the IM CN subsystem entities including ASs in both the calling and called IM CN subsystems.

The first IM CN subsystem entity involved in a dialog (session) or standalone (non-session) method will generate the ICID and include it in the icid parameter of the P-Charging-Vector header in the SIP request. See 3GPP TS 32.225 [17] for requirements on the format of ICID. The P-CSCF will generate an ICID for mobile-originated calls. The I-CSCF will generate an ICID for mobile-terminated calls if there is no ICID received in the initial request (e.g. the calling party network does not behave as an IM CN subsystem). The AS will generate an ICID when acting as an originating UA. The MGCF will generate an ICID for PSTN/PLMN originated calls. Each entity that processes the SIP request will extract the ICID for possible later use in a 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.

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

4.5.3 Access network charging information

4.5.3.1 General

The access network charging information are the media flow level data shared among the IM CN subsystem entities for one side of the session (either the calling or called side). GPRS charging information (GGSN identifier and PDP context information) is an example of access network charging information.

4.5.3.2 GPRS charging information

The GGSN provides the GPRS charging information to the IM CN subsystem, which is the common information used to correlate GGSN CDRs with IM CN subsystem CDRs. The GPRS charging information is used to correlate the bearer level (i.e. PDP context) with session level.

The GPRS charging information is generated at the first opportunity after the resources are allocated at the GGSN. The GPRS charging information is passed from GGSN to P-CSCF/PDF. GPRS charging information will be updated with new information during the session as media flows are added or removed. The P-CSCF provides the GPRS charging information to the S-CSCF. The S-CSCF may also pass the information to an AS, which may be needed for online pre-pay applications. The GPRS charging information for the originating network is used only within that network, and similarly the GPRS charging information for the terminating network is used only within 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 details of the gprs-charging-info parameter is described in subclause 7.2A.5.

4.5.4 Inter operator identifier (IOI)

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

The S-CSCF in the originating network populates the orig-ioi 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 term-ioi parameter is left out of the P-Charging-Vector parameter. The S-CSCF in the originating network retrieves the term-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 S-CSCF in the terminating network retrieves the orig-ioi parameter from the P-Charging-Vector header in the initial request, which identifies the operator network from which the request originated. The S-CSCF in the terminating network populates the term-ioi 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.

The MGCF takes responsibility for populating the orig-ioi parameter when a call/session is originated from the PSTN/PLMN. The MGCF takes responsibility for populating the term-ioi parameter when a call/session is terminated at the PSTN/PLMN.

IOIs will not be passed along within the network, except when proxied by BGCF and I-CSCF to get to MGCF and S-CSCF. However, IOIs will be sent to the AS for accounting purposes.

4.5.5 Charging function addresses

Charging function addresses are distributed to each of the IM CN subsystem 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 multiple addresses for CCF and ECF addresses populated into the P-Charging-Function-Addresses header of the SIP request or response. The parameters are ccf and ecf. Only one instance of ccf is required. Additional ccf addresses may be included by each network for redundancy purposes, but the first instance of ccf is the primary address. If ecf address is included for online charging, then additional instances may also be included for redundancy.

The CCF addresses and ECF addresses are retrieved from an HSS via the Cx interface and passed by the S-CSCF to subsequent entities. The charging function addresses are passed from the S-CSCF to the IM CN subsystem entities in its home network, but are not passed to the visited network or the UE. When the P-CSCF is allocated in the visited network, then the charging function addresses are obtained by means outside the scope of this document. The AS receives the charging function addresses from the S-CSCF via the ISC interface. CCF and/or ECF addresses may be allocated as locally preconfigured addresses. The AS may also retrieve the charging function address from the HSS via Sh interface.

5 Application usage of SIP

5.1 Procedures at the UE

5.1.1 Registration and authentication

5.1.1.1 General

The UE shall register public user identities (see table A.4/1 and dependencies on that major capability).

In case a UE registers several public user identities at different points in time, the procedures to re-register, deregister and subscribe to the registration-state event package for these public user identities can remain uncoordinated in time.

5.1.1.1A Parameters contained in the UICC

In case the UE is loaded with a UICC that contains the ISIM application, it will be preconfigured with all the necessary parameters to initiate the registration to the IM CN subsystem. These parameters include:

- the private user identity;
- one or more public user identities; and
- the home network domain name used to address the SIP REGISTER request

In case the UE is loaded with a UICC that does not contain the ISIM application, the UE shall:

- generate a private user identity;
- generate a temporary public user identity; and
- generate a home network domain name to address the SIP REGISTER request to.

All these three parameters are derived from the IMSI parameter in the USIM, according to the procedures described in 3GPP TS 23.003 [3]. If the UICC does not contain the ISIM application, the UE shall derive new values every time the UICC is changed, and shall discard existing values if the UICC is removed.

The temporary public user identity is only used in REGISTER requests. After a successful registration, the UE will get the associated public user identities, and the UE may use any of them in subsequent non-REGISTER messages.

The UE shall not reveal to the user the temporary public user identity if the temporary public user identity is barred. The temporary public user identity is not barred if received by the UE in the P-Associated-URI header.

5.1.1.2 Initial registration

The UE can register a public user identity at any time that a valid PDP context exists. However, the UE shall only initiate a new registration procedure when it has received a final response from the registrar for the ongoing registration, or the previous REGISTER request has timed out.

A REGISTER request may be integrity protected using IK, see 3GPP TS 33.203 [19], derived as a result of an earlier registration.

The public user identity to be registered can be extracted either from the ISIM application, if present, on the UICC or derived from the USIM, according to the procedures described in subclause 5.1.1.1A. A public user identity may be input by the end user.

On sending a REGISTER request, the UE shall populate the header fields as follows:

- a) the Authorization header, with the username field, set to the value of the private user identity;
- b) the From header set to the SIP URI that contains the public user identity to be registered;
- c) the To header set to the SIP URI that contains the public user identity to be registered;
- d) the Contact header set to include SIP URI(s) containing the IP address of the UE in the hostport parameter or FQDN. If the protected port value that is bound to the security association is known by the UE, that shall be also included in the hostport parameter;

NOTE 1: If the UE specifies its FQDN in the host parameter in the Contact header, then it has to ensure that the given FQDN will resolve (e.g., by reverse DNS lookup) to the IP address that is bound to the security association.

- e) the Expires header, or the expires parameter within the Contact header, set to the value of 600 000 seconds as the value desired for the duration of the registration;

NOTE 2: The registrar (S-CSCF) might decrease the duration of the registration in accordance with network policy. Registration attempts with a registration period of less than a predefined minimum value defined in the registrar will be rejected with a 423 (Interval Too Brief) response.

- f) a Request-URI set to the SIP URI of the domain name of the home network;
- g) the Security-Client header field set to specify the security mechanism the UE supports, the IPSec layer algorithms the UE supports and the parameters needed for the security association setup. For further details see 3GPP TS 33.203 [19] and RFC 3329 [48];
- h) the Supported header containing the option tag "path"; and
- i) if a security association exists, a P-Access-Network-Info header that contains information concerning the access network technology and, if applicable, the cell ID (see subclause 7.2A.4).

The UE shall extract or derive from the UICC a public user identity, the private user identity, and the domain name to be used in the Request-URI in the registration, according to the procedures described in subclause 5.1.1.1A.

On receiving the 200 (OK) response to the REGISTER request, the UE shall store the expiration time of the registration for the public user identities found in the To header value. The UE shall also store the list of URIs contained in the P-Associated-URI header value. This list contains the URIs that are associated to the registered public user identity. The list contains also the identity under registration, unless this identity is barred. In order to build a proper preloaded Route header value for new dialogs, the UE shall also store the list of Service Route headers contained in the Service-Route header.

When a 401 (Unauthorized) response to a REGISTER is received the UE shall behave as described in subclause 5.1.1.5.1.

On receiving a 423 (Interval Too Brief) too brief response to the REGISTER request, the UE shall:

- send another REGISTER request populating the Expires header or the expires parameter with an expiration timer of at least the value received in the Min-Expires header of the 423 (Interval Too Brief) response.

5.1.1.3 Initial subscription to the registration-state event package

Upon receipt of a 2xx response to the initial registration, the UE shall subscribe to the reg event package for the public user identity registered at the users registrar (S-CSCF) as described in draft-ietf-sipping-reg-event-00 [43].

On sending a SUBSCRIBE request, the UE shall populate the header fields as follows:

- a) a Request URI set to the resource to which the UE wants to be subscribed to, i.e. to a SIP URI that contains the public user identity;

- b) a From header set to a SIP URI that contains the public user identity;
- c) a To header set to a SIP URI that contains the public user identity;
- d) an Event header set to the "reg" event package;
- e) an Expires header, or an expires parameter within the Contact header, set to 600 000 seconds as the value desired for the duration of the subscription; and
- f) a P-Access-Network-Info header that contains information concerning the access network technology and, if applicable, the cell ID (see subclause 7.2A.4).

Upon receipt of a 2xx response to the SUBSCRIBE request, the UE shall store the information for the established dialog and the expiration time as indicated in the Expires header of the received response.

The UE shall automatically refresh the subscription by the reg event package 600 seconds before the expiration time for a previously registered public user identity, unless continued subscription is not required. If the expiration time, as indicated in the Expires header of the 2xx response to the SUBSCRIBE request is less than 600 seconds, the UE shall refresh the subscription when half of the expiration time has elapsed and continued subscription of the public user identity is still required.

5.1.1.4 User-initiated re-registration

The UE can reregister a previously registered public user identity at any time.

The UE shall reregister the public user identity 600 seconds before the expiration time of a previous registration, unless either the user or the application within the UE has determined that a continued registration is not required. If the registration period indicated from the S-CSCF is less than 600 seconds, the UE shall reregister when half of the registration period has expired.

The UE shall integrity protect the REGISTER request using IK, see 3GPP TS 33.203 [19], derived as a result of an earlier registration, if IK is available.

On sending a REGISTER request, the UE shall populate the header fields as follows:

- a) an Authorization header, with the username field set to the value of the private user identity;
- b) a From header set to the SIP URI that contains the public user identity to be registered;
- c) a To header set to the SIP URI that contains the public user identity to be registered;
- d) a Contact header set to include SIP URI(s) that contain(s) in the hostport parameter the IP address of the UE or FQDN and protected port value bound to the security association;

NOTE 1: If the UE specifies its FQDN in the host parameter in the Contact header, then it has to ensure that the given FQDN will resolve (e.g., by reverse DNS lookup) to the IP address that is bound to the security association.

- e) an Expires header, or an expires parameter within the Contact header, set to 600 000 seconds as the value desired for the duration of the registration;

NOTE 2: The registrar (S-CSCF) might decrease the duration of the registration in accordance with network policy. Registration attempts with a registration period of less than a predefined minimum value defined in the registrar will be rejected with a 423 (Interval Too Brief) response.

- f) a Request-URI set to the SIP URI of the domain name of the home network;
- g) a Security-Client header field, set to specify the security mechanism it supports, the IPSec layer algorithms it supports and the parameters needed for the security association setup. For further details see 3GPP TS 33.203 [19] and RFC 3329 [48];

NOTE 3: The 401 (Unauthorized) challenge sent back by the S-CSCF to the UE as a response to the REGISTER request is piggybacked by the P-CSCF to insert the Security-Server header field in it. The S-CSCF authenticates the UE, while the P-CSCF negotiates and sets up the security association with the UE during the same registration procedure.

- h) the Supported header containing the option tag "path"; and
- i) the P-Access-Network-Info header that contains information concerning the access network technology and, if applicable, the cell ID (see subclause 7.2A.4).

The UE shall extract or derive from the UICC a public user identity, the private user identity, and the domain name to be used in the Request-URI in the registration, according to the procedures described in subclause 5.1.1.1A.

On receiving the 200 (OK) response to the REGISTER request, the UE shall store the new expiration time of the registration for this public user identity found in the To header value. The UE shall also store the list of URIs contained in the P-Associated-URI header value. This list contains the URIs that are associated to the registered public user identity.

When a 401 (Unauthorized) response to a REGISTER is received the UE shall behave as described in subclause 5.1.1.5.1.

On receiving a 423 (Interval Too Brief) response to the REGISTER request, the UE shall:

- send another REGISTER request populating the Expires header or the expires parameter with an expiration timer of at least the value received in the Min-Expires header of the 423 (Interval Too Brief) response.

5.1.1.5 Authentication

5.1.1.5.1 General

Authentication is achieved via the registration and re-registration procedures. When the network requires authentication or re-authentication of the UE, the UE will receive a 401 (Unauthorized) response to the REGISTER request.

On receiving a 401 (Unauthorized) response to the REGISTER request, the UE shall:

- extract the RAND and AUTN parameters;
- check the validity of a received authentication challenge, as described in 3GPP TS 33.203 [19] i.e. the locally calculated XMAC must match the MAC parameter derived from the AUTN part of the challenge; and the SQN parameter derived from the AUTN part of the challenge must be within the correct range; and
- check the existence of the Security-Server header as described in RFC 3329 [48]. If the header is not present, the UE shall send a new REGISTER request.

In the case that the 401 (Unauthorized) response to the REGISTER request is deemed to be valid the UE shall:

- calculate the RES parameter and derive the keys CK and IK from RAND as described in 3GPP TS 33.203 [19];
- set up the security association based on the static list it received in the 401 (Unauthorized) and its capabilities sent in the Security-Client header in the REGISTER request. The UE shall set up the security association using the most preferred mechanism and algorithm returned by the P-CSCF and supported by the UE and using CK and IK as shared keys; and
- send another REGISTER request using the derived IK to integrity protect the message. The header fields are populated as defined for the initial request, with the addition that the UE shall include an Authorization header containing the private user identity and the authentication challenge response (RES parameter), as described in RFC 3310 [49]. Instead of the Security-Client header the UE shall insert the Security-Verify header into the request, by mirroring in it the content of the Security-Server header received in the 401 (Unauthorized) response. The Call-ID of the integrity protected REGISTER request which carries RES must be the same as the Call-ID of the 401 (Unauthorized) response which carried the challenge.

On receiving the 200 (OK) for the integrity protected REGISTER request, the UE shall start using the security association the 200 (OK) was protected with.

Whenever the 200 (OK) response is not received after a time-out, the UE shall consider the registration to have failed. The UE shall delete the new security associations it was trying to establish, and use the old security association.

In the case that the 401 (Unauthorized) response is deemed to be invalid then the UE shall behave as defined in subclause 5.1.1.5.3.

5.1.1.5.2 Network-initiated re-authentication

Upon receipt of a NOTIFY request on the dialog which was generated during subscription to the reg event package as described in subclause 5.1.1.3, including one or more <registration> element(s) with the state attribute set to "active" and the event attribute set to "shortened" for a public user identity, the UE shall use the expiry attribute within the <contact> element to adjust the expiration time for that public user identity and start the re-authentication procedures at the appropriate time (see subclause 5.1.1.4) by initiating a reregistration as described in subclause 5.1.1.4.

5.1.1.5.3 Abnormal cases

If, in a 401 (Unauthorized) response, either the MAC or SQN is incorrect the UE shall respond with a further REGISTER indicating to the S-CSCF that the challenge has been deemed invalid as follows:

- in the case where the UE deems the MAC parameter to be invalid the subsequent REGISTER request shall contain no response parameter (e.g. no RES or AUTS);
- in the case where the UE deems the SQN to be out of range, the subsequent REGISTER request shall contain the AUTS parameter (see 3GPP TS 33.102 [18]).

A UE shall only respond to two consecutive invalid challenges. The UE may attempt to register with the network again after an implementation specific time. The REGISTER request shall be protected with the existing keys (CK and IK) if available, see 3GPP TS 33.203 [19].

5.1.1.6 Mobile-initiated deregistration

The UE can deregister a previously registered public user identity at any time.

The UE shall integrity protect the REGISTER request using IK, see 3GPP TS 33.203 [19], derived as a result of an earlier registration, if IK is available.

On sending a REGISTER request, the UE shall populate the header fields as follows:

- a) the Authorization header, with the username field, set to the value of the private user identity;
- b) the From header set to the SIP URI that contains the public user identity to be deregistered;
- c) the To header set to the SIP URI that contains the public user identity to be deregistered;
- d) the Contact header set to either the value of "*" or SIP URI(s) that contain(s) in the hostport parameter the IP address of the UE or FQDN and protected port value bound to the security association;
- e) the Expires header, or the expires parameter of the Contact header, set to the value of zero, appropriate to the deregistration requirements of the user;
- f) a Request-URI set to the SIP URI of the domain name of the home network; and
- g) a P-Access-Network-Info header that contains information concerning the access network technology and, if applicable, the cell ID (see subclause 7.2A.4).

The UE shall extract or derive from the UICC a public user identity, the private user identity, and the domain name to be used in the Request-URI in the registration, according to the procedures described in subclause 5.1.1.1A.

On receiving the 200 (OK) response to the REGISTER request, the UE shall remove all registration details relating to this public user identity.

The UE shall release all dialogs prior to deregistering the last registered public user identity.

If there are no more public user identities registered, the UE shall delete the security associations and related keys it may have towards the P-CSCF.

If all public user identities are deregistered and the security association is removed, then the UE shall consider subscription to the reg event package cancelled (i.e. as if the UE had sent a SUBSCRIBE request with an Expires header containing a value of zero).

NOTE: When the UE has received the 200 (OK) for the REGISTER request of the last registered public user identity, the UE removes the security association established between the P-CSCF and the UE. Therefore further SIP signalling (e.g. the NOTIFY containing the deregistration event) will not reach the UE.

5.1.1.7 Network-initiated deregistration

Upon receipt of a NOTIFY request on the dialog which was generated during subscription to the reg event package as described in subclause 5.1.1.3, including one or more <registration> element(s) with the state attribute set to "terminated" and the event attribute set to "rejected" or "deactivated", the UE shall remove all registration details relating to these public user identities. In case of a "deactivated" event attribute, the UE shall start the reregistration procedure as described in subclause 5.1.1.4.

Upon receipt of a NOTIFY request with all <registration> element(s) having their state attribute set to "terminated" (i.e. all public user identities are deregistered) and the Subscription-State header contains the value of "terminated", the UE shall remove the security associations towards the P-CSCF after the server transaction (as defined in RFC 3261 [26]) pertaining to the NOTIFY request terminates.

NOTE 1: If the security association towards the P-CSCF is removed, then the UE considers the subscription to the registration event package terminated (i.e. as if the UE had sent a SUBSCRIBE request with an Expires header containing a value of zero, or a NOTIFY request was received with Subscription-State header containing the value of "terminated").

NOTE 2: When the P-CSCF has removed the security association established between the P-CSCF and the UE, further SIP signalling (e.g. the NOTIFY containing the deregistration event) will not reach the UE.

5.1.2 Subscription and notification

5.1.2.1 Notification about multiple registered public user identities

Upon receipt of a 2xx response to the SUBSCRIBE request the UE shall maintain the generated dialog (identified by the values of the Call-ID, To and From headers).

Upon receipt of a NOTIFY request on the dialog which was generated during subscription to the reg event package the UE shall perform the following actions:

- if a state attribute "active", i.e. registered is received for one or more public user identities, the UE shall store the indicated public user identities as registered;
- if a state attribute "terminated", i.e. deregistered is received for one or more public user identities, the UE shall store the indicated public user identities as deregistered.

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. Usually these automatically or implicitly registered public user identities belong to the same service profile of the user and they might not be available within the UE. The implicitly registered public user identities may also belong to different service profiles. The here-described procedures provide a different mechanism (to the 200 (OK) response to the REGISTER request) to inform the UE about these automatically registered public user identities.

5.1.2.2 General SUBSCRIBE requirements

If the UA receives a 503 (Service Unavailable) response to an initial SUBSCRIBE request containing a Retry-After header, then the UE shall not automatically reattempt the request until after the period indicated by the Retry-After header contents.

5.1.2A Generic procedures applicable to all methods excluding the REGISTER method

5.1.2A.1 Mobile-originating case

The procedures of this subclause are general to all requests and responses, except those for the REGISTER method.

In accordance with RFC 3325 [34] the UE may insert a P-Preferred-Identity header in any initial request for a dialog or request for a standalone transaction as a hint for creation of an asserted identity within the IM CN subsystem. The UE may include any of the following in the P-Preferred-Identity header:

- a public user identity stored in the USIM which has been registered by the user;
- a public user identity returned in a registration-state event package of a NOTIFY request as a result of an implicit registration that was not subsequently deregistered or has expired; or
- any other public user identity which the user has assumed by mechanisms outside the scope of this specification to have a current registration.

NOTE 1: The temporary public user identity specified in subclause 5.1.1.1 is not a public user identity suitable for use in the P-Preferred-Identity header.

Where privacy is required, in any initial request for a dialog or request for a standalone transaction, the UE shall set the From header to "Anonymous".

NOTE 2: The contents of the From header should not be relied upon to be modified by the network based on any privacy specified by the user either within the UE indication of privacy or by network subscription or network policy. Therefore the user should include the value "Anonymous" whenever privacy is explicitly required. As the user may well have privacy requirements, terminal manufacturers should not automatically derive and include values in this header from the public user identity or other values stored in the USIM. Where the user has not expressed a preference in the configuration of the terminal implementation, the implementation should assume that privacy is required. Users that require to identify themselves, and are making calls to SIP destinations beyond the IM CN subsystem, where the destination does not implement RFC 3325 [34], will need to include a value in the From header other than Anonymous.

The UE can indicate privacy of the P-Asserted-Identity that will be generated by the P-CSCF in accordance with RFC 3323 [33], and the additional requirements contained within RFC 3325 [34].

The UE shall insert a P-Access-Network-Info header into any request for a dialog, any subsequent request (except ACK requests and CANCEL requests) or response (except CANCEL responses) within a dialog or any request for a standalone method. This header shall contain information concerning the access network technology and, if applicable, the cell ID (see subclause 7.2A.4).

The UE shall build a proper preloaded Route header value for all new dialogs and standalone transactions. The UE shall build a list of Route header values made out of, in this order, the P-CSCF URI (learnt through the P-CSCF discovery procedures) and the values received in the Service-Route header saved from the 200 (OK) response to the last registration or re-registration.

5.1.2A.2 Mobile-terminating case

The procedures of this subclause are general to all requests and responses, except those for the REGISTER method.

The UE can indicate privacy of the P-Asserted-Identity that will be generated by the P-CSCF in accordance with RFC 3323 [33], and the additional requirements contained within RFC 3325 [34].

NOTE 1: In the mobile-terminating case, this version of the document makes no provision for the UE to provide an P-Preferred-Identity in the form of a hint.

The UE shall insert a P-Access-Network-Info header into any response to a request for a dialog, any subsequent request (except CANCEL requests) or response (except CANCEL responses) within a dialog or any response to a standalone method. This header shall contain information concerning the access network technology and, if applicable, the cell ID (see subclause 7.2A.4).

5.1.3 Call initiation - mobile originating case

5.1.3.1 Initial INVITE

Upon generating an initial INVITE request, the UE shall:

- indicate the support for reliable provisional responses and specify it using the Supported header mechanism;
- indicate the requirement of precondition and specify it using the Require header mechanism.

NOTE: Table A.4 specifies that UE support of forking is required in accordance with RFC 3261. While proxies in the IM CN subsystem do not fork requests, proxies external to the system may initiate forking, such that the UE is able to receive several forked provisional or final responses from different terminations. The UE may accept or reject any of the forked responses, for example, if the UE is capable of supporting a limited number of simultaneous transactions or early dialogs.

When a final answer is received for one of the early dialogues, the UE proceeds to set up the SIP session. The UE shall not progress any further early dialogues to established dialogs. Therefore, upon the reception of a subsequent final 200 (OK) response for an INVITE request (e.g., due to forking), the UE shall:

- 1) acknowledge the response with an ACK request; and
- 2) send a BYE request to this dialog in order to terminate it.

If the UA receives a 503 (Service Unavailable) response to an initial INVITE request containing a Retry-After header, then the UE shall not automatically reattempt the request until after the period indicated by the Retry-After header contents.

If the UE receives a 488 (Not Acceptable Here) response to an initial INVITE request, the UE should send a new INVITE request containing SDP according to the procedures defined in subclause 6.1.

NOTE: An example of where a new request would not be built is where knowledge exists within the UE, or interaction occurs with the user, such that it is known that the resultant SDP would describe a session that did not meet the user requirements.

5.1.4 Call initiation - mobile terminating case

5.1.4.1 Initial INVITE

Upon receiving an initial INVITE request without containing either Supported: precondition or Require: precondition header values, the UE shall generate a 421 (Extension Required) response indicating the required extension in the Require header field.

Upon generating the first response to the initial INVITE request, the UE shall indicate the requirement for reliable provisional responses and specify it using the Require header mechanism. The UE shall send the 200 (OK) response to the initial INVITE request only after the local resource reservation has been completed.

NOTE: Table A.4 specifies that UE support of forking is required in accordance with RFC 3261. While proxy support of forking is precluded in the IM CN subsystem, proxies external to the system may initiate forking, such that the UE is able to receive several forked requests for the same transaction.

5.1.5 Call release

Void.

5.1.6 Emergency service

A UE shall not attempt to establish an emergency session via the IM CN Subsystem when the UE can detect that the number dialled is an emergency number. The UE shall use the CS domain as described in 3GPP TS 24.008 [8].

In the event the UE receives a 380 (Alternative Service) response to an INVITE request the response containing a XML body that includes an <alternative service> element with the <type> child element set to "emergency", the UE shall automatically:

- send an ACK request to the P-CSCF as per normal SIP procedures;
- attempt an emergency call setup according to the procedures described in 3GPP TS 24.008 [8].

The UE may also provide an indication to the user based on the text string contained in the <reason> element.

As a consequence of this, a UE operating in MS operation mode C cannot perform emergency calls.

5.1.7 Void

5.2 Procedures at the P-CSCF

5.2.1 General

The P-CSCF shall support the Path and Service-Route headers.

NOTE 1: The Path header is only applicable to the REGISTER request and its 200 (OK) response. The Service-Route header is only applicable to the 200 (OK) response of REGISTER request.

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.

When the P-CSCF receives any request or response containing the P-Media-Authorization header from the S-CSCF, the P-CSCF shall remove the header.

NOTE 3: If service based local policy applies, the P-CSCF will insert the P-Media-Authorization header as described in subclauses 5.2.7.2 and 5.2.7.3.

5.2.2 Registration

When the P-CSCF receives a REGISTER request from the UE, the P-CSCF shall:

- 1) insert a Path header in the request including an entry containing:
 - the SIP URL identifying the P-CSCF;
 - an indication that requests routed in this direction of the path (i.e. from the S-CSCF to the P-CSCF) are expected to be treated as for the mobile-terminating case. This indication may e.g. be in a parameter in the URL, a character string in the user part of the URL, or be a port number in the URL;
- 2) insert a Require header 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;
- 4) insert the parameter "integrity-protected" (described in subclause 7.2A.2) with a value "yes" into the Authorization header field in case the REGISTER request was received integrity protected, otherwise insert the parameter with the value "no";
- 5) in case the REGISTER request was received without integrity protection, then check the existence of the Security-Client header. If the header is present, then remove and store it. The P-CSCF shall remove the 'sec-agree' item from the Require header, and the header itself if this is the only entry. If the header is not present, then the P-CSCF shall return a suitable 4xx response;
- 6) in case the REGISTER request was received integrity protected, then the P-CSCF shall:

- check the security association which protected the request. If that has a temporary lifetime, then the request shall contain a Security-Verify header. If there is no such header, then the P-CSCF shall return a suitable 4xx error code. If there is such header, then compare the content of the Security-Verify header with the local static list. If those do not match, then there is a potential man-in-the-middle attack. The request should be rejected by sending a suitable 4xx response. If the contents match, the P-CSCF shall remove the Security-Verify header, and the "sec-agree" item from the Require header, and the header itself if this is the only entry;
 - if the security association the REGISTER request came is an established one, then a Security-Verify header is not expected to be included. If the Security-Verify header is present, then the P-CSCF shall remove that header together with the 'Require: sec-agree' header; and
 - check if the private user identity conveyed in the integrity-protected REGISTER request is the same as the private user identity which was previously challenged or authenticated. If the private user identities are different, the P-CSCF shall reject the REGISTER request by returning a 403 (Forbidden) response;
- 7) insert a P-Visited-Network-ID header field, with the value of a pre-provisioned string that identifies the visited network at the home network; and
 - 8) determine the I-CSCF of the home network and forward the request to that I-CSCF.

When the P-CSCF receives a 401 (Unauthorized) response to a REGISTER request, the P-CSCF shall:

- 1) remove the CK and IK values contained in the 401 (Unauthorized) response and bind them to the proper private user identity and security association. The P-CSCF shall forward the 401 (Unauthorized) response to the UE if and only if the CK and IK have been removed;
- 2) insert the Security-Server header in the response, containing the P-CSCF static security list. For further information see 3GPP TS 33.203 [19]; and
- 3) set up the security association with a temporary lifetime between the UE and the P-CSCF for the user identified with the private user identity. For further details see 3GPP TS 33.203 [19] and RFC 3329 [48]. The P-CSCF shall set the SIP level lifetime of the security association to be long enough to permit the UE to finalize the registration procedure (bigger than $64 * T1$). The P-CSCF shall set the IPsec level lifetime of the security association to the maximum.

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) save the list of Service-Route headers preserving the order. The P-CSCF shall store this list during the entire registration period of the respective public user identity. The P-CSCF shall use this list to validate the routing information in the requests originated by the UE. If this registration is a reregistration, the P-CSCF shall replace the already existing list of Service-Route headers with the new list;
- 2) associate the Service-Route header list with the registered public user identity;
- 3) store the public user identities found in the P-Associated-URI header value, as those that are authorized to be used by the UE;
- 4) store the default public user identity for use with procedures for the P-Asserted-Identity. The default public user identity is the first on the list of URIs present in the P-Associated-URI header;

NOTE 1: There may be more than one default public user identities stored in the P-CSCF, as the result of the multiple registrations of public user identities.

- 5) store the values received in the P-Charging-Function-Addresses header;
- 6) update the SIP level lifetime of the security association with the value found in the Expires header;
- 7) protect the response within the same security association to that in which the associated request was protected;
- 8) delete all earlier security associations and related keys it may have towards the UE, when a message protected within the newly set up security association is received; and
- 9) delete the new security associations that it was trying to establish with the UE, in case the P-CSCF receives a message from the UE protected with the old security association.

NOTE 2: The P-CSCF will maintain two Route header lists. The first Route header list - created during the registration procedure - is used only to validate the routing information in the initial requests that originate from 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.

The P-CSCF shall delete any security association from the IPsec database when their SIP level lifetime expires. If there are still active dialogs associated with the user after the security associations were deleted, the P-CSCF shall discard all information pertaining to these dialogs without performing any further SIP transactions with the peer entities of the P-CSCF.

NOTE 3: At the same time, the P-CSCF will also indicate via the Go interface that all resources associated with these dialogs should be released.

5.2.3 Subscription to the user's registration-state event package

Upon receipt of a 200 (OK) response to the initial REGISTER request of a user, the P-CSCF shall subscribe to the reg event package at the user's registrar (S-CSCF) as described in draft-ietf-sipping-reg-event-00 [43]. The P-CSCF shall:

- 1) generate a SUBSCRIBE request with the following elements:
 - a Request-URI set to the resource to which the P-CSCF wants to be subscribed to, i.e. to a SIP URI that contains the public user identity;
 - a From header set to the P-CSCF's SIP URI;
 - a To header, set to a SIP URI that contains the public user identity that was previously registered;
 - an Event header set to the "reg" event package; and
 - an Expires header set to a value higher than the Expires header indicated in the 200 (OK) response to the REGISTER request; and
- 2) determine the I-CSCF of the home network (e.g., by using DNS services);

before sending the SUBSCRIBE request to that I-CSCF, according to the procedures of RFC 3261 [26].

Upon receipt of a 2xx response to the SUBSCRIBE request, 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.

The P-CSCF shall automatically refresh the subscription by the reg event package 600 seconds before the expiration time for a previously registered public user identity, unless continued subscription is not required. If the expiration time, as indicated in the Expires header of the 2xx response to the SUBSCRIBE request is less than 600 seconds, the P-CSCF shall refresh the subscription when half of the expiration time has elapsed and continued subscription of the public user identity is still required.

5.2.4 Registration of multiple public user identities

Upon receipt of a 2xx response to the SUBSCRIBE request the P-CSCF shall maintain the generated dialog (identified by the values of the Call-ID, To and From headers).

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

- if a state attribute "active", 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 state attribute "terminated", 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 P-CSCF 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:

- 1) remove the public user identity found in the To header field, and all the associated public user identities, from the registered public user identities list and all related stored information; and
- 2) check if the user has left any other registered public user identity. When all of the public user identities of a user are deregistered, the P-CSCF shall, if the subscription to the reg event package for that user is still alive, terminate the subscription to the reg event package for that user by sending a SUBSCRIBE request with an Expires header containing a value of zero. The P-CSCF shall also remove the security associations towards that user after the server transaction (as defined in RFC 3261 [26]) pertaining to this deregistration terminates.

NOTE 1: There is no requirement to distinguish a REGISTER request relating to a registration from that relating to a deregistration. For administration reasons the P-CSCF may distinguish such requests, however this has no impact on the SIP procedures.

NOTE 2: When the P-CSCF has sent the 200 (OK) for the REGISTER request of the last registered public user identity, the P-CSCF removes the security association established between the P-CSCF and the UE. Therefore further SIP signalling (e.g. the NOTIFY containing the deregistration event) will not reach the UE.

5.2.5.2 Network-initiated deregistration

Upon receipt of a NOTIFY request on the dialog which was generated during subscription to the reg event package as described in subclause 5.2.3, including one or more <registration> element(s) with the state attribute set to "terminated" the P-CSCF shall remove all stored information for these public user identities.

Upon receipt of a NOTIFY request with all <registration> element(s) having their state attribute set to "terminated" (i.e. all public user identities are deregistered), the P-CSCF shall remove the security associations towards the UE.

NOTE: When the P-CSCF has removed the security association established between the P-CSCF and the UE, further SIP signalling (e.g. the NOTIFY containing the deregistration event) will not reach the UE.

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.

5.2.6.2 Determination of mobile-originated or mobile-terminated case

Upon receipt of an initial request or a target refresh request or a stand-alone transaction, the P-CSCF shall:

- perform the procedures for the mobile-terminating case as described in subclause 5.2.6.4 if the request makes use of the information for mobile-terminating calls, which was added to the Path header entry of the P-CSCF during registration (see subclause 5.2.2), e.g. the message is received at a certain port or the topmost Route header contains a specific user part or parameter;

- perform the procedures for the mobile-originating case as described in subclause 5.2.6.3 if this information is not used by the request.

5.2.6.3 Requests initiated by the UE

When the P-CSCF receives an initial request for a dialog or a request for a standalone transaction, and the request contains a P-Preferred-Identity header that matches one of the registered public user identities, the P-CSCF shall identify the initiator of the request by that public user identity.

When the P-CSCF receives an initial request for a dialog or a request for a standalone transaction, and the request contains as P-Preferred-Identity header that does not match one of the registered public user identities, or does not contain a P-Preferred-Identity header, the P-CSCF shall identify the initiator of the request by a default public user identity. If there is more than one default public user identity available, the P-CSCF shall randomly select one of them.

NOTE: The contents of the From header do not form any part of this decision process.

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

- 1) verify that the list of URIs received in the Service-Route header (during the last successful registration or re-registration) matches the preloaded Route headers in the received request. This verification is done on a per URI basis, not as a whole string. If the verification fails, then the P-CSCF shall either:
 - a) return a 400 (Bad Request) response that may include a Warning header containing the warn-code 399; the P-CSCF shall not forward the request, and shall not continue with the execution of steps 2 onwards; or
 - b) replace the preloaded Route header value in the request with the value of the Service-Route header received during the last 200 (OK) response for a registration or reregistration;
- 2) add its own SIP URL to the top of the Record-Route header. The P-CSCF SIP URI is built in a format that contains the port number of the security association established from the UE to the P-CSCF and either:
 - a) the P-CSCF FQDN that resolves to the IP address of the security association established from the UE to the P-CSCF; or
 - b) the P-CSCF IP address of the security association established from the UE to the P-CSCF;
- 3) remove the P-Preferred-Identity header, if present, and insert a P-Asserted-Identity header with a value representing the initiator of the request; and
- 4) create a new, globally unique value for the icid parameter and insert it into the P-Charging-Vector header;

before forwarding the request, based on the topmost Route header, in accordance with the procedures of RFC 3261 [26].

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

- 1) store the values received in the P-Charging-Function-Addresses header;
- 2) store the list of Record-Route headers from the received response;
- 3) store the dialog ID and associate it with the private user identity and public user identity involved in the session; and
- 4) save the Contact header received in the response in order to release the dialog if needed;

before forwarding the response to the UE in accordance with the procedures of RFC 3261 [26].

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

- 1) verify if the request relates to a dialog in which the originator of the request is involved:
 - a) if the request does not relate to an existing dialog in which the originator is involved, then the P-CSCF shall answer the request by sending a 403 (Forbidden) response back to the originator. The response may include a Warning header containing the warn-code 399. The P-CSCF will not forward the request. No other actions are required;

- b) if the request relates to an existing dialog in which the originator is involved, then the P-CSCF shall continue with the following steps;
- 2) verify that the list of Route headers in the request is included, preserving the same order, in the list of Record-Route headers that was received during the last target refresh request for the same dialog. This verification is done on a per URI basis, not as a whole string. If the verification fails, then the P-CSCF shall either:
 - a) return a 400 (Bad Request) response that may include a Warning header containing the warn-code 399; the P-CSCF shall not forward the request, and shall not continue with the execution of steps 3 onwards; or
 - b) replace the Route header value in the request with the one received during the last target refresh request for the same dialog in the Record-Route header; and
- 3) add its own SIP URL to the Record-Route header. The P-CSCF SIP URI is built in a format that contains the port number of the security association established from the UE to the P-CSCF and either:
 - a) the P-CSCF FQDN that resolves to the IP address of the security association established from the UE to the P-CSCF; or
 - b) the P-CSCF IP address of the security association established from the UE to the P-CSCF before forwarding the request, based on the topmost Route header, in accordance with the procedures of RFC 3261 [26].

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

- 1) store the list of Record-Route headers from the received response; and
- 2) save the Contact header received in the response in order to release the dialog if needed;

before forwarding the response to the UE in accordance with the procedures of RFC 3261 [26].

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

- 1) verify that the list of URIs received in the Service-Route header (during the last successful registration or re-registration) matches the preloaded Route headers in the received request. This verification is done on a per URI basis, not as a whole string. If the verification fails, then the P-CSCF shall either:
 - a) return a 400 (Bad Request) response that may include a Warning header containing the warn-code 399; the P-CSCF shall not forward the request, and shall not continue with the execution of steps 3 onwards; or
 - b) replace the preloaded Route header value in the request with the one received during the last registration in the Service-Route header of the 200 (OK) response;
- 2) remove the P-Preferred-Identity header, if present, and insert a P-Asserted-Identity header with a value representing the initiator of the request; and
- 3) create a new, globally unique value for the icid parameter and insert it into the P-Charging-Vector header;

before forwarding the request, based on the topmost Route header, in accordance with the procedures of RFC 3261 [26].

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

- 1) store the values received in the P-Charging-Function-Addresses header;

before forwarding the response to the UE in accordance with the procedures of RFC 3261 [26].

When the P-CSCF receives from the UE subsequent requests other than a target refresh request, the P-CSCF shall:

- 1) verify if the request relates to a dialog in which the originator of the request is involved:
 - a) if the request does not relate to an existing dialog in which the originator is involved, then the P-CSCF shall answer the request by sending a 403 (Forbidden) response back to the originator. The response may include a Warning header containing the warn-code 399. The P-CSCF will not forward the request. No other actions are required;
 - b) if the request relates to an existing dialog in which the originator is involved, then the P-CSCF shall continue with the following steps; and

- 2) verify that the list of Route headers in the request matches the list of Record-Route headers that was received during the last target refresh request for the same dialog. This verification is done on a per URI basis, not as a whole string. If the verification fails, then the P-CSCF shall either:
 - a) return a 400 (Bad Request) response that may include a Warning header containing the warn-code 399; the P-CSCF shall not forward the request, and shall not continue with the execution of steps 3 onwards; or
 - b) replace the Route header value in the request with the one received during the last target refresh request for the same dialog in the Record-Route header;

before forwarding the request to the UE, (based on the topmost Route header,) in accordance with the procedures of RFC 3261 [26].

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

- 1) verify that the list of URIs received in the Service-Route header (during the last successful registration or re-registration) is included, preserving the same order, as a subset of the preloaded Route headers in the received request. This verification is done on a per URI basis, not as a whole string. If the verification fails, then the P-CSCF shall either:
 - a) return a 400 (Bad Request) response that may include a Warning header containing the warn-code 399; the P-CSCF shall not forward the request, and shall not continue with the execution of steps 2 onwards; or
 - b) replace the Route header value in the request with the one received during the last registration in the Service-Route header of the 200 (OK) response; and
- 2) remove the P-Preferred-Identity header, if present, and insert a P-Asserted-Identity header with a value representing the initiator of the request;

before forwarding the request, based on the topmost Route header, in accordance with the procedures of RFC 3261 [26].

5.2.6.4 Requests terminated by the UE

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

- 1) remove its own SIP URL from the topmost Route header;
- 2) save the Record-Route header list;
- 3) convert the list of Record-Route header values into a list of Route header values and save this list of Route headers;
- 4) save a copy of the Contact header received in the request in order to release the dialog if needed;
- 5) add its own SIP URI to the top of the list of Record-Route headers and save the list. The P-CSCF SIP URI is built in a format that contains the port number of the security association established from the UE to the P-CSCF and either:
 - a) the P-CSCF FQDN that resolves to the IP address of the security association established from the UE to the P-CSCF; or
 - b) the P-CSCF IP address of the security association established from the UE to the P-CSCF;
- 6) add its own address to the top of the received list of Via header and save the list. The P-CSCF Via header entry is built in a format that contains the port number of the security association established from the UE to the P-CSCF and either:
 - a) the P-CSCF FQDN that resolves to the IP address of the security association established from the UE to the P-CSCF; or
 - b) the P-CSCF IP address of the security association established from the UE to the P-CSCF;
- 7) store the values received in the P-Charging-Function-Addresses header;

- 8) remove and store the icid parameter received in the P-Charging-Vector header; and
- 9) save a copy of the P-Called-Party-ID header;

before forwarding the request to the UE in accordance with the procedures of RFC 3261 [26].

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

- 1) remove the P-Preferred-Identity header, if present, and insert a P-Asserted-Identity header with the value saved from the P-Called-Party-ID header that was received in the request;
- 2) verify that the list of Via headers matches the saved list of Via headers received in the request corresponding to the same dialog, including the P-CSCF via header value. This verification is done on a per Via header value basis, not as a whole string. If the verification fails, then the P-CSCF shall either:
 - a) discard the response; or
 - b) replace the Via header values with those received in the request;
- 3) verify that the list of URIs received in the Record-Route header of the request corresponding to the same dialog is included, preserving the same order, as a subset of the Record-Route header list of this response. This verification is done on a per URI basis, not as a whole string. If the verification fails, then the P-CSCF shall either:
 - a) discard the response; or
 - b) replace the Via header values with those received in the request;
- 4) store the dialog ID and associate it with the private user identity and public user identity involved in the session;

before forwarding the response in accordance with the procedures of RFC 3261 [26].

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

- 1) verify that the list of Via headers matches the saved list of Via headers received in the request corresponding to the same dialog, including the P-CSCF via header value. This verification is done on a per Via header value basis, not as a whole string. If these lists do not match, then the P-CSCF shall either:
 - a) discard the response; or
 - b) replace the Via header values with those received in the request;

before forwarding the response in accordance with the procedures of RFC 3261 [26].

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

- 1) remove its own SIP URL from the topmost Route header value;
- 2) save, if present, the received Record-Route headers of the received request;
- 3) save the Contact header received in the request in order to release the dialog if needed; and
- 4) add its own address to the top of the received list of Via header and save the list. The P-CSCF Via header entry is built in a format that contains the port number of the security association established from the UE to the P-CSCF and either:
 - a) the P-CSCF FQDN that resolves to the IP address of the security association established from the UE to the P-CSCF; or
 - b) the P-CSCF IP address of the security association established from the UE to the P-CSCF;

before forwarding the request to the UE in accordance with the procedures of RFC 3261 [26].

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

- 1) verify that the list of Via headers matches the saved list of Via headers received in the request corresponding to the same dialog, including the P-CSCF via header value. This verification is done on a per Via header value basis, not as a whole string. If the verification fails, then the P-CSCF shall either:
 - a) discard the response; or
 - b) replace the Via header values with those received in the request;

before forwarding the response in accordance with the procedures of RFC 3261 [26].

When the P-CSCF receives, destined for the UE, a request for a stand-alone transaction, prior to forwarding the request, the P-CSCF shall:

- 1) add its own address to the top of the received list of Via header and save the list. The P-CSCF Via header entry is built in a format that contains the port number of the security association established from the UE to the P-CSCF and either:
 - a) the P-CSCF FQDN that resolves to the IP address of the security association established from the UE to the P-CSCF; or
 - b) the P-CSCF IP address of the security association established from the UE to the P-CSCF;
- 2) store the values received in the P-Charging-Function-Addresses header; and
- 3) remove and store the icid parameter received in the P-Charging-Vector header;

before forwarding the request to the UE in accordance with the procedures of RFC 3261 [26].

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

- 1) verify that the list of Via headers matches the saved list of Via headers received in the request corresponding to the same dialog, including the P-CSCF via header value. This verification is done on a per Via header value basis, not as a whole string. If these lists do not match, then the P-CSCF shall either:
 - a) discard the response; or
 - b) replace the Via header values with those received in the request; and
- 2) remove the P-Preferred-Identity header, if present, and insert an P-Asserted-Identity header with the value saved from Request-URI of the request;

before forwarding the response in accordance with the procedures of RFC 3261 [26].

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

- 1) add its own address to the top of the received list of Via header and save the list. The P-CSCF Via header entry is built in a format that contains the port number of the security association established from the UE to the P-CSCF and either:
 - a) the P-CSCF FQDN that resolves to the IP address of the security association established from the UE to the P-CSCF; or
 - b) the P-CSCF IP address of the security association established from the UE to the P-CSCF; and
- 2) remove and store the icid parameter from P-Charging-Vector header;

before forwarding the request to the UE in accordance with the procedures of RFC 3261 [26].

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

- 1) verify that the list of Via headers matches the saved list of Via headers received in the request corresponding to the same dialog, including the P-CSCF via header value. This verification is done on a per Via header value basis, not as a whole string. If these lists do not match, then the P-CSCF shall either:
 - a) discard the response; or

- b) replace the Via header values with those received in the request;

before forwarding the response in accordance with the procedures of RFC 3261 [26].

5.2.7 Initial INVITE

5.2.7.1 Introduction

In addition to following the procedures for initial requests defined in subclause 5.2.6, initial INVITE requests also follow the procedures of this subclause.

5.2.7.2 Mobile-originating case

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

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

- if a media authorization token is generated by the PDF as specified in RFC 3313 [31] (i.e. when service-based local policy control is applied), insert the P-Media-Authorization header containing that media authorization token.

NOTE: Typically, the first 183 (Session Progress) response contains an SDP answer including one or more "m=" media descriptions, but it is also possible that the response does not contain an SDP answer or the SDP does not include at least an "m=" media description. However, the media authorization token is generated independently of the presence or absence of "m=" media descriptions and sent to the UE in the P-Media-Authorization header value. The same media authorization token is used until the session is terminated.

When the P-CSCF sends the UPDATE request towards the S-CSCF, the P-CSCF shall also include the access-network-charging-info parameter in the P-Charging-Vector header. See subclause 5.2.7.4 for further information on the access network charging 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 preloaded Route header. The received initial INVITE request 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:

- if a media authorization token is generated by the PDF as specified in RFC 3313 [31] (i.e. when service-based local policy control is applied), insert the P-Media-Authorization header containing that media authorization token.

NOTE: Typically, the initial INVITE request contains an SDP offer including one or more "m=" media descriptions, but it is also possible that the INVITE request does not contain an SDP offer or the SDP does not include at least an "m=" media description. However, the media authorization token is generated independently of the presence or absence of "m=" media descriptions and sent to the UE in the P-Media-Authorization header value. The same media authorization token is used until the session is terminated.

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

When the P-CSCF sends 180 (Ringing) or 200 (OK) (to INVITE) towards the S-CSCF, the P-CSCF shall also include the access-network-charging-info parameter in the P-Charging-Vector header. See subclause 5.2.7.4 for further information on the access network charging information.

5.2.7.4 Access network charging information

The P-CSCF shall include the access-network-charging-info parameter within the P-Charging-Vector header as described in subclause 7.2A.5.

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 RFC 3261 [26].

5.2.8.1.2 Release of an existing session

Upon receipt of an indication that the radio interface resources are 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 request based on the information saved for the related dialog, including:
 - a Request-URI, set to the stored Contact header provided by 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;
 - 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 request based on the information saved for the related dialog, including:
 - a Request-URI, set to the stored Contact header provided by 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;
 - further headers, based on local policy or the requested session release reason.
- 3) send the so generated BYE request towards the indicated user.
- 4) upon receipt of the 2xx responses for the BYE request, 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

The P-CSCF shall respond to all reINVITE requests with a 100 (Trying) provisional response.

For a reINVITE request from the UE, when the P-CSCF sends the UPDATE request towards the S-CSCF, the P-CSCF shall include the updated access-network-charging-info parameter in the P-Charging-Vector header. See subclause 5.2.7.4 for further information on the access network charging information.

5.2.9.2 Mobile-terminating case

The P-CSCF shall respond to all reINVITE requests with a 100 (Trying) provisional response.

For a reINVITE request destined towards the UE, when the P-CSCF sends 200 (OK) response (to the INVITE request) towards the S-CSCF, the P-CSCF shall include the updated access-network-charging-info parameter in the P-Charging-Vector header. See subclause 5.2.7.4 for further information on the access network charging information.

5.2.10 Emergency service

The P-CSCF shall store a configurable list of local emergency numbers and emergency URLs, i.e. those used for emergency services by the operator to which the P-CSCF belongs to. In addition to that, the P-CSCF shall store a configurable list of roaming partners' emergency numbers and emergency URLs associated with MCC and MNC codes.

NOTE: Certain SIP URLs may be classified as emergency URLs in all networks.

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

In order to determine whether the INVITE request is destined for an emergency centre in the roaming country (i.e. the list of roaming partners' are inspected), the P-CSCF shall compare the MCC and the MNC fields in the received in the P-Access-Network-Info header of the INVITE request against its own MCC and MNC codes.

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.

5.2.11 Void

5.3 Procedures at the I-CSCF

5.3.1 Registration procedure

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 [14].

Prior to performing the user registration query procedure to the HSS, the I-CSCF decides which HSS to query, possibly as a result of a query to the Subscription Locator Functional (SLF) entity as specified in 3GPP TS 29.228 [14].

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

In the case of SLF query, if the SLF does not send HSS address to the I-CSCF, the I-CSCF shall send back a 403 (Forbidden) response to the UE. The response may include a Warning header containing the warn-code 399.

If the HSS sends a negative response to the user registration status query request, the I-CSCF shall send back a 403 (Forbidden) response. The response may include a Warning header containing the warn-code 399.

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 response 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.

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, that does not contain a Route header, the I-CSCF shall start the user location query procedure to the HSS as specified in 3GPP TS 29.228 [14] for the called user, indicated in the Request-

URI. Prior to performing the user location query procedure to the HSS, the I-CSCF decides which HSS to query, possibly as a result of a query to the Subscription Locator Functional (SLF) entity as specified in 3GPP TS 29.228 [14].

Upon successful user location query, when the response contains the URL of the assigned S-CSCF, the I-CSCF shall:

- 1) insert the URL received from the HSS as the topmost Route header;
- 2) store the value of the icid parameter received in the P-Charging-Vector header and retain the icid parameter in the P-Charging-Vector header. If no icid parameter was found, then create a new, globally unique value for the icid parameter and insert it into the 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.

Upon successful user location query, when the response contains information about the required S-CSCF capabilities, the I-CSCF shall:

- 1) select a S-CSCF according to the method described in 3GPP TS 29.228 [14];
- 2) insert the URL of the selected S-CSCF as the topmost Route header field value;
- 3) execute the procedure described in step 2 and 3 in the above paragraph (upon successful user location query, when the response contains the URL of the assigned S-CSCF); and
- 4) forward the request to the selected S-CSCF.

Upon an unsuccessful user location query when the response from the HSS indicates that the user does not exist, the I-CSCF shall return an appropriate unsuccessful SIP response. This response may be a 404 (Not found) or 604 (Does not exist anywhere) in the case the user is not a user of the home network.

Upon an unsuccessful user location query when the response from the HSS indicates that the user is not registered and no services are provided for such a user, the I-CSCF shall return an appropriate unsuccessful SIP response. This response may be a 480 (Temporarily unavailable) if the user is recognized as a valid user, but is not registered at the moment and it does not have services for unregistered users.

When the I-CSCF receives an initial request, that contains a single Route header pointing to itself, the I-CSCF shall determine from the entry in the Route header whether it needs to do HSS query or hiding. In case HSS query is needed, then the procedures described for the case when there is no Route header present shall be performed. If the I-CSCF determines that hiding must be performed, then the THIG functionality in I-CSCF received an outgoing initial request for which topology hiding has to be applied, and the I-CSCF shall:

- 1) remove its own SIP URL from the topmost Route header;
- 2) perform the procedures described in subclause 5.3.3; and
- 3) route the request based on the Request-URI header field.

When the I-CSCF receives an initial request containing more than one Route header, the I-CSCF shall:

- 1) remove its own SIP URL from the topmost Route header;
- 2) apply the procedures as described in subclause 5.3.3; and
- 3) forward the request based on the topmost Route header.

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

In the case of SLF query, if the SLF does not send HSS address to the I-CSCF, the I-CSCF shall send back a 404 (Not Found) response to the UE.

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

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 1: 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, Service-Route, shall 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. The inserted SIP URL may include an indicator that identifies the direction of subsequent requests received by the I-CSCF i.e., from the S-CSCF towards the P-CSCF, to identify the mobile-terminating case. This indicator may be encoded in different ways, such as, e.g., a unique parameter in the URL, a character string in the username part of the URL, or a dedicated port number in the URL.

NOTE 2: Any subsequent request that includes the direction indicator (in the Route header) or arrives at the dedicated port number, indicates that the request was sent by the S-CSCF towards the P-CSCF.

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) construct an NAI in the form of 'username@realm', where the username part is the encrypted string, and the realm is the name of the encrypting network.
- 5) append a "tokenized-by=" tag and set it to the value of the encrypting network's name, after the constructed NAI;

- 6) form one valid entry for the specific header out of the resulting NAI, e.g. prepend "SIP/2.0/UDP" for Via headers or "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;lr,
      SIP/2.0/UDP Token( SIP/2.0/UDP scscf1.home1.net;lr,
                        SIP/2.0/UDP pcscf1.home1.net;lr)@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;lr,
       sip:Token(sip:scscf1.home1.net;lr)@home1.net;tokenized-by=home1.net,
       sip:asl.foreign.net;lr,
       sip:Token(sip:scscf1.home1.net;lr,
                sip:pcscf1.home1.net;lr)@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 NAIs encrypted by the network this I-CSCF belongs to within all headers of the incoming message;
- 2) use the user part of those NAIs 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 user part of the NAI which follows 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:");
- 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/2.0/UDP scscf1.home1.net;lr,
                      SIP/2.0/UDP pcscf1.home1.net;lr)@home1.net;tokenized-by=home1.net
```

will be replaced with the following entries:

```
Via: SIP/2.0/UDP scscf1.home1.net;lr, SIP/2.0/UDP pcscf1.home1.net;lr
```

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.

5.3.4 Void

5.4 Procedures at the S-CSCF

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.

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

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.

During registration, the S-CSCF shall include a P-Access-Network-Info header (as received in the REGISTER request from the UE) in the 3rd-party REGISTER towards application servers, if the AS is part of the trust domain. If the AS is not part of the trust domain, the S-CSCF shall not include any P-Access-Network-Info header. The S-CSCF shall not include a P-Access-Network-Info header in any responses to the REGISTER request.

5.4.1.2 Initial registration and user-initiated reregistration

5.4.1.2.1 Unprotected REGISTER

NOTE 1: Any REGISTER request sent unprotected by the UE is considered to be an initial registration. A 200 (OK) final response to such a request will only be sent back after the S-CSCF receives a correct RES in a REGISTER request that is sent integrity protected.

Upon receipt of a REGISTER request with the integrity-protection parameter set to 'no', the S-CSCF shall:

- 1) identify the user by the public user identity as received in the To header and the private user identity as received in the username field in the Authorization header of the REGISTER request;
- 2) check if the P-Visited-Network header is included in the REGISTER request, and if it is included identify the visited network by the value of this header;
- 3) check the value of the Expires header. The S-CSCF shall only proceed with the following procedures if the Expires header is set to a value greater than zero; if the Expires header is set to a value zero, then S-CSCF shall proceed according to subclause 5.4.1.4;
- 4) check how many authentications are ongoing for this user. The S-CSCF may – based on local policy – reject the request by sending a 403 (Forbidden) response, if there are a number of ongoing authentications. The response may include a Warning header containing the warn-code 399. If the S-CSCF decides to challenge the user, then proceed as follows;
- 5) select an authentication vector for the user. If no authentication vector for this user is available, after the S-CSCF has performed the Cx Multimedia Authentication procedure with the HSS, as described in 3GPP TS 29.229 [15], the S-CSCF shall select an authentication vector as described in 3GPP TS 33.203 [19].

Prior to performing Cx Multimedia Authentication procedure with the HSS, the S-CSCF decides which HSS to query, possibly as a result of a query to the Subscription Locator Functional (SLF) entity as specified in 3GPP TS 29.228 [14];

NOTE 2: At this point the S-CSCF informs the HSS, that the user currently registering will be served by the S-CSCF by passing its SIP URL to the HSS. This will be indicated by the HSS for all further incoming requests to this user, in order to direct all these requests directly to this S-CSCF.

- 6) store the icid parameter received in the P-Charging-Vector header;
- 7) challenge the user by generating a 401 (Unauthorized) response for the received REGISTER request, including a WWW-Authenticate header which transports:
 - the home network identification in the realm field;
 - the RAND and AUTN parameters and optional server specific data for the UE in the nonce field;
 - the security mechanism, which is AKAv1-MD5, in the algorithm field;
 - the IK (Integrity Key) parameter for the P-CSCF in the ik field (see subclause 7.2A.4); and
 - optionally the CK (Cipher Key) parameter for the P-CSCF in the ck field (see subclause 7.2A.4);
- 8) send the so generated 401 (Unauthorized) response towards the UE; and,

- 9) start timer reg-await-auth which guards the receipt of the next REGISTER request.

5.4.1.2.2 Protected REGISTER

Upon receipt of a REGISTER request with the integrity-protection parameter in the Authorization header set to 'yes', the S-CSCF shall identify the user by the public user identity as received in the To header and the private user identity as received in the Authorization header of the REGISTER request, and:

In the case that there is no authentication currently ongoing for this user (i.e. no timer reg-await-auth is running):

- 1) check if the user needs to be reauthenticated.

The S-CSCF may require authentication of the user for any REGISTER request, and shall always require authentication for registration requests received without integrity protection by the P-CSCF. The information that a REGISTER request was received integrity protected at the P-CSCF may be used as part of the decision to challenge the user.

If the user needs to be reauthenticated, the S-CSCF shall proceed with the procedures as described for the initial REGISTER in subclause 5.4.1.2.1, beginning with step 4). If the user does not need to be reauthenticated, the S-CSCF shall proceed with the following steps in this paragraph; and

- 2) check whether an Expires timer is included in the REGISTER request and its value. If the Expires header indicates a zero value, the S-CSCF shall perform the deregistration procedures as described in subclause 5.4.1.4. If the Expires header does not indicate zero, the S-CSCF shall check whether the public user identity received in the To header is already registered. If it is not registered, the S-CSCF shall proceed with the procedures as described for the second REGISTER request in subclause 5.4.1.2.2, beginning with step 5. Otherwise, the S-CSCF shall proceed with the procedures as described for the second REGISTER request in subclause 5.4.1.2, beginning with step 6).

In the case that a timer reg-await-auth is running for this user the S-CSCF shall:

- 1) check if the Call-ID of the request matches with the Call-ID of the 401 (Unauthorized) response which carried the last challenge. The S-CSCF shall only proceed further if the Call-IDs match.
- 2) stop timer reg-await-auth;
- 3) check whether an Authorization header is included, containing:
 - a) the private user identity of the user in the username field;
 - b) the algorithm which is AKAv1-MD5 in the algorithm field; and
 - c) the RES parameter needed for the authentication procedure in the response field.

The S-CSCF shall only proceed with the following steps in this paragraph if the RES parameter was included;

- 4) check whether the received RES parameter and the XRES parameter match. The XRES parameter was received from the HSS as part of the Authentication Vector. The S-CSCF shall only proceed with the following steps if RES and XRES are matching;
- 5) after performing the Cx Server Assignment procedure with the HSS, as described in 3GPP TS 29.229 [15], store the following information in the local data:
 - a) the list of public user identities associated to the user, including the own public user identity under registration and the implicitly registered due to the received REGISTER request. Each public user identity is identified as either barred or non-barred; and,
 - b) the user profile(s) of the user including initial Filter Criteria;

NOTE 1: There might be more than one set of initial Filter Criteria received because some implicitly registered public user identities that are part of the same user's subscription may belong to different service profiles.

- 6) bind to each non-barred registered public user identity all registered contact information and store the related method tag values from the Contact header for future use;

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

NOTE 3: The barred public user identities are not bound to the contact information.

- 7) check whether a Path header was included in the REGISTER request and construct a list of preloaded Route headers from the list of entries in the Path header. The S-CSCF shall preserve the order of the preloaded Route headers and bind them to the contact information that was received in the REGISTER message;

NOTE 4: If this registration is a reregistration, then a list of pre-loaded Route headers will already exist. The new list replaces the old list.

- 8) determine the duration of the registration by checking the value of the Expires header in the received REGISTER request. The S-CSCF may reduce the duration of the registration due to local policy or send back a 423 (Interval Too Brief) response specifying the minimum allowed time for registration;
- 9) store the icid parameter received in the P-Charging-Vector header;
- 10) create a 200 (OK) response for the REGISTER request, including:
 - a) the list of received Path headers;
 - b) a P-Associated-URI header containing the list of public user identities that the user is authorized to use. The first URI in the list of public user identities supplied by the HSS to the S-CSCF will indicate the default public user identity to be used by the S-CSCF. The S-CSCF shall place the default public user identity as a first entry in the list of URIs present in the P-Associated-URI header. The default public user identity will be used by the P-CSCF in conjunction with the procedures for the P-Asserted-Identity header, as described in subclause 5.2.6.3. The S-CSCF shall not add a barred public user identity to the list of URIs in the P-Associated-URI header;
 - c) a Service-Route header containing:
 - the SIP URL identifying the S-CSCF containing an indication that requests routed via the service route (i.e. from the P-CSCF to the S-CSCF) are treated as for the mobile-originating case. This indication may e.g. be in a URL parameter, a character string in the user part of the URL or be a port number in the URL; and,
 - if network topology hiding is required a SIP URL identifying an I-CSCF (THIG) as the topmost entry;
- 11) send the so created 200 (OK) response to the UE;
- 12) 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; and,

NOTE 5: If this registration is a reregistration, the Filter Criteria already exists in the local data.

- 13) handle the user as registered for the duration indicated in the Expires header.

5.4.1.2.3 Abnormal cases

The S-CSCF need not challenge an unprotected REGISTER request for a private user identity that already has a registration in process, but instead return a 500 (Server Internal Error) response. The response shall contain a Retry-After header with a value indicating a time the UE shall wait before resending the request.

In the case that the authentication response (RES) from the UE does not match with XRES and the request was correctly integrity protected (it is indicated by the P-CSCF), or 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), and the authentication response was triggered by an initial registration or a UE initiated reauthentication, the S-CSCF shall either:

- start a network initiated re-authentication procedure as defined in subclause 5.4.1.6; or
- send a further challenge 401 (Unauthorized) to the UE.

In the case that the authentication response (RES) from the UE does not match with XRES and the request was correctly integrity protected (it is indicated by the P-CSCF), or 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), and the authentication response was triggered by a network initiated reauthentication 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 REGISTER request from the UE containing an authentication response indicates that the authentication challenge was invalid and with no RES or AUTS parameter, 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 REGISTER request from the UE containing an authentication response indicates that the authentication challenge was invalid but contains the AUTS parameter, the S-CSCF will fetch new authentication vectors from the HSS, including AUTS and RAND in the request to indicate a resynchronisation. On receipt of these vectors from the HSS, the S-CSCF shall:

- 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 request with a 423 (Interval Too Brief) response, containing a Min-Expires header with the minimum registration time the S-CSCF will accept.

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.

In the case that the REGISTER request from the UE contains more than one SIP URIs as Contact header entries, the S-CSCF shall only store the entry with the highest "q" value and include it in the 200 (OK) response.

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

- check whether the P-CSCF included the Integrity-protection parameter into the Authorization header field set to yes, indicating that the REGISTER request was received integrity protected. The S-CSCF shall only proceed with the following steps if the integrity protection parameter is set to yes;
- deregister the public user identity found in the To header field together with the implicitly registered public user identities;
- 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; and
- if this is a deregistration request for the last registered public user identity and there are still active multimedia sessions associated with this user, release each multimedia session belonging to the served user by applying the steps listed in subclause 5.4.5.1.2.

Based on operators' policy the S-CSCF can request from HSS to either be kept or cleared as the S-CSCF allocated to this subscriber. In both cases the state of the subscriber identity is stored as unregistered in the HSS and the S-CSCF. Based on HSS decision, the S-CSCF may either keep all or only a part of the user profile or removes it. If all public user identities of the UE are deregistered, then the S-CSCF may consider the UE and P-CSCF subscriptions to the reg event package cancelled (i.e. as if the UE had sent a SUBSCRIBE request with an Expires header containing a value of zero).

If the Authorization header of the REGISTER request did not contain an Integrity-protection parameter, or the parameter was set to the value 'no', the S-CSCF shall respond to the request with a 403 (Forbidden) response. The response may contain a Warning header with a warn-code 399.

5.4.1.5 Network-initiated deregistration

Prior to initiating the network-initiated deregistration for the last registered public user identity while there are still active multimedia sessions belonging to this user, the S-CSCF shall release all multimedia sessions belonging to this user as described in subclause 5.4.5.1.

When a network-initiated deregistration event occurs for one or more public user identity, the S-CSCF shall send a NOTIFY request to the UE on the dialog which was generated by the UE subscribing to the registration event package. When the S-CSCF receives a final response to the NOTIFY request or upon a timeout, the S-CSCF shall generate a NOTIFY request on all remaining dialogs which have been established due to subscription to the reg 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 "reg" value;
- in the body of the NOTIFY request, include as many <registration> elements as many public user identities the S-CSCF is aware of the user owns;
- set the aor attribute within each <registration> element to one public user identity:
 - set the <contact> sub-element of each <registration> element to the contact address provided by the UE;
 - if the public user identity:
 - has been deregistered then:
 - set the state attribute within the <registration> element to "terminated";
 - set the state attribute within the <contact> element to "terminated"; and
 - set the event attribute within the <contact> element to "deactivated" if the S-CSCF expects the UE to reregister or "rejected" if the S-CSCF does not expect the UE to reregister; or
 - has been kept registered then:
 - set the state attribute within the <registration> element to "active"; and
 - set the state attribute within the <contact> element to "active".

When sending a final NOTIFY request with all <registration> element(s) having their state attribute set to "terminated" (i.e. all public user identities are deregistered), the S-CSCF shall also terminate the subscription to the registration event package by setting the Subscription-State header to the value of "terminated".

The S-CSCF shall only include the non-barred public user identities in the NOTIFY request.

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 which have been established due to subscription to the reg event package of that user. For each NOTIFY request the S-CSCF shall:

- 1) set the Request-URI and Route header to the saved route information during subscription;
- 2) set the Event header to the "reg" value; and
- 3) in the body of the NOTIFY request, include as many <registration> elements as many public user identities the S-CSCF is aware of the user owns:
 - a) set the <contact> sub-element of each <registration> element to the contact address provided by the UE;

- b) set the aor attribute within each <registration> element to one public user identity;
- c) set the state attribute within each <registration> element to "active";
- d) set the state attribute within each <contact> element to "active";
- e) set the event attribute within each <contact> element to "shortened"; and
- f) set the expiry attribute within each <contact> element to an operator defined value.

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.

The S-CSCF shall only include the non-barred public user identities in the NOTIFY request.

When generating the NOTIFY request, the S-CSCF shall shorten the validity of subscriber's registration timer to an operator defined value that will allow the user to be re-authenticated. If, for any reason, the reauthentication procedure is not successfully completed, the S-CSCF shall deregister all public user identities associated with 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, which shall contain the AS's SIP URL;
- b) the From header, which shall contain the S-CSCF's SIP URL;
- c) the To header, which shall contain either the public user identity as contained in the REGISTER request received from the UE or one of the implicitly registered public user identities, as configured by the operator;
- d) the Contact header, which shall contain the S-CSCF's SIP URL;
- e) for initial registration and user-initiated reregistration (subclause 5.4.1.2), the Expires header, which 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, which shall contain the value zero;
- g) for initial registration and user-initiated reregistration (subclause 5.4.1.2), a message body, 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 [14]), then the S-CSCF shall include it in the message body of the REGISTER request within the <service-info> XML element as described in subclause 7.6. For the messages including the 3GPP IMS XML body, the S-CSCF shall 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, which shall contain the same icid parameter that the S-CSCF received in the original REGISTER request from the UE;
- i) for initial registration, a P-Charging-Function-Addresses header, which shall contain the values received from the HSS if the message is forwarded within the S-CSCF home network.

5.4.2 Subscription and notification

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 reg event package, the S-CSCF shall:

- 1) check if, based on the local policy, the request was generated by a subscriber who is authorised to subscribe to this registration state of this particular user. The authorized subscribers include:
 - all public user identities this particular user owns, that the S-CSCF is aware of, and which are not-barred;
 - all the entities identified by the Path header (i.e. the P-CSCF to which this user is attached to); and
 - all the ASs not belonging to third-party providers.
- 2) generate a 2xx response acknowledging the SUBSCRIBE request and indicating that the authorised subscription was successful as described in draft-ietf-sipping-reg-event-00 [43]. 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.

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 reg event package of that user. For each NOTIFY request, the S-CSCF shall:

- 1) set the Request-URI and Route header to the saved route information during subscription;
- 2) set the Event header to the "reg" value;
- 3) in the body of the NOTIFY request, include as many <registration> elements as many public user identities the S-CSCF is aware of the user owns; and
- 4) set the aor attribute within each <registration> element to one public user identity:
 - a) set the <contact> sub-element of each <registration> element to the contact address provided by the UE; and
 - b) if the public user identity:
 - I) has been deregistered then:
 - set the state attribute within the <registration> element to "terminated";
 - set the state attribute within the <contact> element to "terminated"; and
 - set the event attribute within the <contact> element to "deactivated", "expired", "unregistered" or "probation" according draft-ietf-sipping-reg-event-00 [43]; or
 - II) has been registered then:
 - set the state attribute within the <registration> element to "active";
 - set the state attribute within the <contact> element to "active"; and
 - set the event attribute within the <contact> element to "registered"; or

III)has been automatically registered:

- set the state attribute within the <registration> element to "active";
- set the state attribute within the <contact> element to "active"; and
- set the event attribute within the <contact> element to "created".

The S-CSCF shall only include the non-barred public user identities in the NOTIFY request.

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

```
<?xml version="1.0"?>
<reginfo xmlns="urn:ietf:params:xml:ns:reginfo"
  version="0" state="full">
  <registration aor="sip:user1_public1@home1.net" id="as9"
    state="active">
    <contact id="76" state="active" event="registered"
      >sip:[5555::aaa:bbb:ccc:ddd]</contact>
  </registration>
  <registration aor="sip:user1_public2@home1.net" id="as10"
    state="active">
    <contact id="86" state="active" event="created"
      >sip:[5555::aaa:bbb:ccc:ddd]</contact>
  </registration>
</reginfo>
```

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

5.4.3.1 Determination of mobile-originated or mobile-terminated case

Upon receipt of an initial request or a target refresh request or a stand-alone transaction, the S-CSCF shall:

- perform the procedures for the mobile-originating case as described in subclause 5.4.3.2 if the request makes use of the information for mobile-originating calls, which was added to the Service-Route header entry of the S-CSCF during registration (see subclause 5.4.1.2), e.g. the message is received at a certain port or the topmost Route header contains a specific user part or parameter; or,
- perform the procedures for the mobile-terminating case as described in subclause 5.4.3.3 if this information is not used by the request.

5.4.3.2 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:

- 1) determine whether the request contains a barred public user identity in the P-Asserted-Identity or From header fields of the request or not. In case any of the said header fields contains a barred public user identity for the user, then the S-CSCF shall reject the request by generating a 403 (Forbidden) response. The response may include a Warning header containing the warn-code 399. Otherwise, continue with the rest of the steps;
- 2) remove its own SIP URL from the topmost Route header;
- 3) check if an original dialog identifier that the S-CSCF previously placed in a Route header is present in the topmost Route header 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;
- 4) check whether the initial request matches the initial filter criteria based on a public user identity in the P-Asserted-Identity header, the S-CSCF shall forward this request to that application server, then check for matching of the next following filter criteria of lower priority, and apply the filter criteria on the SIP method received from the previously contacted application server as described in 3GPP TS 23.218 [5] subclause 6.4. Depending on the result of the previous process, 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:

- a) insert the AS URL to be contacted into the Route header as the topmost entry followed by its own URL populated as specified in the subclause 5.4.3.4; and
 - b) if the AS is located outside the trust domain then the S-CSCF shall remove the P-Access-Network-Info header field and its values in the request; if the AS is located within the trust domain, then the S-CSCF shall retain the P-Access-Network-Info header field and its values in the request that is forwarded to the AS;
- 5) store the value of the icid parameter received in the P-Charging-Vector header and retain the icid parameter in the P-Charging-Vector header. Optionally, the S-CSCF may generate a new, globally unique icid and insert the new value in the icid parameter of the P-Charging-Vector header when forwarding the message. If the S-CSCF creates a new icid, then it is responsible for maintaining the two icid values in the subsequent messaging;
 - 6) insert an orig-ioi parameter into the P-Charging-Vector header. The S-CSCF shall set the orig-ioi parameter to a value that identifies the sending network. The S-CSCF shall not include the term-ioi parameter;
 - 7) insert a P-Charging-Function-Addresses header populated with values received from the HSS if the message is forwarded within the S-CSCF home network, including towards AS;
 - 8) in the case where the S-CSCF has knowledge of an associated tel-URI for a SIP URL contained in the received P-Asserted-Identity header, add a second P-Asserted-Identity header containing this tel-URI;
 - 9) if the outgoing Request-URI is a TEL URL, the S-CSCF shall translate the E.164 address (see RFC 2806 [22]) to a globally routeable SIP URL using an ENUM/DNS translation mechanism with the format specified in RFC 2916 [24]. 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 the S-CSCF may send an appropriate SIP response to the originator;
 - 10) 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;
 - 11) if network hiding is needed due to local policy, put the address of the I-CSCF(THIG) to the topmost route header;
 - 12) 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 Record-Route header fields and the Contact header from the request in order to release the dialog when needed;
 - 13) in case the request is forwarded to the destination network (either via an I-CSCF(THIG) or directly), remove the P-Access-Network-Info header; and
 - 14) route the request based on SIP routing procedures.

When the S-CSCF receives any response to the above request, the S-CSCF may:

- 1) apply any privacy required by RFC 3323 [33] to the P-Asserted-Identity header.

NOTE 1: This header would normally only be expected in 1xx or 2xx responses.

NOTE 2: The optional procedure above is in addition to any procedure for the application of privacy at the edge of the trust domain specified by RFC 3323 [33].

When the S-CSCF receives a response to the initial request for a dialog, it shall save the necessary Record-Route header fields and the Contact header from the response in order to release the dialog if needed.

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

- 1) remove its own URL from the topmost Route header;
- 2) create a Record-Route header containing its own SIP URL and save the Contact header from the request in order to release the dialog when needed;

- 3) in case the request is forwarded to the destination network or to an AS located outside the trust domain, remove the P-Access-Network-Info header; and
- 4) route the request based on the topmost Route header.

When the S-CSCF receives a response to the target refresh request for a dialog, it shall save the necessary Record-Route header fields and the Contact header from the response in order to release the dialog if needed.

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

- 1) remove its own URL from the topmost Route header;
- 2) in case the request is forwarded to the destination network or to an AS located outside the trust domain, remove the P-access-network-info header; and
- 3) route the request based on the topmost Route header.

5.4.3.3 Requests terminated at the served user

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

- 1) determine whether the request contains a barred public user identity in the Request-URI of the request or not. In case the Request URI contains a barred public user identity for the user, then the S-CSCF shall reject the request by generating a 404 (Not Found) response. Otherwise, continue with the rest of the steps;
- 2) remove its own URL from the topmost Route header;
- 3) check if an original dialog identifier that the S-CSCF previously placed in a Route header is present in the topmost Route header 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;
- 4) check whether the initial request matches the initial filter criteria based on the public user identity in the Request-URI, the S-CSCF shall forward this request to that application server, then check for matching of the next following filter criteria of lower priority, and apply the filter criteria on the SIP method received from the previously contacted application server as described in 3GPP TS 23.218 [5] subclause 6.5. Depending on the result of the previous process, 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 populated as specified in the subclause 5.4.3.4;
- 5) insert a P-Charging-Function-Addresses header populated with values received from the HSS if the message is forwarded within the S-CSCF home network, including towards AS;
- 6) store the value of the icid parameter received in the P-Charging-Vector header and retain the icid parameter in the P-Charging-Vector header;
- 7) store the value of the orig-ioi parameter received in the P-Charging-Vector header, if present. The orig-ioi parameter identifies the sending network of the request message. The orig-ioi parameter shall only be retained in the P-Charging-Vector header if the next hop is to an AS;
- 8) 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;
- 9) build the Route header field with the values determined in the previous step;
- 10) 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;
- 11) build a Request-URI with the contents of the saved Contact URL determined in the previous step;
- 12) insert a P-Called-Party-ID SIP header field including the Request-URI received in the INVITE;

13) in case of an initial request for a dialog create a Record-Route header containing its own SIP URL and save the necessary Record-Route header fields and the Contact header from the request in order to release the dialog when needed; and

14) optionally, apply any privacy required by RFC 3323 [33] to the P-Asserted-Identity header; and

NOTE: The optional procedure above is in addition to any procedure for the application of privacy at the edge of the trust domain specified by RFC 3323 [33].

15) forward the request based on the topmost Route header.

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

- 1) execute the procedures described in the steps 1, 2 and 3 in the above paragraph (when the S-CSCF receives, destined for the registered served user, an initial request for a dialog or a request for a standalone transaction);
- 2) if the S-CSCF does not have the user profile, then initiate the S-CSCF Registration/deregistration notification with the purpose of downloading the relevant user profile (i.e. for unregistered user) and informing the HSS that the user is unregistered, but this S-CSCF will assess triggering of services for the unregistered user, as described in 3GPP TS 29.228 [14];
- 3) keep the user registration status as unregistered for the duration of the dialog. When the dialog expires, the S-CSCF shall inform appropriately the HSS according to the procedures described in 3GPP TS 29.228 [14];
- 4) execute the procedure described in step 4 and 5 in the above paragraph (when the S-CSCF receives, destined for the registered served user, an initial request for a dialog or a request for a standalone transaction).

In case that no AS needs to be contacted, then S-CSCF shall return an appropriate unsuccessful SIP response. This response may be a 480 (Temporarily unavailable) and terminate these procedures; and

- 5) execute the procedures described in the steps 6, 7, 12, 13, 14 and 15 in the above paragraph (when the S-CSCF receives, destined for the registered served user, an initial request for a dialog or a request for a standalone transaction).

When the S-CSCF receives a response to the initial request for a dialog (whether the user is registered or not), it shall save the necessary Record-Route header fields and the Contact header field from the response in order to release the dialog if needed. In the case where the S-CSCF has knowledge of an associated tel-URI for a SIP URL contained in the received P-Asserted-Identity header, the S-CSCF shall add a second P-Asserted-Identity header containing this tel-URI. In case the response is forwarded to an AS that is located within the trust domain, the S-CSCF shall retain the P-Access-Network-Info header; otherwise, the S-CSCF shall remove the P-Access-Network-Info header.

When the S-CSCF receives a response to a request for a standalone transaction (whether the user is registered or not), in the case where the S-CSCF has knowledge of an associated tel-URI for a SIP URL contained in the received P-Asserted-Identity header, the S-CSCF shall add a second P-Asserted-Identity header containing this tel-URI. In case the response is forwarded to an AS that is located within the trust domain, the S-CSCF shall retain the P-Access-Network-Info header; otherwise, the S-CSCF shall remove the P-Access-Network-Info header.

When the S-CSCF receives the 200 (OK) response for a standalone transaction request, the S-CSCF shall insert a P-Charging-Function-Addresses header populated with values received from the HSS if the message is forwarded within the S-CSCF home network, including towards an AS.

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

- 1) remove its own URL from the topmost Route header;
- 2) create a Record-Route header containing its own SIP URL and save the Contact header from the target refresh request in order to release the dialog when needed; and
- 3) forward the request based on the topmost Route header.

When the S-CSCF receives a response to the target refresh request for a dialog (whether the user is registered or not), it shall save the necessary Record-Route header fields and the Contact header field from the response in order to release the dialog if needed. In case the response is forwarded to an AS that is located within the trust domain, the S-CSCF shall retain the P-Access-Network-Info header; otherwise, the S-CSCF shall remove the P-Access-Network-Info header.

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

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

When the S-CSCF receives a response to a subsequent request other than target refresh request for a dialog, in case the response is forwarded to an AS that is located within the trust domain, the S-CSCF shall retain the P-Access-Network-Info header; otherwise, the S-CSCF shall remove the P-Access-Network-Info header.

5.4.3.4 Original dialog identifier

The original dialog identifier is an implementation specific token that the S-CSCF encodes into the own S-CSCF URL in a Route header, prior to forwarding the request to an application server. This is possible because the S-CSCF is the only entity that creates and consumes the value.

The token identifies the original dialog of the request, so in case an application server acting as a B2BUA changes the dialog, the S-CSCF is able to identify the original dialog when the request returns to the S-CSCF. The token can be encoded in different ways, such as e.g., a character string in the user-part of the S-CSCF URL, a parameter in the S-CSCF URL or port number in the S-CSCF URL.

The S-CSCF shall ensure that the value chosen is unique so that the S-CSCF may recognize the value when received in a subsequent message and make the proper association between related dialogs that pass through an Application Server.

5.4.3.5 Void

5.4.4 Call initiation

5.4.4.1 Initial INVITE

Void.

5.4.4.2 Subsequent requests

5.4.4.2.1 Mobile-originating case

When the S-CSCF receives any 1xx response, the S-CSCF shall store the value of the received term-ioi parameter received in the P-Charging-Vector header, if present. The term-ioi parameter identifies the sending network of the response message. The term-ioi parameter shall only be retained in the P-Charging-Vector header if the next hop is to an AS.

When the S-CSCF receives any 1xx or 2xx response, the S-CSCF shall insert a P-Charging-Function-Addresses header 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 UPDATE request, the S-CSCF shall store the access-network-charging-info parameter from the P-Charging-Vector header. The S-CSCF shall retain access-network-charging-info parameter in the P-Charging-Vector header when the request is forwarded to an AS. However, the S-CSCF shall not include the access-network-charging-info parameter in the P-Charging-Vector header when the UPDATE request is forwarded outside the home network of the S-CSCF.

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.

5.4.4.2.2 Mobile-terminating case

When the S-CSCF sends any 1xx response, the S-CSCF shall insert a term-ioi parameter in the P-Charging-Vector header of the outgoing response. The S-CSCF shall set the term-ioi parameter to a value that identifies the sending network of the response and the orig-ioi parameter is set to the previously received value of orig-ioi.

When the S-CSCF receives the any 1xx or 2xx response, the S-CSCF shall insert a P-Charging-Function-Addresses header 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) or 200 (OK) (to INVITE) responses, the S-CSCF shall store the access-network-charging-info parameter from the P-Charging-Vector header. The S-CSCF shall retain the access-network-charging-info parameter shall be retained in the P-Charging-Vector header when the response is forwarded to an AS. However, the S-CSCF shall not include the access-network-charging-info parameter in the P-Charging-Vector header when the response is forwarded outside the home network of the S-CSCF.

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

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 RFC 3261 [26].

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 request for the called user based on the information saved for the related dialog, including:
 - a Request-URI, set to the stored Contact header provided by 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 routeing information towards the called user as stored for the dialog;
 - further headers, based on local policy or the requested session release reason.
- 2) generate a second BYE request for the calling user based on the information saved for the related dialog, including:
 - a Request-URI, set to the stored Contact header provided by 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 routeing information towards the calling user as stored for the dialog;
 - further headers, based on local policy or the requested session release reason.

- 3) if the S-CSCF serves the calling user, treat the first BYE request 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;
- 4) if the S-CSCF serves the calling user, send the second BYE request directly to the calling user.
- 5) if the S-CSCF serves the called user, send the first BYE request directly to the called user;
- 6) if the S-CSCF serves the called user, treat the second BYE request 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.

5.4.5.1.2A Release of the existing dialogs due to registration expiration

When the registration lifetime of the last registered public user identity expires while there are still active multimedia sessions belonging to the served user, the S-CSCF shall release each multimedia session belonging to the served user by applying the steps listed in the subclause 5.4.5.1.2.

5.4.5.1.3 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.

5.4.5.2 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 UPDATE request, the S-CSCF shall store the updated access-network-charging-info parameter from P-Charging-Vector header. The S-CSCF shall retain the access-network-charging-info parameter in the P-Charging-Vector header when the request is forwarded to an AS. However, the S-CSCF shall not include the access-network-charging-info parameter in the P-Charging-Vector header when the UPDATE request is forwarded outside the home network of the S-CSCF.

For a reINVITE request from the UE, if the request is to be forwarded to an AS that is located within the trust domain, the S-CSCF shall retain the P-Access-Network-Info header; otherwise, the S-CSCF shall remove the P-Access-Network-Info header.

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 store the updated access-network-charging-info parameter from the P-Charging-Vector header. The S-CSCF shall retain the access-network-charging-info parameter in the P-Charging-Vector header when the response is forwarded to the AS. However, the S-CSCF shall include the access-network-charging-info parameter in the P-Charging-Vector header when the 200 (OK) response is forwarded outside the home network of the S-CSCF.

For any SIP response to an INVITE request, if the response is to be forwarded to an AS that is located within the trust domain, the S-CSCF shall retain the P-Access-Network-Info header; otherwise, the S-CSCF shall remove the P-Access-Network-Info header.

5.4.7 MESSAGE support

A S-CSCF may be capable of sending and/or receiving the MESSAGE method to conduct dialog-unrelated interactions. To do so, a S-CSCF may initiate or terminate the MESSAGE method.

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 table A.4/1 and dependencies on that major capability shall not apply.

The use of the Path and Service-Route headers 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

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 to I-CSCF:
 - set the Request-URI to the "tel" format using an E.164 address;
 - set the Supported header to "100rel" (see RFC 3312 [30]);
 - include an P-Asserted-Identity header;
 - create a new, globally unique value for the icid parameter and insert it into the P-Charging-Vector header; and
 - insert an orig-ioi parameter into the P-Charging-Vector header. The orig-ioi parameter shall be set to a value that identifies the sending network in which the MGCF resides and the term-ioi parameter shall not be included.

5.5.3.1.2 Calls terminating in circuit-switched networks

When the MGCF receives an initial INVITE request with Supported header indicating "100rel", the MGCF shall:

- send 100 (Trying) response;
- after a matching codec is found at the MGW, send 183 "Session Progress" response:
 - set the Require header to the value of "100rel";
 - include an P-Asserted-Identity header;
 - store the values received in the P-Charging-Function-Addresses header;
 - store the value of the icid parameter received in the P-Charging-Vector header; and

- insert a term-ioi parameter into the P-Charging-Vector header. The term-ioi parameter shall be set to a value that identifies the network in which the MGCF resides.

When the MGCF does not find an available matching codec at the MGW for the received initial INVITE request, the MGCF shall:

- send 503 (Service Unavailable) response if the type of codec was acceptable but none were available; or
- send 488 (Not Acceptable Here) response if the type of codec was not supported, and may include SDP in the message body to indicate the codecs supported by the MGCF/MGW.

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 an UPDATE 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, including an P-Asserted-Identity header.

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; and
- may include Error-Info header with a pointer to additional information indicating that bearer was lost.

5.5.5 Call-related requests

5.5.5.1 ReINVITE

5.5.5.1.1 Calls originating from circuit-switched networks

Void.

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.

5.5.6 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.

NOTE: The detailed interface for requesting MGCF/MGW capabilities is not specified in this version of the document. Other solutions may be used in the interim.

5.6 Procedures at the BGCF

5.6.1 General

The use of the Path and Service-Route headers 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. While the next entity may be a MGCF acting as a UA, the BGCF shall not apply the procedures of RFC 3323 [33] relating to privacy. The BGCF shall store the values received in the P-Charging-Function-Addresses header. The BGCF shall store the value of the icid parameter received in the P-Charging-Vector header and retain the icid parameter in the 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) response 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. Also, the AS shall store the values 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 received in the P-Charging-Vector header, e.g. icid parameter, and retain the P-Charging-Vector header in the message. 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.

5.7.1.3 Access-Network-Info

The AS may receive in any request or response information about the served user access network. This information is contained in the P-Access-Network-Info header. The AS can use the header to provide an appropriate service to the user.

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

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.

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

When acting as an originating UA the AS shall behave as defined for a UE in subclause 5.1.3, 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 an 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 parameter and insert it into the P-Charging-Vector header. The AS may retrieve CCF and/or ECF addresses from HSS on Sh interface.

The AS shall extract charging function addresses from any P-Charging-Function-Addresses header that is received in any 1xx or 2xx responses to the requests.

Furthermore the AS shall insert a Route header pointing to the S-CSCF of the UE on whose behalf the request is generated.

NOTE: The address of the S-CSCF may be obtained either from a previous request terminated by the AS, by querying the HSS on the Sh interface or from static configuration.

5.7.4 Application Server (AS) acting as a SIP proxy

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. There are two kinds of 3rd party call control:

- Routing B2BUA: an AS receives a request from S-CSCF, terminates it and generates a new request, which is based on the received request.
- Initiating B2BUA: an AS initiates two requests, which are logically connected together at the AS.

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 acting as a Routing B2BUA receives an initial INVITE request from the S-CSCF, the AS shall:

- remove its own SIP URL from the topmost Route header of the received INVITE request;
- perform the Application Server specific functions. See 3GPP TS 23.218 [5];
- if successful, generate and send a new INVITE request to the S-CSCF to establish a new dialog;
- copy the remaining Route header(s) unchanged from the received INVITE request to the new INVITE request;
- route the new INVITE request based on the topmost Route header.

NOTE: The topmost Route header of the received INVITE request will contain the AS's SIP URI. The following Route header will contain the SIP URI of the S-CSCF.

When the AS acting as an Initiating B2BUA the AS shall apply the procedures described in subclause 5.7.3 for both requests. The AS shall either set the icid parameter in the P-Charging-Vector header to be the same as received or different. The AS may retrieve CCF and/or ECF addresses from HSS on Sh interface.

5.7.5.2.2 Subsequent requests

Void.

5.7.5.3 Call release

5.7.5.4 Call-related requests

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

When the AS acting as an Initiating B2BUA the AS shall apply the procedures described in subclause 5.7.3 for both requests. The AS shall either set the icid parameter in the P-Charging-Vector header to be the same as received or different.

5.7.6 Void

5.8 Procedures at the MRFC

5.8.1 General

Although the MRFC is acting as a UA, it is outside the scope of this specification how the MRFC associated addresses are made known to other entities.

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.

5.8.2 Call initiation

5.8.2.1 Initial INVITE

5.8.2.1.1 MRFC-terminating case

5.8.2.1.1.1 Introduction

The MRFC shall provide a P-Asserted-Identity header in a response to the initial request for a dialog, or any response for a standalone transaction. It is a matter of network policy whether the MRFC expresses privacy according to RFC 3323 [33] with such responses.

When the MRFC receives an initial INVITE request, the MRFC shall store the values received in the P-Charging-Vector header, e.g. icid parameter. The MRFC shall store the values received in the P-Charging-Function-Addresses header.

5.8.2.1.1.2 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.

NOTE: The detailed interfaces for requesting tones and announcements are not specified in this version of the document. Other solutions may be used in the interim.

5.8.2.1.1.3 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.

NOTE: The detailed interface for requesting ad-hoc conferencing sessions is not specified in this version of the document. Other solutions may be used in the interim.

5.8.2.1.1.4 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

The MRFC shall provide a P-Asserted-Identity header in an initial request for a dialog, or any request for a standalone transaction. It is a matter of network policy whether the MRFC expresses privacy according to RFC 3323 [33] with such requests.

5.8.2.2 Subsequent requests

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 directs 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 (Session Progress) response) 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.

NOTE: The detailed interface for requesting ad-hoc conferencing sessions is not specified in this version of the document. Other solutions may be used in the interim.

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

Void.

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.

NOTE: The detailed interface for requesting MRFC/MRFP capabilities is not specified in this version of the document. Other solutions may be used in the interim.

6 Application usage of SDP

6.1 Procedures at the UE

Usage of SDP by the UE:

1. In order to authorize the media streams, the P-CSCF and S-CSCF have to be able to inspect the SDP payloads. Hence, the UE shall not encrypt the SDP payloads.
2. An INVITE request generated by a UE shall contain SDP payload. The SDP payload shall reflect the calling user's terminal capabilities and user preferences for the session. The UE shall order the SDP payload with the most preferred codec listed first. In addition, the calling user shall indicate the desired QoS for the session, using the segmented status type. In an initial INVITE request the UE shall indicate that it mandates local QoS and that this precondition is not yet satisfied, i.e. the UE shall include the following preconditions:

a=des: qos mandatory local sendrecv

a=curr: qos local none

3. Providing that the INVITE request received by the UE contains an SDP offer including one or more "m=" media descriptions, the first 183 (Session Progress) provisional response that the UE sends, shall contain the answer for the SDP received in the INVITE. The said SDP answer shall reflect the called user's terminal capabilities and user preferences.
4. When the UE sends a 183 (Session Progress) response with SDP payload including one or more "m=" media descriptions, it shall request confirmation for the result of the resource reservation at the originating end point.
5. During session establishment procedure, SIP messages shall only contain SDP payload if that is intended to modify the session description.
6. For "video" and "audio" media types that utilize the RTP/RTCP, the UE shall specify the proposed bandwidth for each media stream utilizing the "b=" media descriptor in the SDP. For other media streams the "b=" media descriptor may be included. The value or absence of the "b=" parameter will affect the assigned QoS which is defined in 3GPP TS 29.208 [13].
7. The UE shall include the DTMF media format at the end of the "m=" media descriptor in the SDP for audio media flows that support both audio codec and DTMF payloads in RTP packets as described in RFC 2833 [23].
8. The UE shall inspect the SDP contained in any SIP request or response, looking for possible indications of grouping of media streams according to draft-ietf-mmusic-reservation-flows-01 [54] and perform the action outlined in subclause 9.2.5.
9. If a PDP context is rejected or modified, the UE shall, if the SDP is affected, update the remote SIP entity according to RFC 3261 [26] and RFC 3311 [29].

10. If the UE builds SDP for an INVITE request generated after receiving a 488 (Not Acceptable Here) response, as described in subclause 5.1.3.1, the UE shall include SDP payload containing a subset of the allowed media types, codecs and other parameters from the SDP payload of all 488 (Not Acceptable Here) responses related to the same session establishment attempt (i.e. a set of INVITE requests used for the same session establishment). The UE shall order the codecs in the SDP payload according to the order of the codecs in the SDP payload of the 488 (Not Acceptable Here) response.

NOTE: The UE may be attempting a session establishment through multiple networks with different policies and potentially may need to send multiple INVITE requests and receive multiple 488 (Not Acceptable Here) responses from different CSCF nodes. The UE therefore takes into account the SDP contents of all the 488 (Not Acceptable Here) responses received related to the same session establishment when building a new INVITE request.

6.2 Procedures at the P-CSCF

When the P-CSCF receives any SIP request or response containing SDP, the P-CSCF shall examine the media parameters in the received SDP. If the P-CSCF finds any media parameters which are not allowed on the network by local policy, the P-CSCF shall return a 488 (Not Acceptable Here) response containing SDP payload. This SDP payload contains either all the media types, codecs and other SDP parameters which are allowed according to the local policy, or, based on configuration by the operator of the P-CSCF, a subset of these allowed parameters. This subset may depend on the content of the received SIP request or response. The P-CSCF shall build the SDP payload in the 488 (Not Acceptable Here) response in the same manner as a UAS builds the SDP in a 488 (Not Acceptable Here) response as specified in RFC 3261 [26]. The P-CSCF shall order the SDP payload with the most preferred codec listed first.

When the P-CSCF receives an initial INVITE request for a terminating session setup or a 183 (Session Progress) response to an INVITE request for an originating session setup, the P-CSCF may modify the SDP according to draft-ietf-mmusic-reservation-flows-01 [54] to indicate to the UE that particular media stream(s) shall be grouped according to a local policy. The policy is used to determine whether the P-CSCF will request the UE to keep media stream(s) grouped in different PDP contexts and identify the relation between different media streams and PDP contexts (see subclause 9.2.5).

The P-CSCF shall apply and maintain the same policy within the SDP from the initial request or response containing SDP and throughout the complete SIP session. If a media stream is added and grouping apply to the session, the P-CSCF shall modify the SDP according to draft-ietf-mmusic-reservation-flows-01 [54] to indicate to the UE that the added media stream(s) will be grouped into either a new group or into one of the existing groups. The P-CSCF shall not indicate re-grouping of media stream(s) within the SDP.

The P-CSCF shall not apply draft-ietf-mmusic-reservation-flows-01 [54] to the SDP for additional media stream(s), if grouping of media stream(s) was not indicated in the initial INVITE request or 183 (Session Progress) response.

6.3 Procedures at the S-CSCF

When the S-CSCF receives any SIP request or response containing SDP, the S-CSCF shall examine the media parameters in the received SDP. If the S-CSCF finds any media parameters which are not allowed based on either local policy or the subscription, the S-CSCF shall return a 488 (Not Acceptable Here) response containing SDP payload. This SDP payload contains either all the media types, codecs and other SDP parameters which are allowed according to the local policy and users subscription or, based on configuration by the operator of the S-CSCF, a subset of these allowed parameters. This subset may depend on the content of the received SIP request or response. The S-CSCF shall build the SDP payload in the 488 (Not Acceptable Here) response in the same manner as a UAS builds the SDP in a 488 (Not Acceptable Here) response as specified in RFC 3261 [26].

6.4 Procedures at the MGCF

6.4.1 Calls originating from circuit-switched networks

The usage of SDP by the MGCF is the same as its usage by the UE, as defined in the subclause 6.1 and A.3.2. When sending an SDP, the MGCF shall not include the "i=", "u=", "e=", "p=", "r=", and "z=" descriptors in the SDP, and it shall ignore them when received in the SDP.

When the MGCF generates and sends an INVITE request for a call originating in a circuit-switched network, the MGCF shall:

- populate the SDP with the codecs supported by the associated MGW (see 3GPP TS 26.235 [10] for the supported codecs).

When the MGCF receives 183 (Session Progress) response to an INVITE request, the MGCF shall:

- check that a supported codec has been indicated in the SDP.

6.4.2 Calls terminating in circuit-switched networks

The usage of SDP by the MGCF is the same as its usage by the UE, as defined in the subclause 6.1 and A.3.2. When sending an SDP, the MGCF shall not include the "i=", "u=", "e=", "p=", "r=", and "z=" descriptors in the SDP, and it shall ignore them when received in the SDP.

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

- check for a codec that matches the requested SDP, which may include DTMF support.

When the MGCF generates and sends a 183 (Session Progress) response to an initial INVITE request, the MGCF shall:

- set SDP indicating the selected codec, which may include DTMF support.

6.5 Procedures at the MRFC

Void.

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

7.2.0 General

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

7.2.1 Void

7.2.2 Void

7.2.3 Void

7.2.4 Void

7.2.5 Void

7.2.6 Void

7.2.7 Void

7.2.8 Void

7.2.9 Void

7.2.10 Void

7.2A Extensions to SIP headers defined within the present document

7.2A.1 Extension to WWW-authenticate header

7.2A.1.1 Introduction

This extension defines a new authentication parameter (auth-param) for the WWW-Authenticate header used in a 401 (Unauthorized) response to the REGISTER request. For more information, see RFC 2617 [21] subclause 3.2.1.

7.2A.1.2 Syntax

The syntax for for auth-param is specified in table 7.4.

Table 7.4: Syntax of auth-param

| | |
|---------------|------------------------------------|
| auth-param | = 1#(integrity-key / cipher-key) |
| integrity-key | = "ik" EQUAL ik-value |
| cipher-key | = "ck" EQUAL ck-value |
| ik-value | = LDQUOT *(HEXDIG) RDQUOT |
| ck-value | = LDQUOT *(HEXDIG) RDQUOT |

7.2A.1.3 Operation

This authentication parameter will be used in a 401 (Unauthorized) response in the WWW-authenticate header during UE authentication procedure as specified in subclause 5.4.1.

The S-CSCF appends the integrity-key parameter (directive) to the WWW.-Authenticate header in a 401 (Unauthorized) response. The P-CSCF stores the integrity-key value and removes the integrity-key parameter from the header prior to forwarding the response to the UE.

The S-CSCF appends the cipher-key parameter (directive) to the WWW-Authenticate header in a 401 (Unauthorized) response. The P-CSCF removes the cipher-key parameter from the header prior to forwarding the response to the UE. In the case ciphering is used, the P-CSCF stores the cipher-key value.

7.2A.2 Extension to Authorization header

7.2A.2.1 Introduction

The integrity-protected authentication parameter (auth-param) is an extension parameter defined for the Authorization header used in REGISTER requests. For more information, see RFC 2617 [21] subclause 3.2.2.

7.2A.2.2 Syntax

The syntax for for auth-param is specified in table 7.5.

Table 7.5: Syntax of auth-param

```
integrity-protected = "integrity-protected" EQUAL ("yes" / "no")
```

7.2A.2.3 Operation

This authentication parameter is inserted by the P-CSCF in all the REGISTER requests received from the UE. The value of the parameter is set to "yes" in case the request was integrity protected, otherwise the value of it is set to "no". This information is used by S-CSCF to decide whether to challenge the REGISTER request or not, as specified in subclause 5.4.1.

7.2A.3 Tokenized-by parameter definition (various headers)

7.2A.3.1 Introduction

The tokenized-by parameter is an extension parameter appended to encrypted entries in various SIP headers as defined in subclause 5.3.3.1.

7.2A.3.2 Syntax

The syntax for the tokenized-by parameter is specified in table 7.6:

Table 7.6: Syntax of tokenized-by-param

```
uri-parameter = transport-param / user-param / method-param
/ ttl-param / maddr-param / lr-param / tokenized-by-param / other-param
tokenized-by-param = "tokenized-by" EQUAL hostname
```

The BNF for uri-parameter is taken from IETF RFC 3261 [26] and modified accordingly.

7.2A.3.3 Operation

The tokenized-by parameter is appended by I-CSCF(THIG) after all encrypted strings within SIP headers when network configuration hiding is active. The value of the parameter is the domain name of the network which encrypts the information.

7.2A.4 P-Access-Network-Info header

7.2A.4.1 Introduction

The P-Access-Network-Info header is extended to include specific information relating to 3GPP access networks.

7.2A.4.2 Syntax

The syntax of the P-Access-Network-Info header is described in RFC 3455 [52].

7.2A.4.3 Additional coding rules for P-Access-Network-Info header

In 3GPP systems, there are additional coding rules for the P-Access-Network-Info header:

If the *access type* field is equal to "3GPP-GERAN" the *access info* field shall contain a value for "cgi-3gpp" parameter. This value shall be the Cell Global Identity obtained from lower layers of the UE.

The Cell Global Identity is a concatenation of MCC, MNC, LAC and CI (as described in 3GPP TS23.003 [3]). The value of "cgi-3gpp" parameter is therefore coded as a text string as follows:

Starting with the most significant bit, MCC (3 digits), MNC (2 or 3 digits depending on MCC value), LAC (fixed length code of 16 bits using full hexadecimal representation) and CI (fixed length code of 16 bits using a full hexadecimal representation).

If the *access type* field is equal to "3GPP-UTRAN-FDD", "3GPP-UTRAN-TDD" or "3GPP-CDMA2000" the *access info* field shall contain a value for "utran-cell-id-3gpp" parameter. This value shall be made up of a concatenation of the MCC, MNC, LAC (as described in 3GPP TS 23.003 [3]) and the UMTS Cell Identity (as described in 3GPP TS 25.331 [9A]), obtained from lower layers of the UE, and is coded as a text string as follows:

Starting with the most significant bit, MCC (3 digits), MNC (2 or 3 digits depending on MCC value), LAC (fixed length code of 16 bits using full hexadecimal representation) and UMTS Cell Identity (fixed length code of 28 bits).

7.2A.5 P-Charging-Vector header

7.2A.5.1 Introduction

The P-Charging-Vector header is extended to include specific charging correlation information needed for IM CN subsystem functional entities.

7.2A.5.2 Syntax

The P-Charging-Vector header field has the syntax described in RFC 3455 [52]. Table 7.3 describes extensions required for 3GPP to that syntax.

Table 7.3: Syntax of extensions to P-Charging-Vector header

```
access-network-charging-info = (gprs-charging-info / generic-param)
gprs-charging-info = ggsn *(SEMI pdp-info) [SEMI extension-param]
ggsn = "ggsn" EQUAL gen-value
pdp-info = pdp-sig SEMI gcid SEMI auth-token *(SEMI flow-id)
pdp-sig = "pdp-sig" EQUAL ("yes" / "no")
gcid = "gcid" EQUAL gen-value
auth-token = "auth-token" EQUAL gen-value
flow-id = "flow-id" EQUAL gen-value
extension-param = token [EQUAL (token | quoted-string)]
```

The access-network-charging-info parameter is an instance of generic-param from the current charge-params component of P-Charging-Vector header

The access-network-charging-info parameter includes alternative definitions for different types access networks.

GPRS is the initially supported access network (gprs-charging-info parameter). For GPRS there are the following components to track: GGSN address (ggsn parameter) and one or more PDP contexts (pdp-info parameter). Each PDP context has an indicator if it is an IM CN subsystem signalling PDP context (pdp-sig parameter), an associated GPRS Charging Identifier (gcid parameter), a media authorization token (auth-token parameter) and one or more flow identifiers (flow-id parameter) that identify associated m-lines within the SDP from the SIP signalling. These parameters are transferred from the GGSN to the P-CSCF (PDF) over the Go interface, see 3GPP TS 29.207[12].

For a dedicated PDP context for SIP signalling, i.e. no media stream requested for a session, then there is no authorisation activity or information exchange over the Go interface. Since there are no GCID, media authorization token or flow identifiers in this case, the GCID and media authorization token are set to zero and no flow identifier parameters are constructed by the P-CSCF/PDF.

7.2A.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

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

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 3GPP IM CN subsystem XML body shall not be forwarded outside a 3GPP network.

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

7.6.2 Document Type Definition

The Document Type Definition, according to XML syntax definitions, is defined in table 7.7.

Table 7.7: 3GPP IM CN subsystem XML body, version 1 DTD

```

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

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

  <!ELEMENT ims-3gpp (
    alternative-service?, service-info?)>
  <!ATTLIST ims-3gpp version CDATA #REQUIRED>

  <!-- 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 subclause describes the elements of the 3GPP IMS Document Type Definition as defined in table 7.7.

- <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.
- <service-info>: the transparent element received from the HSS for a particular trigger point 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.

7.7 SIP timers

The timers defined in RFC 3261 [26] need modification in some cases to accommodate the delays introduced by the air interface processing and transmission delays. Table 7.8 shows recommended values for 3GPP.

Table 7.8 lists in the first column, titled "SIP Timer" the timer names as defined in RFC 3261 [26].

The second column, titled "3GPP value to be applied between network elements" lists the values recommended for network elements e.g. P-CSCF, S-CSCF, MGCF, when communicating with each other i.e. when no air interface leg is included. These values are identical to those recommended by RFC 3261 [26].

The third column, titled "3GPP value to be applied at the UE" lists the values recommended for the UE. These are modified when compared to RFC 3261 [26] to accommodate the air interface delays.

The fourth column, titled "3GPP value to be applied at the P-CSCF toward a UE" lists the values recommended for the P-CSCF when an air interface leg is traversed. These are modified when compared to RFC 3261 [26].

The final column reflects the timer meaning as defined in RFC 3261 [26].

Table 7.8: SIP timers

| SIP Timer | 3GPP value to be applied between network elements | 3GPP value to be applied at the UE | 3GPP value to be applied at the P-CSCF toward a UE | Meaning |
|-----------|---|------------------------------------|--|--|
| T1 | 500ms default | 2s default | 2s default | RTT estimate |
| T2 | 4s | 16s | 16s | The maximum retransmit interval for non-INVITE requests and INVITE responses |
| T4 | 5s | 17s | 17s | Maximum duration a message will remain in the network |
| Timer A | initially T1 | initially T1 | initially T1 | INVITE request retransmit interval, for UDP only |
| Timer B | 64*T1 | 64*T1 | 64*T1 | INVITE transaction timeout timer |
| Timer C | > 3min | > 3 min | > 3 min | proxy INVITE transaction timeout |
| Timer D | > 32s for UDP 0s for TCP/SCTP | >128s 0s for TCP/SCTP | >128s 0s for TCP/SCTP | Wait time for response retransmits |
| Timer E | initially T1 | initially T1 | initially T1 | non-INVITE request retransmit interval, UDP only |
| Timer F | 64*T1 | 64*T1 | 64*T1 | non-INVITE transaction timeout timer |
| Timer G | initially T1 | initially T1 | initially T1 | INVITE response retransmit interval |
| Timer H | 64*T1 | 64*T1 | 64*T1 | Wait time for ACK receipt. |
| Timer I | T4 for UDP 0s for TCP/SCTP | T4 for UDP 0s for TCP/SCTP | T4 for UDP 0s for TCP/SCTP | Wait time for ACK retransmits |
| Timer J | 64*T1 for UDP 0s for TCP/SCTP | 64*T1 for UDP 0s for TCP/SCTP | 64*T1 for UDP 0s for TCP/SCTP | Wait time for non-INVITE request retransmits |
| Timer K | T4 for UDP 0s for TCP/SCTP | T4 for UDP 0s for TCP/SCTP | T4 for UDP 0s for TCP/SCTP | Wait time for response retransmits |

8 SIP compression

8.1 SIP compression procedures at the UE

8.1.1 SIP compression

The UE shall support SigComp as specified in RFC 3320 [32]. The compartment shall start when a SigComp message is received within a security association and shall finish when the UE is no longer registered. State creations and announcements shall be allowed only for messages received in a security association.

The UE shall support the SIP dictionary specified in RFC 3485 [42]. If compression is enabled, the UE shall use the dictionary to compress the first message.

8.1.2 Compression of SIP requests and responses transmitted to the P-CSCF

The UE should compress the requests and responses transmitted to the P-CSCF according to subclause 8.1.1.

NOTE: Compression of SIP messages is an implementation option. However, compression is strongly recommended.

8.1.3 Decompression of SIP requests and responses received from the P-CSCF

The UE shall decompress the compressed requests and responses received from the P-CSCF according to subclause 8.1.1.

If the UE detects a decompression failure at the P-CSCF, the recovery mechanism is implementation specific and this may, as an example, include resetting the compartment, changing the algorithm or sending the following message(s) without compression.

8.2 SIP compression procedures at the P-CSCF

8.2.1 SIP compression

The P-CSCF shall support SigComp as specified in RFC 3320 [32]. The compartment shall start when a SigComp message is received within a security association and shall finish when the UE is no longer registered. State creations and announcements shall be allowed only for messages received in a security association.

The P-CSCF shall support the SIP dictionary specified in RFC 3485 [42]. If compression is enabled, the P-CSCF shall use the dictionary to compress the first message.

8.2.2 Compression of SIP requests and responses transmitted to the UE

The P-CSCF should compress the requests and responses transmitted to the UE according to subclause 8.2.1.

NOTE: Compression of SIP messages is an implementation option. However, compression is strongly recommended.

8.2.3 Decompression of SIP requests and responses received from the UE

The P-CSCF shall decompress the compressed requests and responses received from the UE according to subclause 8.2.1.

If the P-CSCF detects a decompression failure at the UE, the recovery mechanism is implementation specific and this may, as an example, include resetting the compartment, changing the algorithm or sending the following message(s) without compression.

9 GPRS aspects when connected to the IM CN subsystem

9.1 Introduction

A UE accessing the IM CN subsystem, and the IM CN subsystem itself, utilise the services provided by GPRS to provide packet-mode communication between the UE and the IM CN subsystem.

Requirements for the UE on the use of these packet-mode services are specified in this clause. Requirements for the GGSN in support of this communication are specified in 3GPP TS 29.061 [11] and 3GPP TS 29.207 [12].

9.2 Procedures at the UE

9.2.1 PDP context activation and P-CSCF discovery

Prior to communication with the IM CN subsystem, the UE shall:

- a) perform a GPRS attach procedure;
- b) establish a PDP context used for SIP signalling according to the APN and GGSN selection criteria described in 3GPP TS 23.060 [4] and 3GPP TS 27.060 [10A]. This PDP context shall remain active throughout the period the UE is connected to the IM CN subsystem, i.e. from the initial registration and at least until the deregistration. As a result, the PDP context provides the UE with information that makes the UE able to construct an IPv6 address;

The UE shall choose one of the following options when performing establishment of this PDP context:

I. A dedicated PDP context for SIP signalling:

The UE shall indicate to the GGSN that this is a PDP context intended to carry IM CN subsystem-related signalling only by setting the IM CN Subsystem Signalling Flag. The UE may also use this PDP context for DNS and DHCP signalling according to the static packet filters as described in 3GPP TS 29.061 [11];

II. A general-purpose PDP context:

The UE may decide to use a general-purpose PDP Context to carry IM CN subsystem-related signaling. The UE shall indicate to the GGSN that this is a general-purpose PDP context by not setting the IM CN Subsystem Signalling Flag. The UE may carry both signalling and media on the general-purpose PDP context.

The UE indicates the IM CN Subsystem Signalling Flag to the GGSN within the Protocol Configuration Options IE of the ACTIVATE PDP CONTEXT REQUEST message or ACTIVATE SECONDARY PDP CONTEXT REQUEST message. Upon successful signalling PDP context establishment the UE receives an indication from GGSN in the form of IM CN Subsystem Signalling Flag within the Protocol Configuration Options IE. If the flag is not received, the UE shall consider the PDP context as a general-purpose PDP context.

NOTE 1: Indication of successful signalling PDP context establishment is needed for the case when the GGSN does not receive the IM CN Subsystem Signalling Flag from the SGSN. Consequently, it acknowledges a request for activating a PDP Context without an IM CN Subsystem Signalling Flag. The UE will then regard it as a general-purpose PDP context instead of as a dedicated PDP context for SIP signalling as initially requested by the UE.

Detailed description of how the IM CN Subsystem Signalling Flag is carried in the Protocol Configuration Options IE is provided in 3GPP TS 24.008 [8].

NOTE 2: A general-purpose PDP Context may carry both IM CN subsystem signaling and media, in case the media does not need to be authorized by Service Based Local Policy mechanisms defined in 3GPP TS 29.207 [12] and the media stream is not mandated by the P-CSCF to be carried in a separate PDP Context.

c) acquire a P-CSCF address(es).

The methods for P-CSCF discovery are:

I. Employ Dynamic Host Configuration Protocol for IPv6 (DHCPv6) draft-ietf-dhc-dhcpv6 [40], the DHCPv6 options for SIP servers draft-ietf-sip-dhcpv6 [41] and if needed DNS after PDP context activation.

The UE shall either:

- in the DHCP query, request a list of SIP server domain names of P-CSCF(s) and the list of Domain Name Servers (DNS); or
- request a list of SIP server IPv6 addresses of P-CSCF(s).

II. Transfer P-CSCF address(es) within the PDP context activation procedure.

The UE shall indicate the request for a P-CSCF address to the GGSN within the Protocol Configuration Options IE of the ACTIVATE PDP CONTEXT REQUEST message or ACTIVATE SECONDARY PDP CONTEXT REQUEST message.

If the GGSN provides the UE with a list of P-CSCF IPv6 addresses in the ACTIVATE PDP CONTEXT ACCEPT message or ACTIVATE SECONDARY PDP CONTEXT ACCEPT message, the UE shall assume that the list is prioritised with the first address within the Protocol Configuration Options IE as the P-CSCF address with the highest priority.

The UE can freely select method I or II for P-CSCF discovery. In case several P-CSCF addresses are provided to the UE, the selection of P-CSCF address shall be performed according to the resolution of host name as indicated in RFC 3261 [26]. If sufficient information for P-CSCF address selection is not available, selection of the P-CSCF address by the UE is implementation specific.

If the UE is designed to use I above, but receives P-CSCF address(es) according to II, then the UE shall either ignore the received address(es), or use the address(es) in accordance with II, and not proceed with the DHCP request according to I.

The UE may request a DNS Server IPv6 address(es) via draft-ietf-dhc-dhcpv6-26 [40] or by the Protocol Configuration Options IE when activating a PDP context according to 3GPP TS 27.060 [10A].

Detailed description of how the request and response for IPv6 address(es) for DNS server(s) and list of P-CSCF address(es) are carried in the Protocol Configuration Options IE is provided in 3GPP TS 24.008 [8].

9.2.1A Modification of a PDP context used for SIP signalling

The PDP context shall not be modified from a dedicated PDP context for SIP signalling to a general-purpose PDP context or vice versa. The IM CN Subsystem Signalling Flag shall not be set in the Protocol Configuration Options IE of the MODIFY PDP CONTEXT REQUEST message.

The UE shall not indicate the request for a P-CSCF address to the GGSN within the Protocol Configuration Options IE of the MODIFY PDP CONTEXT REQUEST message. The UE shall ignore P-CSCF address(es) if received from the GGSN in the Protocol Configuration Options IE of the MODIFY PDP CONTEXT RESPONSE message.

9.2.1B Re-establishment of the PDP context for signalling

If the dedicated PDP context for SIP signalling is lost due to e.g. a GPRS routing area update procedure, the UE shall attempt to re-establish the dedicated PDP context for SIP signalling. If this procedure does not succeed, the UE shall deactivate all PDP contexts established as a result of SIP signalling according to the 3GPP TS 24.008 [8].

9.2.2 Session management procedures

The existing procedures for session management as described in 3GPP TS 24.008 [8] shall apply while the UE is connected to the IM CN subsystem.

9.2.3 Mobility management procedures

The existing procedures for mobility management as described in 3GPP TS 24.008 [8] shall apply while the UE is connected to the IM CN subsystem.

9.2.4 Cell selection and lack of coverage

The existing mechanisms and criteria for cell selection as described in 3GPP TS 25.304 [9] and 3GPP TS 44.018 [20] shall apply while the UE is connected to the IM CN subsystem.

9.2.5 PDP contexts for media

9.2.5.1 General requirements

The UE shall establish different PDP contexts for media streams that belong to different SIP sessions.

During establishment of a session, the UE establishes data streams(s) for media related to the session. Such data stream(s) may result in activation of additional PDP context(s). Such additional PDP context(s) shall be established as secondary PDP contexts associated to the PDP context used for signalling.

9.2.5.1A Activation or modification of PDP contexts for media

If the UE receives indication within the SDP according to draft-ietf-mmusic-reservation-flows-01 [54] that media stream(s) belong to group(s), the media stream(s) shall be set up on separate PDP contexts according to the indication of grouping. The UE may freely group media streams to PDP context(s) in case no indication of grouping is received from the P-CSCF.

The UE can receive a media authorization token in the P-Media-Authorization header from the P-CSCF according to RFC 3313 [31]. The UE shall, if a media authorization token is received in the P-Media-Authorization header when a SIP session is initiated, establish separate PDP context(s) for the media. If a media authorization token is received in subsequent messages for the same SIP session, the UE shall:

- use the existing PDP context(s) for media;
- modify the existing PDP context(s) for media; or
- establish additional PDP context(s) for media.

The UE shall transparently pass the media authorization token received from the P-CSCF in the 183 (Session Progress) response to an INVITE request at originating setup or in the INVITE request at terminating setup to the GGSN. The UE shall signal it by inserting it within the Traffic Flow Template IE in the ACTIVATE SECONDARY PDP CONTEXT REQUEST message or the MODIFY PDP CONTEXT REQUEST message.

To identify to the GGSN which flow(s) (identified by m-lines within the SDP) that are transferred within a particular PDP context, the UE shall set the flow identifier(s) within the Traffic Flow Template IE in the ACTIVATE SECONDARY PDP CONTEXT REQUEST message or the MODIFY PDP CONTEXT REQUEST message. Detailed description of how the flow identifiers are constructed is provided in 3GPP TS 29.207 [12].

Detailed description of how the media authorization token and flow identifiers are carried in the Traffic Flow Template IE is provided in 3GPP TS 24.008 [8].

If the UE receives several media authorization tokens from the P-CSCF within the same SIP request or response, the first instance of the media authorization token shall be sent to the GGSN, and subsequent instances are discarded by the UE.

The UE shall not include the IM CN Subsystem Signalling Flag when a PDP context for media is established or modified.

9.2.5.2 Special requirements applying to forked responses

Since the UE does not know that forking has occurred until a second, provisional response arrives, the UE sets up the PDP context(s) as required by the initial response received. If a subsequent provisional response is received, different alternative actions may be performed depending on the requirements in the SDP answer:

- 1) **the bearer requirements of the subsequent SDP can be accommodated by the existing PDP context(s).** The UE performs no activation or modification of PDP contexts.
- 2) **the subsequent SDP introduces different QoS requirements or additional IP flows.** The UE modifies the existing PDP context(s), if necessary, according to subclause 9.2.5.1A.
- 3) **the subsequent SDP introduces one or more additional IP flows.** The UE establishes additional PDP context(s) according to subclause 9.2.5.1A.

NOTE 1: When several forked responses are received, the resources requested by the UE is are the “logical OR” of the resources indicated in the multiple responses to avoid allocation of unnecessary resources. The UE does not request more resources than proposed in the original INVITE request.

NOTE 2: When service-based local policy is applied, the UE receives the same authorization token for all forked requests/responses related to the same SIP session.

When a final answer is received for one of the early dialogues, the UE proceeds to set up the SIP session. The UE shall release all the unneeded radio/bearer resources. Therefore, upon the reception of a first final 200 (OK) response for the INVITE request (in addition to the procedures defined in RFC 3261 [26] subclause 13.2.2.4), the UE shall:

- 1) in case PDP context(s) were established or modified as a consequence of the INVITE request and forked provisional responses that are not related to the accepted 200 (OK) response, delete the PDP context(s) or modify the delete the PDP context(s) back to their original state.

9.2.5.3 Unsuccessful situations

One of the Go interface related error codes can be received by the UE in the ACTIVATE SECONDARY PDP CONTEXT REJECT message or the MODIFY PDP CONTEXT REJECT message. If the UE receives a Go interface related error code, the UE shall either terminate the session or retransmit the message up to three times. The Go interface related error codes are further specified in 3GPP TS 29.207 [12].

Annex A (normative): Profiles of IETF RFCs for 3GPP usage

A.1 Profiles

A.1.1 Relationship to other specifications

This annex contains a profile to the IETF specifications, and the PICS proformas underlying profiles do not add requirements to the specifications they are proformas for.

This annex provides a profile specification according to both the current IETF specifications for SIP, SDP and other protocols (as indicated by the "RFC status" column in the tables in this annex) and to the 3GPP specifications using SIP (as indicated by the "Profile status" column in the tables in this annex).

In the "RFC status" column the contents of the referenced specification takes precedence over the contents of the entry in the column. However, a number of the referenced specifications reference RFC 2543 rather than RFC 3261 [26], and therefore certain extensions (particularly new headers) have not been included in these referenced specifications. 3GPP apply the extensions of the bis draft to IETF specifications that reference RFC 2543, and where this consideration applies to the entry in the "RFC status" column, then the entry should apply and override the referenced IETF specification.

In the "Profile status" column, there are a number of differences from the "RFC status" column. Where these differences occur, these differences take precedence over any requirements of the IETF specifications. Where specification concerning these requirements exists in the main body of the present document, the main body of the present document takes precedence.

Where differences occur in the "Profile status" column, the "Profile status" normally gives more strength to a "RFC status" and is not be in contradiction with the "RFC status", e.g. it may change an optional "RFC status" to a mandatory "Profile status". If the "Profile status" weakens the strength of a "RFC status" then additionally this will be indicated by further textual description in the present document.

NOTE 1: The referenced specifications consist of the set of IETF specifications that existed at the time of freezing of this document. Further extensions continue to be specified to SIP, SDP and other protocols, and profiles detailing the support or absence of support of these will not be specified in this major version. An exception exists where the extension specifies functionality that had been agreed by stage 1 and stage 2 to be included in this major version (where the related IETF draft had not been completed in time).

NOTE 2: Absence of a referenced specification does not necessarily preclude the use end-to-end by the UE or AS of such an extension. However, the UE or AS cannot depend on the support of such an extension by other functional entities within the IM CN subsystem within this major version.

A.1.2 Introduction to methodology within this profile

This subclause does not reflect dynamic conformance requirements but static ones. In particular, an condition for support of a PDU parameter does not reflect requirements about the syntax of the PDU (i.e. the presence of a parameter) but the capability of the implementation to support the parameter.

In the sending direction, the support of a parameter means that the implementation is able to send this parameter (but it does not mean that the implementation always sends it).

In the receiving direction, it means that the implementation supports the whole semantic of the parameter.

As a consequence, PDU parameter tables in this subclause are not the same as the tables describing the syntax of a PDU in the reference specification, e.g. RFC 3261 [26] tables 2 and 3. It is not rare to see a parameter which is optional in the syntax but mandatory in subclause below.

The various statii used in this subclause are in accordance with the rules in table A.1.

Table A.1: Key to status codes

| Status code | Status name | Meaning |
|-------------|-----------------------|--|
| m | mandatory | the capability shall be supported. It is a static view of the fact that the conformance requirements related to the capability in the reference specification are mandatory requirements. This does not mean that a given behaviour shall always be observed (this would be a dynamic view), but that it shall be observed when the implementation is placed in conditions where the conformance requirements from the reference specification compel it to do so. For instance, if the support for a parameter in a sent PDU is mandatory, it does not mean that it shall always be present, but that it shall be present according to the description of the behaviour in the reference specification (dynamic conformance requirement). |
| o | optional | the capability may or may not be supported. It is an implementation choice. |
| n/a | not applicable | it is impossible to use the capability. No answer in the support column is required. |
| x | prohibited (excluded) | It is not allowed to use the capability. This is more common for a profile. |
| c <integer> | conditional | the requirement on the capability ("m", "o", "n/a" or "x") depends on the support of other optional or conditional items. <integer> is the identifier of the conditional expression. |
| o.<integer> | qualified optional | for mutually exclusive or selectable options from a set. <integer> is the identifier of the group of options, and the logic of selection of the options. |
| i | irrelevant | capability outside the scope of the given specification. Normally, this notation should be used in a base specification ICS proforma only for transparent parameters in received PDUs. However, it may be useful in other cases, when the base specification is in fact based on another standard. |

The following additional comments apply to the interpretation of the tables in this Annex.

NOTE 1: The tables are constructed according to the conventional rules for ICS proformas and profile tables.

NOTE 2: The notation (either directly or as part of a conditional) of "m" for the sending of a parameter and "i" for the receipt of the same parameter, may be taken as indicating that the parameter is passed on transparently, i.e. without modification. Where a conditional applies, this behaviour only applies when the conditional is met.

A.1.3 Roles

Table A.2: Roles

| Item | Roles | Reference | RFC status | Profile status |
|-------|---|-----------|------------|----------------|
| 1 | User agent | [26] | o.1 | o.1 |
| 2 | Proxy | [26] | o.1 | o.1 |
| o.1: | It is mandatory to support exactly one of these items. | | | |
| NOTE: | For the purposes of the present document it has been chosen to keep the specification simple by the tables specifying only one role at a time. This does not preclude implementations providing two roles, but an entirely separate assessment of the tables shall be made for each role. | | | |

Table A.3: Roles specific to this profile

| Item | Roles | Reference | RFC status | Profile status |
|-------|---|-----------|------------|----------------|
| 1 | UE | 5.1 | n/a | o.1 |
| 2 | P-CSCF | 5.2 | n/a | o.1 |
| 3 | I-CSCF | 5.3 | n/a | o.1 |
| 3A | I-CSCF (THIG) | 5.3 | n/a | c1 |
| 4 | S-CSCF | 5.4 | n/a | o.1 |
| 5 | BGCF | 5.6 | n/a | o.1 |
| 6 | MGCF | 5.5 | n/a | o.1 |
| 7 | AS | 5.7 | n/a | o.1 |
| 7A | AS acting as terminating UA, or redirect server | 5.7.2 | n/a | c2 |
| 7B | AS acting as originating UA | 5.7.3 | n/a | c2 |
| 7C | AS acting as a SIP proxy | 5.7.4 | n/a | c2 |
| 7D | AS performing 3rd party call control | 5.7.5 | n/a | c2 |
| 8 | MRFC | 5.8 | n/a | o.1 |
| c1: | IF A.3/3 THEN o ELSE x - - I-CSCF. | | | |
| c2: | IF A.3/7 THEN o.2 ELSE n/a - - AS. | | | |
| o.1: | It is mandatory to support exactly one of these items. | | | |
| o.2: | It is mandatory to support at least one of these items. | | | |
| NOTE: | For the purposes of the present document it has been chosen to keep the specification simple by the tables specifying only one role at a time. This does not preclude implementations providing two roles, but an entirely separate assessment of the tables shall be made for each role. | | | |

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.4: Major capabilities

| Item | Does the implementation support | Reference | RFC status | Profile status |
|------|--|------------------------|------------|----------------|
| | Capabilities within main protocol | | | |
| 1 | client behaviour for registration? | [26] subclause 10.2 | m | c3 |
| 2 | registrar? | [26] subclause 10.3 | o | c4 |
| 3 | client behaviour for INVITE requests? | [26] subclause 13.2 | m | o |
| 4 | server behaviour for INVITE requests? | [26] subclause 13.3 | m | o |
| 5 | session release? | [26] subclause 15.1 | m | c1 |
| 6 | timestamping of requests? | [26] subclause 8.2.6.1 | o | o |
| 7 | authentication between UA and UA? | [26] subclause 22.2 | o | o |
| 8 | authentication between UA and registrar? | [26] subclause 22.2 | o | n/a |
| 8A | authentication between UA and proxy? | [26] 20.28, 22.3 | o | o |
| 9 | server handling of merged requests due to forking? | [26] 8.2.2.2 | m | m |
| 10 | client handling of multiple responses due to forking? | [26] 13.2.2.4 | m | m |
| 11 | insertion of date in requests and responses? | [26] subclause 20.17 | o | o |
| 12 | downloading of alerting information? | [26] subclause 20.4 | o | o |
| | Extensions | | | |
| 13 | the SIP INFO method? | [25] | o | n/a |
| 14 | reliability of provisional responses in SIP? | [27] | o | m |
| 15 | the REFER method? | [36] | o | o |
| 16 | integration of resource management and SIP? | [30] | o | m |
| 17 | the SIP UPDATE method? | [29] | c5 | m |
| 19 | SIP extensions for media authorization? | [31] | o | m |
| 20 | SIP specific event notification? | [28] | o | c13 |
| 21 | the use of NOTIFY to establish a dialog? | [28] 4.2 | o | n/a |
| 22 | acting as the notifier of event information? | [28] | c2 | c2 |
| 23 | acting as the recipient of event information? | [28] | c2 | c2 |
| 24 | session initiation protocol extension header field for registering non-adjacent contacts? | [35] | o | c6 |
| 25 | private extensions to the Session Initiation Protocol (SIP) for network asserted identity within trusted networks | [34] | o | m |
| 26 | a privacy mechanism for the Session Initiation Protocol (SIP) | [33] | o | m |
| 26A | request of privacy by the inclusion of a Privacy header | [33] | c9 | c11 |
| 26B | application of privacy based on the received Privacy header | [33] | c9 | n/a |
| 26C | passing on of the Privacy header transparently | [33] | c9 | c12 |
| 26D | application of the privacy option "header" such that those headers which cannot be completely expunged of identifying information without the assistance of intermediaries are obscured? | [33] 5.1 | c10 | |
| 26E | application of the privacy option "session" such that anonymization for the session(s) initiated by this message occurs? | [33] 5.2 | c10 | |
| 26F | application of the privacy option "user" such that user level privacy functions | [33] 5.3 | c10 | |

| | | | | |
|------|---|--------|-----|-----|
| | are provided by the network? | | | |
| 26G | application of the privacy option "id" such that privacy of the network asserted identity is provided by the network? | [34] 7 | c10 | n/a |
| 27 | a messaging mechanism for the Session Initiation Protocol (SIP)? | [50] | o | c7 |
| 28 | session initiation protocol extension header field for service route discovery during registration? | [38] | o | m |
| 29 | compressing the session initiation protocol? | [55] | o | c8 |
| c1: | IF A.4/3 OR A.4/4 THEN m ELSE o - - client behaviour or server behaviour for INVITE requests. | | | |
| c2: | IF A.4/20 THEN o.1 ELSE n/a - - SIP specific event notification extension. | | | |
| c3: | IF A.3/1 OR A.3/4 THEN m ELSE n/a - - UE or S-CSCF functional entity. | | | |
| c4: | IF A.3/4 OR A.3/7 THEN m ELSE n/a - - S-CSCF or AS functional entity. | | | |
| c5: | IF A.4/16 THEN m ELSE o - - integration of resource management and SIP extension. | | | |
| c6: | IF A.3/4 OR A.3/1 THEN m ELSE n/a. - - S-CSCF or UE. | | | |
| c7: | IF A.3/1 OR A.3/7B OR A.3/7D THEN m ELSE n/a - - UE or AS acting as originating UA, or AS performing 3rd party call control | | | |
| c8: | IF A.3/1 THEN m ELSE n/a - - UE behaviour. | | | |
| c9: | IF A.4/26 THEN o.2 ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | |
| c10: | IF A.4/26B THEN o.3 ELSE n/a - - application of privacy based on the received Privacy header. | | | |
| c11: | IF A.3/1 OR A.3/6 THEN o ELSE n/a - - UE or MGCF. | | | |
| c12: | IF A.3/7D THEN m ELSE n/a - - AS performing 3rd-party call control. | | | |
| c13: | IF A.3/1 THEN m ELSE o - - UE behaviour. | | | |
| o.1: | At least one of these capabilities is supported. | | | |
| o.2: | At least one of these capabilities is supported. | | | |
| o.3: | At least one of these capabilities is supported. | | | |

A.2.1.3 PDUs

Table A.5: Supported methods

| Item | PDU | Sending | | | Receiving | | |
|------|--|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | ACK request | [26] 13 | m | m | [26] 13 | m | m |
| 2 | BYE request | [26] 15.1 | o | | [26] 15.1 | o | |
| 3 | BYE response | [26] 15.1 | o | | [26] 15.1 | o | |
| 4 | CANCEL request | [26] 9 | o | | [26] 9 | o | |
| 5 | CANCEL response | [26] 9 | o | | [26] 9 | o | |
| 6 | INFO request | [25] 2 | c2 | n/a | [25] 2 | c2 | n/a |
| 7 | INFO response | [25] 2 | c2 | n/a | [25] 2 | c2 | n/a |
| 8 | INVITE request | [26] 13 | m | m | [26] 13 | m | m |
| 9 | INVITE response | [26] 13 | m | m | [26] 13 | m | m |
| 9A | MESSAGE request | [50] 4 | c7 | c7 | [50] 7 | c7 | c7 |
| 9B | MESSAGE response | [50] 4 | c7 | c7 | [50] 7 | c7 | c7 |
| 10 | NOTIFY request | [28] 8.1.2 | c4 | c4 | [28] 8.1.2 | c3 | c3 |
| 11 | NOTIFY response | [28] 8.1.2 | c3 | c3 | [28] 8.1.2 | c4 | c4 |
| 12 | OPTIONS request | [26] 11 | m | m | [26] 11 | m | m |
| 13 | OPTIONS response | [26] 11 | m | m | [26] 11 | m | m |
| 14 | PRACK request | [27] 6 | c5 | c5 | [27] 6 | c5 | c5 |
| 15 | PRACK response | [27] 6 | c5 | c5 | [27] 6 | c5 | c5 |
| 16 | REFER request | [36] 3 | c1 | c1 | [36] 3 | c1 | c1 |
| 17 | REFER response | [36] 3 | c1 | c1 | [36] 3 | c1 | c1 |
| 18 | REGISTER request | [26] 10 | o | | [26] 10 | n/a | |
| 19 | REGISTER response | [26] 10 | n/a | | [26] 10 | m | |
| 20 | SUBSCRIBE request | [28] 8.1.1 | c3 | c3 | [28] 8.1.1 | c4 | c4 |
| 21 | SUBSCRIBE response | [28] 8.1.1 | c4 | c4 | [28] 8.1.1 | c3 | c3 |
| 22 | UPDATE request | [30] 6.1 | c6 | c6 | [30] 6.2 | c6 | c6 |
| 23 | UPDATE response | [30] 6.2 | c6 | c6 | [30] 6.1 | c6 | c6 |
| c1: | IF A.4/15 THEN m ELSE n/a -- the REFER method extension. | | | | | | |
| c2: | IF A.4/13 THEN m ELSE n/a -- the SIP INFO method extension. | | | | | | |
| c3: | IF A.4/23 THEN m ELSE n/a -- recipient for event information. | | | | | | |
| c4: | IF A.4/22 THEN m ELSE n/a -- notifier of event information. | | | | | | |
| c5: | IF A.4/14 THEN m ELSE n/a -- reliability of provisional responses extension. | | | | | | |
| c6: | IF A.4/17 THEN m ELSE n/a -- the SIP update method extension. | | | | | | |
| c7: | IF A.4/27 THEN m ELSE n/a -- the SIP MESSAGE method. | | | | | | |

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.6: Supported status-codes

| Item | Header | Sending | | | Receiving | | |
|------|---------------------------------------|--------------|------------|----------------|--------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | 100 (Trying) | [26] 21.1.1 | n/a | n/a | [26] 21.1.1 | m | m |
| 2 | 180 (Ringing) | [26] 21.1.2 | c2 | c2 | [26] 21.1.2 | c1 | c1 |
| 3 | 181 (Call Is Being Forwarded) | [26] 21.1.3 | c2 | c2 | [26] 21.1.3 | c1 | c1 |
| 4 | 182 (Queued) | [26] 21.1.4 | c2 | c2 | [26] 21.1.4 | c1 | c1 |
| 5 | 183 (Session Progress) | [26] 21.1.5 | c1 | c1 | [26] 21.1.5 | c1 | c1 |
| 6 | 200 (OK) | [26] 21.2.1 | | | [26] 21.2.1 | | |
| 7 | 202 (Accepted) | [28] 8.3.1 | c3 | c3 | [28] 8.3.1 | c3 | c3 |
| 8 | 300 (Multiple Choices) | [26] 21.3.1 | | | [26] 21.3.1 | | |
| 9 | 301 (Moved Permanently) | [26] 21.3.2 | | | [26] 21.3.2 | | |
| 10 | 302 (Moved Temporarily) | [26] 21.3.3 | | | [26] 21.3.3 | | |
| 11 | 305 (Use Proxy) | [26] 21.3.4 | | | [26] 21.3.4 | | |
| 12 | 380 (Alternative Service) | [26] 21.3.5 | | | [26] 21.3.5 | | |
| 13 | 400 (Bad Request) | [26] 21.4.1 | | | [26] 21.4.1 | | |
| 14 | 401 (Unauthorized) | [26] 21.4.2 | | | [26] 21.4.2 | | |
| 15 | 402 (Payment Required) | [26] 21.4.3 | | | [26] 21.4.3 | | |
| 16 | 403 (Forbidden) | [26] 21.4.4 | | | [26] 21.4.4 | | |
| 17 | 404 (Not Found) | [26] 21.4.5 | | | [26] 21.4.5 | | |
| 18 | 405 (Method Not Allowed) | [26] 21.4.6 | | | [26] 21.4.6 | | |
| 19 | 406 (Not Acceptable) | [26] 21.4.7 | | | [26] 21.4.7 | | |
| 20 | 407 (Proxy Authentication Required) | [26] 21.4.8 | | | [26] 21.4.8 | | |
| 21 | 408 (Request Timeout) | [26] 21.4.9 | | | [26] 21.4.9 | | |
| 22 | 410 (Gone) | [26] 21.4.10 | | | [26] 21.4.10 | | |
| 23 | 413 (Request Entity Too Large) | [26] 21.4.11 | | | [26] 21.4.11 | | |
| 24 | 414 (Request-URI Too Large) | [26] 21.4.12 | | | [26] 21.4.12 | | |
| 25 | 415 (Unsupported Media Type) | [26] 21.4.13 | | | [26] 21.4.13 | | |
| 26 | 416 (Unsupported URI Scheme) | [26] 21.4.14 | | | [26] 21.4.14 | | |
| 27 | 420 (Bad Extension) | [26] 21.4.15 | | | [26] 21.4.15 | | |
| 28 | 421 (Extension Required) | [26] 21.4.16 | | | [26] 21.4.16 | | |
| 29 | 423 (Interval Too Brief) | [26] 21.4.17 | c4 | c4 | [26] 21.4.17 | m | m |
| 30 | 480 (Temporarily Unavailable) | [26] 21.4.18 | | | [26] 21.4.18 | | |
| 31 | 481 (Call/Transaction Does Not Exist) | [26] 21.4.19 | | | [26] 21.4.19 | | |
| 32 | 482 (Loop Detected) | [26] 21.4.20 | | | [26] 21.4.20 | | |
| 33 | 483 (Too Many Hops) | [26] 21.4.21 | | | [26] 21.4.21 | | |
| 34 | 484 (Address Incomplete) | [26] 21.4.22 | | | [26] 21.4.22 | | |
| 35 | 485 (Ambiguous) | [26] 21.4.23 | | | [26] 21.4.23 | | |
| 36 | 486 (Busy Here) | [26] 21.4.24 | | | [26] 21.4.24 | | |
| 37 | 487 (Request Terminated) | [26] 21.4.25 | | | [26] 21.4.25 | | |
| 38 | 488 (Not Acceptable Here) | [26] 21.4.26 | | | [26] 21.4.26 | | |
| 39 | 489 (Bad Event) | [28] 7.3.2 | c3 | c3 | [28] 7.3.2 | c3 | c3 |
| 40 | 491 (Request Pending) | [26] 21.4.27 | | | [26] 21.4.27 | | |
| 41 | 493 (Undecipherable) | [26] 21.4.28 | | | [26] 21.4.28 | | |
| 41A | 494 (Security Agreement Required) | [38] 3 | o | n/a | [3] 3 | o | m |
| 42 | 500 (Internal Server Error) | [26] 21.5.1 | | | [26] 21.5.1 | | |
| 43 | 501 (Not Implemented) | [26] 21.5.2 | | | [26] 21.5.2 | | |
| 44 | 502 (Bad Gateway) | [26] 21.5.3 | | | [26] 21.5.3 | | |
| 45 | 503 (Service Unavailable) | [26] 21.5.4 | | | [26] 21.5.4 | | |
| 46 | 504 (Server Time-out) | [26] 21.5.5 | | | [26] 21.5.5 | | |

| Item | Header | Sending | | | Receiving | | |
|------|--|-------------|------------|----------------|-------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 47 | 505 (Version not supported) | [26] 21.5.6 | | | [26] 21.5.6 | | |
| 48 | 513 (Message Too Large) | [26] 21.5.7 | | | [26] 21.5.7 | | |
| 49 | 580 (Precondition Failure) | [30] 8 | | | [30] 8 | | |
| 50 | 600 (Busy Everywhere) | [26] 21.6.1 | | | [26] 21.6.1 | | |
| 51 | 603 (Decline) | [26] 21.6.2 | | | [26] 21.6.2 | | |
| 52 | 604 (Does Not Exist Anywhere) | [26] 21.6.3 | | | [26] 21.6.3 | | |
| 53 | 606 (Not Acceptable) | [26] 21.6.4 | | | [26] 21.6.4 | | |
| c1: | IF A.5/9 THEN m ELSE n/a - - INVITE response. | | | | | | |
| c2: | IF A.5/9 THEN o ELSE n/a - - INVITE response. | | | | | | |
| c3: | IF A.4/20 THEN m ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c4: | IF A.5/19 OR A.5/21 THEN m ELSE n/a - - REGISTER response or SUBSCRIBE response. | | | | | | |

A.2.1.4.2 ACK method

Prerequisite A.5/1 – ACK request

Table A.7: Supported headers within the ACK request

| Item | Header | Sending | | | Receiving | | |
|------|--|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Allow-Events | [28] 8.2.2 | c1 | c1 | [28] 8.2.2 | c2 | c2 |
| 3 | Authorization | [26] 20.7 | c3 | c3 | [26] 20.7 | c3 | c3 |
| 4 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 6 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 7 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 8 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 9 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 10 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 11 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 12 | Date | [26] 20.17 | c4 | c4 | [26] 20.17 | m | m |
| 13 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 14 | Max-Forwards | [26] 20.22 | o | o | [26] 20.22 | n/a | n/a |
| 15 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 15A | Privacy | [33] 4.2 | c6 | n/a | [33] 4.2 | c6 | n/a |
| 16 | Proxy-Authorization | [26] 20.28 | c5 | c5 | [26] 20.28 | n/a | n/a |
| 17 | Proxy-Require | [26] 20.29 | o | n/a | [26] 20.29 | n/a | n/a |
| 18 | Require | [26] 20.32 | o | o | [26] 20.32 | m | m |
| 19 | Route | [26] 20.34 | m | m | [26] 20.34 | n/a | n/a |
| 20 | Timestamp | [26] 20.38 | c7 | c7 | [26] 20.38 | m | m |
| 21 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 22 | User-Agent | [26] 20.41 | o | o | [26] 20.41 | m | m |
| 23 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN o ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.4/20 THEN m ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c3: | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | | |
| c4: | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | |
| c5: | IF A.4/8A THEN m ELSE n/a - - authentication between UA and proxy. | | | | | | |
| c6: | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c7: | IF A.4/6 THEN o ELSE n/a - - timestamping of requests. | | | | | | |

Editor's note: Is the following table a suitable way of showing the contents of message bodies.

Prerequisite A.5/1 – ACK request

Table A.8: 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.5/2 - - BYE request

Table A.9: Supported headers within the BYE request

| Item | Header | Sending | | | Receiving | | |
|------|--|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | o | o | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | o | o | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | o | o | [26] 20.3 | m | m |
| 3A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Allow-Events | [28] 8.2.2 | c1 | c1 | [28] 8.2.2 | c2 | c2 |
| 5 | Authorization | [26] 20.7 | c3 | c3 | [26] 20.7 | c3 | c3 |
| 6 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 7 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 8 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 9 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 10 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 11 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 12 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 13 | Date | [26] 20.17 | c4 | c4 | [26] 20.17 | m | m |
| 14 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 15 | Max-Forwards | [26] 20.22 | o | o | [26] 20.22 | n/a | n/a |
| 16 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 16A | P-Asserted-Identity | [34] 9.1 | n/a | n/a | [34] 9.1 | c6 | c6 |
| 16B | P-Preferred-Identity | [34] 9.2 | c6 | x | [34] 9.2 | n/a | n/a |
| 16C | Privacy | [33] 4.2 | c7 | n/a | [33] 4.2 | c7 | c7 |
| 17 | Proxy-Authorization | [26] 20.28 | c5 | c5 | [26] 20.28 | n/a | n/a |
| 18 | Proxy-Require | [26] 20.29 | o | n/a | [26] 20.29 | n/a | n/a |
| 19 | Record-Route | [26] 20.30 | n/a | n/a | [26] 20.30 | n/a | n/a |
| 20 | Require | [26] 20.32 | o | o | [26] 20.32 | m | m |
| 21 | Route | [26] 20.34 | m | m | [26] 20.34 | n/a | n/a |
| 22 | Supported | [26] 20.37 | o | o | [26] 20.37 | m | m |
| 23 | Timestamp | [26] 20.38 | c8 | c8 | [26] 20.38 | m | m |
| 24 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 25 | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 26 | Via | [26] 20.42 | m | m | [20] 20.42 | m | m |
| c1: | IF A.4/20 THEN o ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.4/20 THEN m ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c3: | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | | |
| c4: | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | |
| c5: | IF A.4/8A THEN m ELSE n/a - - authentication between UA and proxy. | | | | | | |
| c6: | IF A.4/25 THEN o ELSE n/a - - private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c7: | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c8: | IF A.4/6 THEN o ELSE n/a - - timestamping of requests. | | | | | | |

Prerequisite A.5/2 - - BYE request

Table A.10: Supported message bodies within the BYE request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.5/3 - - BYE response

Prerequisite: A.6/1 - - 100 (Trying)

Table A.11: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|------|----------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | n/a | n/a | [26] 20.8 | m | m |
| 2 | Content-Length | [26] 20.14 | n/a | n/a | [26] 20.14 | m | m |
| 3 | Cseq | [26] 20.16 | n/a | n/a | [26] 20.16 | m | m |
| 4 | Date | [26] 20.17 | n/a | n/a | [26] 20.17 | m | m |
| 5 | From | [26] 20.20 | n/a | n/a | [26] 20.20 | m | m |
| 6 | To | [26] 20.39 | n/a | n/a | [26] 20.39 | m | m |
| 7 | Via | [26] 20.42 | n/a | n/a | [26] 20.42 | m | m |

Prerequisite A.5/3 - - BYE response

Table A.12: Supported headers within the BYE response - all remaining status-codes

| Item | Header | Sending | | | Receiving | | |
|-------|----------------------|--|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 3 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 4 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 5 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 6 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 7 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 8 | Date | [26] 20.17 | c1 | c1 | [26] 20.17 | m | m |
| 9 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 10 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 10A | P-Asserted-Identity | [34] 9.1 | n/a | n/a | [34] 9.1 | c3 | c3 |
| 10B | P-Preferred-Identity | [34] 9.2 | c3 | x | [34] 9.2 | n/a | n/a |
| 10C | Privacy | [33] 4.2 | c4 | n/a | [33] 4.2 | c4 | c4 |
| 10D | Server | [26] 20.35 | o | o | [26] 20.35 | o | o |
| 11 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | c2 | c2 |
| 12 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 12A | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 13 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 14 | Warning | [26] 20.43 | o (note) | o | [26] 20.43 | o | o |
| c1: | | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | |
| c2: | | IF A.4/6 THEN m ELSE n/a - - timestamping of requests. | | | | | |
| c3: | | IF A.4/25 THEN o ELSE n/a - - private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | |
| c4: | | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | |
| NOTE: | | For a 606 (Not Acceptable Here) response, this status is RECOMMENDED rather than OPTIONAL. | | | | | |

Prerequisite A.5/3 - - BYE response

Prerequisite: A.6/6 - - 2xx

Table A.13: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|------|---------------------|--|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Authentication-Info | [26] 20.6 | c1 | c1 | [26] 20.6 | c2 | c2 |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| c1: | | IF A.4/7 THEN o ELSE n/a - - authentication between UA and UA. | | | | | |
| c2: | | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | |

Prerequisite A.5/3 - - BYE response

Prerequisite: A.6/8 OR A.6/9 OR A.6/10 OR A.6/11 OR A.6/12 OR A.6/35 - - 3xx or 485 (Ambiguous)

Table A.14: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|---|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 0B | Contact | [26] 20.10 | o (note) | o | [26] 20.10 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| NOTE: The strength of this requirement is RECOMMENDED rather than OPTIONAL. | | | | | | | |

Prerequisite A.5/3 - - BYE response

Prerequisite: A.6/14 - - 401 (Unauthorized)

Table A.15: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|---|--------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Proxy-Authenticate | [26] 20.27 | c1 | c1 | [26] 20.27 | c1 | c1 |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 8 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | m | m |
| c1: IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | | | |

Prerequisite A.5/3 - - BYE response

Prerequisite: A.6/17 OR A.6/23 OR A.6/30 OR A.6/36 OR A.6/42 OR A.6/45 OR A.6/50 OR A.6/51 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.16: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 3 | Retry-After | [26] 20.33 | o | o | [26] 20.33 | o | o |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/3 - - BYE response

Prerequisite: A.6/18 - - 405 (Method Not Allowed)

Table A.17: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/3 - - BYE response

Prerequisite: A.6/19 - - 407 (Proxy Authentication Required)

Table A.18: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|---|--------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Proxy-Authenticate | [26] 20.27 | c1 | c1 | [26] 20.27 | c1 | c1 |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 6 | WWW-Authenticate | [26] 20.44 | o | o | [26] 20.44 | o | o |
| c1: IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | | | |

Prerequisite A.5/3 - - BYE response

Prerequisite A.6/25 - - 415 (Unsupported Media Type)

Table A.19: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|--|-----------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | o.1 | o.1 | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | o.1 | o.1 | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | o.1 | o.1 | [26] 20.3 | m | m |
| 3A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| o.1 At least one of these capabilities is supported. | | | | | | | |

Prerequisite A.5/3 - - BYE response

Prerequisite: A.6/27 - - 420 (Bad Extension)

Table A.20: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 5 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | m | m |

Prerequisite A.5/3 - - BYE response

Prerequisite: A.6/34 - - 484 (Address Incomplete)

Table A.21: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/3 - - BYE response

Table A.22: 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.5/4 - - CANCEL request

Table A.23: Supported headers within the CANCEL request

| Item | Header | Sending | | | Receiving | | |
|------|----------------|--|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 4 | Allow-Events | [28] 8.2.2 | c1 | c1 | [28] 8.2.2 | c2 | c2 |
| 5 | Authorization | [26] 20.7 | c3 | c3 | [26] 20.7 | c3 | c3 |
| 6 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 8 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 9 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 10 | Date | [26] 20.17 | c4 | c4 | [26] 20.17 | m | m |
| 11 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 12 | Max-Forwards | [26] 20.22 | o | o | [26] 20.22 | n/a | n/a |
| 14 | Privacy | [33] 4.2 | c6 | n/a | [33] 4.2 | c6 | n/a |
| 15 | Proxy-Require | [26] 20.29 | o | n/a | [26] 20.29 | n/a | n/a |
| 16 | Record-Route | [26] 20.30 | n/a | n/a | [26] 20.30 | n/a | n/a |
| 17 | Require | [26] 20.32 | o | o | [26] 20.32 | m | m |
| 18 | Route | [26] 20.34 | m | m | [26] 20.34 | n/a | n/a |
| 19 | Supported | [26] 20.37 | o | o | [26] 20.37 | m | m |
| 20 | Timestamp | [26] 20.38 | c8 | c8 | [26] 20.38 | m | m |
| 21 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 22 | User-Agent | [26] 20.41 | o | | [26] 20.41 | o | |
| 23 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | | IF A.4/20 THEN o ELSE n/a - - SIP specific event notification extension. | | | | | |
| c2: | | IF A.4/20 THEN m ELSE n/a - - SIP specific event notification extension. | | | | | |
| c3: | | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | |
| c4: | | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | |
| c6: | | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | |
| c8: | | IF A.4/6 THEN o ELSE n/a - - timestamping of requests. | | | | | |

Prerequisite A.5/4 - - CANCEL request

Table A.24: Supported message bodies within the CANCEL request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.5/5 - - CANCEL response

Table A.25: Supported headers within the CANCEL response - all status-codes

| Item | Header | Sending | | | Receiving | | |
|--|----------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 3 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 4 | Date | [26] 20.17 | c1 | c1 | [26] 20.17 | m | m |
| 5 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 5A | Privacy | [33] 4.2 | c3 | n/a | [33] 4.2 | c3 | n/a |
| 6 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | c2 | c2 |
| 7 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 7A | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 8 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 9 | Warning | [26] 20.43 | o (note) | o | [26] 20.43 | o | o |
| c1: IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | | |
| c2: IF A.4/6 THEN m ELSE n/a - - timestamping of requests. | | | | | | | |
| c3: IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | | |
| NOTE: For a 606 (Not Acceptable Here) response, this status is RECOMMENDED rather than OPTIONAL. | | | | | | | |

Prerequisite A.5/5 - - CANCEL response

Prerequisite: A.6/6 - - 200 (OK)

Table A.26: Supported headers within the CANCEL response

| Item | Header | Sending | | | Receiving | | |
|------|--------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Record-Route | [26] 20.30 | n/a | n/a | [26] 20.30 | n/a | n/a |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/5 - - CANCEL response

Prerequisite: A.6/14 - - 401 (Unauthorized)

Table A.27: Supported headers within the CANCEL response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/5 - - CANCEL response

Prerequisite: A.6/17 OR A.6/23 OR A.6/30 OR A.6/42 OR A.6/45 OR A.6/50 OR A.6/51 - - 404, 413, 480, 500, 503, 600, 603

Table A.28: Supported headers within the CANCEL response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Retry-After | [26] 20.33 | o | o | [26] 20.33 | o | o |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/5 - - CANCEL response

Prerequisite: A.6/27 - - 420 (Bad Extension)

Table A.29: Supported headers within the CANCEL response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 5 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | m | m |

Prerequisite A.5/5 - - CANCEL response

Prerequisite: A.6/34 - - 484 (Address Incomplete)

Table A.30: Supported headers within the CANCEL response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/5 - - CANCEL response

Table A.31: 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

Void

A.2.1.4.6 INFO method

Prerequisite A.5/6 - - INFO request

Table A.32: Supported headers within the INFO request

| Item | Header | Sending | | | Receiving | | |
|------|---------------------|--|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | o | o | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | o | o | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | o | o | [26] 20.3 | m | m |
| 3A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Allow-Events | [28] 8.2.2 | c1 | c1 | [28] 8.2.2 | c2 | c2 |
| 5 | Authorization | [26] 20.7 | c3 | c3 | [26] 20.7 | c3 | c3 |
| 6 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 7 | Contact | [26] 20.10 | o | o | [26] 20.10 | o | o |
| 7A | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 8 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 8A | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 9 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 10 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 11 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 12 | Date | [26] 20.17 | c4 | c4 | [26] 20.17 | m | m |
| 14 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 15 | Max-Forwards | [26] 20.22 | o | o | [26] 20.22 | n/a | n/a |
| 15A | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 16 | Organization | [26] 20.25 | o | o | [26] 20.25 | o | o |
| 17 | Priority | [26] 20.26 | o | o | [26] 20.26 | o | o |
| 17A | Privacy | [33] 4.2 | c6 | n/a | [33] 4.2 | c6 | n/a |
| 18 | Proxy-Authorization | [26] 20.28 | c5 | c5 | [26] 20.28 | n/a | n/a |
| 19 | Proxy-Require | [26] 20.29 | o | n/a | [26] 20.29 | n/a | n/a |
| 20 | Record-Route | [26] 20.30 | n/a | n/a | [26] 20.30 | n/a | n/a |
| 21 | Require | [26] 20.32 | o | o | [26] 20.32 | m | m |
| 22 | Route | [26] 20.34 | m | m | [26] 20.34 | n/a | n/a |
| 23 | Subject | [26] 20.36 | o | o | [26] 20.36 | o | o |
| 24 | Supported | [26] 20.37 | o | o | [26] 20.37 | m | m |
| 25 | Timestamp | [26] 20.38 | c8 | c8 | [26] 20.38 | m | m |
| 26 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 27 | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 28 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | | IF A.4/20 THEN o ELSE n/a - - SIP specific event notification extension. | | | | | |
| c2: | | IF A.4/20 THEN m ELSE n/a - - SIP specific event notification extension. | | | | | |
| c3: | | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | |
| c4: | | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | |
| c5: | | IF A.4/8A THEN m ELSE n/a - - authentication between UA and proxy. | | | | | |
| c6: | | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | |
| c8: | | IF A.4/6 THEN o ELSE n/a - - timestamping of requests. | | | | | |

Prerequisite A.5/6 - - INFO request

Table A.33: Supported message bodies within the INFO request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.5/7 - - INFO response

Prerequisite: A.6/1 - - 100 (Trying)

Table A.34: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|------|----------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | n/a | n/a | [26] 20.8 | m | m |
| 2 | Content-Length | [26] 20.14 | n/a | n/a | [26] 20.14 | m | m |
| 3 | Cseq | [26] 20.16 | n/a | n/a | [26] 20.16 | m | m |
| 4 | Date | [26] 20.17 | n/a | n/a | [26] 20.17 | m | m |
| 5 | From | [26] 20.20 | n/a | n/a | [26] 20.20 | m | m |
| 6 | To | [26] 20.39 | n/a | n/a | [26] 20.39 | m | m |
| 7 | Via | [26] 20.42 | n/a | n/a | [26] 20.42 | m | m |

Prerequisite A.5/7 - - INFO response

Table A.35: Supported headers within the INFO response - all remaining status-codes

| Item | Header | Sending | | | Receiving | | |
|-------|---------------------|--|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 1A | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 2 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 2A | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 3 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 4 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 5 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 6 | Date | [26] 20.17 | c1 | c1 | [26] 20.17 | m | m |
| 7 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 7A | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 8 | Organization | [26] 20.25 | o | o | [26] 20.25 | m | m |
| 8A | Privacy | [33] 4.2 | c3 | n/a | [33] 4.2 | c3 | n/a |
| 8B | Server | [26] 20.35 | o | o | [26] 20.35 | o | o |
| 9 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | c2 | c2 |
| 10 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 10A | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 11 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 12 | Warning | [26] 20.43 | o (note) | o | [26] 20.43 | o | o |
| c1: | | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | |
| c2: | | IF A.4/6 THEN m ELSE n/a - - timestamping of requests. | | | | | |
| c3: | | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | |
| NOTE: | | For a 606 (Not Acceptable Here) response, this status is RECOMMENDED rather than OPTIONAL. | | | | | |

Prerequisite A.5/7 - - INFO response

Prerequisite: A.6/6 - - 2xx

Table A.36: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|------|---------------------|--|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Authentication-Info | [26] 20.6 | c1 | c1 | [26] 20.6 | c2 | c2 |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| c1: | | IF A.4/7 THEN o ELSE n/a - - authentication between UA and UA. | | | | | |
| c2: | | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | |

Prerequisite A.5/7 - - INFO response

Prerequisite: A.6/8 OR A.6/9 OR A.6/10 OR A.6/11 OR A.6/12 - - 3xx

Table A.37: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/7 - - INFO response

Prerequisite: A.6/14 - - 401 (Unauthorized)

Table A.38: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|---|--------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Proxy-Authenticate | [26] 20.27 | c1 | c1 | [26] 20.27 | c1 | c1 |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 8 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | m | m |
| c1: IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | | | |

Prerequisite A.5/7 - - INFO response

Prerequisite: A.6/17 OR A.6/23 OR A.6/30 OR A.6/36 OR A.6/42 OR A.6/45 OR A.6/50 OR A.6/51 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.39: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Retry-After | [26] 20.33 | o | o | [26] 20.33 | o | o |
| 6 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/7 - - INFO response

Prerequisite: A.6/18 - - 405 (Method Not Allowed)

Table A.40: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 6 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/7 - - INFO response

Prerequisite: A.6/14 - - 407 (Proxy Authentication Required)

Table A.40A: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|---|--------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Proxy-Authenticate | [26] 20.27 | c1 | c1 | [26] 20.27 | c1 | c1 |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 6 | WWW-Authenticate | [26] 20.44 | o | o | [26] 20.44 | o | o |
| c1: IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | | | |

Prerequisite A.5/7 - - INFO response

Prerequisite: A.6/25 - - 415 (Unsupported Media Type)

Table A.41: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|--|-----------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Accept | [26] 20.1 | o.1 | o.1 | [26] 20.1 | m | m |
| 0B | Accept-Encoding | [26] 20.2 | o.1 | o.1 | [26] 20.2 | m | m |
| 0C | Accept-Language | [26] 20.3 | o.1 | o.1 | [26] 20.3 | m | m |
| 0D | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| o.1 At least one of these capabilities is supported. | | | | | | | |

Prerequisite A.5/7 - - INFO response

Prerequisite: A.6/27 - - 420 (Bad Extension)

Table A.42: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 6 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | m | m |

Prerequisite A.5/7 - - INFO response

Prerequisite: A.6/34 - - 484 (Address Incomplete)

Table A.43: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/7 - - INFO response

Prerequisite: A.6/35 - - 485 (Ambiguous")

Table A.44: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/7 - - INFO response

Table A.45: 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.5/8 - - INVITE request

Table A.46: Supported headers within the INVITE request

| Item | Header | Sending | | | Receiving | | |
|------|---|------------------------|------------|----------------|------------------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | o | o | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | o | o | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | o | o | [26] 20.3 | m | m |
| 4 | Alert-Info | [26] 20.4 | o | o | [26] 20.4 | c1 | c1 |
| 5 | Allow | [26] 20.5, [26] 5.1 | o (note 1) | o | [26] 20.5, [26] 5.1 | m | m |
| 6 | Allow-Events | [28] 8.2.2 | c2 | c2 | [28] 8.2.2 | c2 | c2 |
| 8 | Authorization | [26] 20.7 | c3 | c3 | [26] 20.7 | c3 | c3 |
| 9 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 10 | Call-Info | [26] 20.9 | o | o | [26] 20.9 | o | o |
| 11 | Contact | [26] 20.10 | m | m | [26] 20.10 | m | m |
| 12 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 13 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 14 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 15 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 16 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 17 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 18 | Date | [26] 20.17 | c4 | c4 | [26] 20.17 | m | m |
| 19 | Expires | [26] 20.19 | o | o | [26] 20.19 | o | o |
| 20 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 21 | In-Reply-To | [26] 20.21 | o | o | [26] 20.21 | o | o |
| 22 | Max-Forwards | [26] 20.22 | o | o | [26] 20.22 | n/a | n/a |
| 23 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 24 | Organization | [26] 20.25 | o | o | [26] 20.25 | o | o |
| 25 | P-Media-Authorization | [31] 6.1 | n/a | n/a | [31] 6.1 | c11 | c12 |
| 25A | P-Asserted-Identity | [34] 9.1 | n/a | n/a | [34] 9.1 | c7 | c7 |
| 25B | P-Preferred-Identity | [34] 9.2 | c7 | c5 | [34] 9.2 | n/a | n/a |
| 26 | Priority | [26] 20.26 | o | o | [26] 20.26 | o | o |
| 26A | Privacy | [33] 4.2 | c9 | c9 | [33] 4.2 | c9 | c9 |
| 27 | Proxy-Authorization | [26] 20.28 | c6 | c6 | [26] 20.28 | n/a | n/a |
| 28 | Proxy-Require | [26] 20.29 | o (note 2) | o (note 2) | [26] 20.29 | n/a | n/a |
| 29 | Record-Route | [26] 20.30 | n/a | n/a | [26] 20.30 | m | m |
| 31 | Reply-To | [26] 20.31 | o | o | [26] 20.31 | o | o |
| 32 | Require | [26] 20.32 | c8 | o | [26] 20.32 | m | m |
| 33 | Route | [26] 20.34 | m | m | [26] 20.34 | n/a | n/a |
| 34 | Subject | [26] 20.36 | o | o | [26] 20.36 | o | o |
| 35 | Supported | [26] 20.37 | c8 | m | [26] 20.37 | m | m |
| 36 | Timestamp | [26] 20.38 | c10 | c10 | [26] 20.38 | m | m |
| 37 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 38 | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 39 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/12 THEN m ELSE n/a - - downloading of alerting information. | | | | | | |
| c2: | IF A.4/20 THEN m ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c3: | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | | |
| c4: | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | |
| c5: | IF A.3/1 AND A.4/25 THEN o ELSE n/a - - UE and private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c6: | IF A.4/8A THEN m ELSE n/a - - authentication between UA and proxy. | | | | | | |
| c7: | IF A.4/25 THEN o ELSE n/a - - private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c8: | IF A.4/14 THEN o.1 ELSE o - - Reliability of provisional responses in SIP. | | | | | | |
| c9: | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c10: | IF A.4/6 THEN o ELSE n/a - - timestamping of requests. | | | | | | |
| c11: | IF A.4/19 THEN m ELSE n/a - - SIP extensions for media authorization. | | | | | | |
| c12: | IF A.3/1 THEN m ELSE n/a - - UE. | | | | | | |
| o.1: | At least one of these shall be supported. | | | | | | |

| Item | Header | Sending | | | Receiving | | |
|---|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| NOTE 1: The strength of this requirement in RFC 3261 [26] is RECOMMENDED, rather than OPTIONAL. | | | | | | | |
| NOTE 2: 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. | | | | | | | |

Prerequisite A.5/8 - - INVITE request

Table A.47: Supported message bodies within the INVITE request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.5/9 - - INVITE response

Prerequisite: A.6/1 - - 100 (Trying)

Table A.48: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|----------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | n/a | n/a | [26] 20.8 | m | m |
| 2 | Content-Length | [26] 20.14 | n/a | n/a | [26] 20.14 | m | m |
| 3 | Cseq | [26] 20.16 | n/a | n/a | [26] 20.16 | m | m |
| 4 | Date | [26] 20.17 | n/a | n/a | [26] 20.17 | m | m |
| 5 | From | [26] 20.20 | n/a | n/a | [26] 20.20 | m | m |
| 6 | To | [26] 20.39 | n/a | n/a | [26] 20.39 | m | m |
| 7 | Via | [26] 20.42 | n/a | n/a | [26] 20.42 | m | m |

Prerequisite A.5/9 - - INVITE response

Table A.49: Supported headers within the INVITE response - all remaining status-codes

| Item | Header | Sending | | | Receiving | | |
|-------|--|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 1A | Call-Info | [26] 20.9 | o | o | [26] 20.9 | o | o |
| 2 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 3 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 4 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 5 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 6 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 7 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 8 | Date | [26] 20.17 | c1 | c1 | [26] 20.17 | m | m |
| 9 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 10 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 11 | Organization | [26] 20.25 | o | o | [26] 20.25 | o | o |
| 11A | P-Asserted-Identity | [34] 9.1 | n/a | n/a | [34] 9.1 | c3 | c3 |
| 11B | P-Preferred-Identity | [34] 9.2 | c3 | x | [34] 9.2 | n/a | n/a |
| 11C | Privacy | [33] 4.2 | c4 | c4 | [33] 4.2 | c4 | c4 |
| 11D | Server | [26] 20.35 | o | o | [26] 20.35 | o | o |
| 12 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | c2 | c2 |
| 13 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 13A | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 14 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 15 | Warning | [26] 20.43 | o (note) | o | [26] 20.43 | o | o |
| c1: | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | |
| c2: | IF A.4/6 THEN m ELSE n/a - - timestamping of requests. | | | | | | |
| c3: | IF A.4/25 THEN o ELSE n/a - - private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c4: | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| NOTE: | For a 606 (Not Acceptable Here) response, this status is RECOMMENDED rather than OPTIONAL. | | | | | | |

Prerequisite A.5/9 - - INVITE response

Prerequisite: A.6/2 OR A.6/3 OR A.6/4 OR A.6/5 - - 1xx

Table A.50: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|--|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Contact | [26] 20.10 | o | | [26] 20.10 | o/m | |
| 6 | P-Media-Authorization | [31] 6.1 | n/a | n/a | [31] 6.1 | c11 | c12 |
| 8 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 9 | Rseq | [27] 7.1 | c2 | m | [27] 7.1 | c3 | m |
| 11 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| c2: | IF A.4/14 THEN o ELSE n/a - - reliability of provisional responses in SIP. | | | | | | |
| c3: | IF A.4/14 THEN m ELSE n/a - - reliability of provisional responses in SIP. | | | | | | |
| c11: | IF A.4/19 THEN m ELSE n/a - - SIP extensions for media authorization. | | | | | | |
| c12: | IF A.3/1 THEN m ELSE n/a - - UE. | | | | | | |

Prerequisite A.5/9 - - INVITE response

Prerequisite: A.6/6 - - 2xx

Table A.51: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|---|-----------------------|---|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | o | o | [26] 20.1 | m | m |
| 1A | Accept-Encoding | [26] 20.2 | o | o | [26] 20.2 | m | m |
| 1B | Accept-Language | [26] 20.3 | o | o | [26] 20.3 | m | m |
| 2 | Allow | [26] 20.5 | o (note 1) | o | [26] 20.5 | m | m |
| 4 | Authentication-Info | [26] 20.6 | c1 | c1 | [26] 20.6 | c2 | c2 |
| 6 | Contact | [26] 20.10 | m | m | [26] 20.10 | m | m |
| 8 | P-Media-Authorization | [31] 6.1 | n/a | n/a | [31] 6.1 | c11 | c12 |
| 9 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | m | m |
| 11 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 13 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| c1: | | IF A.4/7 THEN o ELSE n/a - - authentication between UA and UA. | | | | | |
| c2: | | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | |
| c11: | | IF A.4/19 THEN m ELSE n/a - - SIP extensions for media authorization. | | | | | |
| c12: | | IF A.3/1 THEN m ELSE n/a - - UE. | | | | | |
| NOTE 1: The strength of this requirement in RFC 3261 [26] is RECOMMENDED, rather than OPTIONAL. | | | | | | | |

Prerequisite A.5/9 - - INVITE response

Prerequisite: A.6/8 OR A.6/9 OR A.6/10 OR A.6/11 OR A.6/12 OR A.6/34 - - 3xx or 485 (Ambiguous)

Table A.52: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|---|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Contact | [26] 20.10 | o (note 1) | o | [26] 20.10 | m | m |
| 5 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 8 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 10 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| NOTE: The strength of this requirement is RECOMMENDED rather than OPTIONAL. | | | | | | | |

Prerequisite A.5/9 - - INVITE response

Prerequisite: A.6/14 - - 401 (Unauthorized)

Table A.53: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|--------------------|--|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 6 | Proxy-Authenticate | [26] 20.27 | c3 | c3 | [26] 20.27 | c3 | c3 |
| 8 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 10 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 13 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | m | m |
| c1: | | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | |
| c2: | | IF A.4/6 THEN m ELSE n/a - - timestamping of requests. | | | | | |
| c3: | | IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | |

Prerequisite A.5/9 - - INVITE response

Prerequisite: A.6/17 OR A.6/23 OR A.6/30 OR A.6/36 OR A.6/50 OR A.6/51 - - 404, 413, 480, 486, 600, 603

Table A.54: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 7 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 8 | Retry-After | [26] 20.33 | o | o | [26] 20.33 | o | o |
| 10 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/9 - - INVITE response

Prerequisite: A.6/18 - - 405 (Method Not Allowed)

Table A.55: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Allow | [26] 20.5 | m | m | [26] 20.5 | m | m |
| 5 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 8 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 10 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/9 - - INVITE response

Prerequisite: A.6/20 - - 407 (Proxy Authentication Required)

Table A.56: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 6 | Proxy-Authenticate | [26] 20.27 | o | | [26] 20.27 | o | |
| 8 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 10 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 11 | WWW-Authenticate | [26] 20.44 | o | o | [26] 20.44 | o | o |
| c1: | IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | | |

Prerequisite A.5/9 - - INVITE response

Prerequisite: A.6/25 - - 415 (Unsupported Media Type)

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 | [26] 20.1 | o.1 | o.1 | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | o.1 | o.1 | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | o.1 | o.1 | [26] 20.3 | m | m |
| 3A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 6 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 9 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 11 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| o.1 | At least one of these capabilities is supported. | | | | | | |

Prerequisite A.5/9 - - INVITE response

Prerequisite: A.6/27 - - 420 (Bad Extension)

Table A.58: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 7 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 9 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 10 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | m | m |

Prerequisite A.5/9 - - INVITE response

Prerequisite: A.6/34 - - 484 (Address Incomplete)

Table A.59: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 7 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 9 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/9 - - INVITE response

Prerequisite: A.6/42 - - 500 (Server Internal Error)

Table A.60: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 7 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 8 | Retry-After | [26] 20.33 | m | m | [26] 20.33 | o | o |
| 10 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/9 - - INVITE response

Prerequisite: A.6/45 - - 503 (Service Unavailable)

Table A.61: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 7 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 8 | Retry-After | [26] 20.33 | o | o | [26] 20.33 | o | m |
| 10 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/9 - - INVITE response

Table A.62: Supported message bodies within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

A.2.1.4.7A MESSAGE method

Prerequisite A.5/9A - - MESSAGE request

Table A.62A: Supported headers within the MESSAGE request

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Allow-Events | [28] 8.2.2 | c1 | c1 | [28] 8.2.2 | c2 | c2 |
| 3 | Authorization | [26] 20.7 | c3 | c3 | [26] 20.7 | c3 | c3 |
| 4 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 5 | Call-Info | [26] 20.9 | o | o | [26] 20.9 | o | o |
| 6 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 7 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 8 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 9 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 10 | Content-Type | [26] 20.15 | m | m | [26] 29.15 | m | m |
| 11 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 12 | Date | [26] 20.17 | c4 | c4 | [26] 20.17 | m | m |
| 13 | Expires | [26] 20.19 | o | o | [26] 20.19 | o | o |
| 14 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 15 | In-Reply-To | [26] 20.21 | o | o | [26] 20.21 | o | o |
| 16 | Max-Forwards | [26] 20.22 | o | o | [26] 20.22 | o | o |
| 17 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 18 | Organization | [26] 20.25 | o | o | [26] 20.25 | o | o |
| 18A | P-Asserted-Identity | [34] 9.1 | n/a | n/a | [34] 9.1 | c11 | c11 |
| 18B | P-Preferred-Identity | [34] 9.2 | c11 | c7 | [34] 9.2 | n/a | n/a |
| 19 | Priority | [26] 20.26 | o | o | [26] 20.26 | o | o |
| 19A | Privacy | [33] 4.2 | c12 | c12 | [33] 4.2 | c12 | c12 |
| 20 | Proxy-Authorization | [26] 20.28 | c5 | c5 | [26] 20.28 | n/a | n/a |
| 21 | Proxy-Require | [26] 20.29 | o | n/a | [26] 20.29 | n/a | n/a |
| 22 | Record-Route | [26] 20.30 | n/a | n/a | [26] 20.30 | n/a | n/a |
| 23 | Reply-To | [26] 20.31 | o | o | [26] 20.31 | o | o |
| 24 | Require | [26] 20.32 | c8 | o | [26] 20.32 | m | m |
| 25 | Route | [26] 20.34 | m | m | [26] 20.34 | n/a | n/a |
| 26 | Subject | [26] 20.35 | o | o | [26] 20.36 | o | o |
| 27 | Supported | [26] 20.37 | c9 | m | [26] 20.37 | m | m |
| 28 | Timestamp | [26] 20.38 | c10 | c10 | [26] 20.38 | m | m |
| 29 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 30 | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 31 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN o ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.4/20 THEN m ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c3: | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | | |
| c4: | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | |
| c5: | IF A.162/8A THEN m ELSE i - - authentication between UA and proxy. | | | | | | |
| c7: | IF A.3/1 AND A.4/25 THEN o ELSE n/a - - UE and private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c8: | IF A.4/14 THEN o.1 ELSE o - - Reliable transport. | | | | | | |
| c9: | IF IF A.4/14 THEN o.1 ELSE o - - support of reliable transport. | | | | | | |
| c10: | IF A.4/6 THEN o ELSE n/a - - timestamping of requests. | | | | | | |
| c11: | IF A.4/25 THEN o ELSE n/a - - private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c12: | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |

Prerequisite A.5/9A - - MESSAGE request

Table A.62B: Supported message bodies within the MESSAGE request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.5/9B - - MESSAGE response

Table A.62C: Supported headers within the MESSAGE response - all remaining status-codes

| Item | Header | Sending | | | Receiving | | |
|-------|----------------------|--|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Call-Info | [26] 20.9 | o | o | [26] 20.9 | o | o |
| 3 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 4 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 5 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 6 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 7 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 8 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 9 | Date | [26] 20.17 | c1 | c1 | [26] 20.17 | m | m |
| 10 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 11 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 12 | Organization | [26] 20.25 | o | o | [26] 20.25 | o | o |
| 12A | P-Asserted-Identity | [34] 9.1 | n/a | n/a | [34] 9.1 | c3 | c3 |
| 12B | P-Preferred-Identity | [34] 9.2 | c3 | x | [34] 9.2 | n/a | n/a |
| 12C | Privacy | [33] 4.2 | c4 | c4 | [33] 4.2 | c4 | c4 |
| 13 | Server | [26] 20.35 | o | o | [26] 20.35 | o | o |
| 14 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | c2 | c2 |
| 15 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 16 | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 17 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 18 | Warning | [26] 20.43 | o | o | [26] 20.43 | o | o |
| c1: | | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | |
| c2: | | IF A.4/6 THEN m ELSE n/a - - timestamping of requests. | | | | | |
| c3: | | IF A.4/25 THEN o ELSE n/a - - private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | |
| c4: | | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | |
| NOTE: | | For a 606 (Not Acceptable Here) response, this status is RECOMMENDED rather than OPTIONAL. | | | | | |

Prerequisite A.5/9B - - MESSAGE response

Prerequisite: A.6/6 - - 2xx

Table A.62D: Supported headers within the MESSAGE response

| Item | Header | Sending | | | Receiving | | |
|------|---------------------|--|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Authentication-Info | [26] 20.6 | c1 | c1 | [26] 20.6 | c2 | c2 |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| c1: | | IF A.4/7 THEN o ELSE n/a - - authentication between UA and UA. | | | | | |
| c2: | | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | |

Prerequisite A.5/9B - - MESSAGE response

Prerequisite: A.6/8 OR A.6/9 OR A.6/10 OR A.6/11 OR A.6/12 OR A.6/35 - - 3xx or 485 (Ambiguous)

Table A.62E: Supported headers within the MESSAGE response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Contact | [26] 20.10 | o (note) | o | [26] 20.10 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

NOTE: The strength of this requirement is RECOMMENDED rather than OPTIONAL.

Prerequisite A.5/9B - - MESSAGE response

Prerequisite: A.6/14 - - 401 (Unauthorized)

Table A.62F: Supported headers within the MESSAGE response

| Item | Header | Sending | | | Receiving | | |
|------|--------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Proxy-Authenticate | [26] 20.27 | c1 | c1 | [26] 20.27 | c1 | c1 |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 6 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | m | m |

c1: IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA.

Prerequisite A.5/9B - - MESSAGE response

Prerequisite: A.6/17 OR A.6/23 OR A.6/30 OR A.6/36 OR A.6/42 OR A.6/45 OR A.6/50 OR A.6/51 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.62G: Supported headers within the MESSAGE response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Retry-After | [26] 20.33 | o | o | [26] 20.33 | o | o |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/9B - - MESSAGE response

Prerequisite: A.6/18 - - 405 (Method Not Allowed)

Table A.62H: Supported headers within the MESSAGE response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/9B - - MESSAGE response

Prerequisite: A.6/20 - - 407 (Proxy Authentication Required)

Table A.62I: Supported headers within the MESSAGE response

| Item | Header | Sending | | | Receiving | | |
|---|--------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Proxy-Authenticate | [26] 20.27 | c1 | c1 | [26] 20.27 | c1 | c1 |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 6 | WWW-Authenticate | [26] 20.44 | o | o | [26] 20.44 | o | o |
| c1: IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | | | |

Prerequisite A.5/9B - - MESSAGE response

Prerequisite: A.6/25 - - 415 (Unsupported Media Type)

Table A.62J: Supported headers within the MESSAGE response

| Item | Header | Sending | | | Receiving | | |
|--|-----------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | o.1 | o.1 | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | o.1 | o.1 | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | o.1 | o.1 | [26] 20.3 | m | m |
| 4 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 5 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 6 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| o.1 At least one of these capabilities is supported. | | | | | | | |

Prerequisite A.5/9B - - MESSAGE response

Prerequisite: A.6/27 - - 420 (Bad Extension)

Table A.62K: Supported headers within the MESSAGE response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 5 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | m | m |

Prerequisite A.5/9B - - MESSAGE response

Prerequisite: A.6/34 - - 484 (Address Incomplete)

Table A.62L: Supported headers within the MESSAGE response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/9B - - MESSAGE response

Table A.62M: Supported message bodies within the MESSAGE 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.5/10 - - NOTIFY request

Table A.63: Supported headers within the NOTIFY request

| Item | Header | Sending | | | Receiving | | |
|------|--|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | o | o | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | o | o | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | o | o | [26] 20.3 | m | m |
| 3A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Allow-Events | [28] 8.2.2 | c1 | c1 | [28] 8.2.2 | c2 | c2 |
| 5 | Authorization | [26] 20.7 | c3 | c3 | [26] 20.7 | c3 | c3 |
| 6 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 6A | Contact | [26] 20.10 | m | m | [26] 20.10 | m | m |
| 7 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 8 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 9 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 10 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 11 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 12 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 13 | Date | [26] 20.17 | c4 | c4 | [26] 20.17 | m | m |
| 14 | Event | [28] 8.2.1 | m | m | [28] 8.2.1 | m | m |
| 15 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 16 | Max-Forwards | [26] 20.22 | o | o | [26] 20.22 | n/a | n/a |
| 17 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 17A | P-Asserted-Identity | [34] 9.1 | n/a | n/a | [34] 9.1 | c6 | c6 |
| 17B | P-Preferred-Identity | [34] 9.2 | c6 | x | [34] 9.2 | n/a | n/a |
| 17C | Privacy | [33] 4.2 | c7 | n/a | [33] 4.2 | c7 | c7 |
| 18 | Proxy-Authorization | [26] 20.28 | c5 | c5 | [26] 20.28 | n/a | n/a |
| 19 | Proxy-Require | [26] 20.29 | o | n/a | [26] 20.29 | n/a | n/a |
| 20 | Record-Route | [26] 20.30 | n/a | n/a | [26] 20.30 | c9 | c9 |
| 21 | Require | [26] 20.32 | o | o | [26] 20.32 | m | m |
| 22 | Route | [26] 20.34 | m | m | [26] 20.34 | n/a | n/a |
| 23 | Subscription-State | [28] 8.2.3 | m | m | [28] 8.2.3 | m | m |
| 24 | Supported | [26] 20.37 | o | o | [26] 20.37 | m | m |
| 25 | Timestamp | [26] 20.38 | c8 | c8 | [26] 20.38 | m | m |
| 26 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 27 | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 28 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN o ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.4/20 THEN m ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c3: | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | | |
| c4: | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | |
| c5: | IF A.4/8A THEN m ELSE n/a - - authentication between UA and proxy. | | | | | | |
| c6: | IF A.4/25 THEN o ELSE n/a - - private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c7: | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c8: | IF A.4/6 THEN o ELSE n/a - - timestamping of requests. | | | | | | |
| c9: | IF A.4/15 OR A.4/20 THEN m ELSE n/a - - the REFER method extension or SIP specific event notification extension. | | | | | | |

Prerequisite A.5/10 - - NOTIFY request

Table A.64: Supported message bodies within the NOTIFY request

| Item | Header | Sending | | | Receiving | | |
|------|--|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | sipfrag | [37] 2 | c1 | c1 | [37] | c1 | c1 |
| c1: | IF A.4/15 THEN m ELSE o - - the REFER method extension | | | | | | |

Prerequisite A.5/11 - - NOTIFY response

Table A.65: Supported headers within the NOTIFY response - all status-codes

| Item | Header | Sending | | | Receiving | | |
|-------|--|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 3 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 4 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 5 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 6 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 7 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 8 | Date | [26] 20.17 | c1 | c1 | [26] 20.17 | m | m |
| 9 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 10 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 10A | P-Asserted-Identity | [34] 9.1 | n/a | n/a | [34] 9.1 | c3 | c3 |
| 10B | P-Preferred-Identity | [34] 9.2 | c3 | x | [34] 9.2 | n/a | n/a |
| 10C | Privacy | [33] 4.2 | c4 | n/a | [33] 4.2 | c4 | c4 |
| 10D | Server | [26] 20.35 | o | o | [26] 20.35 | o | o |
| 11 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | c2 | c2 |
| 12 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 12A | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 13 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 14 | Warning | [26] 20.43 | o (note) | o | [26] 20.43 | o | o |
| c1: | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | |
| c2: | IF A.4/6 THEN m ELSE n/a - - timestamping of requests. | | | | | | |
| c3: | IF A.4/25 THEN o ELSE n/a - - private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c4: | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| NOTE: | For a 606 (Not Acceptable Here) response, this status is RECOMMENDED rather than OPTIONAL. | | | | | | |

Prerequisite A.5/11 - - NOTIFY response

Prerequisite: A.6/6 and A.6/7 - - 2xx

Table A.66: Supported headers within the NOTIFY response

| Item | Header | Sending | | | Receiving | | |
|------|--|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Authentication-Info | [26] 20.6 | c1 | c1 | [26] 20.6 | c2 | c2 |
| 1A | Contact | [26] 20.10 | m | m | [26] 20.10 | m | m |
| 2 | Record-Route | [26] 20.30 | c3 | c3 | [26] 20.30 | c3 | c3 |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| c1: | IF A.4/7 THEN o ELSE n/a - - authentication between UA and UA. | | | | | | |
| c2: | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | | |
| c3: | IF A.4/15 OR A.4/20 THEN m ELSE n/a - - the REFER method extension or SIP specific event notification extension. | | | | | | |

Prerequisite A.5/11 - - NOTIFY response

Prerequisite: A.6/8 OR A.6/9 OR A.6/10 OR A.6/11 OR A.6/12 OR A.6/35 - - 3xx or 485 (Ambiguous)

Table A.67: Supported headers within the NOTIFY response

| Item | Header | Sending | | | Receiving | | |
|---|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Contact | [26] 20.10 | m (note) | m | [26] 20.10 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| NOTE: The strength of this requirement is RECOMMENDED rather than MANDATORY for a 485 response. | | | | | | | |

Prerequisite A.5/11 - - NOTIFY response

Prerequisite: A.6/14 - - 401 (Unauthorized)

Table A.68: Supported headers within the NOTIFY response

| Item | Header | Sending | | | Receiving | | |
|---|--------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Proxy-Authenticate | [26] 20.27 | c1 | c1 | [26] 20.27 | c1 | c1 |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 8 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | m | m |
| c1: IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | | | |

Prerequisite A.5/11 - - NOTIFY response

Prerequisite: A.6/17 OR A.6/23 OR A.6/30 OR A.6/36 OR A.6/42 OR A.6/45 OR A.6/50 OR A.6/51 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.69: Supported headers within the NOTIFY response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 3 | Retry-After | [26] 20.33 | o | o | [26] 20.33 | o | o |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/11 - - NOTIFY response

Prerequisite: A.6/18 -- 405 (Method Not Allowed)

Table A.70: Supported headers within the NOTIFY response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/11 - - NOTIFY response

Prerequisite: A.6/20 - - 407 (Proxy Authentication Required)

Table A.71: Supported headers within the NOTIFY response

| Item | Header | Sending | | | Receiving | | |
|---|--------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Proxy-Authenticate | [26] 20.27 | c3 | c3 | [26] 20.27 | c3 | c3 |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 6 | WWW-Authenticate | [26] 20.44 | o | o | [26] 20.44 | o | o |
| c3: IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | | | |

Prerequisite A.5/11 - - NOTIFY response

Prerequisite A.6/25 - - 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 | [26] 20.1 | o.1 | o.1 | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | o.1 | o.1 | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | o.1 | o.1 | [26] 20.3 | m | m |
| 3A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/11 - - NOTIFY response

Prerequisite: A.6/27 - - 420 (Bad Extension)

Table A.73: Supported headers within the NOTIFY response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 5 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | m | m |

Prerequisite A.5/11 - - NOTIFY response

Prerequisite: A.6/34 - - 484 (Address Incomplete)

Table A.74: Supported headers within the NOTIFY response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/11 - - NOTIFY response

Prerequisite: A.6/39 - - 489 (Bad Event)

Table A.75: Supported headers within the NOTIFY response

| Item | Header | Sending | | | Receiving | | |
|------|--------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Allow-Events | [28] 8.2.2 | m | m | [28] 8.2.2 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |

Prerequisite A.5/11 - - NOTIFY response

Table A.76: 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.5/12 - - OPTIONS request

Table A.77: Supported headers within the OPTIONS request

| Item | Header | Sending | | | Receiving | | |
|-------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | m | m |
| 3A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Allow-Events | [28] 8.2.2 | c1 | c1 | [28] 8.2.2 | c1 | c1 |
| 5 | Authorization | [26] 20.7 | c2 | c2 | [26] 20.7 | c2 | c2 |
| 6 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 7 | Call-Info | [26] 20.9 | o | o | [26] 20.9 | o | o |
| 8 | Contact | [26] 20.10 | o | o | [26] 20.10 | o | o |
| 9 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 10 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 11 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 12 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 13 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 14 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 15 | Date | [26] 20.17 | c3 | c3 | [26] 20.17 | m | m |
| 16 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 17 | Max-Forwards | [26] 20.22 | o | o | [26] 20.22 | n/a | n/a |
| 18 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 19 | Organization | [26] 20.25 | o | o | [26] 20.25 | o | o |
| 19A | P-Asserted-Identity | [34] 9.1 | n/a | n/a | [34] 9.1 | c6 | c6 |
| 19B | P-Preferred-Identity | [34] 9.2 | c6 | c4 | [34] 9.2 | n/a | n/a |
| 19C | Privacy | [33] 4.2 | c8 | c8 | [33] 4.2 | c8 | c8 |
| 20 | Proxy-Authorization | [26] 20.28 | c5 | c5 | [26] 20.28 | n/a | n/a |
| 21 | Proxy-Require | [26] 20.29 | o | o (note) | [26] 20.29 | n/a | n/a |
| 22 | Record-Route | [26] 20.30 | n/a | n/a | [26] 20.30 | n/a | n/a |
| 23 | Require | [26] 20.32 | o | o | [26] 20.32 | m | m |
| 24 | Route | [26] 20.34 | m | m | [26] 20.34 | n/a | n/a |
| 25 | Supported | [26] 20.37 | c6 | c6 | [26] 20.37 | m | m |
| 26 | Timestamp | [26] 20.38 | c7 | c7 | [26] 20.38 | m | m |
| 27 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 28 | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 29 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN m ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | | |
| c3: | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | |
| c4: | IF A.3/1 AND A.4/25 THEN o ELSE n/a - - UE and private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c5: | IF A.4/8A THEN m ELSE n/a - - authentication between UA and proxy. | | | | | | |
| c6: | IF A.4/25 THEN o ELSE n/a - - private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c7: | IF A.4/6 THEN o ELSE n/a - - timestamping of requests. | | | | | | |
| c8: | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| 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. | | | | | | |

Prerequisite A.5/12 - - OPTIONS request

Table A.78: Supported message bodies within the OPTIONS request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.5/13 - - OPTIONS response

Prerequisite: A.6/1 - - 100 (Trying)

Table A.79: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|------|----------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | n/a | n/a | [26] 20.8 | m | m |
| 2 | Content-Length | [26] 20.14 | n/a | n/a | [26] 20.14 | m | m |
| 3 | Cseq | [26] 20.16 | n/a | n/a | [26] 20.16 | m | m |
| 4 | Date | [26] 20.17 | n/a | n/a | [26] 20.17 | m | m |
| 5 | From | [26] 20.20 | n/a | n/a | [26] 20.20 | m | m |
| 6 | To | [26] 20.39 | n/a | n/a | [26] 20.39 | m | m |
| 7 | Via | [26] 20.42 | n/a | n/a | [26] 20.42 | m | m |

Prerequisite A.5/13 - - OPTIONS response

Table A.80: Supported headers within the OPTIONS response - all remaining status-codes

| Item | Header | Sending | | | Receiving | | |
|-------|--|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 1A | Call-Info | [26] 20.9 | o | o | [26] 20.9 | o | o |
| 2 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 3 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 4 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 5 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 6 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 7 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 8 | Date | [26] 20.17 | c1 | c1 | [26] 20.17 | m | m |
| 9 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 10 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 11 | Organization | [26] 20.25 | o | o | [26] 20.25 | o | o |
| 11A | P-Asserted-Identity | [34] 9.1 | n/a | n/a | [34] 9.1 | c3 | c3 |
| 11B | P-Preferred-Identity | [34] 9.2 | c3 | x | [34] 9.2 | n/a | n/a |
| 11C | Privacy | [33] 4.2 | c4 | c4 | [33] 4.2 | c4 | c4 |
| 12 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | c2 | c2 |
| 13 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 13A | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 14 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 15 | Warning | [26] 20.43 | o (note) | o | [26] 20.43 | o | o |
| c1: | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | |
| c2: | IF A.4/6 THEN m ELSE n/a - - timestamping of requests. | | | | | | |
| c3: | IF A.4/25 THEN o ELSE n/a - - private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c4: | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| NOTE: | For a 606 (Not Acceptable Here) response, this status is RECOMMENDED rather than OPTIONAL. | | | | | | |

Prerequisite A.5/13 - - OPTIONS response

Prerequisite: A.6/6 - - 2xx

Table A.81: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|---|---------------------|--|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | m | m |
| 2 | Allow | [26] 20.5 | o (note 1) | o | [26] 20.5 | m | m |
| 3 | Authentication-Info | [26] 20.6 | c1 | c1 | [26] 20.6 | c2 | c2 |
| 5 | Contact | [26] 20.10 | o | | [26] 20.10 | o | |
| 6 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| c1: | | IF A.4/7 THEN o ELSE n/a - - authentication between UA and UA. | | | | | |
| c2: | | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | |
| NOTE 1: The strength of this requirement in RFC 3261 [26] is RECOMMENDED, rather than OPTIONAL. | | | | | | | |

Prerequisite A.5/13 - - OPTIONS response

Prerequisite: A.6/8 OR A.6/9 OR A.6/10 OR A.6/11 OR A.6/12 OR A.6/35 - - 3xx or 485 (Ambiguous)

Table A.82: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|---|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 3 | Contact | [26] 20.10 | o (note) | o | [26] 20.10 | m | m |
| 4 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| NOTE: The strength of this requirement is RECOMMENDED rather than OPTIONAL. | | | | | | | |

Prerequisite A.5/13 - - OPTIONS response

Prerequisite: A.6/14 - - 401 (Unauthorized)

Table A.83: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|------|--------------------|---|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 4 | Proxy-Authenticate | [26] 20.27 | c1 | c1 | [26] 20.27 | c1 | c1 |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 10 | WWW-Authenticate | [26] 20.44 | o | | [26] 20.44 | o | |
| c1: | | IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | |

Prerequisite A.5/13 - - OPTIONS response

Prerequisite: A.6/17 OR A.6/23 OR A.6/30 OR A.6/36 OR A.6/42 OR A.6/45 OR A.6/50 OR A.6/51 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.84: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Retry-After | [26] 20.33 | o | o | [26] 20.33 | o | o |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/13 - - OPTIONS response

Prerequisite: A.6/18 - - 405 (Method Not Allowed)

Table A.85: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Allow | [26] 20.5 | m | m | [26] 20.5 | m | m |
| 4 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/13 - - OPTIONS response

Prerequisite: A.6/20 - - 407 (Proxy Authentication Required)

Table A.86: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 4 | Proxy-Authenticate | [26] 20.27 | c1 | c1 | [26] 20.27 | c1 | c1 |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 8 | WWW-Authenticate | [26] 20.44 | o | o | [26] 20.44 | o | o |
| c1: | IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | | |

Prerequisite A.5/13 - - OPTIONS response

Prerequisite: A.6/25 - - 415 (Unsupported Media Type)

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 | [26] 20.1 | o.1 | o.1 | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | o.1 | o.1 | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | o.1 | o.1 | [26] 20.3 | m | m |
| 4 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 5 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 6 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| o.1 | | At least one of these capabilities is supported. | | | | | |

Prerequisite A.5/13 - - OPTIONS response

Prerequisite: A.6/27 - - 420 (Bad Extension)

Table A.88: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 6 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 7 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | m | m |

Prerequisite A.5/13 - - OPTIONS response

Prerequisite: A.6/34 - - 484 (Address Incomplete)

Table A.89: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/13 - - OPTIONS response

Table A.90: 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.5/14 - - PRACK request

Table A.91: Supported headers within the PRACK request

| Item | Header | Sending | | | Receiving | | |
|------|--|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | o | o | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | o | o | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | o | o | [26] 20.3 | m | m |
| 3A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Allow-Events | [28] 8.2.2 | c1 | c1 | [28] 8.2.2 | c2 | c2 |
| 5 | Authorization | [26] 20.7 | c3 | c3 | [26] 20.7 | c3 | c3 |
| 6 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 7 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 8 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 9 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 10 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 11 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 12 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 13 | Date | [26] 20.17 | c4 | c4 | [26] 20.17 | m | m |
| 14 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 15 | Max-Forwards | [26] 20.22 | o | o | [26] 20.22 | n/a | n/a |
| 16 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 16A | Privacy | [33] 4.2 | c6 | n/a | [33] 4.2 | c6 | n/a |
| 17 | Proxy-Authorization | [26] 20.28 | c5 | c5 | [26] 20.28 | n/a | n/a |
| 18 | Proxy-Require | [26] 20.29 | o | n/a | [26] 20.29 | n/a | n/a |
| 19 | RAck | [27] 7.2 | m | m | [27] 7.2 | m | m |
| 20 | Record-Route | [26] 20.30 | n/a | n/a | [26] 20.30 | n/a | n/a |
| 21 | Require | [26] 20.32 | o | o | [26] 20.32 | m | m |
| 22 | Route | [26] 20.34 | m | m | [26] 20.34 | n/a | n/a |
| 23 | Supported | [26] 20.37 | o | o | [26] 20.37 | m | m |
| 24 | Timestamp | [26] 20.38 | c8 | c8 | [26] 20.38 | m | m |
| 25 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 26 | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 27 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN o ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.4/20 THEN m ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c3: | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | | |
| c4: | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | |
| c5: | IF A.4/8A THEN m ELSE n/a - - authentication between UA and proxy. | | | | | | |
| c6: | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c8: | IF A.4/6 THEN o ELSE n/a - - timestamping of requests. | | | | | | |

Prerequisite A.5/14 - - PRACK request

Table A.92: Supported message bodies within the PRACK request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.5/15 - - PRACK response

Prerequisite: A.6/1 - - 100 (Trying)

Table A.93: Supported headers within the PRACK response

| Item | Header | Sending | | | Receiving | | |
|------|----------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | n/a | n/a | [26] 20.8 | m | m |
| 2 | Content-Length | [26] 20.14 | n/a | n/a | [26] 20.14 | m | m |
| 3 | Cseq | [26] 20.16 | n/a | n/a | [26] 20.16 | m | m |
| 4 | Date | [26] 20.17 | n/a | n/a | [26] 20.17 | m | m |
| 5 | From | [26] 20.20 | n/a | n/a | [26] 20.20 | m | m |
| 6 | To | [26] 20.39 | n/a | n/a | [26] 20.39 | m | m |
| 7 | Via | [26] 20.42 | n/a | n/a | [26] 20.42 | m | m |

Prerequisite A.5/15 - - PRACK response

Table A.94: Supported headers within the PRACK response - all remaining status-codes

| Item | Header | Sending | | | Receiving | | |
|--|---------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 3 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 4 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 5 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 6 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 7 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 8 | Date | [26] 20.17 | c1 | c1 | [26] 20.17 | m | m |
| 9 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 10 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 10A | Privacy | [33] 4.2 | c2 | n/a | [33] 4.2 | c2 | n/a |
| 10B | Server | [26] 20.35 | o | o | [26] 20.35 | o | o |
| 11 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | c2 | c2 |
| 12 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 12A | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 13 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 14 | Warning | [26] 20.43 | o (note) | o | [26] 20.43 | o | o |
| c1: IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | | |
| c2: IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | | |
| NOTE: For a 606 (Not Acceptable Here) response, this status is RECOMMENDED rather than OPTIONAL. | | | | | | | |

Prerequisite A.5/15 - - PRACK response

Prerequisite: A.6/6 - - 2xx

Table A.95: Supported headers within the PRACK response

| Item | Header | Sending | | | Receiving | | |
|--|---------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 0B | Authentication-Info | [26] 20.6 | c1 | c1 | [26] 20.6 | c2 | c2 |
| 1 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 3 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| c1: IF A.4/7 THEN o ELSE n/a - - authentication between UA and UA. | | | | | | | |
| c2: IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | | | |

Prerequisite A.5/15 - - PRACK response

Prerequisite: A.6/8 OR A.6/9 OR A.6/10 OR A.6/11 OR A.6/12 OR A.6/35 - - 3xx or 485 (Ambiguous)

Table A.96: Supported headers within the PRACK response

| Item | Header | Sending | | | Receiving | | |
|---|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Contact | [26] 20.10 | o (note) | o | [26] 20.10 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| NOTE: The strength of this requirement is RECOMMENDED rather than OPTIONAL. | | | | | | | |

Prerequisite A.5/15 - - PRACK response

Prerequisite: A.6/14 - - 401 (Unauthorized)

Table A.97: Supported headers within the PRACK response

| Item | Header | Sending | | | Receiving | | |
|---|--------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Proxy-Authenticate | [26] 20.27 | c1 | c1 | [26] 20.27 | c1 | c1 |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 8 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | m | m |
| c1: IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | | | |

Prerequisite A.5/15 - - PRACK response

Prerequisite: A.6/17 OR A.6/23 OR A.6/30 OR A.6/36 OR A.6/42 OR A.6/45 OR A.6/50 OR A.6/51 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.98: Supported headers within the PRACK response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 3 | Retry-After | [26] 20.33 | o | o | [26] 20.33 | o | o |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/15 - - PRACK response

Prerequisite: A.6/18 - - 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 | [26] 20.5 | m | m | [26] 20.5 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/15 - - PRACK response

Prerequisite: A.6/20 - - 407 (Proxy Authentication Required)

Table A.100: Supported headers within the PRACK response

| Item | Header | Sending | | | Receiving | | |
|---|--------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Proxy-Authenticate | [26] 20.27 | c1 | c1 | [26] 20.27 | c1 | c1 |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 6 | WWW-Authenticate | [26] 20.44 | o | o | [26] 20.44 | o | o |
| c1: IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | | | |

Prerequisite A.5/15 - - PRACK response

Prerequisite: A.6/25 - - 415 (Unsupported Media Type)

Table A.101: Supported headers within the PRACK response

| Item | Header | Sending | | | Receiving | | |
|------|-----------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | o.1 | o.1 | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | o.1 | o.1 | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | o.1 | o.1 | [26] 20.3 | m | m |
| 3A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/15 - - PRACK response

Prerequisite: A.6/27 - - 420 (Bad Extension)

Table A.102: Supported headers within the PRACK response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/15 - - PRACK response

Prerequisite: A.6/34 - - 484 (Address Incomplete)

Table A.103: Supported headers within the PRACK response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/15 - - PRACK response

Table A.104: 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.5/16 - - REFER request

Table A.105: Supported headers within the REFER request

| Item | Header | Sending | | | Receiving | | |
|------|---|-------------------------|------------|----------------|-------------------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Accept | [26] 20.1 | o | o | [26] 20.1 | m | m |
| 0B | Accept-Encoding | [26] 20.2 | o | o | [26] 20.2 | m | m |
| 1 | Accept-Language | [26] 20.3 | o | o | [26] 20.3 | m | m |
| 1A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Allow-Events | [28] 8.2.2 | c1 | c1 | [28] 8.2.2 | c2 | c2 |
| 3 | Authorization | [26] 20.7 | c3 | c3 | [26] 20.7 | c3 | c3 |
| 4 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 5 | Contact | [26] 20.10 | m | m | [26] 20.10 | m | m |
| 5A | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 5B | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 5C | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 6 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 7 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 8 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 9 | Date | [26] 20.17 | c4 | c4 | [26] 20.17 | m | m |
| 10 | Expires | [26] 20.19 | o | o | [26] 20.19 | o | o |
| 11 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 12 | Max-Forwards | [26] 20.22 | o | o | [26] 20.22 | n/a | n/a |
| 13 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 14 | Organization | [26] 20.25 | o | o | [26] 20.25 | o | o |
| 14A | P-Asserted-Identity | [34] 9.1 | n/a | n/a | [34] 9.1 | c8 | c8 |
| 14B | P-Preferred-Identity | [34] 9.2 | c8 | c7 | [34] 9.2 | n/a | n/a |
| 14C | Privacy | [33] 4.2 | c9 | c9 | [33] 4.2 | c9 | c9 |
| 15 | Proxy-Authorization | [26] 20.28 | c5 | c5 | [26] 20.28 | n/a | n/a |
| 16 | Proxy-Require | [26] 20.29 | o | n/a | [26] 20.29 | n/a | n/a |
| 17 | Record-Route | [26] 20.30 | n/a | n/a | [26] 20.30 | m | m |
| 18 | Refer-To | [36] 3 | m | m | [36] 3 | m | m |
| 19 | Require | [26] 20.32 | o | o | [26] 20.32 | m | m |
| 20 | Route | [26] 20.34 | m | m | [26] 20.34 | n/a | n/a |
| 20A | Subject | [26] 20.36 | o | o | [26] 20.36 | o | o |
| 21 | Supported | [26] 20.37, [26] 7.1 | o | o | [26] 20.37, [26] 7.1 | m | m |
| 22 | Timestamp | [26] 20.38 | c6 | c6 | [26] 20.38 | m | m |
| 23 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 24 | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 25 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN o ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.4/20 THEN m ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c3: | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | | |
| c4: | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | |
| c5: | IF A.4/8A THEN m ELSE n/a - - authentication between UA and proxy. | | | | | | |
| c6: | IF A.4/6 THEN o ELSE n/a - - timestamping of requests. | | | | | | |
| c7: | IF A.3/1 AND A.4/25 THEN o ELSE n/a - - UE and private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c8: | IF A.4/25 THEN o ELSE n/a - - private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c9: | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |

Prerequisite A.5/16 - - REFER request

Table A.106: Supported message bodies within the REFER request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.5/17 - - REFER response

Prerequisite: A.6/1 - - 100 (Trying)

Table A.107: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|------|----------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | n/a | n/a | [26] 20.8 | m | m |
| 2 | Content-Length | [26] 20.14 | n/a | n/a | [26] 20.14 | m | m |
| 3 | Cseq | [26] 20.16 | n/a | n/a | [26] 20.16 | m | m |
| 4 | Date | [26] 20.17 | n/a | n/a | [26] 20.17 | m | m |
| 5 | From | [26] 20.20 | n/a | n/a | [26] 20.20 | m | m |
| 6 | To | [26] 20.39 | n/a | n/a | [26] 20.39 | m | m |
| 7 | Via | [26] 20.42 | n/a | n/a | [26] 20.42 | m | m |

Prerequisite A.5/17 - - REFER response

Table A.108: Supported headers within the REFER response - all remaining status-codes

| Item | Header | Sending | | | Receiving | | |
|-------|----------------------|--|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 1A | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 2 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 3 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 4 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 5 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 6 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 7 | Date | [26] 20.17 | c1 | c1 | [26] 20.17 | m | m |
| 8 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 9 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 10 | Organization | [26] 20.25 | o | o | [26] 20.25 | o | o |
| 10A | P-Asserted-Identity | [34] 9.1 | n/a | n/a | [34] 9.1 | c3 | c3 |
| 10B | P-Preferred-Identity | [34] 9.2 | c3 | x | [34] 9.2 | n/a | n/a |
| 10C | Privacy | [33] 4.2 | c4 | c4 | [33] 4.2 | c4 | c4 |
| 10D | Server | [26] 20.35 | o | o | [26] 20.35 | o | o |
| 11 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | c2 | c2 |
| 12 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 12A | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 13 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 14 | Warning | [26] 20.43 | o (note) | o | [26] 20.43 | o | o |
| c1: | | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | |
| c2: | | IF A.4/6 THEN m ELSE n/a - - timestamping of requests. | | | | | |
| c3: | | IF A.4/25 THEN o ELSE n/a - - private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | |
| c4: | | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | |
| NOTE: | | For a 606 (Not Acceptable Here) response, this status is RECOMMENDED rather than OPTIONAL. | | | | | |

Prerequisite A.5/17 - - REFER response

Prerequisite: A.6/7 - - 202 (Accepted)

Table A.109: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|------|---------------------|--|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Authentication-Info | [26] 20.6 | c1 | c1 | [26] 20.6 | c2 | c2 |
| 3 | Contact | [26] 20.10 | m | m | [26] 20.10 | m | m |
| 5 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | m | m |
| 6 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| c1: | | IF A.4/7 THEN o ELSE n/a - - authentication between UA and UA. | | | | | |
| c2: | | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | |

Prerequisite A.5/17 - - REFER response

Prerequisite: A.6/8 OR A.6/9 OR A.6/10 OR A.6/11 OR A.6/12 OR A.6/35 - - 3xx or 485 (Ambiguous)

Table A.110: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Contact | [26] 20.10 | o (note) | o | [26] 20.10 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

NOTE: The strength of this requirement is RECOMMENDED rather than OPTIONAL.

Prerequisite A.5/17 - - REFER response

Prerequisite: A.6/14 - - 401 (Unauthorized)

Table A.111: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|------|--------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 4 | Proxy-Authenticate | [26] 20.27 | c1 | c1 | [26] 20.27 | c1 | c1 |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 10 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | m | m |

c1: IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA.

Prerequisite A.5/17 - - REFER response

Prerequisite: A.6/17 OR A.6/23 OR A.6/30 OR A.6/36 OR A.6/42 OR A.6/45 OR A.6/50 OR A.6/51 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.112: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 6 | Retry-After | [26] 20.33 | o | o | [26] 20.33 | o | o |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/17 - - REFER response

Prerequisite: A.6/18 - - 405 (Method Not Allowed)

Table A.113: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Allow | [26] 20.5 | m | m | [26] 20.5 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 6 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/17 - - REFER response

Prerequisite: A.6/20 - - 407 (Proxy Authentication Required)

Table A.114: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|---|--------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 4 | Proxy-Authenticate | [26] 20.27 | c1 | c1 | [26] 20.27 | c1 | c1 |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 8 | WWW-Authenticate | [26] 20.44 | o | o | [26] 20.44 | o | o |
| c1: IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | | | |

Prerequisite A.5/17 - - REFER response

Prerequisite: A.6/25 - - 415 (Unsupported Media Type)

Table A.115: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|--|-----------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | o.1 | o.1 | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | o.1 | o.1 | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | o.1 | o.1 | [26] 20.3 | m | m |
| 3A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 6 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| o.1 At least one of these capabilities is supported. | | | | | | | |

Prerequisite A.5/17 - - REFER response

Prerequisite: A.6/27 - - 420 (Bad Extension)

Table A.116: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 8 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | m | m |

Prerequisite A.5/17 - - REFER response

Prerequisite: A.6/34 - - 484 (Address Incomplete)

Table A.117: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/17 - - REFER response

Table A.118: 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.5/18 - - REGISTER request

Table A.119: Supported headers within the REGISTER request

| Item | Header | Sending | | | Receiving | | |
|-------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | o | o | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | o | o | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | o | o | [26] 20.3 | m | m |
| 3A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Allow-Events | [28] 8.2.2 | c1 | c1 | [28] 8.2.2 | c1 | c1 |
| 5 | Authorization | [26] 20.7 | c2 | n/a | [26] 20.7 | c2 | n/a |
| 6 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 7 | Call-Info | [26] 20.9 | o | o | [26] 20.9 | o | o |
| 8 | Contact | [26] 20.10 | o | o | [26] 20.10 | m | m |
| 9 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 10 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 11 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 12 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 13 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 14 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 15 | Date | [26] 20.17 | c3 | c3 | [26] 20.17 | m | m |
| 16 | Expires | [26] 20.19 | o | o | [26] 20.19 | m | m |
| 17 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 18 | Max-Forwards | [26] 20.22 | o | o | [26] 20.22 | n/a | n/a |
| 19 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 20 | Organization | [26] 20.25 | o | o | [26] 20.25 | o | o |
| 20A | Path | [35] 4 | c4 | c5 | [35] 4 | m | c6 |
| 20B | Privacy | [33] 4.2 | c9 | n/a | [33] 4.2 | c9 | n/a |
| 21 | Proxy-Authorization | [26] 20.28 | c8 | c8 | [26] 20.28 | n/a | n/a |
| 22 | Proxy-Require | [26] 20.29 | o | o (note) | [26] 20.29 | n/a | n/a |
| 23 | Require | [26] 20.32 | o | o | [26] 20.32 | m | m |
| 24 | Route | [26] 20.34 | o | n/a | [26] 20.34 | n/a | n/a |
| 25 | Supported | [26] 20.37 | o | o | [26] 20.37 | m | m |
| 26 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | c7 | c7 |
| 27 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 28 | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 29 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN m ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.4/8 THEN m ELSE n/a - - authentication between UA and registrar. | | | | | | |
| c3: | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | |
| c4: | IF A.4/24 THEN o ELSE n/a - - session initiation protocol extension header field for registering non-adjacent contacts. | | | | | | |
| c5: | IF A.4/24 THEN x ELSE n/a - - session initiation protocol extension header field for registering non-adjacent contacts. | | | | | | |
| c6: | IF (A.3/4) OR A.3/1 THEN m ELSE n/a. - - S-CSCF or UE. | | | | | | |
| c7: | IF A.4/6 THEN m ELSE n/a - - timestamping of requests. | | | | | | |
| c8: | IF A.4/8A THEN m ELSE n/a - - authentication between UA and proxy. | | | | | | |
| c9: | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| 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. | | | | | | |

Prerequisite A.5/18 - - REGISTER request

Table A.120: Supported message bodies within the REGISTER request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.5/19 - - REGISTER response

Prerequisite: A.6/1 - - 100 (Trying)

Table A.121: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|----------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | n/a | n/a | [26] 20.8 | m | m |
| 2 | Content-Length | [26] 20.14 | n/a | n/a | [26] 20.14 | m | m |
| 3 | Cseq | [26] 20.16 | n/a | n/a | [26] 20.16 | m | m |
| 4 | Date | [26] 20.17 | n/a | n/a | [26] 20.17 | m | m |
| 5 | From | [26] 20.20 | n/a | n/a | [26] 20.20 | m | m |
| 6 | To | [26] 20.39 | n/a | n/a | [26] 20.39 | m | m |
| 7 | Via | [26] 20.42 | n/a | n/a | [26] 20.42 | m | m |

Prerequisite A.5/19 - - REGISTER response

Table A.122: Supported headers within the REGISTER response - all status-codes

| Item | Header | Sending | | | Receiving | | |
|-------|--|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 1A | Call-Info | [26] 20.9 | o | o | [26] 20.9 | o | o |
| 2 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 3 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 4 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 5 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 6 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 7 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 8 | Date | [26] 20.17 | c1 | c1 | [26] 20.17 | m | m |
| 9 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 10 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 11 | Organization | [26] 20.25 | o | o | [26] 20.25 | o | o |
| 11A | Privacy | [33] 4.2 | c2 | n/a | [33] 4.2 | c2 | n/a |
| 11B | Server | [26] 20.35 | o | o | [26] 20.35 | o | o |
| 12 | Timestamp | [26] 20.38 | c2 | c2 | [26] 20.38 | m | m |
| 13 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 13A | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 14 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 15 | Warning | [26] 20.43 | o (note) | o | [26] 20.43 | o | o |
| c1: | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | |
| c2: | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| NOTE: | For a 606 (Not Acceptable Here) response, this status is RECOMMENDED rather than OPTIONAL. | | | | | | |

Prerequisite A.5/19 - - REGISTER response

Prerequisite: A.6/6 - - 2xx

Table A.123: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | o | | [26] 20.1 | o | |
| 1A | Accept-Encoding | [26] 20.2 | o | o | [26] 20.2 | m | m |
| 1B | Accept-Language | [26] 20.3 | o | o | [26] 20.3 | m | m |
| 2 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 3 | Authentication-Info | [26] 20.6 | c6 | c6 | [26] 20.6 | c7 | c7 |
| 5 | Contact | [26] 20.10 | o | o | [26] 20.10 | m | m |
| 6 | Path | [35] 4 | c3 | c3 | [35] 4 | c4 | c4 |
| 7 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 8 | Service-Route | [38] 6 | c5 | c5 | [38] 6 | c5 | c5 |
| 9 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| c1: | IF (A.3/4 AND A.4/2) THEN m ELSE n/a - - S-CSCF acting as registrar. | | | | | | |
| c2: | IF A.3/4 OR A.3/1 THEN m ELSE n/a - - S-CSCF or UE. | | | | | | |
| c3: | IF A.4/24 THEN m ELSE n/a - - session initiation protocol extension header field for registering non-adjacent contacts. | | | | | | |
| c4: | IF A.4/24 THEN o ELSE n/a - - session initiation protocol extension header field for registering non-adjacent contacts. | | | | | | |
| c5: | IF A.4/28 THEN m ELSE n/a - - session initiation protocol extension header field for service route discovery during registration. | | | | | | |
| c6: | IF A.4/8 THEN o ELSE n/a - - authentication between UA and registrar. | | | | | | |
| c7: | IF A.4/8 THEN m ELSE n/a - - authentication between UA and registrar. | | | | | | |

Prerequisite A.5/19 - - REGISTER response

Prerequisite: A.6/8 OR A.6/9 OR A.6/10 OR A.6/11 OR A.6/12 OR A.6/35 - - 3xx or 485 (Ambiguous)

Table A.124: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|-------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 3 | Contact | [26] 20.10 | o (note) | o | [26] 20.10 | m | m |
| 4 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 6 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| NOTE: | The strength of this requirement is RECOMMENDED rather than OPTIONAL. | | | | | | |

Prerequisite A.5/19 - - REGISTER response

Prerequisite: A.6/14 - - 401 (Unauthorized)

Table A.125: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 4 | Proxy-Authenticate | [26] 20.27 | c1 | x | [26] 20.27 | c1 | x |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 10 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | m | m |
| c1: | IF A.5/8 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | | |

Prerequisite A.5/19 - - REGISTER response

Prerequisite: A.6/17 OR A.6/23 OR A.6/30 OR A.6/36 OR A.6/42 OR A.6/45 OR A.6/50 OR A.6/51 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.126: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 6 | Retry-After | [26] 20.33 | o | o | [26] 20.33 | o | o |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/19 - - REGISTER response

Prerequisite: A.6/18 - - 405 (Method Not Allowed)

Table A.127: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Allow | [26] 20.5 | m | m | [26] 20.5 | m | m |
| 4 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 6 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/19 - - REGISTER response

Prerequisite: A.6/20 - - 407 (Proxy Authentication Required)

Table A.128: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 5 | Proxy-Authenticate | [26] 20.27 | c1 | x | [26] 20.27 | c1 | x |
| 6 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 9 | WWW-Authenticate | [26] 20.44 | o | o | [26] 20.44 | o | o |
| c1: | IF A.5/8 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | | |

Prerequisite A.5/19 - - REGISTER response

Prerequisite: A.6/25 - - 415 (Unsupported Media Type)

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 | [26] 20.1 | o.1 | o.1 | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | o.1 | o.1 | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | o.1 | o.1 | [26] 20.3 | m | m |
| 4 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 5 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 7 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 9 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| o.1 | | At least one of these capabilities is supported. | | | | | |

Prerequisite A.5/19 - - REGISTER response

Prerequisite: A.6/27 - - 420 (Bad Extension)

Table A.130: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 8 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | m | m |

Prerequisite A.5/19 - - REGISTER response

Prerequisite: A.6/29 - - 423 (Interval Too Brief)

Table A.131: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 3 | Error-Info | [26] 20.18 | o | | [26] 20.18 | o | |
| 5 | Min-Expires | [26] 20.23 | m | m | [26] 20.23 | m | m |
| 6 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/19 - - REGISTER response

Prerequisite: A.6/34 - - 484 (Address Incomplete)

Table A.132: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/19 - - REGISTER response

Table A.133: 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.5/20 - - SUBSCRIBE request

Table A.134: Supported headers within the SUBSCRIBE request

| Item | Header | Sending | | | Receiving | | |
|-------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | o | o | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | o | o | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | o | o | [26] 20.3 | m | m |
| 3A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 4 | Allow-Events | [28] 8.2.2 | c1 | c1 | [28] 8.2.2 | c2 | c2 |
| 5 | Authorization | [26] 20.7 | c3 | c3 | [26] 20.7 | c3 | c3 |
| 6 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 6A | Contact | [26] 20.10 | m | m | [26] 20.10 | m | m |
| 7 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 8 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 9 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 10 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 11 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 12 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 13 | Date | [26] 20.17 | c4 | c4 | [26] 20.17 | m | m |
| 14 | Event | [28] 8.2.1 | m | m | [28] 8.2.1 | m | m |
| 15 | Expires | [26] 20.19 | o (note) | o (note) | [26] 20.19 | m | m |
| 16 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 17 | Max-Forwards | [26] 20.22 | o | o | [26] 20.22 | n/a | n/a |
| 18 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 18A | Organization | [26] 20.25 | o | o | [26] 20.25 | o | o |
| 18B | P-Asserted-Identity | [34] 9.1 | n/a | n/a | [34] 9.1 | c6 | c6 |
| 18C | P-Preferred-Identity | [34] 9.2 | c6 | c7 | [34] 9.2 | n/a | n/a |
| 18D | Privacy | [33] 4.2 | c9 | c9 | [33] 4.2 | c9 | c9 |
| 19 | Proxy-Authorization | [26] 20.28 | c5 | c5 | [26] 20.28 | n/a | n/a |
| 20 | Proxy-Require | [26] 20.29 | o | n/a | [26] 20.29 | n/a | n/a |
| 21 | Record-Route | [26] 20.30 | n/a | n/a | [26] 20.30 | m | m |
| 22 | Require | [26] 20.32 | o | o | [26] 20.32 | m | m |
| 23 | Route | [26] 20.34 | m | m | [26] 20.34 | n/a | n/a |
| 24 | Supported | [26] 20.37 | o | o | [26] 20.37 | m | m |
| 25 | Timestamp | [26] 20.38 | c8 | c8 | [26] 20.38 | m | m |
| 26 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 27 | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 28 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN o ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.4/20 THEN m ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c3: | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | | |
| c4: | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | |
| c5: | IF A.4/8A THEN m ELSE n/a - - authentication between UA and proxy. | | | | | | |
| c6: | IF A.4/25 THEN o ELSE n/a - - private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c7: | IF A.3/1 AND A.4/25 THEN o ELSE n/a - - UE and private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c8: | IF A.4/6 THEN o ELSE n/a - - timestamping of requests. | | | | | | |
| c9: | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| NOTE: | The strength of this requirement is RECOMMENDED rather than OPTIONAL. | | | | | | |

Prerequisite A.5/20 - - SUBSCRIBE request

Table A.135: Supported message bodies within the SUBSCRIBE request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.5/21 - - SUBSCRIBE response

Table A.136: Supported headers within the SUBSCRIBE response - all status-codes

| Item | Header | Sending | | | Receiving | | |
|-------|--|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 3 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 4 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 5 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 6 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 7 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 8 | Date | [26] 20.17 | c1 | c1 | [26] 20.17 | m | m |
| 9 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 10 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 10A | Organization | [26] 20.25 | o | o | [26] 20.25 | o | o |
| 10B | P-Asserted-Identity | [34] 9.1 | n/a | n/a | [34] 9.1 | c3 | c3 |
| 10C | P-Preferred-Identity | [34] 9.2 | c3 | x | [34] 9.2 | n/a | n/a |
| 10D | Privacy | [33] 4.2 | c4 | c4 | [33] 4.2 | c4 | c4 |
| 10E | Server | [26] 20.35 | o | o | [26] 20.35 | o | o |
| 11 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | c2 | c2 |
| 12 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 12A | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 13 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 14 | Warning | [26] 20.43 | o (note) | o | [26] 20.43 | o | o |
| c1: | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | |
| c2: | IF A.4/6 THEN m ELSE n/a - - timestamping of requests. | | | | | | |
| c3: | IF A.4/25 THEN o ELSE n/a - - private extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c4: | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| NOTE: | For a 606 (Not Acceptable Here) response, this status is RECOMMENDED rather than OPTIONAL. | | | | | | |

Prerequisite A.5/21 - - SUBSCRIBE response

Prerequisite: A.6/6 and A.6/7 - - 2xx

Table A.137: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|--|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Authentication-Info | [26] 20.6 | c1 | c1 | [26] 20.6 | c2 | c2 |
| 1A | Contact | [26] 20.10 | m | m | [26] 20.10 | m | m |
| 2 | Expires | [26] 20.19 | m | m | [26] 20.19 | m | m |
| 3 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | m | m |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 6 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| c1: | IF A.4/7 THEN o ELSE n/a - - authentication between UA and UA. | | | | | | |
| c2: | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | | |

Prerequisite A.5/21 - - SUBSCRIBE response

Prerequisite: A.6/8 OR A.6/9 OR A.6/10 OR A.6/11 OR A.6/12 OR A.6/35 - - 3xx or 485 (Ambiguous)

Table A.138: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|---|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Contact | [26] 20.10 | m (note) | m | [26] 20.10 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| NOTE: The strength of this requirement is RECOMMENDED rather than MANDATORY for a 485 response. | | | | | | | |

Prerequisite A.5/21 - - SUBSCRIBE response

Prerequisite: A.6/14 - - 401 (Unauthorized)

Table A.139: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Proxy-Authenticate | [26] 20.27 | c1 | c1 | [26] 20.27 | c1 | c1 |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 8 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | m | m |
| c1: | IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | | |

Prerequisite A.5/21 - - SUBSCRIBE response

Prerequisite: A.6/17 OR A.6/23 OR A.6/30 OR A.6/36 OR A.6/42 OR A.6/50 OR A.6/51 - - 404, 413, 480, 486, 500, 600, 603

Table A.140: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 3 | Retry-After | [26] 20.33 | o | | [26] 20.33 | o | |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/21 - - SUBSCRIBE response

Prerequisite: A.6/18 - - 405 (Method Not Allowed)

Table A.141: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/21 - - SUBSCRIBE response

Prerequisite: A.6/20 - - 407 (Proxy Authentication Required)

Table A.142: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|---|--------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Proxy-Authenticate | [26] 20.27 | c1 | c1 | [26] 20.27 | c1 | c1 |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 6 | WWW-Authenticate | [26] 20.44 | o | o | [26] 20.44 | o | o |
| c1: IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | | | |

Prerequisite A.5/21 - - SUBSCRIBE response

Prerequisite A.6/25 - - 415 (Unsupported Media Type)

Table A.143: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|--|-----------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | o.1 | o.1 | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | o.1 | o.1 | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | o.1 | o.1 | [26] 20.3 | m | m |
| 4 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 6 | Server | [26] 20.35 | o | o | [26] 20.35 | o | o |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| o.1 At least one of these capabilities is supported. | | | | | | | |

Prerequisite A.5/21 - - SUBSCRIBE response

Prerequisite: A.6/27 - - 420 (Bad Extension)

Table A.144: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 5 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | m | m |

Prerequisite A.5/21 - - SUBSCRIBE response

Prerequisite: A.6/29 - - 423 (Interval Too Brief)

Table A.145: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Min-Expires | [26] 20.23 | m | m | [26] 20.23 | m | m |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/21 - - SUBSCRIBE response

Prerequisite: A.6/34 - - 484 (Address Incomplete)

Table A.146: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/21 - - SUBSCRIBE response

Prerequisite: A.6/39 - - 489 (Bad Event)

Table A.147: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|--------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Allow-Events | [28] 8.2.2 | m | m | [28] 8.2.2 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |

Prerequisite A.5/21 - - SUBSCRIBE response

Prerequisite: A.6/45 - - 503 (Service Unavailable)

Table A.148: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 1 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 3 | Retry-After | [26] 20.33 | o | o | [26] 20.33 | o | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/21 - - SUBSCRIBE response

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.2.1.4.14 UPDATE method

Prerequisite A.5/22 - - UPDATE request

Table A.150: Supported headers within the UPDATE request

| Item | Header | Sending | | | Receiving | | |
|------|--|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | o | o | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | o | o | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | o | o | [26] 20.3 | m | m |
| 4 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 5 | Allow-Events | [28] 8.2.2 | c2 | c2 | [28] 8.2.2 | c3 | c3 |
| 6 | Authorization | [26] 20.7 | c4 | c4 | [26] 20.7 | c4 | c4 |
| 7 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 8 | Call-Info | [26] 20.9 | o | o | [26] 20.9 | o | o |
| 9 | Contact | [26] 20.10 | m | m | [26] 20.10 | m | m |
| 10 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 11 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 12 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 13 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 14 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 15 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 16 | Date | [26] 20.17 | c5 | c5 | [26] 20.17 | m | m |
| 17 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 18 | Max-Forwards | [26] 20.22 | o | o | [26] 20.22 | n/a | n/a |
| 19 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 20 | Organization | [26] 20.25 | o | o | [26] 20.25 | o | o |
| 20A | Privacy | [33] 4.2 | c6 | n/a | [33] 4.2 | c6 | n/a |
| 21 | Proxy-Authorization | [26] 20.28 | c10 | c10 | [26] 20.28 | n/a | n/a |
| 22 | Proxy-Require | [26] 20.29 | o | n/a | [26] 20.29 | n/a | n/a |
| 23 | Record-Route | [26] 20.30 | n/a | n/a | [26] 20.30 | n/a | n/a |
| 24 | Require | [26] 20.32 | o | o | [26] 20.32 | m | m |
| 25 | Route | [26] 20.34 | m | m | [26] 20.34 | n/a | n/a |
| 26 | Supported | [26] 20.37 | o | o | [26] 20.37 | m | m |
| 27 | Timestamp | [26] 20.38 | c9 | c9 | [26] 20.38 | m | m |
| 28 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 29 | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 30 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c2: | IF A.4/20 THEN o ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c3: | IF A.4/20 THEN m ELSE n/a - - SIP specific event notification extension. | | | | | | |
| c4: | IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | | |
| c5: | IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | |
| c6: | IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c9: | IF A.4/6 THEN o ELSE n/a - - timestamping of requests. | | | | | | |
| c10: | IF A.4/8A THEN m ELSE n/a - - authentication between UA and proxy. | | | | | | |

Prerequisite A.5/22 - - UPDATE request

Table A.151: Supported message bodies within the UPDATE request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.5/23 - - UPDATE response

Table A.152: Supported headers within the UPDATE response - all remaining status-codes

| Item | Header | Sending | | | Receiving | | |
|--|---------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 1A | Call-Info | [26] 20.9 | o | o | [26] 20.9 | o | o |
| 2 | Content-Disposition | [26] 20.11 | o | o | [26] 20.11 | m | m |
| 3 | Content-Encoding | [26] 20.12 | o | o | [26] 20.12 | m | m |
| 4 | Content-Language | [26] 20.13 | o | o | [26] 20.13 | m | m |
| 5 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 6 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | m | m |
| 7 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 8 | Date | [26] 20.17 | c1 | c1 | [26] 20.17 | m | m |
| 9 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 10 | MIME-Version | [26] 20.24 | o | o | [26] 20.24 | m | m |
| 10A | Organization | [26] 20.25 | o | o | [26] 20.25 | o | o |
| 10B | Privacy | [33] 4.2 | c3 | n/a | [33] 4.2 | c3 | n/a |
| 10C | Server | [26] 20.35 | o | o | [26] 20.35 | o | o |
| 11 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | c2 | c2 |
| 12 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 12A | User-Agent | [26] 20.41 | o | o | [26] 20.41 | o | o |
| 13 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 14 | Warning | [26] 20.43 | o (note) | o | [26] 20.43 | o | o |
| c1: IF A.4/11 THEN o ELSE n/a - - insertion of date in requests and responses. | | | | | | | |
| c2: IF A.4/6 THEN m ELSE n/a - - timestamping of date in requests. | | | | | | | |
| c3: IF A.4/26 THEN o ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | | |
| NOTE: For a 606 (Not Acceptable Here) response, this status is RECOMMENDED rather than OPTIONAL. | | | | | | | |

Prerequisite A.5/23 - - UPDATE response

Prerequisite: A.6/6 - - 2xx

Table A.153: Supported headers within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|--|---------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Accept | [26] 20.1 | o | o | [26] 20.1 | m | m |
| 0B | Accept-Encoding | [26] 20.2 | o | o | [26] 20.2 | m | m |
| 0C | Accept-Language | [26] 20.3 | o | o | [26] 20.3 | m | m |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Authentication-Info | [26] 20.6 | c1 | c1 | [26] 20.6 | c2 | c2 |
| 3 | Contact | [26] 20.10 | m | m | [26] 20.10 | m | m |
| 4 | Require | [26] 20.31 | m | m | [26] 20.31 | m | m |
| 6 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| c1: IF A.4/7 THEN o ELSE n/a - - authentication between UA and UA. | | | | | | | |
| c2: IF A.4/7 THEN m ELSE n/a - - authentication between UA and UA. | | | | | | | |

Prerequisite A.5/23 - - UPDATE response

Prerequisite: A.6/8 OR A.6/9 OR A.6/10 OR A.6/11 OR A.6/12 - - 3xx

Table A.154: Supported headers within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Contact | [26] 20.10 | o | o | [26] 20.10 | o | o |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/23 - - UPDATE response

Prerequisite: A.6/14 - - 401 (Unauthorized)

Table A.154A: Supported headers within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 3 | Proxy-Authenticate | [26] 20.27 | o | | [26] 20.27 | o | |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 6 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | m | m |
| c1: | IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | | |

Prerequisite A.5/23 - - UPDATE response

Prerequisite: A.6/17 OR A.6/23 OR A.6/30 OR A.6/36 OR A.6/42 OR A.6/45 OR A.6/50 OR A.6/51 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.155: Supported headers within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 5 | Retry-After | [26] 20.33 | o | o | [26] 20.33 | o | o |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/23 - - UPDATE response

Prerequisite: A.6/18 - - 405 (Method Not Allowed)

Table A.156: Supported headers within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 5 | Require | [26] 20.32 | m | m | [26] 20.33 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

Prerequisite A.5/23 - - UPDATE response

Prerequisite: A.6/20 - - 407 (Proxy Authentication Required)

Table A.157: Supported headers within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|---|--------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 4 | Proxy-Authenticate | [26] 20.27 | c1 | c1 | [26] 20.27 | c1 | c1 |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 8 | WWW-Authenticate | [26] 20.44 | o | o | [26] 20.44 | o | o |
| c1: IF A.5/7 THEN m ELSE n/a - - support of authentication between UA and UA. | | | | | | | |

Prerequisite A.5/23 - - UPDATE response

Prerequisite: A.6/25 - - 415 (Unsupported Media Type)

Table A.158: Supported headers within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|--|-----------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | o.1 | o.1 | [26] 20.1 | m | m |
| 2 | Accept-Encoding | [26] 20.2 | o.1 | o.1 | [26] 20.2 | m | m |
| 3 | Accept-Language | [26] 20.3 | o.1 | o.1 | [26] 20.3 | m | m |
| 4 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 6 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 8 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 10 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| o.1 At least one of these capabilities is supported. | | | | | | | |

Prerequisite A.5/23 - - UPDATE response

Prerequisite: A.6/27 - - 420 (Bad Extension)

Table A.159: Supported headers within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|------|-------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | m | m |
| 6 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |
| 7 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | m | m |

Prerequisite A.5/23 - - UPDATE response

Prerequisite: A.6/35 - - 485 (Ambiguous)

Table A.160: Supported headers within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|------|------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | o | o | [26] 20.5 | m | m |
| 2 | Contact | [26] 20.10 | o (note) | o | [26] 20.10 | m | m |
| 3 | Error-Info | [26] 20.18 | o | o | [26] 20.18 | o | o |
| 5 | Require | [26] 20.32 | m | m | [26] 20.33 | m | m |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | m | m |

NOTE: The strength of this requirement is RECOMMENDED rather than OPTIONAL.

Prerequisite A.5/23 - - UPDATE response

Table A.161: Supported message bodies within the UPDATE 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.162: Major capabilities

| Item | Does the implementation support | Reference | RFC status | Profile status |
|------|---|------------------|------------|----------------|
| | Capabilities within main protocol | | | |
| 1 | client behaviour for session requests? | [26] 16 | m | m |
| 2 | server behaviour for session requests? | [26] 16 | m | m |
| 3 | session release? | [26] 16 | m | m |
| 4 | stateless proxy behaviour? | [26] 16.11 | o.1 | |
| 5 | stateful proxy behaviour? | [26] 16.2 | o.1 | |
| 6 | forking of initial requests? | [26] 16.1 | c1 | x |
| 7 | support of TLS connections on the upstream side? | [26] 16.7 | o | n/a |
| 8 | support of TLS connections on the downstream side? | [26] 16.7 | o | n/a |
| 8A | authentication between UA and proxy? | [26] 20.28, 22.3 | o | x |
| 9 | insertion of date in requests and responses? | [26] 20.17 | o | o |
| 10 | suppression or modification of alerting information data? | [26] 20.4 | o | o |
| 11 | reading the contents of the Require header before proxying the request or response? | [26] 20.32 | o | o |
| 12 | adding or modifying the contents of the Require header before proxying the REGISTER request or response | [26] 20.32 | o | m |
| 13 | adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER? | [26] 20.32 | o | o |
| 14 | the requirement to be able to insert itself in the subsequent transactions in a dialog? | [26] 16.6 | o | c2 |
| 15 | the requirement to be able to use separate URIs in the upstream direction and downstream direction when record routing? | [26] 16.7 | c3 | c3 |
| 16 | reading the contents of the Supported header before proxying the response? | [26] 20.37 | o | o |
| 17 | reading the contents of the Unsupported header before proxying the 420 response to a REGISTER? | [26] 20.40 | o | m |
| 18 | reading the contents of the Unsupported header before proxying the 420 response to a method other than REGISTER? | [26] 20.40 | o | o |
| 19 | the inclusion of the Error-Info header in 3xx - 6xx responses? | [26] 20.18 | o | o |
| 19A | reading the contents of the Organization header before proxying the request or response? | [26] 20.25 | o | o |
| 19B | adding or concatenating the Organization header before proxying the request or response? | [26] 20.25 | o | o |
| 19C | reading the contents of the Call-Info header before proxying the request or response? | [26] 20.25 | o | o |
| 19D | adding or concatenating the Call-Info header before proxying the request or response? | [26] 20.25 | o | o |
| 19E | delete Contact headers from 3xx responses prior to relaying the response? | [26] 20 | o | o |
| | Extensions | | | |

| | | | | |
|-----|--|----------|-----|-----|
| 20 | the SIP INFO method? | [25] | o | o |
| 21 | reliability of provisional responses in SIP? | [27] | o | m |
| 22 | the REFER method? | [36] | o | o |
| 23 | integration of resource management and SIP? | [30] | o | m |
| 24 | the SIP UPDATE method? | [29] | c4 | m |
| 26 | SIP extensions for media authorization? | [31] | o | m |
| 27 | SIP specific event notification | [28] | o | o |
| 28 | the use of NOTIFY to establish a dialog | [28] 4.2 | o | n/a |
| 29 | Session Initiation Protocol Extension Header Field for Registering Non-Adjacent Contacts | [35] | o | c6 |
| 30 | extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks | [34] | o | m |
| 30A | act as first entity within the trust domain for asserted identity | [34] | c5 | c8 |
| 30B | act as subsequent entity within trust network that can route outside the trust network | [34] | c5 | c9 |
| 31 | a privacy mechanism for the Session Initiation Protocol (SIP) | [33] | o | m |
| 31A | request of privacy by the inclusion of a Privacy header | [33] | n/a | n/a |
| 31B | application of privacy based on the received Privacy header | [33] | c10 | c12 |
| 31C | passing on of the Privacy header transparently | [33] | c10 | c13 |
| 31D | application of the privacy option "header" such that those headers which cannot be completely expunged of identifying information without the assistance of intermediaries are obscured? | [33] 5.1 | x | x |
| 31E | application of the privacy option "session" such that anonymization for the session(s) initiated by this message occurs? | [33] 5.2 | n/a | n/a |
| 31F | application of the privacy option "user" such that user level privacy functions are provided by the network? | [33] 5.3 | n/a | n/a |
| 31G | application of the privacy option "id" such that privacy of the network asserted identity is provided by the network? | [34] 7 | c11 | c12 |
| 32 | Session Initiation Protocol Extension Header Field for Service Route Discovery During Registration | [38] | o | c6 |
| 33 | a messaging mechanism for the Session Initiation Protocol (SIP) | [50] | o | m |
| 34 | Compressing the Session Initiation Protocol | [55] | o | c7 |

| | |
|-------|--|
| c1: | IF A.162/5 THEN o ELSE n/a - - stateful proxy behaviour. |
| c2: | IF A.3/4 OR A.3/7 THEN m ELSE IF A.3/3 THEN o ELSE n/a - - S-CSCF or AS else I-CSCF. |
| c3: | IF (A.162/7 AND NOT A.162/8) OR (NOT A.162/7 AND A.162/8) THEN m ELSE IF A.162/14 THEN o ELSE n/a - - TLS interworking with non-TLS else proxy insertion. |
| c4: | IF A.162/23 THEN m ELSE o - - integration of resource management and SIP. |
| c5: | IF A.162/30 THEN o ELSE n/a - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. |
| c6: | IF A.3/2 OR A.3/3A THEN m ELSE n/a - - P-CSCF or I-CSCF (THIG). |
| c7: | IF A.3/2 THEN m ELSE n/a - - P-CSCF. |
| c8: | IF A.3/2 AND A.162/30 THEN m ELSE n/a - - P-CSCF and extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. |
| c9: | |
| c10: | IF A.162/31 THEN o.2 ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). |
| c11: | IF A.162/31B THEN o ELSE x - - application of privacy based on the received Privacy header. |
| c12: | |
| c13: | |
| o.1: | It is mandatory to support at least one of these items. |
| o.2: | It is mandatory to support at least one of these items. |
| NOTE: | An AS acting as a proxy may be outside the trust domain, and therefore not able to support the capability for that reason; in this case it is perfectly reasonable for the header to be passed on transparently, as specified in the PDU parts of the profile. |

A.2.2.3 PDUs

Table A.163: Supported methods

| Item | PDU | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | ACK request | [26] 13 | m | m | [26] 13 | m | m |
| 2 | BYE request | [26] 16 | o | m | [26] 16 | o | m |
| 3 | BYE response | [26] 16 | o | m | [26] 16 | o | m |
| 4 | CANCEL request | [26] 16.10 | o | m | [26] 16.10 | o | m |
| 5 | CANCEL response | [26] 16.10 | o | m | [26] 16.10 | o | m |
| 6 | INFO request | [25] 2 | c2 | c2 | [25] 2 | c2 | c2 |
| 7 | INFO response | [25] 2 | c2 | c2 | [25] 2 | c2 | c2 |
| 8 | INVITE request | [26] 16 | m | m | [26] 16 | m | m |
| 9 | INVITE response | [26] 16 | m | m | [26] 16 | m | m |
| 9A | MESSAGE request | [50] 4 | c5 | c5 | [50] 7 | c5 | c5 |
| 9B | MESSAGE response | [50] 4 | c5 | c5 | [50] 7 | c5 | c5 |
| 10 | NOTIFY request | [28] 8.1.2 | c3 | c3 | [28] 8.1.2 | c3 | c3 |
| 11 | NOTIFY response | [28] 8.1.2 | c3 | c3 | [28] 8.1.2 | c3 | c3 |
| 12 | OPTIONS request | [26] 16 | m | m | [26] 16 | m | m |
| 13 | OPTIONS response | [26] 16 | m | m | [26] 16 | m | m |
| 14 | PRACK request | [27] 6 | c6 | c6 | [27] 6 | c6 | c6 |
| 15 | PRACK response | [27] 6 | c6 | c6 | [27] 6 | c6 | c6 |
| 16 | REFER request | [36] 3 | c1 | c1 | [36] 3 | c1 | c1 |
| 17 | REFER response | [36] 3 | c1 | c1 | [36] 3 | c1 | c1 |
| 18 | REGISTER request | [26] 16 | m | m | [26] 16 | m | m |
| 19 | REGISTER response | [26] 16 | m | m | [26] 16 | m | m |
| 20 | SUBSCRIBE request | [28] 8.1.1 | c3 | c3 | [28] 8.1.1 | c3 | c3 |
| 21 | SUBSCRIBE response | [28] 8.1.1 | c3 | c3 | [28] 8.1.1 | c3 | c3 |
| 22 | UPDATE request | [30] 7 | c4 | c4 | [30] 7 | c4 | c4 |
| 23 | UPDATE response | [30] 7 | c4 | c4 | [30] 7 | c4 | c4 |
| c1: | IF A.162/22 THEN m ELSE n/a - - the REFER method. | | | | | | |
| c2: | IF A.162/20 THEN m ELSE n/a - - the SIP INFO method. | | | | | | |
| c3: | IF A.162/27 THEN m ELSE n/a - - SIP specific event notification. | | | | | | |
| c4: | IF A.162/24 THEN m ELSE n/a - - the SIP UPDATE method. | | | | | | |
| c5: | IF A.162/33 THEN m ELSE n/a - - the SIP MESSAGE method. | | | | | | |
| c6: | IF A.162/21 THEN m ELSE n/a - - reliability of provisional responses. | | | | | | |

A.2.2.4 PDU parameters

A.2.2.4.1 Status-codes

Table A.164: Supported-status codes

| Item | Header | Sending | | | Receiving | | |
|------|-------------------------------------|-----------------|------------|----------------|-----------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | 100 (Trying) | [26] 21.1.1 | c1 | c1 | [26] 21.1.1 | c2 | c2 |
| 2 | 180 (Ringing) | [26] 21.1.2 | c3 | c3 | [26] 21.1.2 | c3 | c3 |
| 3 | 181 (Call Is Being Forwarded) | [26] 21.1.3 | c3 | c3 | [26] 21.1.3 | c3 | c3 |
| 4 | 182 (Queued) | [26] 21.1.4 | c3 | c3 | [26] 21.1.4 | c3 | c3 |
| 5 | 183 (Session Progress) | [26] 21.1.5 | c3 | c3 | [26] 21.1.5 | c3 | c3 |
| 6 | 200 (OK) | [26] 21.2.1 | | | [26] 21.2.1 | | |
| 7 | 202 (Accepted) | [28] 8.3.1 | c4 | c4 | [28] 8.3.1 | c4 | c4 |
| 8 | 300 (Multiple Choices) | [26] 21.3.1 | | | [26] 21.3.1 | | |
| 9 | 301 (Moved Permanently) | [26] 21.3.2 | | | [26] 21.3.2 | | |
| 10 | 302 (Moved Temporarily) | [26] 21.3.3 | | | [26] 21.3.3 | | |
| 11 | 305 (Use Proxy) | [26] 21.3.4 | | | [26] 21.3.4 | | |
| 12 | 380 (Alternative Service) | [26] 21.3.5 | | | [26] 21.3.5 | | |
| 13 | 400 (Bad Request) | [26] 21.4.1 | | | [26] 21.4.1 | | |
| 14 | 401 (Unauthorized) | [26] 21.4.2 | | | [26] 21.4.2 | | |
| 15 | 402 (Payment Required) | [26] 21.4.3 | | | [26] 21.4.3 | | |
| 16 | 403 (Forbidden) | [26] 21.4.4 | | | [26] 21.4.4 | | |
| 17 | 404 (Not Found) | [26] 21.4.5 | | | [26] 21.4.5 | | |
| 18 | 405 (Method Not Allowed) | [26] 21.4.6 | | | [26] 21.4.6 | | |
| 19 | 406 (Not Acceptable) | [26] 21.4.7 | | | [26] 21.4.7 | | |
| 20 | 407 (Proxy Authentication Required) | [26] 21.4.8 | | | [26] 21.4.8 | | |
| 21 | 408 (Request Timeout) | [26] 21.4.9 | | | [26] 21.4.9 | | |
| 22 | 410 (Gone) | [26] 21.4.10 | | | [26] 21.4.10 | | |
| 23 | 413 (Request Entity Too Large) | [26] 21.4.11 | | | [26] 21.4.11 | | |
| 24 | 414 (Request-URI Too Large) | [26] 21.4.12 | | | [26] 21.4.12 | | |
| 25 | 415 (Unsupported Media Type) | [26] 21.4.13 | | | [26] 21.4.13 | | |
| 26 | 416 (Unsupported URI Scheme) | [26] 21.4.14 | | | [26] 21.4.14 | | |
| 27 | 420 (Bad Extension) | [26] 21.4.15 | | | [26] 21.4.15 | | |
| 28 | 421 (Extension Required) | [26] 21.4.16 | | | [26] 21.4.16 | | |
| 29 | 423 (Interval Too Brief) | [26] 21.4.17 | c5 | c5 | [26] 21.4.17 | c6 | c6 |

| Item | Header | Sending | | | Receiving | | |
|------|---|-----------------|------------|----------------|-----------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 30 | 480 (Temporarily not available) | [26] 21.4.18 | | | [26] 21.4.18 | | |
| 31 | 481 (Call /Transaction Does Not Exist) | [26] 21.4.19 | | | [26] 21.4.19 | | |
| 32 | 482 (Loop Detected) | [26] 21.4.20 | | | [26] 21.4.20 | | |
| 33 | 483 (Too Many Hops) | [26] 21.4.21 | | | [26] 21.4.21 | | |
| 34 | 484 (Address Incomplete) | [26] 21.4.22 | | | [26] 21.4.22 | | |
| 35 | 485 (Ambiguous) | [26] 21.4.23 | | | [26] 21.4.23 | | |
| 36 | 486 (Busy Here) | [26] 21.4.24 | | | [26] 21.4.24 | | |
| 37 | 487 (Request Terminated) | [26] 21.4.25 | | | [26] 21.4.25 | | |
| 38 | 488 (Not Acceptable Here) | [26] 21.4.26 | | | [26] 21.4.26 | | |
| 39 | 489 (Bad Event) | [28] 7.3.2 | c4 | c4 | [28] 7.3.2 | c4 | c4 |
| 40 | 491 (Request Pending) | [26] 21.4.27 | | | [26] 21.4.27 | | |
| 41 | 493 (Undecipherable) | [26] 21.4.28 | | | [26] 21.4.28 | | |
| 41A | 494 (Security Agreement Required) | [38] 3 | o | c7 | [3] 3 | o | n/a |
| 42 | 500 (Internal Server Error) | [26] 21.5.1 | | | [26] 21.5.1 | | |
| 43 | 501 (Not Implemented) | [26] 21.5.2 | | | [26] 21.5.2 | | |
| 44 | 502 (Bad Gateway) | [26] 21.5.3 | | | [26] 21.5.3 | | |
| 45 | 503 (Service Unavailable) | [26] 21.5.4 | | | [26] 21.5.4 | | |
| 46 | 504 (Server Time-out) | [26] 21.5.5 | | | [26] 21.5.5 | | |
| 47 | 505 (Version not supported) | [26] 21.5.6 | | | [26] 21.5.6 | | |
| 48 | 513 (Message Too Large) | [26] 21.5.7 | | | [26] 21.5.7 | | |
| 49 | 580 (Precondition Failure) | [30] 8 | | | [30] 8 | | |
| 50 | 600 (Busy Everywhere) | [26] 21.6.1 | | | [26] 21.6.1 | | |
| 51 | 603 (Decline) | [26] 21.6.2 | | | [26] 21.6.2 | | |
| 52 | 604 (Does Not Exist Anywhere) | [26] 21.6.3 | | | [26] 21.6.3 | | |
| 53 | 606 (Not Acceptable) | [26] 21.6.4 | | | [26] 21.6.4 | | |
| c1: | IF A.162/15 THEN m ELSE n/a - - stateful proxy. | | | | | | |
| c2: | IF A.162/15 THEN m ELSE i - - the requirement to be able to use separate URIs in the upstream direction and downstream direction when record routing. | | | | | | |
| c3: | IF A.163/9 THEN m ELSE n/a - - INVITE response. | | | | | | |
| c4: | IF A.162/27 THEN m ELSE n/a - - SIP specific event notification. | | | | | | |
| c5: | IF A.163/19 OR A.163/21 THEN m ELSE n/a - - REGISTER response or SUBSCRIBE response. | | | | | | |
| c6: | IF A.163/19 OR A.163/21 THEN i ELSE n/a - - REGISTER response or SUBSCRIBE response. | | | | | | |
| c7: | IF A.3/2 THEN m ELSE n/a - - P-CSCF role. | | | | | | |

A.2.2.4.2 ACK method

Prerequisite A.163/1 - - ACK request

Table A.165: Supported headers within the ACK request

| Item | Header | Sending | | | Receiving | | |
|-------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Allow-Events | [28] 8.2.2 | m | m | [28] 8.2.2 | c1 | c1 |
| 3 | Authorization | [26] 20.7 | m | m | [26] 20.7 | i | i |
| 4 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 6 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | i |
| 7 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | i |
| 8 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | i |
| 9 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 10 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | c3 |
| 11 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 12 | Date | [26] 20.17 | m | m | [26] 20.17 | c2 | c2 |
| 13 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 14 | Max-Forwards | [26] 20.22 | m | m | [26] 20.22 | m | m |
| 15 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | c3 |
| 16 | Proxy-Authorization | [26] 20.28 | m | m | [26] 20.28 | c4 | c4 |
| 17 | Proxy-Require | [26] 20.29 | m | m | [26] 20.29 | m | m |
| 17A | Privacy | [33] 4.2 | c6 | c6 | [33] 4.2 | c7 | c7 |
| 18 | Require | [26] 20.32 | m | m | [26] 20.32 | c5 | c5 |
| 19 | Route | [26] 20.34 | m | m | [26] 20.34 | m | m |
| 20 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 21 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 22 | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 23 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN m ELSE i - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c3: | IF A.3/2 OR A.3/4 THEN m ELSE i - - P-CSCF or S-CSCF. | | | | | | |
| c4: | IF A.162/8A THEN m ELSE i - - authentication between UA and proxy. | | | | | | |
| c5: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c6: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c7: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |
| 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.

Prerequisite A.163/1 - - ACK request

Table A.166: 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.163/2 - - BYE request

Table A.167: Supported headers within the BYE request

| Item | Header | Sending | | | Receiving | | |
|-------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 3A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Allow-Events | [28] 8.2.2 | m | m | [28] 8.2.2 | c1 | c1 |
| 5 | Authorization | [26] 20.7 | m | m | [26] 20.7 | i | i |
| 6 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 7 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | c3 |
| 8 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | c3 |
| 9 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | c3 |
| 10 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 11 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | c3 |
| 12 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 13 | Date | [26] 20.17 | m | m | [26] 20.17 | c2 | c2 |
| 14 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 15 | Max-Forwards | [26] 20.22 | m | m | [26] 20.22 | m | m |
| 16 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | c3 |
| 16A | P-Asserted-Identity | [34] 9.1 | c9 | c9 | [34] 9.1 | c10 | c10 |
| 16B | P-Preferred-Identity | [34] 9.2 | x | x | [34] 9.2 | c8 | n/a |
| 16C | Privacy | [33] 4.2 | c11 | c11 | [33] 4.2 | c12 | c12 |
| 17 | Proxy-Authorization | [26] 20.28 | m | m | [26] 20.28 | c4 | c4 |
| 18 | Proxy-Require | [26] 20.29 | m | m | [26] 20.29 | m | m |
| 19 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c7 | c7 |
| 20 | Require | [26] 20.32 | m | m | [26] 20.32 | c5 | c5 |
| 21 | Route | [26] 20.34 | m | m | [26] 20.34 | m | m |
| 22 | Supported | [26] 20.37 | m | m | [26] 20.37 | c6 | c6 |
| 23 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 24 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 25 | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 26 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN m ELSE i - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c3: | IF A.3/2 OR A.3/4 THEN m ELSE i - - P-CSCF or S-CSCF. | | | | | | |
| c4: | IF A.162/8A THEN m ELSE i - - authentication between UA and proxy. | | | | | | |
| c5: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c6: | IF A.162/16 THEN m ELSE i - - reading the contents of the Supported header before proxying the response. | | | | | | |
| c7: | IF A.162/14 THEN o ELSE i - - the requirement to be able to insert itself in the subsequent transactions in a dialog. | | | | | | |
| c8: | IF A.162/30A THEN m ELSE n/a - - act as first entity within the trust domain for asserted identity. | | | | | | |
| c9: | IF A.162/30 THEN m ELSE n/a - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c10: | IF A.162/30A or A.162/30B THEN m ELSE i - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks or subsequent entity within trust network that can route outside the trust network. | | | | | | |
| c11: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c12: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |
| 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.163/2 - - BYE request

Table A.168: Supported message bodies within the BYE request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.163/3 - - BYE response

Prerequisite: A.164/1 - - 100 (Trying)

Table A.169: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 3 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 4 | Date | [26] 20.17 | m | m | [26] 20.17 | c1 | c1 |
| 5 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 6 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 7 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |

Prerequisite A.163/3 - - BYE response

Table A.170: Supported headers within the BYE response - all remaining status-codes

| Item | Header | Sending | | | Receiving | | |
|--|----------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | c2 |
| 3 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | c2 |
| 4 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | c2 |
| 5 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 6 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | c2 |
| 7 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 8 | Date | [26] 20.17 | m | m | [26] 20.17 | c1 | c1 |
| 9 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 10 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | c2 |
| 10A | P-Asserted-Identity | [34] 9.1 | c4 | c4 | [34] 9.1 | c5 | c5 |
| 10B | P-Preferred-Identity | [34] 9.2 | x | x | [34] 9.2 | c3 | n/a |
| 10C | Privacy | [33] 4.2 | c6 | c6 | [33] 4.2 | c7 | c7 |
| 10D | Server | [26] 20.35 | m | m | [26] 20.35 | i | i |
| 11 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 12 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 12A | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 13 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 14 | Warning | [26] 20.43 | m | m | [26] 20.43 | i | i |
| c1: IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. c2: IF A.3/2 OR A.3/4 THEN m ELSE i - - P-CSCF or S-CSCF. c3: IF A.162/30A THEN m ELSE n/a - - act as first entity within the trust domain for asserted identity. c4: IF A.162/30 THEN m ELSE n/a - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. c5: IF A.162/30A or A.162/30B THEN m ELSE i - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks or subsequent entity within trust network that can route outside the trust network. c6: IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). c7: IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | | |

Prerequisite A.163/3 - - BYE response

Prerequisite: A.164/6 - - 2xx

Table A.171: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|--|---------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Authentication-Info | [26] 20.6 | m | m | [26] 20.6 | i | i |
| 2 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c3 | c3 |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. c3: IF A.162/15 THEN o ELSE i - - the requirement to be able to use separate URIs in the upstream direction and downstream direction when record routing. | | | | | | | |

Prerequisite A.163/3 - BYE response

Prerequisite: A.164/8 OR A.164/9 OR A.164/10 OR A.164/11 OR A.164/12 OR A.164/35 - - 3xx or 485 (Ambiguous)

Table A.172: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Contact | [26] 20.10 | m | m | [26] 20.10 | c1 | c1 |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c1: | IF A.162/19E THEN m ELSE i - - deleting Contact headers. | | | | | | |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/3 - - BYE response

Prerequisite: A.164/14 - - 401 (Unauthorized)

Table A.173: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 8 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/3 - - BYE response

Prerequisite: A.164/17 OR A.164/23 OR A.164/30 OR A.164/36 OR A.164/42 OR A.164/45 OR A.164/50 OR A.164/51 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.174: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 3 | Retry-After | [26] 20.33 | m | m | [26] 20.33 | i | i |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/3 - - BYE response

Prerequisite: A.164/18 - - 405 (Method Not Allowed)

Table A.175: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/3 - - BYE response

Prerequisite: A.164/20 - - 407 (Proxy Authentication Required)

Table A.176: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 6 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/3 - - BYE response

Prerequisite: A.164/25 - - 415 (Unsupported Media Type)

Table A.177: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 3A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/3 - - BYE response

Prerequisite: A.164/27 - - 420 (Bad Extension)

Table A.178: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 5 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | c3 | c3 |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/18 THEN m ELSE i - - reading the contents of the Unsupported header before proxying the 420 response to a method other than REGISTER. | | | | | | |

Prerequisite A.163/3 - - BYE response

Prerequisite: A.164/34 - - 484 (Address Incomplete)

Table A.179: Supported headers within the BYE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/3 - - BYE response

Table A.180: 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.163/4 - - CANCEL request

Table A.181: Supported headers within the CANCEL request

| Item | Header | Sending | | | Receiving | | |
|-------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 4 | Allow-Events | [28] 8.2.2 | m | m | [28] 8.2.2 | c1 | c1 |
| 5 | Authorization | [26] 20.7 | m | m | [26] 20.7 | i | i |
| 6 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 8 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 9 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 10 | Date | [26] 20.17 | m | m | [26] 20.17 | c2 | c2 |
| 11 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 12 | Max-Forwards | [26] 20.22 | m | m | [26] 20.22 | m | m |
| 13 | Privacy | [33] 4.2 | c3 | c3 | [33] 4.2 | c4 | c4 |
| 15 | Proxy-Require | [26] 20.29 | m | m | [26] 20.29 | m | m |
| 16 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c7 | c7 |
| 17 | Require | [26] 20.32 | m | m | [26] 20.32 | c5 | c5 |
| 18 | Route | [26] 20.34 | m | m | [26] 20.34 | m | m |
| 19 | Supported | [26] 20.37 | m | m | [26] 20.37 | c6 | c6 |
| 20 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 21 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 22 | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 23 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN m ELSE i - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c3: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c4: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |
| c5: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c6: | IF A.162/16 THEN m ELSE i - - reading the contents of the Supported header before proxying the response. | | | | | | |
| c7: | IF A.162/14 THEN o ELSE i - - the requirement to be able to insert itself in the subsequent transactions in a dialog. | | | | | | |
| 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.163/4 - - CANCEL request

Table A.182: Supported message bodies within the CANCEL request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.163/5 - - CANCEL response

Table A.183: Supported headers within the CANCEL response - all status-codes

| Item | Header | Sending | | | Receiving | | |
|------|--|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 3 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 4 | Date | [26] 20.17 | m | m | [26] 20.17 | c1 | c1 |
| 5 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 5A | Privacy | [33] 4.2 | c2 | c2 | [33] 4.2 | c3 | c3 |
| 6 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 7 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 7A | User-Agent | [26] 20.41 | o | | [26] 20.41 | o | |
| 8 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 9 | Warning | [26] 20.43 | m | m | [26] 20.43 | i | i |
| c1: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c2: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c3: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |

Prerequisite A.163/5 - - CANCEL response

Prerequisite: A.164/6 - - 200 (OK)

Table A.184: Supported headers within the CANCEL response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c3 | c3 |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/15 THEN o ELSE i - - the requirement to be able to use separate URIs in the upstream direction and downstream direction when record routing. | | | | | | |

Prerequisite A.163/5 - - CANCEL response

Prerequisite: A.164/14 - - 401 (Unauthorized)

Table A.185: Supported headers within the CANCEL response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/5 - - CANCEL response

Prerequisite: A.164/17 OR A.164/23 OR A.164/30 OR A.164/42 OR A.164/45 OR A.164/50 OR A.164/51 - - 404, 413, 480, 500, 503, 600, 603

Table A.186: Supported headers within the CANCEL response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Error-Info | [26] 2418 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 4 | Retry-After | [26] 20.33 | m | m | [26] 20.33 | i | i |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/5 - - CANCEL response

Prerequisite: A.164/27 - - 420 (Bad Extension)

Table A.187: Supported headers within the CANCEL response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 5 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | c3 | c3 |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/18 THEN m ELSE i - - reading the contents of the Unsupported header before proxying the 420 response to a method other than REGISTER. | | | | | | |

Prerequisite A.163/5 - - CANCEL response

Prerequisite: A.164/34 - - 484 (Address Incomplete)

Table A.188: Supported headers within the CANCEL response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/5 - - CANCEL response

Table A.189: 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

Void

A.2.2.4.6 INFO method

Prerequisite A.163/6 - - INFO request

Table A.190: Supported headers within the INFO request

| Item | Header | Sending | | | Receiving | | |
|-------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 3A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Allow-Events | [28] 8.2.2 | m | m | [28] 8.2.2 | c1 | c1 |
| 5 | Authorization | [26] 20.7 | m | m | [26] 20.7 | i | i |
| 6 | Call-ID | [26] 20.8 | m | | [26] 20.8 | m | |
| 7 | Contact | [26] 20.10 | m | m | [26] 20.10 | i | i |
| 7A | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | c4 |
| 8 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | c4 |
| 8A | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | c4 |
| 9 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 10 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | c4 |
| 11 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 12 | Date | [26] 20.17 | m | m | [26] 20.17 | c2 | c2 |
| 14 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 15 | Max-Forwards | [26] 20.22 | m | m | [26] 20.22 | m | m |
| 15A | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | i |
| 16 | Organization | [26] 20.25 | m | m | [26] 20.25 | c3 | c3 |
| 17 | Priority | [26] 20.26 | m | m | [26] 20.26 | i | i |
| 17A | Privacy | [33] 4.2 | c9 | c9 | [33] 4.2 | c10 | c10 |
| 18 | Proxy-Authorization | [26] 20.28 | m | m | [26] 20.28 | c8 | c8 |
| 19 | Proxy-Require | [26] 20.29 | m | m | [26] 20.29 | m | m |
| 20 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c7 | c7 |
| 21 | Require | [26] 20.32 | m | m | [26] 20.32 | c4 | c5 |
| 22 | Route | [26] 20.34 | m | m | [26] 20.34 | m | m |
| 23 | Subject | [26] 20.36 | m | m | [26] 20.36 | i | i |
| 24 | Supported | [26] 20.37 | m | m | [26] 20.37 | c6 | c6 |
| 25 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 26 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 27 | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 28 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN m ELSE i - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c3: | IF A.162/19A OR A.162/19B THEN m ELSE i - - reading, adding or concatenating the Organization header. | | | | | | |
| c4: | IF A.3/2 OR A.3/4 THEN m ELSE i - - P-CSCF or S-CSCF. | | | | | | |
| c5: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c6: | IF A.162/16 THEN m ELSE i - - reading the contents of the Supported header before proxying the response. | | | | | | |
| c7: | IF A.162/14 THEN o ELSE i - - the requirement to be able to insert itself in the subsequent transactions in a dialog. | | | | | | |
| c8: | IF A.162/8A THEN m ELSE i - - authentication between UA and proxy. | | | | | | |
| c9: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c10: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |
| 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.163/6 - - INFO request

Table A.191: Supported message bodies within the INFO request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.163/7 - - INFO response

Prerequisite: A.164/1 - - 100 (Trying)

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 | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 3 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 4 | Date | [26] 20.17 | m | m | [26] 20.17 | c1 | c1 |
| 5 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 6 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 7 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |

Prerequisite A.163/7 - - INFO response

Table A.193: Supported headers within the INFO response - all remaining status-codes

| Item | Header | Sending | | | Receiving | | |
|------|--|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 1A | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | c3 |
| 2 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | c3 |
| 2A | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | c3 |
| 3 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 4 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | c3 |
| 5 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 6 | Date | [26] 20.17 | m | m | [26] 20.17 | c1 | c1 |
| 7 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 7A | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | i |
| 8 | Organization | [26] 20.25 | m | m | [26] 20.25 | c2 | c2 |
| 8A | Privacy | [33] 4.2 | c4 | c4 | [33] 4.2 | c5 | c5 |
| 8B | Server | [26] 20.35 | m | m | [26] 20.35 | i | i |
| 9 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 10 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 10A | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 11 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 12 | Warning | [26] 20.43 | m | m | [26] 20.43 | i | i |
| c1: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c2: | IF A.162/19A OR A.162/19B THEN m ELSE i - - reading, adding or concatenating the Organization header. | | | | | | |
| c3: | IF A.3/2 OR A.3/4 THEN m ELSE i - - P-CSCF or S-CSCF. | | | | | | |
| c4: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c5: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |

Prerequisite A.163/7 - - INFO response

Prerequisite: A.164/6 - - 2xx

Table A.194: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Authentication-Info | [26] 20.6 | m | m | [26] 20.6 | i | i |
| 4 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c3 | c3 |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/15 THEN o ELSE i - - the requirement to be able to use separate URIs in the upstream direction and downstream direction when record routing. | | | | | | |

Prerequisite A.163/7 - - INFO response

Prerequisite: A.164/8 OR A.164/9 OR A.164/10 OR A.164/11 OR A.164/12 - - 3xx

Table A.195: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/7 - - INFO response

Prerequisite: A.164/14 - - 401 (Unauthorized)

Table A.196: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 2418 | m | m | [26] 20.18 | i | i |
| 2 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 8 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/7 - - INFO response

Prerequisite: A.164/17 OR A.164/23 OR A.164/30 OR A.164/36 OR A.164/42 OR A.164/45 OR A.164/50 OR A.164/51 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.197: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 4 | Retry-After | [26] 20.33 | m | m | [26] 20.33 | i | i |
| 6 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/7 - - INFO response

Prerequisite: A.164/18 - - 405 (Method Not Allowed)

Table A.198: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 6 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/7 - - INFO response

Prerequisite: A.164/20 - - 407 (Proxy Authentication Required)

Table A.198A: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Error-Info | [26] 2418 | m | m | [26] 20.18 | i | i |
| 3 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 6 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/7 - - INFO response

Prerequisite: A.164/25 - - 415 (Unsupported Media Type)

Table A.199: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 0B | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 0C | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 0D | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/7 - - INFO response

Prerequisite: A.164/27 - - 420 (Bad Extension)

Table A.200: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 6 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | c3 | c3 |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/18 THEN m ELSE i - - reading the contents of the Unsupported header before proxying the 420 response to a method other than REGISTER. | | | | | | |

Prerequisite A.163/7 - - INFO response

Prerequisite: A.164/34 - - 484 (Address Incomplete)

Table A.201: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/7 - - INFO response

Prerequisite: A.164/35 - - 485 (Ambiguous)

Table A.202: Supported headers within the INFO response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/7 - - INFO response

Table A.203: 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.163/8 - - INVITE request

Table A.204: Supported headers within the INVITE request

| Item | Header | Sending | | | Receiving | | |
|------|-----------------------|-----------------------|------------|----------------|-----------------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 4 | Alert-Info | [26] 20.4 | c2 | c2 | [26] 20.4 | c3 | c3 |
| 5 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 6 | Allow-Events | [28] 8.2.2 | m | m | [28] 8.2.2 | c1 | c1 |
| 8 | Authorization | [26] 20.7 | m | m | [26] 20.7 | i | i |
| 9 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 10 | Call-Info | [26] 20.9 | m | m | [26] 20.9 | c12 | c12 |
| 11 | Contact | [26] 20.10 | m | m | [26] 20.10 | i | i |
| 12 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | c6 |
| 13 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | c6 |
| 14 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | c6 |
| 15 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 16 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | c6 |
| 17 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 18 | Date | [26] 20.17 | m | m | [26] 20.17 | c4 | c4 |
| 19 | Expires | [26] 20.19 | m | m | [26] 20.19 | i | i |
| 20 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 21 | In-Reply-To | [26] 20.21 | m | m | [26] 20.21 | i | i |
| 22 | Max-Forwards | [26] 20.22 | m | m | [26] 20.22 | m | m |
| 23 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | c6 |
| 24 | Organization | [26] 20.25 | m | m | [26] 20.25 | c5 | c5 |
| 25 | P-Media-Authorization | [31] 6.1 | c9 | c10 | [31] 6.1 | n/a | n/a |
| 25A | P-Asserted-Identity | [34] 9.1 | c15 | c15 | [34] 9.1 | c16 | c16 |
| 25B | P-Preferred-Identity | [34] 9.2 | x | x | [34] 9.2 | c14 | c14 |
| 26 | Priority | [26] 20.26 | m | m | [26] 20.26 | i | i |
| 26A | Privacy | [33] 4.2 | c17 | c17 | [33] 4.2 | c18 | c18 |
| 27 | Proxy-Authorization | [26] 20.28 | m | m | [26] 20.28 | c13 | c13 |
| 28 | Proxy-Require | [26] 20.29, [34] 4 | m | m | [26] 20.29, [34] 4 | m | m |
| 29 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c11 | c11 |
| 31 | Reply-To | [26] 20.31 | m | m | [26] 20.31 | i | i |
| 32 | Require | [26] 20.32 | m | m | [26] 20.32 | c7 | c7 |
| 33 | Route | [26] 20.34 | m | m | [26] 20.34 | m | m |
| 34 | Subject | [26] 20.36 | m | m | [26] 20.36 | i | i |
| 35 | Supported | [26] 20.37 | m | m | [26] 20.37 | c8 | c8 |
| 36 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 37 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 38 | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 39 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |

| Item | Header | Sending | | | Receiving | | |
|-------|---|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| c1: | IF A.4/20 THEN m ELSE i - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.162/10 THEN n/a ELSE m - - suppression or modification of alerting information data. | | | | | | |
| c3: | IF A.162/10 THEN m ELSE i - - suppression or modification of alerting information data. | | | | | | |
| c4: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c5: | IF A.162/19A OR A.162/19B THEN m ELSE i - - reading, adding or concatenating the Organization header. | | | | | | |
| c6: | IF A.3/2 OR A.3/4 THEN m ELSE i - - P-CSCF or S-CSCF. | | | | | | |
| c7: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c8: | IF A.162/16 THEN m ELSE i - - reading the contents of the Supported header before proxying the response. | | | | | | |
| c9: | IF A.162/26 THEN m ELSE n/a - - SIP extensions for media authorization. | | | | | | |
| c10: | IF A.3/2 THEN m ELSE n/a - - P-CSCF. | | | | | | |
| c11: | IF A.162/14 THEN m ELSE i - - the requirement to be able to insert itself in the subsequent transactions in a dialog. | | | | | | |
| c12: | IF A.162/19C OR A.162/19D THEN m ELSE i - - reading, adding or concatenating the Call-Info header. | | | | | | |
| c13: | IF A.162/8A THEN m ELSE i - - authentication between UA and proxy. | | | | | | |
| c14: | IF A.162/30A THEN m ELSE n/a - - act as first entity within the trust domain for asserted identity. | | | | | | |
| c15: | IF A.162/30 THEN m ELSE n/a - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c16: | IF A.162/30A or A.162/30B THEN m ELSE i - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks or subsequent entity within trust network that can route outside the trust network. | | | | | | |
| c17: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c18: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |
| 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.163/8 - - INVITE request

Table A.205: Supported message bodies within the INVITE request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.163/9 - - INVITE response

Prerequisite: A.164/1 - - 100 (Trying)

Table A.206: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 3 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 4 | Date | [26] 20.17 | c1 | c1 | [26] 20.17 | c2 | c2 |
| 5 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 6 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 7 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF (A.162/9 AND A.162/5) OR A.162/4 THEN m ELSE n/a - - stateful proxy behaviour that inserts date, or stateless proxies. | | | | | | |
| c2: | IF A.162/4 THEN i ELSE m - - Stateless proxy passes on. | | | | | | |

Prerequisite A.163/9 - - INVITE response

Table A.207: Supported headers within the INVITE response - all remaining status-codes

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 1A | Call-Info | [26] 20.9 | m | m | [26] 20.9 | c4 | c4 |
| 2 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | c3 |
| 3 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | c3 |
| 4 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | c3 |
| 5 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 6 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | c3 |
| 7 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 8 | Date | [26] 20.17 | m | m | [26] 20.17 | c1 | c1 |
| 9 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 10 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | c3 |
| 11 | Organization | [26] 20.25 | m | m | [26] 20.25 | c2 | c2 |
| 11A | P-Asserted-Identity | [34] 9.1 | c6 | c6 | [34] 9.1 | c7 | c7 |
| 11B | P-Preferred-Identity | [34] 9.2 | x | x | [34] 9.2 | c5 | n/a |
| 11C | Privacy | [33] 4.2 | c8 | c8 | [33] 4.2 | c9 | c9 |
| 11D | Server | [26] 20.35 | m | m | [26] 20.35 | i | i |
| 12 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 13 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 13A | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 14 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 15 | Warning | [26] 20.43 | m | m | [26] 20.43 | i | i |
| c1: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c2: | IF A.162/19A OR A.162/19B THEN m ELSE i - - reading, adding or concatenating the Organization header. | | | | | | |
| c3: | IF A.3/2 OR A.3/4 THEN m ELSE i - - P-CSCF or S-CSCF. | | | | | | |
| c4: | IF A.162/19C OR A.162/19D THEN m ELSE i - - reading, adding or concatenating the Call-Info header. | | | | | | |
| c5: | IF A.162/30A THEN m ELSE n/a - - act as first entity within the trust domain for asserted identity. | | | | | | |
| c6: | IF A.162/30 THEN m ELSE n/a - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c7: | IF A.162/30A or A.162/30B THEN m ELSE i - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks or subsequent entity within trust network that can route outside the trust network. | | | | | | |
| c8: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c9: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |

Prerequisite A.163/9 - - INVITE response

Prerequisite: A.164/2 OR A.164/3 OR A.164/4 OR A.164/5 - - 1xx

Table A.208: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Contact | [26] 20.10 | m | m | [26] 20.10 | i | i |
| 6 | P-Media-Authorization | [31] 6.1 | c9 | c10 | [31] 6.1 | n/a | n/a |
| 8 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 9 | Rseq | [27] 7.1 | m | m | [27] 7.1 | i | i |
| 11 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c9: | IF A.162/26 THEN m ELSE n/a - - SIP extensions for media authorization. | | | | | | |
| c10: | IF A.3/2 THEN m ELSE n/a - - P-CSCF. | | | | | | |

Prerequisite A.163/9 - - INVITE response

Prerequisite: A.164/6 - - 2xx

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 | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 1A | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 1B | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 2 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Authentication-Info | [26] 20.6 | m | m | [26] 20.6 | i | i |
| 6 | Contact | [26] 20.10 | m | m | [26] 20.10 | i | i |
| 8 | P-Media-Authorization | [31] 6.1 | c9 | c10 | [31] 6.1 | n/a | n/a |
| 9 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c3 | c3 |
| 11 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 13 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/14 THEN m ELSE i - - the requirement to be able to insert itself in the subsequent transactions in a dialog. | | | | | | |
| c9: | IF A.162/26 THEN m ELSE n/a - - SIP extensions for media authorization. | | | | | | |
| c10: | IF A.3/2 THEN m ELSE n/a - - P-CSCF. | | | | | | |

Prerequisite A.163/9 - - INVITE response

Prerequisite: A.164/8 OR A.164/9 OR A.164/10 OR A.164/11 OR A.164/12 OR A.164/35 - - 3xx or 485 (Ambiguous)

Table A.210: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Contact | [26] 20.10 | m | m | [26] 20.10 | c1 | c1 |
| 5 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 8 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 10 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c1: | IF A.162/19E THEN m ELSE i - - deleting Contact headers. | | | | | | |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/9 - - INVITE response

Prerequisite: A.164/14 - - 401 (Unauthorized)

Table A.211: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 6 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 8 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 10 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 15 | WWW-Authenticate | [26] 20.44 | o | | [26] 20.44 | o | |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/9 - - INVITE response

Prerequisite: A.164/17 OR A.164/23 OR A.164/30 OR A.164/36 OR A.164/50 OR A.164/51 - - 404, 413, 480, 486, 600, 603

Table A.212: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 7 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 8 | Retry-After | [26] 20.33 | m | m | [26] 20.33 | i | i |
| 10 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 12 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/9 - - INVITE response

Prerequisite: A.164/18 - - 405 (Method Not Allowed)

Table A.213: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Allow | [26] 20.5 | m | | [26] 20.5 | m/o | |
| 5 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 11 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 13 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/9 - - INVITE response

Prerequisite: A.164/20 - - 407 (Proxy Authentication Required)

Table A.214: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 6 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 8 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 10 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 11 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/9 - - INVITE response

Prerequisite: A.164/25 - - 415 (Unsupported Media Type)

Table A.215: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 3A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 6 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 9 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 11 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/9 - - INVITE response

Prerequisite: A.164/27 - - 420 (Bad Extension)

Table A.216: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 7 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 9 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 10 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | c3 | c3 |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/18 THEN m ELSE i - - reading the contents of the Unsupported header before proxying the 420 response to a method other than REGISTER. | | | | | | |

Prerequisite A.163/9 - - INVITE response

Prerequisite: A.164/34 - - 484 (Address Incomplete)

Table A.217: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 7 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 9 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/9 - - INVITE response

Prerequisite: A.164/42 - - 500 (Server Internal Error)

Table A.217A: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 7 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 8 | Retry-After | [26] 20.33 | m | m | [26] 20.33 | i | i |
| 10 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/9 - - INVITE response

Prerequisite: A.164/45 - - 503 (Service Unavailable)

Table A.217B: Supported headers within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 7 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 8 | Retry-After | [26] 20.33 | m | m | [26] 20.33 | i | i |
| 10 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/9 - - INVITE response

Table A.218: Supported message bodies within the INVITE response

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

A.2.2.4.7A MESSAGE method

Prerequisite A.163/9A - - MESSAGE request

Table A.218A: Supported headers within the MESSAGE request

| Item | Header | Sending | | | Receiving | | |
|-------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [50] 10 | i | i |
| 2 | Allow-Events | [28] 8.2.2 | m | m | [28] 8.2.2 | c1 | c1 |
| 3 | Authorization | [26] 20.7 | m | m | [26] 20.7 | i | i |
| 4 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 5 | Call-Info | [26] 20.9 | m | m | [26] 20.9 | c4 | c4 |
| 6 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | i |
| 7 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | i |
| 8 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | i |
| 9 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 10 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | i |
| 11 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 12 | Date | [26] 20.17 | m | m | [26] 20.17 | c2 | c2 |
| 13 | Expires | [26] 20.19 | m | m | [26] 20.19 | l | i |
| 14 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 15 | In-Reply-To | [26] 20.21 | m | m | [50] 10 | i | i |
| 16 | Max-Forwards | [26] 20.22 | m | m | [26] 20.22 | m | m |
| 17 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | i |
| 18 | Organization | [26] 20.25 | m | m | [26] 20.25 | c3 | c3 |
| 18A | P-Asserted-Identity | [34] 9.1 | c10 | c10 | [34] 9.1 | c11 | c11 |
| 18B | P-Preferred-Identity | [34] 9.2 | x | x | [34] 9.2 | c9 | c9 |
| 19 | Priority | [26] 20.26 | m | m | [26] 20.26 | i | i |
| 19A | Privacy | [33] 4.2 | c12 | c12 | [33] 4.2 | c13 | c13 |
| 20 | Proxy-Authorization | [26] 20.28 | m | m | [26] 20.28 | c8 | c8 |
| 21 | Proxy-Require | [26] 20.29 | m | m | [26] 20.29 | m | m |
| 22 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c7 | c7 |
| 23 | Reply-To | [26] 20.31 | m | m | [26] 20.31 | i | i |
| 24 | Require | [26] 20.32 | m | m | [26] 20.32 | c5 | c5 |
| 25 | Route | [26] 20.34 | m | m | [26] 20.34 | m | m |
| 26 | Subject | [26] 20.36 | m | m | [26] 20.36 | i | i |
| 27 | Supported | [26] 20.37 | m | m | [26] 20.37 | c6 | c6 |
| 28 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 29 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 30 | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 31 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN m ELSE i - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c3: | IF A.162/19A OR A.162/19B THEN m ELSE i - - reading, adding or concatenating the Organization header. | | | | | | |
| c4: | IF A.162/19C OR A.162/19D THEN m ELSE i - - reading, adding or concatenating the Call-Info header. | | | | | | |
| c5: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c6: | IF A.162/16 THEN m ELSE i - - reading the contents of the Supported header before proxying the response. | | | | | | |
| c7: | IF A.162/14 THEN o ELSE i - - the requirement to be able to insert itself in the subsequent transactions in a dialog. | | | | | | |
| c8: | IF A.162/8A THEN m ELSE i - - authentication between UA and proxy. | | | | | | |
| c9: | IF A.162/30A THEN m ELSE n/a - - act as first entity within the trust domain for asserted identity. | | | | | | |
| c10: | IF A.162/30 THEN m ELSE n/a - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c11: | IF A.162/30A or A.162/30B THEN m ELSE i - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks or subsequent entity within trust network that can route outside the trust network. | | | | | | |
| c12: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c13: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |
| 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.163/9A - - MESSAGE request

Table A.218B: Supported message bodies within the MESSAGE request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.163/9B - - MESSAGE response

Table A.218C: Supported headers within the MESSAGE response - all remaining status-codes

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Call-Info | [26] 20.9 | m | m | [26] 20.9 | c3 | c3 |
| 3 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | i |
| 4 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | i |
| 5 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | i |
| 6 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 7 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | i |
| 8 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 9 | Date | [26] 20.17 | m | m | [26] 20.17 | c1 | c1 |
| 10 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 11 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | i |
| 12 | Organization | [26] 20.25 | m | m | [26] 20.25 | c2 | c2 |
| 12A | P-Asserted-Identity | [34] 9.1 | c5 | c5 | [34] 9.1 | c6 | c6 |
| 12B | P-Preferred-Identity | [34] 9.2 | x | x | [34] 9.2 | c4 | n/a |
| 12C | Privacy | [33] 4.2 | c7 | c7 | [33] 4.2 | c8 | c8 |
| 13 | Server | [26] 20.35 | m | m | [26] 20.35 | i | i |
| 14 | Timestamp | [26] 20.38 | i | i | [26] 20.38 | i | i |
| 15 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 16 | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 17 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 18 | Warning | [26] 20.43 | m | m | [26] 20.43 | i | i |
| c1: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c2: | IF A.162/19A OR A.162/19B THEN m ELSE i - - reading, adding or concatenating the Organization header. | | | | | | |
| c3: | IF A.162/19C OR A.162/19D THEN m ELSE i - - reading, adding or concatenating the Call-Info header. | | | | | | |
| c4: | IF A.162/30A THEN m ELSE n/a - - act as first entity within the trust domain for asserted identity. | | | | | | |
| c5: | IF A.162/30 THEN m ELSE n/a - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c6: | IF A.162/30A or A.162/30B THEN m ELSE i - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks or subsequent entity within trust network that can route outside the trust network. | | | | | | |
| c7: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c8: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |

Prerequisite A.163/9B - - MESSAGE response

Prerequisite: A.164/6 - - 2xx

Table A.218D: Supported headers within the MESSAGE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Authentication-Info | [26] 20.6 | m | m | [26] 20.6 | i | i |
| 4 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c3 | c3 |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 6 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/15 THEN o ELSE i - - the requirement to be able to use separate URIs in the upstream direction and downstream direction when record routing. | | | | | | |

Prerequisite A.163/9B - - MESSAGE response

Prerequisite: A.164/8 OR A.164/9 OR A.164/10 OR A.164/11 OR A.164/12 OR A.164/35 - - 3xx or 485 (Ambiguous)

Table A.218E: Supported headers within the MESSAGE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [50] 10 | i | i |
| 2 | Contact | [26] 20.10 | m | m | [26] 20.10 | c1 | c1 |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c1: | IF A.162/19E THEN m ELSE i - - deleting Contact headers. | | | | | | |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/9B - - MESSAGE response

Prerequisite: A.164/14 - - 401 (Unauthorized)

Table A.218F: Supported headers within the MESSAGE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [50] 10 | i | i |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 6 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/9B - - MESSAGE response

Prerequisite: A.164/17 OR A.164/23 OR A.164/30 OR A.164/36 OR A.164/42 OR A.164/45 OR A.164/50 OR A.164/51 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.218G: Supported headers within the MESSAGE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [50] 10 | i | i |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 4 | Retry-After | [26] 20.33 | m | m | [26] 20.33 | i | i |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/9B - - MESSAGE response

Prerequisite: A.164/18 - - 405 (Method Not Allowed)

Table A.218H: Supported headers within the MESSAGE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/9B - - MESSAGE response

Prerequisite: A.164/20 - - 407 (Proxy Authentication Required)

Table A.218I: Supported headers within the MESSAGE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [50] 10 | i | i |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 6 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/9B - - MESSAGE response

Prerequisite: A.164/25 - - 415 (Unsupported Media Type)

Table A.218J: Supported headers within the MESSAGE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 4 | Allow | [26] 20.5 | m | m | [50] 10 | i | i |
| 5 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 6 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/9B - - MESSAGE response

Prerequisite: A.164/27 - - 420 (Bad Extension)

Table A.218K: Supported headers within the MESSAGE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [50] 10 | i | i |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 5 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | c3 | c3 |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/18 THEN m ELSE i - - reading the contents of the Unsupported header before proxying the 420 response to a method other than REGISTER. | | | | | | |

Prerequisite A.163/9B - - MESSAGE response

Prerequisite: A.164/34 - - 484 (Address Incomplete)

Table A.218L: Supported headers within the MESSAGE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [50] 10 | i | i |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/9B - - MESSAGE response

Table A.218M: Supported message bodies within the MESSAGE 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.163/10 - - NOTIFY request

Table A.219: Supported headers within the NOTIFY request

| Item | Header | Sending | | | Receiving | | |
|-------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 3A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Allow-Events | [28] 8.2.2 | m | m | [28] 8.2.2 | c1 | c1 |
| 5 | Authorization | [26] 20.7 | m | m | [26] 20.7 | i | i |
| 6 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 6A | Contact | [26] 20.10 | m | m | [26] 20.10 | i | i |
| 7 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | i |
| 8 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | i |
| 9 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | i |
| 10 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 11 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | i |
| 12 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 13 | Date | [26] 20.17 | m | m | [26] 20.17 | c2 | c2 |
| 14 | Event | [28] 8.2.1 | m | m | [28] 8.2.1 | m | m |
| 15 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 16 | Max-Forwards | [26] 20.22 | m | m | [26] 20.22 | m | m |
| 17 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | i |
| 17A | P-Asserted-Identity | [34] 9.1 | c8 | c8 | [34] 9.1 | c9 | c9 |
| 17B | P-Preferred-Identity | [34] 9.2 | x | x | [34] 9.2 | c3 | n/a |
| 17C | Privacy | [33] 4.2 | c10 | c10 | [33] 4.2 | c11 | c11 |
| 18 | Proxy-Authorization | [26] 20.28 | m | m | [26] 20.28 | c4 | c4 |
| 19 | Proxy-Require | [26] 20.29 | m | m | [26] 20.29 | m | m |
| 20 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c7 | c7 |
| 21 | Require | [26] 20.32 | m | m | [26] 20.32 | c5 | c5 |
| 22 | Route | [26] 20.34 | m | m | [26] 20.34 | m | m |
| 23 | Subscription-State | [28] 8.2.3 | m | m | [28] 8.2.3 | i | i |
| 24 | Supported | [26] 20.37 | m | m | [26] 20.37 | c6 | c6 |
| 25 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 26 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 27 | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 28 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN m ELSE i - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c3: | IF A.162/30A THEN m ELSE n/a - - act as first entity within the trust domain for asserted identity. | | | | | | |
| c4: | IF A.162/8A THEN m ELSE i - - authentication between UA and proxy. | | | | | | |
| c5: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c6: | IF A.162/16 THEN m ELSE i - - reading the contents of the Supported header before proxying the response. | | | | | | |
| c7: | IF A.162/14 THEN (IF A.162/22 OR A.162/27 THEN m ELSE o) ELSE i - - the requirement to be able to insert itself in the subsequent transactions in a dialog or (the REFER method or SIP specific event notification). | | | | | | |
| c8: | IF A.162/30 THEN m ELSE n/a - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c9: | IF A.162/30A or A.162/30B THEN m ELSE i - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks or subsequent entity within trust network that can route outside the trust network. | | | | | | |
| c10: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c11: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |
| 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.163/10 - - NOTIFY request

Table A.220: Supported message bodies within the NOTIFY request

| Item | Header | Sending | | | Receiving | | |
|------|---------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | sipfrag | [37] 2 | m | m | [37] 2 | i | i |

Prerequisite A.163/11 - - NOTIFY response

Table A.221: Supported headers within the NOTIFY response - all status-codes

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | i |
| 3 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | i |
| 4 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | i |
| 5 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 6 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | i |
| 7 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 8 | Date | [26] 20.17 | m | m | [26] 20.17 | c1 | c1 |
| 9 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 10 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | i |
| 10A | P-Asserted-Identity | [34] 9.1 | c3 | c3 | [34] 9.1 | c4 | c4 |
| 10B | P-Preferred-Identity | [34] 9.2 | x | x | [34] 9.2 | c2 | n/a |
| 10C | Privacy | [33] 4.2 | c5 | c5 | [33] 4.2 | c6 | c6 |
| 10D | Server | [26] 20.35 | m | m | [26] 20.35 | i | i |
| 11 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 12 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 12A | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 13 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 14 | Warning | [26] 20.43 | m | m | [26] 20.43 | i | i |
| c1: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c2: | IF A.162/30A THEN m ELSE n/a - - act as first entity within the trust domain for asserted identity. | | | | | | |
| c3: | IF A.162/30 THEN m ELSE n/a - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c4: | IF A.162/30A or A.162/30B THEN m ELSE i - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks or subsequent entity within trust network that can route outside the trust network. | | | | | | |
| c5: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c6: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |

Prerequisite A.163/11 - - NOTIFY response

Prerequisite: A.164/6 AND A.164/7 - - 2xx

Table A.222: Supported headers within the NOTIFY response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Authentication-Info | [26] 20.6 | m | m | [26] 20.6 | i | i |
| 1A | Contact | [26] 20.10 | m | m | [26] 20.10 | i | i |
| 2 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c3 | c3 |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/15 THEN m ELSE i - - the requirement to be able to use separate URIs in the upstream direction and downstream direction when record routing. | | | | | | |

Prerequisite A.163/11 - - NOTIFY response

Prerequisite: A.164/8 OR A.164/9 OR A.164/10 OR A.164/11 OR A.164/12 OR A.164/35 - - 3xx or 485 (Ambiguous)

Table A.223: Supported headers within the NOTIFY response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Contact | [26] 20.10 | m | m | [26] 20.10 | c1 | c1 |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c1: | IF A.162/19E THEN m ELSE i - - deleting Contact headers. | | | | | | |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/11 - - NOTIFY response

Prerequisite: A.164/14 - - 401 (Unauthorized)

Table A.224: Supported headers within the NOTIFY response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 8 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/11 - - NOTIFY response

Prerequisite: A.164/17 OR A.164/23 OR A.164/30 OR A.164/36 OR A.164/42 OR A.164/45 OR A.164/50 OR A.164/51 - - 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 |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 3 | Retry-After | [26] 20.33 | m | m | [26] 20.33 | i | i |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/11 - - NOTIFY response

Prerequisite: A.164/18 - - 405 (Method Not Allowed)

Table A.226: Supported headers within the NOTIFY response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/11 - - NOTIFY response

Prerequisite: A.164/20 - - 407 (Proxy Authentication Required)

Table A.227: Supported headers within the NOTIFY response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 6 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/11 - - NOTIFY response

Prerequisite: A.164/25 - - 415 (Unsupported Media Type)

Table A.228: Supported headers within the NOTIFY response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 3A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/11 - - NOTIFY response

Prerequisite: A.164/27 - - 420 (Bad Extension)

Table A.229: Supported headers within the NOTIFY response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 5 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | c3 | c3 |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/18 THEN m ELSE i - - reading the contents of the Unsupported header before proxying the 420 response to a method other than REGISTER. | | | | | | |

Prerequisite A.163/11 - - NOTIFY response

Prerequisite: A.164/34 - - 484 (Address Incomplete)

Table A.230: Supported headers within the NOTIFY response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/11 - - NOTIFY response

Prerequisite: A.164/39 - - 489 (Bad Event)

Table A.231: Supported headers within the NOTIFY response

| Item | Header | Sending | | | Receiving | | |
|-------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Allow-Events | [28] 8.2.2 | m | m | [28] 8.2.2 | c1 | c1 |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | c3 | c3 |
| c1: | IF A.4/20 THEN m ELSE i - - SIP specific event notification extension. | | | | | | |
| c3: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| 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.163/11 - - NOTIFY response

Table A.232: 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.163/12 - - OPTIONS request

Table A.233: Supported headers within the OPTIONS request

| Item | Header | Sending | | | Receiving | | |
|-------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 3A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Allow-Events | [28] 8.2.2 | m | m | [28] 8.2.2 | c1 | c1 |
| 5 | Authorization | [26] 20.7 | m | m | [26] 20.7 | i | i |
| 6 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 7 | Call-Info | [26] 20.9 | m | m | [26] 20.9 | c4 | c4 |
| 8 | Contact | [26] 20.10 | m | m | [26] 20.10 | i | i |
| 9 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | i |
| 10 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | i |
| 11 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | i |
| 12 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 13 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | i |
| 14 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 15 | Date | [26] 20.17 | m | m | [26] 20.17 | c2 | c2 |
| 16 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 17 | Max-Forwards | [26] 20.22 | m | m | [26] 20.22 | m | m |
| 18 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | i |
| 19 | Organization | [26] 20.25 | m | m | [26] 20.25 | c3 | c3 |
| 19A | P-Asserted-Identity | [34] 9.1 | c10 | c10 | [34] 9.1 | c11 | c11 |
| 19B | P-Preferred-Identity | [34] 9.2 | x | x | [34] 9.2 | c9 | c9 |
| 19C | Privacy | [33] 4.2 | c12 | c12 | [33] 4.2 | c13 | c13 |
| 20 | Proxy-Authorization | [26] 20.28 | m | m | [26] 20.28 | c8 | c8 |
| 21 | Proxy-Require | [26] 20.29 | m | m | [26] 20.29 | m | m |
| 22 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c7 | c7 |
| 23 | Require | [26] 20.32 | m | m | [26] 20.32 | c5 | c5 |
| 24 | Route | [26] 20.34 | m | m | [26] 20.34 | m | m |
| 25 | Supported | [26] 20.37 | m | m | [26] 20.37 | c6 | c6 |
| 26 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 27 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 28 | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 29 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN m ELSE i - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c3: | IF A.162/19A OR A.162/19B THEN m ELSE i - - reading, adding or concatenating the Organization header. | | | | | | |
| c4: | IF A.162/19C OR A.162/19D THEN m ELSE i - - reading, adding or concatenating the Call-Info header. | | | | | | |
| c5: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c6: | IF A.162/16 THEN m ELSE i - - reading the contents of the Supported header before proxying the response. | | | | | | |
| c7: | IF A.162/14 THEN o ELSE i - - the requirement to be able to insert itself in the subsequent transactions in a dialog. | | | | | | |
| c8: | IF A.162/8A THEN m ELSE i - - authentication between UA and proxy. | | | | | | |
| c9: | IF A.162/30A THEN m ELSE n/a - - act as first entity within the trust domain for asserted identity. | | | | | | |
| c10: | IF A.162/30 THEN m ELSE n/a - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c11: | IF A.162/30A or A.162/30B THEN m ELSE i - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks or subsequent entity within trust network that can route outside the trust network. | | | | | | |
| c12: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c13: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |
| 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.163/12 - - OPTIONS request

Table A.234: Supported message bodies within the OPTIONS request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.163/13 - - OPTIONS response

Prerequisite: A.164/1 - - 100 (Trying)

Table A.235: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 3 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 4 | Date | [26] 20.17 | m | m | [26] 20.17 | c1 | c1 |
| 5 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 6 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 7 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |

Prerequisite A.163/13 - - OPTIONS response

Table A.236: Supported headers within the OPTIONS response - all remaining status-codes

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 1A | Call-Info | [26] 20.9 | m | m | [26] 20.9 | c3 | c3 |
| 2 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | i |
| 3 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | i |
| 4 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | i |
| 5 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 6 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | i |
| 7 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 8 | Date | [26] 20.17 | m | m | [26] 20.17 | c1 | c1 |
| 9 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 10 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | i |
| 11 | Organization | [26] 20.25 | m | m | [26] 20.25 | c2 | c2 |
| 11A | P-Asserted-Identity | [34] 9.1 | c5 | c5 | [34] 9.1 | c6 | c6 |
| 11B | P-Preferred-Identity | [34] 9.2 | x | x | [34] 9.2 | c4 | n/a |
| 11C | Privacy | [33] 4.2 | c7 | c7 | [33] 4.2 | c8 | c8 |
| 11D | Server | [26] 20.35 | m | m | [26] 20.35 | i | i |
| 12 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 13 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 13A | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 14 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 15 | Warning | [26] 20.43 | m | m | [26] 20.43 | i | i |
| c1: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c2: | IF A.162/19A OR A.162/19B THEN m ELSE i - - reading, adding or concatenating the Organization header. | | | | | | |
| c3: | IF A.162/19C OR A.162/19D THEN m ELSE i - - reading, adding or concatenating the Call-Info header. | | | | | | |
| c4: | IF A.162/30A THEN m ELSE n/a - - act as first entity within the trust domain for asserted identity. | | | | | | |
| c5: | IF A.162/30 THEN m ELSE n/a - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c6: | IF A.162/30A or A.162/30B THEN m ELSE i - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks or subsequent entity within trust network that can route outside the trust network. | | | | | | |
| c7: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c8: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |

Prerequisite A.163/13 - - OPTIONS response

Prerequisite: A.164/6 - - 2xx

Table A.237: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Authentication-Info | [26] 20.6 | m | m | [26] 20.6 | i | i |
| 5 | Contact | [26] 20.10 | m | m | [26] 20.10 | i | i |
| 9 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c3 | c3 |
| 10 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 12 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/15 THEN o ELSE i - - the requirement to be able to use separate URIs in the upstream direction and downstream direction when record routing. | | | | | | |

Prerequisite A.163/13 - - OPTIONS response

Prerequisite: A.164/8 OR A.164/9 OR A.164/10 OR A.164/11 OR A.164/12 OR A.164/35 - - 3xx or 485 (Ambiguous)

Table A.238: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Contact | [26] 20.10 | m | m | [26] 20.10 | c1 | c1 |
| 4 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c1: | IF A.162/19E THEN m ELSE i - - deleting Contact headers. | | | | | | |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/13 - - OPTIONS response

Prerequisite: A.164/14 - - 401 (Unauthorized)

Table A.239: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 4 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 10 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/13 - - OPTIONS response

Prerequisite: A.164/17 OR A.164/23 OR A.164/30 OR A.164/36 OR A.164/42 OR A.164/45 OR A.164/50 OR A.164/51 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.240: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Retry-After | [26] 20.33 | m | m | [26] 20.33 | i | i |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/13 - - OPTIONS response

Prerequisite: A.164/18 - - 405 (Method Not Allowed)

Table A.241: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/13 - - OPTIONS response

Prerequisite: A.164/20 - - 407 (Proxy Authentication Required)

Table A.242: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 4 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 8 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/13 - - OPTIONS response

Prerequisite: A.164/25 - - 415 (Unsupported Media Type)

Table A.243: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 4 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 5 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 6 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/13 - - OPTIONS response

Prerequisite: A.164/27 - - 420 (Bad Extension)

Table A.244: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 6 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 7 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | c3 | c3 |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/18 THEN m ELSE i - - reading the contents of the Unsupported header before proxying the 420 response to a method other than REGISTER. | | | | | | |

Prerequisite A.163/13 - - OPTIONS response

Prerequisite: A.164/34 - - 484 (Address Incomplete)

Table A.245: Supported headers within the OPTIONS response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/13 - - OPTIONS response

Table A.246: 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.163/14 - - PRACK request

Table A.247: Supported headers within the PRACK request

| Item | Header | Sending | | | Receiving | | |
|-------|---------------------|---|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 3A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Allow-Events | [28] 8.2.2 | m | m | [28] 8.2.2 | c1 | c1 |
| 5 | Authorization | [26] 20.7 | m | m | [26] 20.7 | i | i |
| 6 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 7 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | c3 |
| 8 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | c3 |
| 9 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | c3 |
| 10 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 11 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | c3 |
| 12 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 13 | Date | [26] 20.17 | m | m | [26] 20.17 | c2 | c2 |
| 14 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 15 | Max-Forwards | [26] 20.22 | o | o | [26] 20.22 | n/a | n/a |
| 16 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | c3 |
| 16A | Privacy | [33] 4.2 | c8 | c8 | [33] 4.2 | c9 | c9 |
| 17 | Proxy-Authorization | [26] 20.28 | m | m | [26] 20.28 | c4 | c4 |
| 18 | Proxy-Require | [26] 20.29 | m | m | [26] 20.29 | m | m |
| 19 | RAck | [27] 7.2 | m | m | [27] 7.2 | i | i |
| 20 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c7 | c7 |
| 21 | Require | [26] 20.32 | m | m | [26] 20.32 | c5 | c5 |
| 22 | Route | [26] 20.34 | m | m | [26] 20.34 | m | m |
| 23 | Supported | [26] 20.37 | m | m | [26] 20.37 | c6 | c6 |
| 24 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 25 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 26 | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 27 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | | IF A.4/20 THEN m ELSE i - - SIP specific event notification extension. | | | | | |
| c2: | | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | |
| c3: | | IF A.3/2 OR A.3/4 THEN m ELSE i - - P-CSCF or S-CSCF. | | | | | |
| c4: | | IF A.162/8A THEN m ELSE i - - authentication between UA and proxy. | | | | | |
| c5: | | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | |
| c6: | | IF A.162/16 THEN m ELSE i - - reading the contents of the Supported header before proxying the response. | | | | | |
| c7: | | IF A.162/14 THEN 0 ELSE i - - the requirement to be able to insert itself in the subsequent transactions in a dialog. | | | | | |
| c8: | | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | |
| c9: | | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | |
| 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.163/14 - - PRACK request

Table A.248: Supported message bodies within the PRACK request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.163/15 - - PRACK response

Prerequisite: A.164/1 - - 100 (Trying)

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 | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 3 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 4 | Date | [26] 20.17 | m | m | [26] 20.17 | c1 | c1 |
| 5 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 6 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 7 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |

Prerequisite A.163/15 - - PRACK response

Table A.250: Supported headers within the PRACK response - all remaining status-codes

| Item | Header | Sending | | | Receiving | | |
|--|---------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | c2 |
| 3 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | c2 |
| 4 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | c2 |
| 5 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 6 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | c2 |
| 7 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 8 | Date | [26] 20.17 | m | m | [26] 20.17 | c1 | c1 |
| 9 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 10 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | c2 |
| 10A | Privacy | [33] 4.2 | c3 | c3 | [33] 4.2 | c4 | c4 |
| 10B | Server | [26] 20.35 | m | m | [26] 20.35 | i | i |
| 11 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 12 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 12A | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 13 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 14 | Warning | [26] 20.43 | m | m | [26] 20.43 | i | i |
| c1: IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. c2: IF A.3/2 OR A.3/4 THEN m ELSE i - - P-CSCF or S-CSCF. c3: IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). c4: IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | | |

Prerequisite A.163/15 - - PRACK response

Prerequisite: A.164/6 - - 2xx

Table A.251: Supported headers within the PRACK response

| Item | Header | Sending | | | Receiving | | |
|--|---------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 0B | Authentication-Info | [26] 20.6 | m | m | [26] 20.6 | i | i |
| 1 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c3 | c3 |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. c3: IF A.162/15 THEN o ELSE i - - the requirement to be able to use separate URIs in the upstream direction and downstream direction when record routing. | | | | | | | |

Prerequisite A.163/15 - - PRACK response

Prerequisite: A.164/8 OR A.164/9 OR A.164/10 OR A.164/11 OR A.164/12 OR A.164/35 - - 3xx or 485 (Ambiguous)

Table A.252: Supported headers within the PRACK response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Contact | [26] 20.10 | m | m | [26] 20.10 | c1 | c1 |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c1: | IF A.162/19E THEN m ELSE i - - deleting Contact headers. | | | | | | |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/15 - - PRACK response

Prerequisite: A.164/14 - - 401 (Unauthorized)

Table A.253: Supported headers within the PRACK response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 8 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/15 - - PRACK response

Prerequisite: A.164/17 OR A.164/23 OR A.164/30 OR A.164/36 OR A.164/42 OR A.164/45 OR A.164/50 OR A.164/51 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.254: Supported headers within the PRACK response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 3 | Retry-After | [26] 20.33 | m | m | [26] 20.33 | i | i |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/15 - - PRACK response

Prerequisite: A.164/18 - - 405 (Method Not Allowed)

Table A.255: Supported headers within the PRACK response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/15 - - PRACK response

Prerequisite: A.164/20 - - 407 (Proxy Authentication Required)

Table A.256: Supported headers within the PRACK response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 6 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/15 - - PRACK response

Prerequisite: A.164/25 - - 415 (Unsupported Media Type)

Table A.257: Supported headers within the PRACK response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 3A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/15 - - PRACK response

Prerequisite: A.164/27 - - 420 (Bad Extension)

Table A.258: Supported headers within the PRACK response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/15 - - PRACK response

Prerequisite: A.164/34 - - 484 (Address Incomplete)

Table A.259: Supported headers within the PRACK response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/15 - - PRACK response

Table A.260: 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.163/16 - - REFER request

Table A.261: Supported headers within the REFER request

| Item | Header | Sending | | | Receiving | | |
|-------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 0B | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 1 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 1A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Allow-Events | [28] 8.2.2 | m | m | [28] 8.2.2 | c1 | c1 |
| 3 | Authorization | [26] 20.7 | m | m | [26] 20.7 | i | i |
| 4 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 5 | Contact | [26] 20.10 | m | m | [26] 20.10 | i | i |
| 5A | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | i |
| 5B | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | i |
| 5C | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | i |
| 6 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 7 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | i |
| 8 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 9 | Date | [26] 20.17 | m | m | [26] 20.17 | c2 | c2 |
| 10 | Expires | [26] 20.19 | m | m | [26] 20.19 | i | i |
| 11 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 12 | Max-Forwards | [26] 20.22 | m | m | [26] 20.22 | m | m |
| 13 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | i |
| 14 | Organization | [26] 20.25 | m | m | [26] 20.25 | c3 | c3 |
| 14A | P-Asserted-Identity | [34] 9.1 | c9 | c9 | [34] 9.1 | c10 | c10 |
| 14B | P-Preferred-Identity | [34] 9.2 | x | x | [34] 9.2 | c8 | c8 |
| 14C | Privacy | [33] 4.2 | c11 | c11 | [33] 4.2 | c12 | c12 |
| 15 | Proxy-Authorization | [26] 20.28 | m | m | [26] 20.28 | c4 | c4 |
| 16 | Proxy-Require | [26] 20.29 | m | m | [26] 20.29 | m | m |
| 17 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c7 | c7 |
| 18 | Refer-To | [36] 3 | c3 | c3 | [36] 3 | c4 | c4 |
| 19 | Require | [26] 20.32 | m | m | [26] 20.32 | c5 | c5 |
| 20 | Route | [26] 20.34 | m | m | [26] 20.34 | m | m |
| 20A | Subject | [26] 20.36 | m | m | [26] 20.36 | i | i |
| 21 | Supported | [26] 20.37 | m | m | [26] 20.37 | c6 | c6 |
| 22 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 23 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 24 | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 25 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN m ELSE i - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c3: | IF A.162/19A OR A.162/19B THEN m ELSE i - - reading, adding or concatenating the Organization header. | | | | | | |
| c4: | IF A.162/8A THEN m ELSE i - - authentication between UA and proxy. | | | | | | |
| c5: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c6: | IF A.162/16 THEN m ELSE i - - reading the contents of the Supported header before proxying the response. | | | | | | |
| c7: | IF A.162/14 THEN m ELSE i - - the requirement to be able to insert itself in the subsequent transactions in a dialog. | | | | | | |
| c8: | IF A.162/30A THEN m ELSE n/a - - act as first entity within the trust domain for asserted identity. | | | | | | |
| c9: | IF A.162/30 THEN m ELSE n/a - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c10: | IF A.162/30A or A.162/30B THEN m ELSE i - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks or subsequent entity within trust network that can route outside the trust network. | | | | | | |
| c11: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c12: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |
| 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.163/16 - - REFER request

Table A.262: Supported message bodies within the REFER request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.163/17 - - REFER response

Prerequisite: A.164/1 - - 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 | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 3 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 4 | Date | [26] 20.17 | m | m | [26] 20.17 | c1 | c1 |
| 5 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 6 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 7 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |

Prerequisite A.163/17 - - REFER response

Table A.264: Supported headers within the REFER response - all remaining status-codes

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 1A | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | i |
| 2 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | i |
| 3 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | i |
| 4 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 5 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | i |
| 6 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 7 | Date | [26] 20.17 | m | m | [26] 20.17 | c1 | c1 |
| 8 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 9 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | i |
| 10 | Organization | [26] 20.25 | m | m | [26] 20.25 | c2 | c2 |
| 10A | P-Asserted-Identity | [34] 9.1 | c4 | c4 | [34] 9.1 | c5 | c5 |
| 10B | P-Preferred-Identity | [34] 9.2 | x | x | [34] 9.2 | c3 | n/a |
| 10C | Privacy | [33] 4.2 | c6 | c6 | [33] 4.2 | c7 | c7 |
| 10D | Server | [26] 20.35 | m | m | [26] 20.35 | i | i |
| 11 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 12 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 12A | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 13 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 14 | Warning | [26] 20.43 | m | m | [26] 20.43 | i | i |
| c1: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c2: | IF A.162/19A OR A.162/19B THEN m ELSE i - - reading, adding or concatenating the Organization header. | | | | | | |
| c3: | IF A.162/30A THEN m ELSE n/a - - act as first entity within the trust domain for asserted identity. | | | | | | |
| c4: | IF A.162/30 THEN m ELSE n/a - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c5: | IF A.162/30A or A.162/30B THEN m ELSE i - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks or subsequent entity within trust network that can route outside the trust network. | | | | | | |
| c6: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c7: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |

Prerequisite A.163/17 - - REFER response

Prerequisite: A.164/7 - - 202 (Accepted)

Table A.265: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Authentication-Info | [26] 20.6 | m | m | [26] 20.6 | i | i |
| 3 | Contact | [26] 20.10 | m | m | [26] 20.10 | i | i |
| 5 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c3 | c3 |
| 6 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/15 THEN m ELSE i - - the requirement to be able to use separate URIs in the upstream direction and downstream direction when record routing. | | | | | | |

Prerequisite A.163/17 - - REFER response

Prerequisite: A.164/8 OR A.164/9 OR A.164/10 OR A.164/11 OR A.164/12 OR A.164/35 - - 3xx or 485 (Ambiguous)

Table A.266: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Contact | [26] 20.10 | m | m | [26] 20.10 | c1 | c1 |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c1: | IF A.162/19E THEN m ELSE i - - deleting Contact headers. | | | | | | |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/17 - - REFER response

Prerequisite: A.164/8 OR A.164/9 OR A.164/10 OR A.164/11 OR A.164/12 - - 401 (Unauthorized)

Table A.267: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 4 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 10 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/17 - - REFER response

Prerequisite: A.164/17 OR A.164/23 OR A.164/30 OR A.164/36 OR A.164/42 OR A.164/45 OR A.164/50 OR A.164/51 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.268: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 6 | Retry-After | [26] 20.33 | m | m | [26] 20.33 | i | i |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/17 - - REFER response

Prerequisite: A.164/18 - - 405 (Method Not Allowed)

Table A.269: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/17 - - REFER response

Prerequisite: A.164/20 - - 407 (Proxy Authentication Required)

Table A.270: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 4 | Proxy-Authenticate | [26] 20.27 | o | | [26] 20.27 | o | |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 8 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/17 - - REFER response

Prerequisite: A.164/25 - - 415 (Unsupported Media Type)

Table A.271: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 3A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 6 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/17 - - REFER response

Prerequisite: A.164/27 - - 420 (Bad Extension)

Table A.272: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 8 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | c3 | c3 |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/18 THEN m ELSE i - - reading the contents of the Unsupported header before proxying the 420 response to a method other than REGISTER. | | | | | | |

Prerequisite A.163/17 - - REFER response

Prerequisite: A.164/34 - - 484 (Address Incomplete)

Table A.273: Supported headers within the REFER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/17 - - REFER response

Table A.274: 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.163/18 - - REGISTER request

Table A.275: Supported headers within the REGISTER request

| Item | Header | Sending | | | Receiving | | |
|-------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 3A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Allow-Events | [28] 8.2.2 | m | m | [28] 8.2.2 | c1 | c1 |
| 5 | Authorization | [26] 20.7 | m | m | [26] 20.7 | i | i |
| 6 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 7 | Call-Info | [26] 20.9 | m | m | [26] 20.9 | c2 | c2 |
| 8 | Contact | [26] 20.10 | m | m | [26] 20.10 | i | i |
| 9 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | i |
| 10 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | i |
| 11 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | i |
| 12 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 13 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | i |
| 14 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 15 | Date | [26] 20.17 | m | m | [26] 20.17 | m | m |
| 16 | Expires | [26] 20.19 | m | m | [26] 20.19 | i | i |
| 17 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 18 | Max-Forwards | [26] 20.22 | m | m | [26] 20.22 | m | m |
| 19 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | i |
| 20 | Organization | [26] 20.25 | m | m | [26] 20.25 | c3 | c3 |
| 20A | Path | [35] 4.2 | c6 | c6 | [35] 4.2 | c6 | c6 |
| 20B | Privacy | [33] 4.2 | c8 | c8 | [33] 4.2 | c9 | c9 |
| 21 | Proxy-Authorization | [26] 20.28 | m | m | [26] 20.28 | c7 | c7 |
| 22 | Proxy-Require | [26] 20.29 | m | m | [26] 20.29 | m | m |
| 23 | Require | [26] 20.32 | m | m | [26] 20.32 | c4 | c4 |
| 24 | Route | [26] 20.34 | m | m | [26] 20.34 | m | m |
| 25 | Supported | [26] 20.37 | m | m | [26] 20.37 | c5 | c5 |
| 26 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 27 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 28 | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 29 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN m ELSE i - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.162/19C OR A.162/19D THEN m ELSE i - - reading, adding or concatenating the Call-Info header. | | | | | | |
| c3: | IF A.162/19A OR A.162/19B THEN m ELSE i - - reading, adding or concatenating the Organization header. | | | | | | |
| c4: | IF A.162/11 OR A.162/12 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c5: | IF A.162/16 THEN m ELSE i - - reading the contents of the Supported header before proxying the response. | | | | | | |
| c6: | IF A.162/29 THEN m ELSE n/a - - PATH header support. | | | | | | |
| c7: | IF A.162/8A THEN m ELSE i - - authentication between UA and proxy. | | | | | | |
| c8: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c9: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |
| 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.163/18 - - REGISTER request

Table A.276: Supported message bodies within the REGISTER request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.163/19 - - REGISTER response

Prerequisite: A.164/1 - - 100 (Trying)

Table A.277: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|----------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 3 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 4 | Date | [26] 20.17 | m | m | [26] 20.17 | m | m |
| 5 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 6 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 7 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |

Prerequisite A.163/19 - - REGISTER response

Table A.278: Supported headers within the REGISTER response - all remaining status-codes

| Item | Header | Sending | | | Receiving | | |
|------|--|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 1A | Call-Info | [26] 20.9 | m | m | [26] 20.9 | c2 | c2 |
| 2 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | i |
| 3 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | i |
| 4 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | i |
| 5 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 6 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | i |
| 7 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 8 | Date | [26] 20.17 | m | m | [26] 20.17 | m | m |
| 9 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 10 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | i |
| 11 | Organization | [26] 20.25 | m | m | [26] 20.25 | c1 | c1 |
| 11A | Privacy | [33] 4.2 | c3 | c3 | [33] 4.2 | c4 | c4 |
| 11B | Server | [26] 20.35 | m | m | [26] 20.35 | i | i |
| 12 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 13 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 13A | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 14 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 15 | Warning | [26] 20.43 | m | m | [26] 20.43 | i | i |
| c1: | IF A.162/19A OR A.162/19B THEN m ELSE i - - reading, adding or concatenating the Organization header. | | | | | | |
| c2: | IF A.162/19C OR A.162/19D THEN m ELSE i - - reading, adding or concatenating the Call-Info header. | | | | | | |
| c3: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c4: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |

Prerequisite A.163/19 - - REGISTER response

Prerequisite: A.164/6 - - 2xx

Table A.279: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 1A | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 1B | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 2 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Authentication-Info | [26] 20.6 | m | m | [26] 20.6 | i | i |
| 5 | Contact | [26] 20.10 | m | m | [26] 20.10 | i | i |
| 6 | Path | [35] 4.2 | c3 | c3 | [35] 4.2 | c4 | c4 |
| 7 | Require | [26] 20.32 | m | m | [26] 20.32 | c1 | c1 |
| 8 | Service-Route | [38] 6 | c5 | c5 | [38] 6 | c6 | c7 |
| 9 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c1: | IF A.162/11 OR A.162/12 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c2: | IF A.3/2 OR A.3/3A THEN m ELSE n/a - - P-CSCF or I-CSCF (THIG). | | | | | | |
| c3: | IF A.162/29 THEN m ELSE n/a - - Path extension support. | | | | | | |
| c4: | IF A.162/29 THEN i ELSE n/a - - Path extension support. | | | | | | |
| c5: | IF A.162/32 THEN m ELSE n/a - - Service-Route extension support. | | | | | | |
| c6: | IF A.162/32 THEN i ELSE n/a - - Service-Route extension support. | | | | | | |
| c7: | IF A.162/32 THEN (IF A.3/2 THEN m ELSE i) ELSE n/a - - Service-Route extension and P-CSCF. | | | | | | |

Prerequisite A.163/19 - - REGISTER response

Prerequisite: A.164/8 OR A.164/9 OR A.164/10 OR A.164/11 OR A.164/12 OR A.164/35 - - 3xx or 485 (Ambiguous)

Table A.280: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Contact | [26] 20.10 | m | m | [26] 20.10 | c2 | c2 |
| 4 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 6 | Require | [26] 20.32 | m | m | [26] 20.32 | c1 | c1 |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c1: | IF A.162/11 OR A.162/12 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c2: | IF A.162/19E THEN m ELSE i - - deleting Contact headers. | | | | | | |

Prerequisite A.163/19 - - REGISTER response

Prerequisite: A.164/14 - - 401 (Unauthorized)

Table A.281: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 4 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c1 | c1 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 10 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c1: | IF A.162/11 OR A.162/12 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/19 - - REGISTER response

Prerequisite: A.164/17 OR A.164/23 OR A.164/30 OR A.164/36 OR A.164/42 OR A.164/45 OR A.164/50 OR A.164/51 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.282: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c1 | c1 |
| 6 | Retry-After | [26] 20.33 | m | m | [26] 20.33 | i | i |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c1: | IF A.162/11 OR A.162/12 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/19 - - REGISTER response

Prerequisite: A.164/18 - - 405 (Method Not Allowed)

Table A.283: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 2 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 6 | Require | [26] 20.32 | m | m | [26] 20.32 | c1 | c1 |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c1: | IF A.162/11 OR A.162/12 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/19 - - REGISTER response

Prerequisite: A.164/20 - - 407 (Proxy Authentication Required)

Table A.284: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 5 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 6 | Require | [26] 20.32 | m | m | [26] 20.32 | c1 | c1 |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 9 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c1: | IF A.162/11 OR A.162/12 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/19 - - REGISTER response

Prerequisite: A.164/25 - - 415 (Unsupported Media Type)

Table A.285: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 4 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 5 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 7 | Require | [26] 20.32 | m | m | [26] 20.32 | c1 | c1 |
| 9 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c1: | IF A.162/11 OR A.162/12 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/19 - - REGISTER response

Prerequisite: A.164/27 - - 420 (Bad Extension)

Table A.286: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c1 | c1 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 8 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | c3 | c3 |
| c1: | IF A.162/11 OR A.162/12 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/17 THEN m ELSE i | | | | | | |

Prerequisite A.163/19 - - REGISTER response

Prerequisite: A.164/29 - - 423 (Interval Too Brief)

Table A.287: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Error-Info | [26] 20.18 | o | | [26] 20.18 | o | |
| 5 | Min-Expires | [26] 20.23 | m | m | [26] 20.23 | i | i |
| 6 | Require | [26] 20.32 | m | m | [26] 20.32 | c1 | c1 |
| 8 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c1: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/19 - - REGISTER response

Prerequisite: A.164/34 - - 484 (Address Incomplete)

Table A.288: Supported headers within the REGISTER response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c1 | c1 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c1: | IF A.162/11 OR A.162/12 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/19 - - REGISTER response

Table A.289: 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.163/20 - - SUBSCRIBE request

Table A.290: Supported headers within the SUBSCRIBE request

| Item | Header | Sending | | | Receiving | | |
|-------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 3A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 4 | Allow-Events | [28] 8.2.2 | m | m | [28] 8.2.2 | c1 | c1 |
| 5 | Authorization | [26] 20.7 | m | m | [26] 20.7 | i | i |
| 6 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 6A | Contact | [26] 20.10 | m | m | [26] 20.10 | i | i |
| 7 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | i |
| 8 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | i |
| 9 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | i |
| 10 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 11 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | i |
| 12 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 13 | Date | [26] 20.17 | m | m | [26] 20.17 | c2 | c2 |
| 14 | Event | [28] 8.2.1 | m | m | [28] 8.2.1 | m | m |
| 15 | Expires | [26] 20.19 | m | m | [26] 20.19 | i | i |
| 16 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 17 | Max-Forwards | [26] 20.22 | m | m | [26] 20.22 | m | m |
| 18 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | i |
| 18A | Organization | [26] 20.25 | m | m | [26] 20.25 | c3 | c3 |
| 18B | P-Asserted-Identity | [34] 9.1 | c9 | c9 | [34] 9.1 | c10 | c10 |
| 18C | P-Preferred-Identity | [34] 9.2 | x | x | [34] 9.2 | c8 | c8 |
| 18D | Privacy | [33] 4.2 | c11 | c11 | [33] 4.2 | c12 | c12 |
| 19 | Proxy-Authorization | [26] 20.28 | m | m | [26] 20.28 | c4 | c4 |
| 20 | Proxy-Require | [26] 20.29 | m | m | [26] 20.29 | m | m |
| 21 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c7 | c7 |
| 22 | Require | [26] 20.32 | m | m | [26] 20.32 | c5 | c5 |
| 23 | Route | [26] 20.34 | m | m | [26] 20.34 | m | m |
| 24 | Supported | [26] 20.37 | m | m | [26] 20.37 | c6 | c6 |
| 25 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 26 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 27 | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 28 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN m ELSE i - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c3: | IF A.162/19A OR A.162/19B THEN m ELSE i - - reading, adding or concatenating the Organization header. | | | | | | |
| c4: | IF A.162/8A THEN m ELSE i - - authentication between UA and proxy. | | | | | | |
| c5: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c6: | IF A.162/16 THEN m ELSE i - - reading the contents of the Supported header before proxying the response. | | | | | | |
| c7: | IF A.162/14 THEN m ELSE i - - the requirement to be able to insert itself in the subsequent transactions in a dialog. | | | | | | |
| c8: | IF A.162/30A THEN m ELSE n/a - - act as first entity within the trust domain for asserted identity. | | | | | | |
| c9: | IF A.162/30 THEN m ELSE n/a - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c10: | IF A.162/30A or A.162/30B THEN m ELSE i - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks or subsequent entity within trust network that can route outside the trust network. | | | | | | |
| c11: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c12: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |
| 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.163/20 - - SUBSCRIBE request

Table A.291: Supported message bodies within the SUBSCRIBE request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.163/21 - - SUBSCRIBE response

Table A.292: Supported headers within the SUBSCRIBE response - all status-codes

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 2 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | i |
| 3 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | i |
| 4 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | i |
| 5 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 6 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | i |
| 7 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 8 | Date | [26] 20.17 | m | m | [26] 20.17 | c1 | c1 |
| 9 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 10 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | i |
| 10A | Organization | [26] 20.25 | m | m | [26] 20.25 | c2 | c2 |
| 10B | P-Asserted-Identity | [34] 9.1 | c4 | c4 | [34] 9.1 | c5 | c5 |
| 10C | P-Preferred-Identity | [34] 9.2 | x | x | [34] 9.2 | c3 | n/a |
| 10D | Privacy | [33] 4.2 | c6 | c6 | [33] 4.2 | c7 | c7 |
| 10E | Server | [26] 20.35 | m | m | [26] 20.35 | i | i |
| 11 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 12 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 12A | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 13 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 14 | Warning | [26] 20.43 | m | m | [26] 20.43 | i | i |
| c1: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c2: | IF A.162/19A OR A.162/19B THEN m ELSE i - - reading, adding or concatenating the Organization header. | | | | | | |
| c3: | IF A.162/30A THEN m ELSE n/a - - act as first entity within the trust domain for asserted identity. | | | | | | |
| c4: | IF A.162/30 THEN m ELSE n/a - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks. | | | | | | |
| c5: | IF A.162/30A or A.162/30B THEN m ELSE i - - extensions to the Session Initiation Protocol (SIP) for asserted identity within trusted networks or subsequent entity within trust network that can route outside the trust network. | | | | | | |
| c6: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c7: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |

Prerequisite A.163/21 - - SUBSCRIBE response

Prerequisite: A.164/6 AND A.164/7 - - 2xx

Table A.293: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Authentication-Info | [26] 20.6 | m | m | [26] 20.6 | i | i |
| 1A | Contact | [26] 20.10 | m | m | [26] 20.10 | i | i |
| 2 | Expires | [26] 20.19 | m | m | [26] 20.19 | i | i |
| 3 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c3 | c3 |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 6 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/15 THEN m ELSE i - - the requirement to be able to use separate URIs in the upstream direction and downstream direction when record routing. | | | | | | |

Prerequisite A.163/21 - - SUBSCRIBE response

Prerequisite: A.164/8 OR A.164/9 OR A.164/10 OR A.164/11 OR A.164/12 OR A.164/35 - - 3xx or 485 (Ambiguous)

Table A.294: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Contact | [26] 20.10 | m | m | [26] 20.10 | c1 | c1 |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c1: | IF A.162/19E THEN m ELSE i - - deleting Contact headers. | | | | | | |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/21 - - SUBSCRIBE response

Prerequisite: A.164/14 - - 401 (Unauthorized)

Table A.295: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 8 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/21 - - SUBSCRIBE response

Prerequisite: A.164/17 OR A.164/23 OR A.164/30 OR A.164/36 OR A.164/42 OR A.164/50 OR A.164/51 - - 404, 413, 480, 486, 500, 600, 603

Table A.296: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 3 | Retry-After | [26] 20.33 | m | m | [26] 20.33 | i | i |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/21 - - SUBSCRIBE response

Prerequisite: A.164/18 - - 405 (Method Not Allowed)

Table A.297: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/21 - - SUBSCRIBE response

Prerequisite: A.164/20 - - 407 (Proxy Authentication Required)

Table A.298: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 6 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/21 - - SUBSCRIBE response

Prerequisite: A.164/25 - - 415 (Unsupported Media Type)

Table A.299: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 4 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 5 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 6 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/21 - - SUBSCRIBE response

Prerequisite: A.164/27 - - 420 (Bad Extension)

Table A.300: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 5 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | c3 | c3 |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/18 THEN m ELSE i - - reading the contents of the Unsupported header before proxying the 420 response to a method other than REGISTER. | | | | | | |

Prerequisite A.163/21 - - SUBSCRIBE response

Prerequisite: A.164/29 - - 423 (Interval Too Brief)

Table A.301: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Min-Expires | [26] 20.23 | m | m | [26] 20.23 | i | i |
| 3 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/21 - - SUBSCRIBE response

Prerequisite: A.164/34 - - 484 (Address Incomplete)

Table A.302: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 4 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/21 - - SUBSCRIBE response

Prerequisite: A.164/39 - - 489 (Bad Event)

Table A.303: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|-------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Allow-Events | [28] 8.2.2 | m | m | [28] 8.2.2 | c1 | c1 |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | c3 | c3 |
| c1: | IF A.4/20 THEN m ELSE i - - SIP specific event notification extension. | | | | | | |
| c3: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| 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.163/21 - - SUBSCRIBE response

Prerequisite: A.164/45 - - 503 (Service Unavailable)

Table A.303A: Supported headers within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 1 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 2 | Require | [26] 20.32 | m | m | [26] 20.32 | c3 | c3 |
| 3 | Retry-After | [26] 20.33 | m | m | [26] 20.33 | i | i |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c3: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/21 - - SUBSCRIBE response

Table A.304: Supported message bodies within the SUBSCRIBE response

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

A.2.2.4.14 UPDATE method

Prerequisite A.163/22 - - UPDATE request

Table A.305: Supported headers within the UPDATE request

| Item | Header | Sending | | | Receiving | | |
|-------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 4 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 5 | Allow-Events | [28] 8.2.2 | m | m | [28] 8.2.2 | c1 | c1 |
| 6 | Authorization | [26] 20.7 | m | m | [26] 20.7 | i | i |
| 7 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 8 | Call-Info | [26] 20.9 | m | m | [26] 20.9 | c8 | c8 |
| 9 | Contact | [26] 20.10 | m | m | [26] 20.10 | i | i |
| 10 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | c4 | c4 |
| 11 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | c4 | c4 |
| 12 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | c4 | c4 |
| 13 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 14 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | c4 | c4 |
| 15 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 16 | Date | [26] 20.17 | m | m | [26] 20.17 | c2 | c2 |
| 17 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 18 | Max-Forwards | [26] 20.22 | m | m | [26] 20.22 | m | m |
| 19 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | c4 |
| 20 | Organization | [26] 20.25 | m | m | [26] 20.25 | c3 | c3 |
| 20A | Privacy | [33] 4.2 | c10 | c10 | [33] 4.2 | c11 | c11 |
| 21 | Proxy-Authorization | [26] 20.28 | m | m | [26] 20.28 | c9 | c9 |
| 22 | Proxy-Require | [26] 20.29 | m | m | [26] 20.29 | m | m |
| 23 | Record-Route | [26] 20.30 | m | m | [26] 20.30 | c7 | c7 |
| 24 | Require | [26] 20.32 | m | m | [26] 20.32 | c5 | c5 |
| 25 | Route | [26] 20.34 | m | m | [26] 20.34 | m | m |
| 26 | Supported | [26] 20.37 | m | m | [26] 20.37 | c6 | c6 |
| 27 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 28 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 29 | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 30 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| c1: | IF A.4/20 THEN m ELSE i - - SIP specific event notification extension. | | | | | | |
| c2: | IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. | | | | | | |
| c3: | IF A.162/19A OR A.162/19B THEN m ELSE i - - reading, adding or concatenating the Organization header. | | | | | | |
| c4: | IF A.3/2 OR A.3/4 THEN m ELSE i - - P-CSCF or S-CSCF. | | | | | | |
| c5: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c6: | IF A.162/16 THEN m ELSE i - - reading the contents of the Supported header before proxying the response. | | | | | | |
| c7: | IF A.162/14 THEN o ELSE i - - the requirement to be able to insert itself in the subsequent transactions in a dialog. | | | | | | |
| c8: | IF A.162/19C OR A.162/19D THEN m ELSE i - - reading, adding or concatenating the Call-Info header. | | | | | | |
| c9: | IF A.162/8A THEN m ELSE i - - authentication between UA and proxy. | | | | | | |
| c10: | IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). | | | | | | |
| c11: | IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | |
| 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.163/22 - - UPDATE request

Table A.306: Supported message bodies within the UPDATE request

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

Prerequisite A.163/22 - - UPDATE response

Table A.307: Supported headers within the UPDATE response - all remaining status-codes

| Item | Header | Sending | | | Receiving | | |
|---|---------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Call-ID | [26] 20.8 | m | m | [26] 20.8 | m | m |
| 1A | Call-Info | [26] 20.9 | m | m | [26] 20.9 | c4 | c4 |
| 2 | Content-Disposition | [26] 20.11 | m | m | [26] 20.11 | i | c3 |
| 3 | Content-Encoding | [26] 20.12 | m | m | [26] 20.12 | i | c3 |
| 4 | Content-Language | [26] 20.13 | m | m | [26] 20.13 | i | c3 |
| 5 | Content-Length | [26] 20.14 | m | m | [26] 20.14 | m | m |
| 6 | Content-Type | [26] 20.15 | m | m | [26] 20.15 | i | c3 |
| 7 | Cseq | [26] 20.16 | m | m | [26] 20.16 | m | m |
| 8 | Date | [26] 20.17 | m | m | [26] 20.17 | c1 | c1 |
| 9 | From | [26] 20.20 | m | m | [26] 20.20 | m | m |
| 10 | MIME-Version | [26] 20.24 | m | m | [26] 20.24 | i | c3 |
| 10A | Organization | [26] 20.25 | m | m | [26] 20.25 | c2 | c2 |
| 10B | Privacy | [33] 4.2 | c5 | c5 | [33] 4.2 | c6 | c6 |
| 10C | Server | [26] 20.35 | m | m | [26] 20.35 | i | i |
| 11 | Timestamp | [26] 20.38 | m | m | [26] 20.38 | i | i |
| 12 | To | [26] 20.39 | m | m | [26] 20.39 | m | m |
| 12A | User-Agent | [26] 20.41 | m | m | [26] 20.41 | i | i |
| 13 | Via | [26] 20.42 | m | m | [26] 20.42 | m | m |
| 14 | Warning | [26] 20.43 | m | m | [26] 20.43 | i | i |
| c1: IF A.162/9 THEN m ELSE i - - insertion of date in requests and responses. c2: IF A.162/19A OR A.162/19B THEN m ELSE i - - reading, adding or concatenating the Organization header. c3: IF A.3/2 OR A.3/4 THEN m ELSE i - - P-CSCF or S-CSCF. c4: IF A.162/19C OR A.162/19D THEN m ELSE i - - reading, adding or concatenating the Call-Info header. c5: IF A.162/31 THEN m ELSE n/a - - a privacy mechanism for the Session Initiation Protocol (SIP). c6: IF A.162/31D OR A.162/31G THEN m ELSE IF A.162/31C THEN i ELSE n/a - - application of the privacy option "header" or application of the privacy option "id" or passing on of the Privacy header transparently. | | | | | | | |

Prerequisite A.163/23 - - UPDATE response

Prerequisite: A.164/6 - - 2xx

Table A.308: Supported headers within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|--|---------------------|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 0A | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 0B | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 0C | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Authentication-Info | [26] 20.6 | m | m | [26] 20.6 | i | i |
| 3 | Contact | [26] 20.10 | m | m | [26] 20.10 | i | i |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 6 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. c3: IF A.162/15 THEN o ELSE i - - the requirement to be able to use separate URIs in the upstream direction and downstream direction when record routing. | | | | | | | |

Prerequisite A.163/23 - - UPDATE response

Prerequisite: A.164/8 OR A.164/9 OR A.164/10 OR A.164/11 OR A.164/12 - - 3xx

Table A.309: Supported headers within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Contact | [26] 20.10 | m | m | [26] 20.10 | c1 | c1 |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c1: | IF A.162/19E THEN m ELSE i - - deleting Contact headers. | | | | | | |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/23 - - UPDATE response

Prerequisite: A.164/14 - - 401 (Unauthorized)

Table A.309A: Supported headers within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|------|--|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 3 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 6 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i. | | | | | | |

Prerequisite A.163/23 - - UPDATE response

Prerequisite: A.164/17 OR A.164/23 OR A.164/30 OR A.164/36 OR A.164/42 OR A.164/45 OR A.164/50 OR A.164/51 - - 404, 413, 480, 486, 500, 503, 600, 603

Table A.310: Supported headers within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 5 | Retry-After | [26] 20.33 | m | m | [26] 20.33 | i | i |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/23 - - UPDATE response

Prerequisite: A.164/18 - - 405 (Method Not Allowed)

Table A.311: Supported headers within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/23 - - UPDATE response

Prerequisite: A.164/20 - - 407 (Proxy Authentication Required)

Table A.312: Supported headers within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 4 | Proxy-Authenticate | [26] 20.27 | m | m | [26] 20.27 | m | m |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 8 | WWW-Authenticate | [26] 20.44 | m | m | [26] 20.44 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/23 - - UPDATE response

Prerequisite: A.164/25 - - 415 (Unsupported Media Type)

Table A.313: Supported headers within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Accept | [26] 20.1 | m | m | [26] 20.1 | i | i |
| 2 | Accept-Encoding | [26] 20.2 | m | m | [26] 20.2 | i | i |
| 3 | Accept-Language | [26] 20.3 | m | m | [26] 20.3 | i | i |
| 4 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 6 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 8 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 10 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/23 - - UPDATE response

Prerequisite: A.164/27 - - 420 (Bad Extension)

Table A.314: Supported headers within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 4 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 6 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| 7 | Unsupported | [26] 20.40 | m | m | [26] 20.40 | c3 | c3 |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |
| c3: | IF A.162/18 THEN m ELSE i - - reading the contents of the Unsupported header before proxying the 420 response to a method other than REGISTER. | | | | | | |

Prerequisite A.163/23 - - UPDATE response

Prerequisite: A.164/35 - - 485 (Ambiguous)

Table A.315: Supported headers within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|------|---|------------|------------|----------------|------------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Allow | [26] 20.5 | m | m | [26] 20.5 | i | i |
| 2 | Contact | [26] 20.10 | m | m | [26] 20.10 | c1 | c1 |
| 3 | Error-Info | [26] 20.18 | m | m | [26] 20.18 | i | i |
| 5 | Require | [26] 20.32 | m | m | [26] 20.32 | c2 | c2 |
| 7 | Supported | [26] 20.37 | m | m | [26] 20.37 | i | i |
| c1: | IF A.162/19E THEN m ELSE i - - deleting Contact headers. | | | | | | |
| c2: | IF A.162/11 OR A.162/13 THEN m ELSE i - - reading the contents of the Require header before proxying the request or response or adding or modifying the contents of the Require header before proxying the request or response for methods other than REGISTER. | | | | | | |

Prerequisite A.163/23 - - UPDATE response

Table A.316: Supported message bodies within the UPDATE response

| Item | Header | Sending | | | Receiving | | |
|------|--------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | | | | | | | |

A.3 Profile definition for the Session Description Protocol as used in the present document

A.3.1 Introduction

Void.

A.3.2 User agent role

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.3.2.1 Major capabilities

Table A.317: Major capabilities

| Item | Does the implementation support | Reference | RFC status | Profile status |
|------|--|-----------|------------|----------------|
| | Capabilities within main protocol | | | |
| | Extensions | | | |
| 22 | Integration of resource management and SIP? | [30] | o | m |
| 23 | Grouping of media lines | [53] | o | m |
| 24 | Mapping of Media Streams to Resource Reservation Flows | [54] | o | m |
| | | | | |

A.3.2.2 SDP types

Table A.318: SDP types

| Item | Type | Sending | | | Receiving | | |
|---|---|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| Session level description | | | | | | | |
| 1 | v= (protocol version) | [39] 6 | m | m | [39] 6 | m | m |
| 2 | o= (owner/creator and session identifier) | [39] 6 | m | m | [39] 6 | m | m |
| 3 | s= (session name) | [39] 6 | m | m | [39] 6 | m | m |
| 4 | i= (session information) | [39] 6 | o | | [39] 6 | | |
| 5 | u= (URI of description) | [39] 6 | o | n/a | [39] 6 | | n/a |
| 6 | e= (email address) | [39] 6 | o | n/a | [39] 6 | | n/a |
| 7 | p= (phone number) | [39] 6 | o | n/a | [39] 6 | | n/a |
| 8 | c= (connection information) | [39] 6 | o | | [39] 6 | | |
| 9 | b= (bandwidth information) | [39] 6 | o | o (NOTE 1) | [39] 6 | | |
| Time description (one or more per description) | | | | | | | |
| 10 | t= (time the session is active) | [39] 6 | m | m | [39] 6 | m | m |
| 11 | r= (zero or more repeat times) | [39] 6 | o | n/a | [39] 6 | | n/a |
| Session level description (continued) | | | | | | | |
| 12 | z= (time zone adjustments) | [39] 6 | o | n/a | [39] 6 | | n/a |
| 13 | k= (encryption key) | [39] 6 | o | | [39] 6 | | |
| 14 | a= (zero or more session attribute lines) | [39] 6 | o | | [39] 6 | | |
| Media description (zero or more per description) | | | | | | | |
| 15 | m= (media name and transport address) | [39] 6 | o | o | [39] 6 | m | m |
| 16 | i= (media title) | [39] 6 | o | | [39] 6 | | |
| 17 | c= (connection information) | [39] 6 | c1 | c1 | [39] 6 | | |
| 18 | b= (bandwidth information) | [39] 6 | o | o (NOTE 1) | [39] 6 | | |
| 19 | k= (encryption key) | [39] 6 | o | | [39] 6 | | |
| 20 | a= (zero or more media attribute lines) | [39] 6 | o | | [39] 6 | | |
| c1: IF A.318/15 THEN m ELSE n/a. | | | | | | | |
| NOTE 1: For "video" and "audio" media types that utilise RTP/RTCP, it shall be specified. For other media types, it may be specified. | | | | | | | |

Prerequisite A.318/14 OR A.318/20 - - a= (zero or more session/media attribute lines)

Table A.319: 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) | [39] 6 | | | [39] 6 | | |
| 2 | keywords (a=keywds) | [39] 6 | | | [39] 6 | | |
| 3 | name and version of tool (a=tool) | [39] 6 | | | [39] 6 | | |
| 4 | packet time (a=ptime) | [39] 6 | | | [39] 6 | | |
| 5 | maximum packet time (a=maxptime) | [39] 6 | | | [39] 6 | | |
| 6 | receive-only mode (a=recvonly) | [39] 6 | | | [39] 6 | | |
| 7 | send and receive mode (a=sendrecv) | [39] 6 | | | [39] 6 | | |
| 8 | send-only mode (a=sendonly) | [39] 6 | | | [39] 6 | | |
| 9 | whiteboard orientation (a=orient) | [39] 6 | | | [39] 6 | | |
| 10 | conference type (a=type) | [39] 6 | | | [39] 6 | | |
| 11 | character set (a=charset) | [39] 6 | | | [39] 6 | | |
| 12 | language tag (a=sdplang) | [39] 6 | | | [39] 6 | | |
| 13 | language tag (a=lang) | [39] 6 | | | [39] 6 | | |
| 14 | frame rate (a=framerate) | [39] 6 | | | [39] 6 | | |
| 15 | quality (a=quality) | [39] 6 | | | [39] 6 | | |
| 16 | format specific parameters (a=fmtp) | [39] 6 | | | [39] 6 | | |
| 17 | rtpmap attribute (a=rtpmap) | [39] 6 | | | [39] 6 | | |
| 18 | current-status attribute (a=curr) | [30] 5 | c1 | c1 | [30] 5 | c2 | c2 |
| 19 | desired-status attribute (a=des) | [30] 5 | c1 | c1 | [30] 5 | c2 | c2 |
| 20 | confirm-status attribute (a=conf) | [30] 5 | c1 | c1 | [30] 5 | c2 | c2 |
| 21 | media stream identification attribute (a=mid) | [53] 3 | c3 | c3 | [53] 3 | c4 | c4 |
| 22 | group attribute (a=group) | [53] 4 | c5 | c5 | [53] 3 | c6 | c6 |
| c1: | IF A.317/22 THEN o ELSE n/a. | | | | | | |
| c2: | IF A.317/22 THEN m ELSE n/a. | | | | | | |
| c3: | IF A.317/23 THEN o ELSE n/a. | | | | | | |
| c4: | IF A.317/23 THEN m ELSE n/a. | | | | | | |
| c5: | IF A.317/24 THEN o ELSE n/a. | | | | | | |
| c6: | IF A.317/24 THEN m ELSE n/a. | | | | | | |

A.3.2.3 SDP types parameters

Prerequisite A.318/2 - - o= (owner/creator and session identifier)

Table A.320: owner/creator and session identifier type (o=)

| Item | Field | Sending | | | Receiving | | |
|------|--------------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | username | [39] 6 | m | m | [39] 6 | m | n/a |
| 2 | session id | [39] 6 | m | m | [39] 6 | m | m |
| 3 | version | [39] 6 | m | m | [39] 6 | m | m |
| 4 | network type | [39] 6 | m | m | [39] 6 | m | n/a |
| 5 | address type | [39] 6 | m | m | [39] 6 | m | n/a |
| 6 | address | [39] 6 | m | m | [39] 6 | m | n/a |

Prerequisite A.318/10 - - t= (time the session is active)

Table A.321: time the session is active type (t=)

| Item | Field | Sending | | | Receiving | | |
|------|------------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | start time | [39] 6 | m | m | [39] 6 | m | n/a |
| 2 | stop time | [39] 6 | m | m | [39] 6 | m | n/a |

Prerequisite A.318/11 - - r= (zero or more repeat times)

Table A.322: zero or more repeat times (r=)

| Item | Field | Sending | | | Receiving | | |
|------|---------------------------------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | repeat interval | [39] 6 | | n/a | [39] 6 | | n/a |
| 2 | active duration | [39] 6 | | n/a | [39] 6 | | n/a |
| 3 | list of offsets from start-time | [39] 6 | | n/a | [39] 6 | | n/a |

Prerequisite A.318/12 - - z= (time zone adjustments)

Table A.323: time zone adjustments type (z=)

| Item | Field | Sending | | | Receiving | | |
|------|-----------------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | adjustment time | [39] 6 | | n/a | [39] 6 | | n/a |
| 2 | offset | [39] 6 | | n/a | [39] 6 | | n/a |
| 3 | adjustment time | [39] 6 | | n/a | [39] 6 | | n/a |
| 4 | offset | [39] 6 | | n/a | [39] 6 | | n/a |

Prerequisite A.318/13 - - k= (encryption key)

Table A.324: encryption key type (k=)

| Item | Field | Sending | | | Receiving | | |
|------|----------------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | method | [39] 6 | | | [39] 6 | | |
| 2 | encryption key | [39] 6 | | | [39] 6 | | |

Prerequisite A.318/15 - - m= (media name and transport address)

Table A.325: 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" | [39] 6 | | | [39] 6 | | |
| 2 | port | [39] 6 | | | [39] 6 | | |
| 3 | transport | [39] 6 | | | [39] 6 | | |
| 4 | fmt list | [39] 6 | | | [39] 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.318/17 - - c= (connection information)

Table A.326: connection type (c=)

| Item | Field | Sending | | | Receiving | | |
|------|--------------------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | network type | [39] 6 | | | [39] 6 | | |
| 2 | address type | [39] 6 | | | [39] 6 | | |
| 3 | connection address | [39] 6 | | | [39] 6 | | |

Prerequisite A.318/18 - - b= (bandwidth information)

Table A.327: bandwidth information (b=)

| Item | Field | Sending | | | Receiving | | |
|------|-----------------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | modifier | [39] 6 | | o (NOTE 1) | [39] 6 | | |
| 2 | bandwidth-value | [39] 6 | | o (NOTE 2) | [39] 6 | | |

NOTE 1: For "video" and "audio" media types that utilise RTP/RTCP, the value shall be AS.
NOTE 2: For "video" and "audio" media types that utilise RTP/RTCP, it shall be specified. For other media types, it may be specified.

A.3.2.4 SDP types parameters within attribute lines

This subclause dos not intend to show an exhaustive list of all the possible attribute values

Prerequisite A.319/22 - - group attribute (a=group)

Table A.327A: group semantics (a=group)

| Item | Field | Sending | | | Receiving | | |
|------|-------------------------------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Lip Synchronization (LS) | [53] 4 | o | o | [53] 4 | m | m |
| 2 | Flow Identification (FID) | [53] 4 | o | o | [53] 4 | m | m |
| 3 | Single Reservation Flow (SRF) | [54] 2 | o | m | [54] 2 | m | m |

A.3.3 Proxy role

This subclause contains the ICS proforma tables related to the user role. They need to be completed only for proxy implementations.

Prerequisite: A.2/2 -- proxy role

A.3.3.1 Major capabilities

Table A.328: Major capabilities

| Item | Does the implementation support | Reference | RFC status | Profile status |
|--|--|-----------|------------|----------------|
| | Capabilities within main protocol | | | |
| | Extensions | | | |
| 1 | Integration of resource management and SIP? | [30] | o | m |
| 2 | Grouping of media lines | [53] | o | c1 |
| 3 | Mapping of Media Streams to Resource Reservation Flows | [54] | o | c1 |
| c1: IF A.3/2 THEN m ELSE n/a - - P-CSCF role | | | | |

A.3.3.2 SDP types

Table A.329: SDP types

| Item | Type | Sending | | | Receiving | | |
|---|--|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| Session level description | | | | | | | |
| 1 | v= (protocol version) | [39] 6 | m | m | [39] 6 | m | m |
| 2 | o= (owner/creator and session identifier). | [39] 6 | m | m | [39] 6 | i | i |
| 3 | s= (session name) | [39] 6 | m | m | [39] 6 | i | i |
| 4 | i= (session information) | [39] 6 | m | m | [39] 6 | i | i |
| 5 | u= (URI of description) | [39] 6 | m | m | [39] 6 | i | i |
| 6 | e= (email address) | [39] 6 | m | m | [39] 6 | i | i |
| 7 | p= (phone number) | [39] 6 | m | m | [39] 6 | i | i |
| 8 | c= (connection information) | [39] 6 | m | m | [39] 6 | i | i |
| 9 | b= (bandwidth information) | [39] 6 | m | m | [39] 6 | i | i |
| Time description (one or more per description) | | | | | | | |
| 10 | t= (time the session is active) | [39] 6 | m | m | [39] 6 | i | i |
| 11 | r= (zero or more repeat times) | [39] 6 | m | m | [39] 6 | i | i |
| Session level description (continued) | | | | | | | |
| 12 | z= (time zone adjustments) | [39] 6 | m | m | [39] 6 | i | i |
| 13 | k= (encryption key) | [39] 6 | m | m | [39] 6 | i | i |
| 14 | a= (zero or more session attribute lines) | [39] 6 | m | m | [39] 6 | i | i |
| Media description (zero or more per description) | | | | | | | |
| 15 | m= (media name and transport address) | [39] 6 | m | m | [39] 6 | m | m |
| 16 | i= (media title) | [39] 6 | o | | [39] 6 | | |
| 17 | c= (connection information) | [39] 6 | o | | [39] 6 | | |
| 18 | b= (bandwidth information) | [39] 6 | o | | [39] 6 | | |
| 19 | k= (encryption key) | [39] 6 | o | | [39] 6 | | |
| 20 | a= (zero or more media attribute lines) | [39] 6 | o | | [39] 6 | | |

Prerequisite A.329/14 OR A.329/20 - - a= (zero or more session/media attribute lines)

Table A.330: 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) | [39] 6 | | | [39] 6 | | |
| 2 | keywords (a=keywds) | [39] 6 | | | [39] 6 | | |
| 3 | name and version of tool (a=tool) | [39] 6 | | | [39] 6 | | |
| 4 | packet time (a=ptime) | [39] 6 | | | [39] 6 | | |
| 5 | maximum packet time (a=maxptime) | [39] 6 | | | [39] 6 | | |
| 6 | receive-only mode (a=recvonly) | [39] 6 | | | [39] 6 | | |
| 7 | send and receive mode (a=sendrecv) | [39] 6 | | | [39] 6 | | |
| 8 | send-only mode (a=sendonly) | [39] 6 | | | [39] 6 | | |
| 9 | whiteboard orientation (a=orient) | [39] 6 | | | [39] 6 | | |
| 10 | conference type (a=type) | [39] 6 | | | [39] 6 | | |
| 11 | character set (a=charset) | [39] 6 | | | [39] 6 | | |
| 12 | language tag (a=sdplang) | [39] 6 | | | [39] 6 | | |
| 13 | language tag (a=lang) | [39] 6 | | | [39] 6 | | |
| 14 | frame rate (a=framerate) | [39] 6 | | | [39] 6 | | |
| 15 | quality (a=quality) | [39] 6 | | | [39] 6 | | |
| 16 | format specific parameters (a=fmtp) | [39] 6 | | | [39] 6 | | |
| 17 | rtpmap attribute (a=rtpmap) | [39] 6 | | | [39] 6 | | |
| 18 | current-status attribute (a=curr) | [30] 5 | m | m | [30] 5 | c2 | c2 |
| 19 | desired-status attribute (a=des) | [30] 5 | m | m | [30] 5 | c2 | c2 |
| 20 | confirm-status attribute (a=conf) | [30] 5 | m | m | [30] 5 | c2 | c2 |
| 21 | media stream identification attribute (a=mid) | [53] 3 | c3 | c3 | [53] 3 | c4 | c4 |
| 22 | group attribute (a=group) | [53] 4 | c5 | c6 | [53] 3 | c5 | c6 |
| c2: | IF A.328/1 THEN m ELSE i. | | | | | | |
| c3: | IF A.328/2 THEN o ELSE n/a. | | | | | | |
| c4: | IF A.328/2 THEN m ELSE n/a. | | | | | | |
| c5: | IF A.328/3 THEN o ELSE n/a. | | | | | | |
| c6: | IF A.328/3 THEN m ELSE n/a. | | | | | | |

A.3.3.3 SDP types parameters

Prerequisite A.329/2 - - o= (owner/creator and session identifier)

Table A.331: owner/creator and session identifier type (o=)

| Item | Field | Sending | | | Receiving | | |
|------|--------------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | username | [39] 6 | m | m | [39] 6 | m | m |
| 2 | session id | [39] 6 | m | m | [39] 6 | m | m |
| 3 | version | [39] 6 | m | m | [39] 6 | m | m |
| 4 | network type | [39] 6 | m | m | [39] 6 | m | m |
| 5 | address type | [39] 6 | m | m | [39] 6 | m | m |
| 6 | address | [39] 6 | m | m | [39] 6 | m | m |

Prerequisite A.329/10 - - t= (time the session is active)

Table A.332: time the session is active type (b=)

| Item | Field | Sending | | | Receiving | | |
|------|------------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | start time | [39] 6 | | | [39] 6 | | |
| 2 | stop time | [39] 6 | | | [39] 6 | | |

Prerequisite A.329/11 - - r= (zero or more repeat times)

Table A.333: zero or more repeat times (r=)

| Item | Field | Sending | | | Receiving | | |
|------|---------------------------------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | repeat interval | [39] 6 | | | [39] 6 | | |
| 2 | active duration | [39] 6 | | | [39] 6 | | |
| 3 | list of offsets from start-time | [39] 6 | | | [39] 6 | | |

Prerequisite A.329/12 - - z= (time zone adjustments)

Table A.334: time zone adjustments type (z=)

| Item | Field | Sending | | | Receiving | | |
|------|-----------------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | adjustment time | [39] 6 | | | [39] 6 | | |
| 2 | offset | [39] 6 | | | [39] 6 | | |
| 3 | adjustment time | [39] 6 | | | [39] 6 | | |
| 4 | offset | [39] 6 | | | [39] 6 | | |

Prerequisite A.329/13 - - k= (encryption key)

Table A.335: encryption key type (k=)

| Item | Field | Sending | | | Receiving | | |
|------|----------------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | method | [39] 6 | | | [39] 6 | | |
| 2 | encryption key | [39] 6 | | | [39] 6 | | |

Prerequisite A.329/15 - - m= (media name and transport address)

Table A.336: 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" | [39] 6 | | | [39] 6 | | |
| 2 | port | [39] 6 | | | [39] 6 | | |
| 3 | transport | [39] 6 | | | [39] 6 | | |
| 4 | fmt list | [39] 6 | | | [39] 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.329/17 - - c= (connection information)

Table A.337: connection type (c=)

| Item | Field | Sending | | | Receiving | | |
|------|--------------------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | network type | [39] 6 | | | [39] 6 | | |
| 2 | address type | [39] 6 | | | [39] 6 | | |
| 3 | connection address | [39] 6 | | | [39] 6 | | |

Prerequisite A.329/18 - - b= (bandwidth information)

Table A.338: bandwidth information (b=)

| Item | Field | Sending | | | Receiving | | |
|------|-----------------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | modifier | [39] 6 | | | [39] 6 | | |
| 2 | bandwidth-value | [39] 6 | | | [39] 6 | | |

A.3.3.4 SDP types parameters within attribute lines

The subclause does not intend to show an exhaustive list of all the possible attribute values.

Prerequisite A.330/22 -- group attribute (a=group)

Table A.339: group semantics (a=group)

| Item | Field | Sending | | | Receiving | | |
|------|-------------------------------|---------|------------|----------------|-----------|------------|----------------|
| | | Ref. | RFC status | Profile status | Ref. | RFC status | Profile status |
| 1 | Lip Synchronization (LS) | [53] 4 | m | m | [53] 4 | i | i |
| 2 | Flow Identification (FID) | [53] 4 | m | m | [53] 4 | i | i |
| 3 | Single Reservation Flow (SRF) | [54] 2 | o | m | [54] 2 | m | m |

A.4 Profile definition for other message bodies as used in the present document

Void.

Annex B (informative): Change history

| Change history | | | | | | | | |
|----------------|-------|---------------|----|-----|--|-----|-----|--------|
| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New | WG doc |
| | | | | | Version 0.0.0 Editor's internal draft | | | |
| | | | | | Version 0.0.1 Editor's internal draft | | | |
| | | | | | Version 0.0.2 Editor's internal draft | | | |
| | | N1-001060 | | | Version 0.0.3 Submitted to CN1 SIP adhoc #1 | | | |
| 19/10/00 | | N1-001109 | | | Version 0.0.4 Reflecting results of initial CN1 discussion | | | |
| 19/10/00 | | N1-001115 | | | Version 0.0.5 Reflecting output of CN1 SIP adhoc#1 discussion | | | |
| 09/11/00 | | | | | Version 0.0.6 Revision to include latest template and styles | | | |
| | | N1-010092 | | | Version 0.0.7 Reflecting updates of some IETF drafts | | | |
| 14/02/01 | | N1-010269 | | | Version 0.0.8 Revision to include temporary annex B incorporating valuable source material | | | |
| 18/03/01 | | N1-010378 rev | | | Version 0.1.0 incorporating results of CN1 discussion at CN1 #16 | | | |
| 12/04/01 | | N1-010737 | | | Version 0.2.0 incorporating results of CN1 discussions at SIP adhoc #4 | | | |
| 11/06/01 | | N1-010935 | | | Version 0.3.0 incorporating results of CN1 discussions at CN1 #16 | | | |
| 23/07/01 | | N1-011103 | | | Version 0.4.0 incorporating results of CN1 discussions at CN1 #18 (agreed documents N1-011028, N1-011050, N1-011055, N1-011056) | | | |
| 12/09/01 | | N1-011385 | | | Version 0.5.0 incorporating results of CN1 discussions at CN1 #19 (agreed documents N1-011109, N1-011152, N1-011195, N1-011312, N1-011319, N1-011343) | | | |
| 04/10/01 | | N1-011470 | | | Version 0.6.0 incorporating results of CN1 discussions at CN1 #19bis (agreed documents N1-011346, N1-011373, N1-011389, N1-011390, N1-011392, N1-011393, N1-011394, N1-011408, N1-011410, N1-011426) | | | |
| 19/10/01 | | N1-011643 | | | Version 0.7.0 incorporating results of CN1 discussions at CN1 #20 (agreed documents N1-011477, N1-011479, N1-011498, N1-011523, N1-011548, N1-011585, N1-011586, N1-011592, N1-011611, N1-011629) | | | |
| 16/11/01 | | N1-011821 | | | Version 0.8.0 incorporating results of CN1 discussions at CN1 #20bis (agreed documents N1-011685, N1-011690, N1-011741, N1-011743, N1-011759, N1-011760, N1-011761, N1-011765c, N1-011767, N1-011769, N1-011770, N1-011771, N1-011774, N1-011777, N1-011779, N1-011780) N1-011712 was agreed but determined to have no impact on the specification at this time. | | | |
| 30/11/01 | | N1-020010 | | | Version 1.0.0 incorporating results of CN1 discussions at CN1 #21 (agreed documents N1-011828, N1-011829, N1-011836, N1-011899 [revision marks not used on moved text - additional change from chairman's report incorporated], implementation of subclause 3.1 editor's note based on discussion of N1-011900 [chairman's report], N1-011905, N1-011984, N1-011985, N1-011986, N1-011988, N1-011989, N1-012012 [excluding points 2 and 16], N1-012013, N1-012014 [excluding point 1], N1-012015, N1-012021, N1-012022, N1-012025, N1-012031, N1-012045, N1-012056, N1-012057) CN1 agreed for presentation for information to CN plenary. | | | |
| 18/01/02 | | N1-020189 | | | Version 1.1.0 incorporating results of CN1 discussions at CN1 SIP ad-hoc (agreed documents N1-020015, N1-020053, N1-020064, N1-020101, N1-020123, N1-020124, N1-020142, N1-020146, N1-020147, N1-020148, N1-020151, N1-020157, N1-020159, N1-020165). Also N1-012000 (agreed at previous meeting) required, subclause 5.2.6 to be deleted and this | | | |

| Change history | | | | | | | | |
|----------------|-----------|-----------|-----|-----|--|-------|-------|-----------|
| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New | WG doc |
| | | | | | change has been enacted | | | |
| 01/02/02 | | N1-020459 | | | Version 1.2.0 incorporating results of CN1 discussions at CN1 #22 (agreed documents N1-020198, N1-020396, N1-020398, N1-020399, N1-020408, N1-020417, N1-020418, N1-020419, N1-020421, N1-020422, N1-020436, N1-020437, N1-020449) | | | |
| 01/02/02 | | N1-020569 | | | Version 1.2.1 issues to correct cut and paste error in incorporation of Annex B into main document. Affected subclause 5.1.1.3. Change to clause 7 title that was incorrectly applied to subclause 7.2 also corrected. | | | |
| 22/02/02 | | | | | Advanced to version 2.0.0 based on agreement of N1-020515. Version 2.0.0 incorporating results of CN1 discussions at CN1 #22bis (agreed documents N1-020466, N1-020468, N1-020469, N1-020472, N1-020473, N1-020500, N1-020504, N1-020507, N1-020511, N1-020512, N1-020521, N1-020583, N1-020584, N1-020602, N1-020603, N1-020604, N1-020611, N1-020612, N1-020613, N1-020614, N1-020615, N1-020617, N1-020623, N1-020624, N1-020625, N1-020626, N1-020627, N1-020642, N1-020643, N1-020646, N1-020649, N1-020656, N1-020659, N1-020668, N1-020669, N1-020670, N1-020671). In addition N1-020409, agreed at CN1#22 but missed from the previous version, was also implemented. References have been resequenced. | | | |
| 02/03/02 | | | | | Editorial clean-up by ETSI/MCC. | 2.0.0 | 2.0.1 | |
| 11/03/02 | TSG CN#15 | NP-020049 | | | The draft was approved, and 3GPP TS 24.229 was then to be issued in Rel-5 under formal change control. | 2.0.1 | 5.0.0 | |
| 2002-06 | NP-16 | NP-020230 | 004 | 1 | S-CSCF Actions on Authentication Failure | 5.0.0 | 5.1.0 | N1-020903 |
| 2002-06 | NP-16 | NP-020230 | 005 | 2 | Disallow Parallel Registrations | 5.0.0 | 5.1.0 | N1-020959 |
| 2002-06 | NP-16 | NP-020230 | 007 | 1 | Hiding | 5.0.0 | 5.1.0 | N1-020910 |
| 2002-06 | NP-16 | NP-020312 | 008 | 8 | Support for services for unregistered users | 5.0.0 | 5.1.0 | |
| 2002-06 | | | 009 | 1 | Not implemented nor implementable. In the meeting report CN1#24 under doc N1-021513 it is shown that CR095r2 supercedes 009r1 if 095r2 was to be approved in CN#16 (but unfortunately 009r1 was also approved in the the CN#16 draft minutes). | | | N1-020921 |
| 2002-06 | NP-16 | NP-020231 | 019 | | MGCF procedure clarification | 5.0.0 | 5.1.0 | N1-020788 |
| 2002-06 | NP-16 | NP-020231 | 020 | 2 | MGCF procedure error cases | 5.0.0 | 5.1.0 | N1-020960 |
| 2002-06 | NP-16 | NP-020231 | 022 | 1 | Abbreviations clean up | 5.0.0 | 5.1.0 | N1-020949 |
| 2002-06 | NP-16 | NP-020231 | 023 | | Clarification of SIP usage outside IM CN subsystem | 5.0.0 | 5.1.0 | N1-020792 |
| 2002-06 | NP-16 | NP-020314 | 024 | 3 | Replacement of COMET by UPDATE | 5.0.0 | 5.1.0 | |
| 2002-06 | NP-16 | NP-020231 | 025 | 3 | Incorporation of current RFC numbers | 5.0.0 | 5.1.0 | N1-021091 |
| 2002-06 | NP-16 | NP-020231 | 026 | 1 | Clarification of B2BUA usage in roles | 5.0.0 | 5.1.0 | N1-020941 |
| 2002-06 | NP-16 | NP-020231 | 028 | 4 | Determination of MO / MT requests in I-CSCF(THIG) | 5.0.0 | 5.1.0 | N1-021248 |
| 2002-06 | NP-16 | NP-020231 | 030 | 2 | P-CSCF release of an existing session | 5.0.0 | 5.1.0 | N1-021006 |
| 2002-06 | NP-16 | NP-020232 | 031 | 1 | S-CSCF release of an existing session | 5.0.0 | 5.1.0 | N1-020939 |
| 2002-06 | NP-16 | NP-020232 | 033 | 3 | SDP procedure at the UE | 5.0.0 | 5.1.0 | N1-020971 |
| 2002-06 | NP-16 | NP-020232 | 035 | 1 | AS Procedures corrections | 5.0.0 | 5.1.0 | N1-020934 |
| 2002-06 | NP-16 | NP-020232 | 036 | 8 | Corrections to SIP Compression | 5.0.0 | 5.1.0 | N1-021499 |
| 2002-06 | NP-16 | NP-020232 | 037 | 1 | Enhancement of S-CSCF and I-CSCF Routing Procedures for interworking with external networks | 5.0.0 | 5.1.0 | N1-020928 |
| 2002-06 | NP-16 | NP-020232 | 041 | 2 | Delivery of IMS security parameters from S-CSCF to the P-CSCF by using proprietary auth-param | 5.0.0 | 5.1.0 | N1-021003 |

| Change history | | | | | | | | |
|----------------|-------|-----------|-----|-----|--|-------|-------|-----------|
| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New | WG doc |
| 2002-06 | NP-16 | NP-020232 | 045 | | Cleanup of request / response terminology - clause 5 | 5.0.0 | 5.1.0 | N1-020835 |
| 2002-06 | NP-16 | NP-020232 | 046 | | Cleanup of request / response terminology - clause 6 | 5.0.0 | 5.1.0 | N1-020836 |
| 2002-06 | NP-16 | NP-020232 | 047 | 2 | Simplification of profile tables | 5.0.0 | 5.1.0 | N1-021059 |
| 2002-06 | NP-16 | NP-020232 | 049 | | Forking options | 5.0.0 | 5.1.0 | N1-020839 |
| 2002-06 | NP-16 | NP-020315 | 050 | 1 | Media-Authorization header corrections | 5.0.0 | 5.1.0 | |
| 2002-06 | NP-16 | NP-020233 | 051 | 1 | Clause 5.4 editorials (S-CSCF) | 5.0.0 | 5.1.0 | N1-020950 |
| 2002-06 | NP-16 | NP-020233 | 053 | 2 | Integrity protection signalling from the P-CSCF to the S-CSCF | 5.0.0 | 5.1.0 | N1-021007 |
| 2002-06 | NP-16 | NP-020233 | 054 | | Representing IM CN subsystem functional entities in profile table roles | 5.0.0 | 5.1.0 | N1-020847 |
| 2002-06 | NP-16 | NP-020233 | 055 | | Clause 4 editorials | 5.0.0 | 5.1.0 | N1-020848 |
| 2002-06 | NP-16 | NP-020233 | 056 | | Clause 5.8 editorials (MRFC) | 5.0.0 | 5.1.0 | N1-020849 |
| 2002-06 | NP-16 | NP-020233 | 057 | 1 | Annex A editorials, including precondition additions | 5.0.0 | 5.1.0 | N1-021001 |
| 2002-06 | NP-16 | NP-020233 | 058 | 2 | Representing the registrar as a UA | 5.0.0 | 5.1.0 | N1-021054 |
| 2002-06 | NP-16 | NP-020233 | 059 | | Additional definitions | 5.0.0 | 5.1.0 | N1-020852 |
| 2002-06 | NP-16 | NP-020312 | 060 | 11 | Restructuring of S-CSCF Registration Sections | 5.0.0 | 5.1.0 | |
| 2002-06 | NP-16 | NP-020234 | 061 | 2 | Determination of MOC / MTC at P-CSCF and S-CSCF | 5.0.0 | 5.1.0 | N1-021060 |
| 2002-06 | NP-16 | NP-020234 | 062 | | Correction to the terminating procedures | 5.0.0 | 5.1.0 | N1-020927 |
| 2002-06 | NP-16 | NP-020234 | 063 | | Loose Routing for Network Initiated Call Release Procedures | 5.0.0 | 5.1.0 | N1-020940 |
| 2002-06 | NP-16 | NP-020234 | 064 | | Incorporation of previously agreed corrections to clause 5.2.5.2 (N1-020416) | 5.0.0 | 5.1.0 | N1-021004 |
| 2002-06 | NP-16 | NP-020234 | 065 | | Clause 7.2 editorial corrections | 5.0.0 | 5.1.0 | N1-021005 |
| 2002-06 | NP-16 | NP-020234 | 067 | 2 | S-CSCF routing of MO calls | 5.0.0 | 5.1.0 | N1-021097 |
| 2002-06 | NP-16 | NP-020234 | 068 | 1 | I-CSCF routing of dialog requests | 5.0.0 | 5.1.0 | N1-021078 |
| 2002-06 | NP-16 | NP-020234 | 069 | 2 | Definition of the Tokenised-by parameter | 5.0.0 | 5.1.0 | N1-021096 |
| 2002-06 | NP-16 | NP-020235 | 070 | 3 | SDP procedures at UE | 5.0.0 | 5.1.0 | N1-021453 |
| 2002-06 | NP-16 | NP-020235 | 073 | 2 | Updates to the procedures involving the iFCs, following the Oulu iFC changes | 5.0.0 | 5.1.0 | N1-021440 |
| 2002-06 | NP-16 | NP-020235 | 074 | 1 | Addition of DHCPv6 references to 24.229 | 5.0.0 | 5.1.0 | N1-021086 |
| 2002-06 | NP-16 | NP-020235 | 075 | 1 | Clarification to URL and address assignments | 5.0.0 | 5.1.0 | N1-021083 |
| 2002-06 | NP-16 | NP-020235 | 079 | 3 | Downloading the implicitly registered public user identities from the S-CSCF to P-CSCF | 5.0.0 | 5.1.0 | N1-021510 |
| 2002-06 | NP-16 | NP-020235 | 080 | 3 | Clarification of GPRS aspects | 5.0.0 | 5.1.0 | N1-021486 |
| 2002-06 | NP-16 | NP-020235 | 081 | 2 | Introduction of Subscription Locator Function Interrogation at I-CSCF in 24.229 | 5.0.0 | 5.1.0 | N1-021469 |
| 2002-06 | NP-16 | NP-020235 | 082 | 1 | Introduction of Visited_Network_ID p-header | 5.0.0 | 5.1.0 | N1-021433 |
| 2002-06 | NP-16 | NP-020236 | 084 | 1 | MRFC register addresses | 5.0.0 | 5.1.0 | N1-021434 |
| 2002-06 | NP-16 | NP-020236 | 085 | 1 | MRFC INVITE interface editor's notes | 5.0.0 | 5.1.0 | N1-021470 |
| 2002-06 | NP-16 | NP-020236 | 086 | 1 | MRFC OPTIONS interface editor's notes | 5.0.0 | 5.1.0 | N1-021471 |
| 2002-06 | NP-16 | NP-020236 | 087 | | MRFC PRACK & INFO editor's notes | 5.0.0 | 5.1.0 | N1-021159 |
| 2002-06 | NP-16 | NP-020236 | 088 | 1 | MGCF OPTIONS interface editor's notes | 5.0.0 | 5.1.0 | N1-021472 |
| 2002-06 | NP-16 | NP-020236 | 089 | | MGCF reINVITE editor's notes | 5.0.0 | 5.1.0 | N1-021161 |

| Change history | | | | | | | | |
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| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New | WG doc |
| 2002-06 | NP-16 | NP-020237 | 090 | | 3PCC AS editor's notes | 5.0.0 | 5.1.0 | N1-021162 |
| 2002-06 | NP-16 | NP-020237 | 091 | | AS acting as terminating UA editor's notes | 5.0.0 | 5.1.0 | N1-021163 |
| 2002-06 | NP-16 | NP-020237 | 092 | 1 | AS acting as originating UA editor's notes | 5.0.0 | 5.1.0 | N1-021466 |
| 2002-06 | NP-16 | NP-020237 | 093 | 2 | Charging overview clause | 5.0.0 | 5.1.0 | N1-021512 |
| 2002-06 | NP-16 | NP-020237 | 094 | 1 | Procedures for original-dialog-id P-header | 5.0.0 | 5.1.0 | N1-021456 |
| 2002-06 | NP-16 | NP-020237 | 095 | 2 | Procedures for charging-vector P-header | 5.0.0 | 5.1.0 | N1-021513 |
| 2002-06 | NP-16 | NP-020237 | 096 | 1 | Procedures for charging-function-addresses P-header | 5.0.0 | 5.1.0 | N1-021458 |
| 2002-06 | NP-16 | NP-020237 | 097 | 1 | SDP types | 5.0.0 | 5.1.0 | N1-021467 |
| 2002-06 | NP-16 | NP-020237 | 100 | | Removal of State from profile tables | 5.0.0 | 5.1.0 | N1-021173 |
| 2002-06 | NP-16 | NP-020238 | 101 | | Editor's note cleanup - clause 3 | 5.0.0 | 5.1.0 | N1-021174 |
| 2002-06 | NP-16 | NP-020238 | 102 | | Editor's note cleanup - clause 4 | 5.0.0 | 5.1.0 | N1-021175 |
| 2002-06 | NP-16 | NP-020238 | 103 | | Editor's note cleanup - clause 5.1 and deletion of void subclauses | 5.0.0 | 5.1.0 | N1-021176 |
| 2002-06 | NP-16 | NP-020238 | 104 | 1 | Editor's note cleanup - clause 5.2 and deletion of void subclauses | 5.0.0 | 5.1.0 | N1-021487 |
| 2002-06 | NP-16 | NP-020238 | 105 | | Editor's note cleanup - clause 5.3 | 5.0.0 | 5.1.0 | N1-021178 |
| 2002-06 | NP-16 | NP-020238 | 106 | | Editor's note cleanup - clause 5.4 and deletion of void subclauses | 5.0.0 | 5.1.0 | N1-021179 |
| 2002-06 | NP-16 | NP-020238 | 107 | | Editor's note cleanup - clause 5.5 and deletion of void subclauses | 5.0.0 | 5.1.0 | N1-021180 |
| 2002-06 | NP-16 | NP-020238 | 110 | | Editor's note cleanup - clause 6 | 5.0.0 | 5.1.0 | N1-021183 |
| 2002-06 | NP-16 | NP-020238 | 111 | | Editor's note cleanup - clause 9 | 5.0.0 | 5.1.0 | N1-021184 |
| 2002-06 | NP-16 | NP-020239 | 113 | 1 | SIP Default Timers | 5.0.0 | 5.1.0 | N1-021465 |
| 2002-06 | NP-16 | NP-020239 | 114 | 1 | Correction of the subscription to the registration event package | 5.0.0 | 5.1.0 | N1-021436 |
| 2002-06 | NP-16 | NP-020239 | 115 | 1 | Support for ISIMless UICC | 5.0.0 | 5.1.0 | N1-021441 |
| 2002-06 | NP-16 | NP-020239 | 119 | 1 | SIP procedures at UE | 5.0.0 | 5.1.0 | N1-021452 |
| 2002-06 | NP-16 | NP-020239 | 121 | 2 | New requirements in the P-CSCF | 5.0.0 | 5.1.0 | N1-021509 |
| 2002-06 | NP-16 | NP-020239 | 122 | | SDP procedures at MGCF | 5.0.0 | 5.1.0 | N1-021264 |
| 2002-06 | NP-16 | NP-020239 | 124 | 1 | S-CSCF allocation | 5.0.0 | 5.1.0 | N1-021443 |
| 2002-06 | NP-16 | NP-020240 | 129 | 1 | Introduction of P-Access-Network-Info header | 5.0.0 | 5.1.0 | N1-021498 |
| 2002-06 | NP-16 | NP-020240 | 130 | 2 | Usage of Path and P-Service Route | 5.0.0 | 5.1.0 | N1-021508 |
| 2002-06 | NP-16 | NP-020240 | 133 | | Removal of Referred-By header from specification | 5.0.0 | 5.1.0 | N1-021354 |
| 2002-06 | NP-16 | NP-020240 | 134 | | Handling of Record-Route header in profile tables | 5.0.0 | 5.1.0 | N1-021357 |
| 2002-06 | NP-16 | NP-020312 | 135 | 1 | Asserted identities and privacy | 5.0.0 | 5.1.0 | |
| 2002-06 | NP-16 | NP-020240 | 136 | | Removal of caller preferences from specification | 5.0.0 | 5.1.0 | N1-021359 |
| 2002-06 | NP-16 | NP-020240 | 137 | | Substitution of REFER references | 5.0.0 | 5.1.0 | N1-021360 |
| 2002-06 | NP-16 | NP-020240 | 138 | | Removal of session timer from specification | 5.0.0 | 5.1.0 | N1-021361 |
| 2002-09 | NP-17 | NP-020489 | 141 | 2 | Adding MESSAGE to 24.229 | 5.1.0 | 5.2.0 | |
| 2002-09 | NP-17 | NP-020375 | 142 | | Public user identity to use for third party register | 5.1.0 | 5.2.0 | N1-021563 |
| 2002-09 | NP-17 | NP-020375 | 143 | 1 | Replace P-Original-Dialog-ID header with unique data in Route header | 5.1.0 | 5.2.0 | N1-021797 |

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| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New | WG doc |
| 2002-09 | NP-17 | NP-020375 | 145 | | Synchronize text with latest I-D for P-headers for charging | 5.1.0 | 5.2.0 | N1-021569 |
| 2002-09 | NP-17 | NP-020488 | 146 | 2 | Service profiles and implicitly registered public user identities | 5.1.0 | 5.2.0 | |
| 2002-09 | NP-17 | NP-020376 | 147 | | S-CSCF decides when to include IOI | 5.1.0 | 5.2.0 | N1-021571 |
| 2002-09 | NP-17 | NP-020376 | 148 | | Clean up XML in clause 7.6 | 5.1.0 | 5.2.0 | N1-021572 |
| 2002-09 | NP-17 | NP-020376 | 149 | | Fix clause 5.2.7.4 header | 5.1.0 | 5.2.0 | N1-021573 |
| 2002-09 | NP-17 | NP-020376 | 150 | | Removal of forward reference to non P-CSCF procedures | 5.1.0 | 5.2.0 | N1-021589 |
| 2002-09 | NP-17 | NP-020376 | 151 | | Deregistration of public user identities | 5.1.0 | 5.2.0 | N1-021590 |
| 2002-09 | NP-17 | NP-020376 | 152 | | Reauthentication trigger via other means | 5.1.0 | 5.2.0 | N1-021591 |
| 2002-09 | NP-17 | NP-020487 | 153 | 3 | Registration with integrity protection | 5.1.0 | 5.2.0 | |
| 2002-09 | NP-17 | NP-020485 | 154 | 2 | Explicit listing of need to route response messages | 5.1.0 | 5.2.0 | |
| 2002-09 | NP-17 | NP-020377 | 157 | 1 | Include IP address in ICID | 5.1.0 | 5.2.0 | N1-021816 |
| 2002-09 | NP-17 | NP-020377 | 158 | | Reference updates | 5.1.0 | 5.2.0 | N1-021604 |
| 2002-09 | NP-17 | NP-020377 | 159 | | Abbreviation updates | 5.1.0 | 5.2.0 | N1-021605 |
| 2002-09 | NP-17 | NP-020377 | 163 | 1 | Clarifications of allocation of IP address | 5.1.0 | 5.2.0 | N1-021817 |
| 2002-09 | NP-17 | NP-020377 | 171 | 1 | Verifications at the P-CSCF for subsequent request | 5.1.0 | 5.2.0 | N1-021802 |
| 2002-09 | NP-17 | NP-020377 | 174 | 1 | Clarification of IMS signalling flag | 5.1.0 | 5.2.0 | N1-021781 |
| 2002-09 | NP-17 | NP-020377 | 176 | 1 | Definition of a general-purpose PDP context for IMS | 5.1.0 | 5.2.0 | N1-021783 |
| 2002-09 | NP-17 | NP-020372 | 177 | 2 | Request for DNS IPv6 server address | 5.1.0 | 5.2.0 | N1-021833 |
| 2002-09 | NP-17 | NP-020378 | 178 | | Error cases for PDP context modification | 5.1.0 | 5.2.0 | N1-021679 |
| 2002-09 | NP-17 | NP-020378 | 183 | 1 | Incorporation of draft-ietf-sip-sec-agree-04.txt | 5.1.0 | 5.2.0 | N1-021791 |
| 2002-09 | NP-17 | NP-020378 | 185 | 1 | User Initiated De-registration | 5.1.0 | 5.2.0 | N1-021787 |
| 2002-09 | NP-17 | NP-020378 | 186 | 1 | Mobile initiated de-registration | 5.1.0 | 5.2.0 | N1-021788 |
| 2002-09 | NP-17 | NP-020378 | 187 | 1 | CallID of REGISTER requests | 5.1.0 | 5.2.0 | N1-021786 |
| 2002-09 | NP-17 | NP-020378 | 188 | 1 | Correction to the I-CSCF routing procedures | 5.1.0 | 5.2.0 | N1-021803 |
| 2002-09 | NP-17 | NP-020378 | 189 | 1 | Registration procedures at P-CSCF | 5.1.0 | 5.2.0 | N1-021793 |
| 2002-09 | NP-17 | NP-020378 | 192 | 1 | Corrections related to the P-Access-Network-Info header | 5.1.0 | 5.2.0 | N1-021827 |
| 2002-09 | NP-17 | NP-020378 | 194 | 1 | Chapter to describe the registration event | 5.1.0 | 5.2.0 | N1-021794 |
| 2002-09 | NP-17 | NP-020484 | 196 | | Definition of abbreviation IMS | 5.1.0 | 5.2.0 | |
| 2002-12 | NP-18 | NP-020558 | 140 | 4 | Support of non-IMS forking | 5.2.0 | 5.3.0 | N1-022446 |
| 2002-12 | NP-18 | NP-020565 | 144 | 2 | Identification of supported IETF drafts within this release | 5.2.0 | 5.3.0 | N1-022114 |
| 2002-12 | NP-18 | NP-020558 | 161 | 3 | Clarifications and editorials to SIP profile | 5.2.0 | 5.3.0 | N1-022412 |
| 2002-12 | NP-18 | NP-020558 | 175 | 5 | Clarifications of the binding and media grouping | 5.2.0 | 5.3.0 | N1-022494 |
| 2002-12 | NP-18 | NP-020558 | 179 | 2 | Support of originating requests from Application Servers | 5.2.0 | 5.3.0 | N1-022106 |
| 2002-12 | NP-18 | NP-020558 | 197 | | Wrong references in 4.1 | 5.2.0 | 5.3.0 | N1-021902 |
| 2002-12 | NP-18 | NP-020558 | 198 | | Alignment of the MGCF procedures to RFC 3312 | 5.2.0 | 5.3.0 | N1-021903 |

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| 2002-12 | NP-18 | NP-020558 | 199 | 1 | Service Route Header and Path Header interactions | 5.2.0 | 5.3.0 | N1-022080 |
| 2002-12 | NP-18 | NP-020558 | 202 | | Addition of clause 6 though clause 9 references to conformance clause | 5.2.0 | 5.3.0 | N1-021919 |
| 2002-12 | NP-18 | NP-020558 | 203 | 1 | URL and address assignments | 5.2.0 | 5.3.0 | N1-022115 |
| 2002-12 | NP-18 | NP-020559 | 204 | 3 | Fix gprs-charging-info definition and descriptions | 5.2.0 | 5.3.0 | N1-022426 |
| 2002-12 | NP-18 | NP-020559 | 206 | | Alignment of the SDP attributes related to QoS integration with IETF | 5.2.0 | 5.3.0 | N1-021930 |
| 2002-12 | NP-18 | NP-020559 | 207 | 1 | Update of the 3GPP-generated SIP P- headers document references | 5.2.0 | 5.3.0 | N1-022116 |
| 2002-12 | NP-18 | NP-020559 | 208 | 1 | Handling of INVITE requests that do not contain SDP | 5.2.0 | 5.3.0 | N1-022098 |
| 2002-12 | NP-18 | NP-020559 | 209 | 2 | UE Registration | 5.2.0 | 5.3.0 | N1-022471 |
| 2002-12 | NP-18 | NP-020559 | 211 | 1 | Usage of private user identity during registration | 5.2.0 | 5.3.0 | N1-022083 |
| 2002-12 | NP-18 | NP-020559 | 212 | 1 | P-CSCF subscription to the users registration-state event | 5.2.0 | 5.3.0 | N1-022084 |
| 2002-12 | NP-18 | NP-020559 | 213 | 2 | Handling of MT call by the P-CSCF | 5.2.0 | 5.3.0 | N1-022154 |
| 2002-12 | NP-18 | NP-020559 | 215 | | P-CSCF acting as a UA | 5.2.0 | 5.3.0 | N1-021939 |
| 2002-12 | NP-18 | NP-020559 | 216 | 1 | S-CSCF handling of protected registrations | 5.2.0 | 5.3.0 | N1-022085 |
| 2002-12 | NP-18 | NP-020560 | 217 | 1 | S-CSCF handling of subscription to the users registration-state event | 5.2.0 | 5.3.0 | N1-022086 |
| 2002-12 | NP-18 | NP-020560 | 218 | 1 | Determination of MO or MT in I-CSCF | 5.2.0 | 5.3.0 | N1-022102 |
| 2002-12 | NP-18 | NP-020560 | 220 | | Definition of the NAI and RTCP abbreviations | 5.2.0 | 5.3.0 | N1-021944 |
| 2002-12 | NP-18 | NP-020560 | 222 | 4 | Go related error codes in the UE | 5.2.0 | 5.3.0 | N1-022495 |
| 2002-12 | NP-18 | NP-020560 | 223 | 1 | Clarifications on CCF/ECF addresses | 5.2.0 | 5.3.0 | N1-022120 |
| 2002-12 | NP-18 | NP-020560 | 225 | 2 | Clarifications on dedicated PDP Context for IMS signaling | 5.2.0 | 5.3.0 | N1-022156 |
| 2002-12 | NP-18 | NP-020560 | 228 | 3 | Clarifications on the use of charging correlation information | 5.2.0 | 5.3.0 | N1-022425 |
| 2002-12 | NP-18 | NP-020560 | 232 | 1 | Expires information in REGISTER response | 5.2.0 | 5.3.0 | N1-022095 |
| 2002-12 | NP-18 | NP-020560 | 235 | 2 | Indication of successful establishment of Dedicated Signalling PDP context to the UE | 5.2.0 | 5.3.0 | N1-022129 |
| 2002-12 | NP-18 | NP-020560 | 237 | | P-CSCF sending 100 (Trying) Response for reINVITE | 5.2.0 | 5.3.0 | N1-021998 |
| 2002-12 | NP-18 | NP-020561 | 239 | 1 | Correction on P-Asserted-Id, P-Preferred-Id, Remote-Party-ID | 5.2.0 | 5.3.0 | N1-022100 |
| 2002-12 | NP-18 | NP-020561 | 240 | 1 | Clarifications to subclause 9.2.5 | 5.2.0 | 5.3.0 | N1-022137 |
| 2002-12 | NP-18 | NP-020561 | 242 | | ENUM translation | 5.2.0 | 5.3.0 | N1-022020 |
| 2002-12 | NP-18 | NP-020561 | 243 | 1 | AS routing | 5.2.0 | 5.3.0 | N1-022107 |
| 2002-12 | NP-18 | NP-020561 | 245 | 1 | Warning header | 5.2.0 | 5.3.0 | N1-022108 |
| 2002-12 | NP-18 | NP-020561 | 246 | 3 | S-CSCF procedure tidyup | 5.2.0 | 5.3.0 | N1-022497 |
| 2002-12 | NP-18 | NP-020561 | 247 | 1 | P-CSCF procedure tidyup | 5.2.0 | 5.3.0 | N1-022125 |
| 2002-12 | NP-18 | NP-020561 | 248 | 2 | UE procedure tidyup | 5.2.0 | 5.3.0 | N1-022472 |
| 2002-12 | NP-18 | NP-020561 | 249 | 3 | MESSAGE corrections part 1 | 5.2.0 | 5.3.0 | N1-022455 |

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| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New | WG doc |
| 2002-12 | NP-18 | NP-020561 | 250 | 2 | MESSAGE corrections part 2 | 5.2.0 | 5.3.0 | N1-022456 |
| 2002-12 | NP-18 | NP-020562 | 251 | 2 | Security association clarifications | 5.2.0 | 5.3.0 | N1-022440 |
| 2002-12 | NP-18 | NP-020562 | 252 | 1 | The use of security association by the UE | 5.2.0 | 5.3.0 | N1-022433 |
| 2002-12 | NP-18 | NP-020562 | 253 | 1 | UE integrity protected re-registration | 5.2.0 | 5.3.0 | N1-022434 |
| 2002-12 | NP-18 | NP-020562 | 255 | 3 | Handling of default public user identities by the P-CSCF | 5.2.0 | 5.3.0 | N1-022496 |
| 2002-12 | NP-18 | NP-020562 | 263 | | Fixing ioi descriptions | 5.2.0 | 5.3.0 | N1-022266 |
| 2002-12 | NP-18 | NP-020562 | 264 | 1 | Fix descriptions for ECF/CCF addresses | 5.2.0 | 5.3.0 | N1-022447 |
| 2002-12 | NP-18 | NP-020562 | 266 | 2 | Alignment with draft-ietf-sipping-reg-event-00 and clarification on network initiated deregistration | 5.2.0 | 5.3.0 | N1-022493 |
| 2002-12 | NP-18 | NP-020563 | 267 | 1 | Correction to network initiated re-authentication procedure | 5.2.0 | 5.3.0 | N1-022449 |
| 2002-12 | NP-18 | NP-020563 | 268 | 1 | Registration Expires Timer Default Setting | 5.2.0 | 5.3.0 | N1-022439 |
| 2002-12 | NP-18 | NP-020563 | 269 | 1 | Clarification on Sh interface for charging purposes | 5.2.0 | 5.3.0 | N1-022465 |
| 2002-12 | NP-18 | NP-020563 | 270 | 2 | Clarifications on the scope | 5.2.0 | 5.3.0 | N1-022500 |
| 2002-12 | NP-18 | NP-020563 | 273 | 1 | Add charging info for SUBSCRIBE | 5.2.0 | 5.3.0 | N1-022467 |
| 2002-12 | NP-18 | NP-020563 | 274 | 1 | Profile revisions for RFC 3261 headers | 5.2.0 | 5.3.0 | N1-022413 |
| 2002-12 | NP-18 | NP-020563 | 275 | | Consistency changes for SDP procedures at MGCF | 5.2.0 | 5.3.0 | N1-022345 |
| 2002-12 | NP-18 | NP-020563 | 276 | | Proxy support of PRACK | 5.2.0 | 5.3.0 | N1-022350 |
| 2002-12 | NP-18 | NP-020563 | 277 | | Clarification of transparent handling of parameters in profile | 5.2.0 | 5.3.0 | N1-022351 |
| 2002-12 | NP-18 | NP-020564 | 279 | 1 | Meaning of refresh request | 5.2.0 | 5.3.0 | N1-022444 |
| 2002-12 | NP-18 | NP-020564 | 280 | | Removal of Caller Preferences dependency | 5.2.0 | 5.3.0 | N1-022362 |
| 2002-12 | NP-18 | NP-020564 | 281 | 1 | P-Access-Network-Info clarifications | 5.2.0 | 5.3.0 | N1-022445 |
| 2002-12 | NP-18 | NP-020564 | 282 | | Clarification on use of the From header by the UE | 5.2.0 | 5.3.0 | N1-022370 |
| 2002-12 | NP-18 | NP-020634 | 283 | 2 | Support of comp=sigcomp parameter | 5.2.0 | 5.3.0 | |
| 2002-12 | NP-18 | NP-020668 | 284 | 4 | SDP media policy rejection | 5.2.0 | 5.3.0 | |
| 2002-12 | NP-18 | NP-020567 | 285 | 1 | Fallback for compression failure | 5.2.0 | 5.3.0 | N1-022481 |
| 2002-12 | NP-18 | NP-020564 | 287 | 1 | SA related procedures | 5.2.0 | 5.3.0 | N1-022459 |
| 2002-12 | NP-18 | NP-020568 | 290 | 1 | Emergency Service correction | 5.2.0 | 5.3.0 | N1-022461 |
| 2002-12 | NP-18 | NP-020663 | 278 | 4 | P-CSCF does not strip away headers | 5.2.0 | 5.3.0 | N1-022499 |
| 2002-12 | NP-18 | NP-020557 | 289 | | PCF to PDF | 5.2.0 | 5.3.0 | N1-022387 |
| 2003-03 | NP-19 | NP-030049 | 291 | | Minor correction and consistency changes to general part of profile | 5.3.0 | 5.4.0 | N1-030012 |
| 2003-03 | NP-19 | NP-030049 | 292 | | SIP profile minor correction and consistency changes | 5.3.0 | 5.4.0 | N1-030013 |
| 2003-03 | NP-19 | NP-030049 | 293 | 1 | Network asserted identity procedure corrections for the UE | 5.3.0 | 5.4.0 | N1-030261 |
| 2003-03 | NP-19 | NP-030049 | 294 | 1 | Asserted identity inclusion in SIP profile | 5.3.0 | 5.4.0 | N1-030300 |
| 2003-03 | NP-19 | NP-030049 | 296 | | Profile references relating to registration | 5.3.0 | 5.4.0 | N1-030023 |

| Change history | | | | | | | | |
|----------------|-------|-----------|-----|-----|--|-------|-------|-----------|
| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New | WG doc |
| 2003-03 | NP-19 | NP-030049 | 297 | 2 | Reference corrections | 5.3.0 | 5.4.0 | N1-030301 |
| 2003-03 | NP-19 | NP-030050 | 300 | 1 | 488 message with a subset of allowed media parameters | 5.3.0 | 5.4.0 | N1-030245 |
| 2003-03 | NP-19 | NP-030050 | 301 | 1 | Handling of Emergency Numbers in P-CSCF | 5.3.0 | 5.4.0 | N1-030239 |
| 2003-03 | NP-19 | NP-030050 | 302 | 2 | Correction of the registration state event package | 5.3.0 | 5.4.0 | N1-030268 |
| 2003-03 | NP-19 | NP-030050 | 305 | 2 | User initiated de-registration at P-CSCF | 5.3.0 | 5.4.0 | N1-030295 |
| 2003-03 | NP-19 | NP-030050 | 306 | 2 | Network-initiated deregistration at UE, P-CSCF, and S-CSCF | 5.3.0 | 5.4.0 | N1-030296 |
| 2003-03 | NP-19 | NP-030050 | 307 | 2 | UE deregistration during established dialogs | 5.3.0 | 5.4.0 | N1-030297 |
| 2003-03 | NP-19 | NP-030050 | 308 | 2 | S-CSCF handling of deregistration during established dialogs | 5.3.0 | 5.4.0 | N1-030298 |
| 2003-03 | NP-19 | NP-030050 | 309 | 1 | S-CSCF handling of established dialogs upon deregistration | 5.3.0 | 5.4.0 | N1-030233 |
| 2003-03 | NP-19 | NP-030050 | 310 | 2 | S-CSCF handling of established dialogs upon registration-lifetime expiration | 5.3.0 | 5.4.0 | N1-030299 |
| 2003-03 | NP-19 | NP-030051 | 311 | 1 | P-CSCF handling of established dialogs upon registration-lifetime expiration | 5.3.0 | 5.4.0 | N1-030235 |
| 2003-03 | NP-19 | NP-030051 | 312 | 1 | Correction of Authentication procedure | 5.3.0 | 5.4.0 | N1-030240 |
| 2003-03 | NP-19 | NP-030051 | 313 | | Mixed Path header and Service-Route operation | 5.3.0 | 5.4.0 | N1-030127 |
| 2003-03 | NP-19 | NP-030051 | 315 | 2 | Clarifications on updating the authorization token | 5.3.0 | 5.4.0 | N1-030255 |
| 2003-03 | NP-19 | NP-030051 | 318 | 2 | Consideration of P-CSCF/PDF | 5.3.0 | 5.4.0 | N1-030307 |
| 2003-03 | NP-19 | NP-030051 | 319 | 2 | Clarification on GPRS charging information | 5.3.0 | 5.4.0 | N1-030308 |
| 2003-03 | NP-19 | NP-030051 | 323 | 1 | P-Access-Network-Info procedure corrections for the UE | 5.3.0 | 5.4.0 | N1-030250 |
| 2003-03 | NP-19 | NP-030051 | 324 | 1 | P-Access-Network-Info procedure corrections for the S-CSCF | 5.3.0 | 5.4.0 | N1-030251 |
| 2003-03 | NP-19 | NP-030051 | 326 | 1 | Updating user agent related profile tables | 5.3.0 | 5.4.0 | N1-030260 |
| 2003-03 | NP-19 | NP-030052 | 327 | 2 | Cleanup and clarification to the registration and authentication procedure | 5.3.0 | 5.4.0 | N1-030282 |
| 2003-03 | NP-19 | NP-030052 | 328 | 1 | Corrections to the reg event package | 5.3.0 | 5.4.0 | N1-030230 |
| 2003-03 | NP-19 | NP-030052 | 330 | 2 | Clarifications for setting up separate PDP contexts in case of SBLP | 5.3.0 | 5.4.0 | N1-030288 |
| 2003-03 | NP-19 | NP-030052 | 331 | 2 | Handling of the P-Media-Autohorization header | 5.3.0 | 5.4.0 | N1-030289 |
| 2003-03 | NP-19 | NP-030052 | 333 | 3 | Removal of P-Asserted-Identity from clause 7 of 24.229 | 5.3.0 | 5.4.0 | N1-030310 |
| 2003-03 | NP-19 | NP-030052 | 334 | | P-CSCF general procedure corrections | 5.3.0 | 5.4.0 | N1-030182 |
| 2003-03 | NP-19 | NP-030052 | 335 | 2 | Usage of Contact in UE's registration procedure | 5.3.0 | 5.4.0 | N1-030281 |
| 2003-03 | NP-19 | NP-030052 | 337 | | Usage of P-Asserted-Identity for responses | 5.3.0 | 5.4.0 | N1-030193 |
| 2003-03 | NP-19 | NP-030052 | 339 | 2 | Authorization for registration event package | 5.3.0 | 5.4.0 | N1-030285 |
| 2003-03 | NP-19 | NP-030052 | 341 | 1 | P-CSCF subscription to reg event | 5.3.0 | 5.4.0 | N1-030284 |

History

| Document history | | |
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