

# CSCF Statement of Compliance Overview

## Call Session Control Function

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### STATEMENT OF COMPLIANCE

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# 1 Introduction

This document provides general information about compliances with standards for the Call Session Control Function (CSCF).





## 2 Statement of Compliance Definitions

One of the following statements is given to each standard specification:

- **Compliant** The functionality that is provided has been implemented in accordance with relevant and mandatory requirements in the specification. Possible limitations in the functionality are summarized.
- **Partially Compliant** Part of the functionality that is provided has either been implemented in a way that is deviating from relevant and mandatory requirements in the specification, or if there are functionality that has not been implemented, or both.
- **Not Compliant** The functionality that is provided has been implemented in a way that is deviating from relevant and mandatory requirements in the specification.
- **Not Applicable** No explicit CSCF requirements.

**Note:** Compliant sometimes means that the functionality is transparent for the CSCF.







## 3 Standards

This section describes the standards with which the CSCF is compliant.

### 3.1 3GPP Specifications

The compliance for each specification is described in Table 1.

**Note:** In this document, the 3GPP® specifications are based on Release 9.

*Table 1 3GPP Specifications*

| Specification/Version | Title   | Compliance     | Comment   |
|-----------------------|---|----------------|---|
| 3GPP TR 21.905        | Vocabulary for 3GPP Specifications                                    | Not Applicable |   |
| 3GPP TS 22.101        | Service aspects;<br>Service principles                                | Not Applicable |   |
| 3GPP TS 22.003        | Circuit Teleservices supported by a Public Land Mobile Network (PLMN) | Not Applicable |   |
| 3GPP TS 23.002        | Network architecture  | Compliant      |   |
| 3GPP TS 23.003        | Numbering, addressing and identification                              | Compliant      |   |
| 3GPP TS 23.167        | IP Multimedia Subsystem (IMS) emergency sessions                      | Compliant      |   |
| 3GPP TS 23.218        | IP Multimedia (IM) Session Handling; IM call model                    | Compliant      |   |
| 3GPP TS 23.221        | Architectural requirements  | Not Applicable | The architectural requirements for IMS are addressed in 3GPP TS 23.228. |
| 3GPP TS 23.228        | IP Multimedia Subsystem; Stage 2                                      | Compliant      | Temporary GRUU is not supported.  |

*Table 1 3GPP Specifications*

| <b>Specification/Version</b> | <b>Title</b>  | <b>Compliance</b> | <b>Comment</b> |
|------------------------------|---|-------------------|----------------|
| 3GPP TS 23.234               | 3GPP system to Wireless Local Area Network (WLAN) interworking; System description    | Not Applicable    |                |
| 3GPP TS 23.292               | IP Multimedia Subsystem (IMS) Centralized Services; Stage 2                           | Compliant         |                |
| 3GPP TS 23.380               | IMS Restoration Procedures  | Compliant         |                |
| 3GPP TS 24.141               | Presence Service using the IP Multimedia (IM) Core Network (CN) subsystem; Stage 3    | Compliant         |                |
| 3GPP TS 24.147               | Conferencing using the IP Multimedia (IM) Core Network (CN) subsystem; Stage 3        | Compliant         |                |
| 3GPP TS 24.167               | 3GPP IMS Management Object (MO); Stage 3  | Not Applicable    |                |
| 3GPP TS 24.173               | IMS Multimedia Telephony service and supplementary services; Stage 3                  | Not Applicable    |                |
| 3GPP TS 24.182               | IP Multimedia Subsystem (IMS) Customized Alerting Tones (CAT); Protocol specification | Compliant         |                |
| 3GPP TS 24.183               | IP Multimedia Subsystem (IMS) Customized Ringing Signal (CRS); Protocol specification | Compliant         |                |



Table 1 3GPP Specifications

| Specification/Version | Title   | Compliance          | Comment   |
|-----------------------|---|---------------------|---|
| 3GPP TS24.229         | IP Multimedia Call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP) Stage 3 | Partially Compliant | <p>The following are not supported:</p> <ul style="list-style-type: none"> <li>• Transport Layer Security (TLS)</li> <li>• History-Info</li> <li>• P-Asserted-Service</li> <li>• P-Private-Network-Indication</li> <li>• Access network charging information</li> <li>• Temporary GRUU</li> <li>• Combination of public GRUU and RFC6140</li> <li>• Multiple registration (ob), registration instance ID/reg-id</li> <li>• Type 3 IOI</li> <li>• Request-Disposition header</li> <li>• Logging P-Debug-ID</li> <li>• Overlap signaling</li> </ul> |
| 3GPP TS 24.234        | 3GPP System to Wireless Local Area Network (WLAN) interworking; User Equipment (UE) to network protocols; Stage 3             | Not Applicable      |   |
| 3GPP TS 24.237        | IP Multimedia Subsystem (IMS) Service Continuity; Stage 3   | Compliant           |   |
| 3GPP TS 24.247        | Messaging service using the IP Multimedia (IM) Core Network (CN) subsystem; Stage 3   | Not Applicable      |   |

*Table 1 3GPP Specifications*

| <b>Specification/Version</b> | <b>Title</b>  | <b>Compliance</b>   | <b>Comment</b>   |
|------------------------------|---|---------------------|--|
| 3GPP TS 24.279               | Combining Circuit Switched (CS) and IP Multimedia Subsystem (IMS) services, stage 3, Release 7                                      | Compliant           |  |
| 3GPP TS 24.292               | IP Multimedia (IM) Core Network (CN) subsystem Centralized Services (ICS); Stage 3  | Compliant           |  |
| 3GPP TS 24.323               | 3GPP IMS service level tracing management object (MO)   | Not Compliant       |  |
| 3GPP TS 24.341               | Support of SMS over IP networks; Stage 3  | Partially Compliant | The procedures requiring “service-info” are not supported. |
| 3GPP TS 24.606               | Message Waiting Indication (MWI) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification                       | Compliant           |  |
| 3GPP TS 24.616               | Malicious Communication Identification (MCID) using IP Multimedia (IM) Core Network (CN) subsystem                                  | Compliant           |  |
| 3GPP TS 24.623               | Extensible Markup Language (XML) Configuration Access Protocol (XCAP) over the Ut interface for Manipulating Supplementary Services | Not Applicable      |  |
| 3GPP TS 24.647               | Advise Of Charge (AoC) using IP Multimedia (IM) Core Network (CN) subsystem   | Compliant           |  |



*Table 1 3GPP Specifications*

| <b>Specification/Version</b> | <b>Title</b>   | <b>Compliance</b>   | <b>Comment</b>  |
|------------------------------|--|---------------------|---|
| 3GPP TS 27.060               | Mobile Station (MS) supporting Packet Switched Services  | Not Applicable      |   |
| 3GPP TS 29.061               | Interworking between the Public Land Mobile Network (PLMN) supporting Packet Based Services and Packet Data Networks (PDN) | Not Applicable      |   |
| 3GPP TS 29.162               | Interworking between the IM CN subsystem and IP networks   | Not Applicable      |   |
| 3GPP TS 29.163               | Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks                 | Not Applicable      |   |
| 3GPP TS 29.212               | Policy and Charging Control over Gx reference point  | Not Applicable      |   |
| 3GPP TS 29.213               | Policy and Charging Control signalling flows and Quality of Service (QoS) parameter mapping                                | Compliant           |   |
| 3GPP TS 29.214               | Policy and Charging Control over Rx reference point  | Partially Compliant | Indication of Emergency Session is not supported.<br><br>Notifications of AF Signaling Transmission Path Status and IP-CAN Type Change are not supported. |

Table 1 3GPP Specifications

| Specification/Version | Title  | Compliance | Comment  |
|-----------------------|--|------------|--|
| 3GPP TS 29.228        | IP Multimedia (IM) Subsystem Cx and Dx Interfaces; Signalling flows and message contents | Compliant  | <p>The procedures are supported except that the Supported-Applications, Associated-Identities, Subscription-Info, Framed-IPv6-Prefix, Framed-Interface-Id AVPs are not supported and the feature AliasInd is not supported. The S-CSCF never stores the server name in the HSS. The CSCF does not send an SAR message at Authentication failure or Authentication time-out.</p> <p>Network initiated deregistration of Wildcarded Public Service Identities is not supported, but must be done by its Private Service Identity. The CSCF does not support Session Description Service Point Trigger. The CSCF also supports Ericsson additions to the Cx/Dx interface, which carries additional functionality.</p> |
| 3GPP TS 29.229        | Cx and Dx Interfaces based on the Diameter protocol, Protocol details                    | Compliant  | <p>The procedures are supported except that the Supported-Applications, Associated-Identities, Subscription-Info, Framed-IPv6-Prefix, Framed-Interface-Id AVPs are not supported and the feature AliasInd is not supported. The CSCF also supports Ericsson additions to the Cx/Dx interface, which carries additional functionality.</p>  |



Table 1 3GPP Specifications

| Specification/Version | Title  | Compliance          | Comment  |
|-----------------------|--|---------------------|--|
| 3GPP TS 31.103        | Characteristics of the IP Multimedia services identity module (ISIM) application                         | Not Applicable      |  |
| 3GPP TS 32.240        | Telecommunication management; Charging management; Charging architecture and principles                  | Partially Compliant | The P-CSCF and the I-CSCF do not support charging.   |
| 3GPP TS 32.260        | Telecommunication management; Charging management; IP Multimedia Subsystem (IMS) charging                | Partly Compliant    | Offline/online charging is not supported for the P-CSCF and the I-CSCF. Immediate Event Charging (IEC) is not supported.   |
| 3GPP TS 32.422        | Telecommunication management; Subscriber and equipment trace; Trace control and configuration management | Compliant           |  |
| 3GPP TS 33.102        | 3G Security; Security architecture   | Not Applicable      |  |
| 3GPP TS 33.203        | Access security for IP-based services  | Compliant           |  |
| 3GPP TS 33.210        | 3G Security; Network Domain Security; IP Network Layer Security  | Compliant           | RFC 2401, PF_KEY Key Management API, Version 2. Only manual keying is supported with limitations. RFC 2367, Security Architecture for the Internet Protocol. Only ESP in transport and tunnel modes are supported. |
| 3GPP TS 33.328        | IP Multimedia Subsystem (IMS) media plane security   | Not Applicable      |  |

## 3.2 IETF RFCs

The compliance for each specification is described in Table 2.

*Table 2 IETF RFCs Specifications*

| Specification             | Title   | Compliance          | Comment |
|---------------------------|---|---------------------|---------|
| RFC 2046 (November 1996)  | Multipurpose Internet Mail Extensions (MIME) Part Two: Media Types                                    | Partially Compliant |         |
| RFC 2617 (June 1999)      | HTTP Authentication: Basic and Digest Access Authentication   | Compliant           |         |
| RFC 3261 (June 2002)      | SIP: Session Initiation Protocol  | Compliant           |         |
| RFC 3262 (June 2002)      | Reliability of provisional responses in Session Initiation Protocol (SIP)                             | Compliant           |         |
| RFC 3263 (June 2002)      | Session Initiation Protocol (SIP): Locating SIP Servers   | Compliant           |         |
| RFC 3264 (June 2002)      | An Offer/Answer Model with Session Description Protocol (SDP)   | Compliant           |         |
| RFC 3265 (June 2002)      | Session Initiation Protocol (SIP) Specific Event Notification   | Compliant           |         |
| RFC 3310 (September 2002) | Hypertext Transfer Protocol (HTTP) Digest Authentication Using Authentication and Key Agreement (AKA) | Compliant           |         |
| RFC 3311 (September 2002) | The Session Initiation Protocol (SIP) UPDATE method   | Compliant           |         |
| RFC 3312 (October 2002)   | Integration of resource management and Session Initiation Protocol (SIP)                              | Compliant           |         |





*Table 2 IETF RFCs Specifications*

| <b>Specification</b>      | <b>Title</b>  | <b>Compliance</b>   | <b>Comment</b>               |
|---------------------------|---|---------------------|------------------------------|
| RFC 3313 (January 2003)   | Private Session Initiation Protocol (SIP) Extensions for Media Authorization  | Not Compliant       |                              |
| RFC 3320 (March 2002)     | Signaling Compression (SigComp)   | Not Compliant       |                              |
| RFC 3323 (November 2002): | A Privacy Mechanism for the Session Initiation Protocol (SIP)   | Partially Compliant |                              |
| RFC 3325 (November 2002)  | Private Extensions to the Session Initiation Protocol (SIP) for Network Asserted Identity within Trusted Networks               | Compliant           |                              |
| RFC 3326 (December 2002)  | The Reason Header Field for the Session Initiation Protocol (SIP)   | Compliant           |                              |
| RFC 3327 (December 2002)  | Session Initiation Protocol Extension Header Field for Registering Non-Adjacent Contacts  | Compliant           |                              |
| RFC 3329 (January 2003)   | Security Mechanism Agreement for the Session Initiation Protocol (SIP)  | Compliant           | Syntax modified by TS33.203. |
| RFC 3428 (December 2002)  | Session Initiation Protocol (SIP) Extension for Instant Messaging   | Compliant           |                              |
| RFC 3455 (January 2003)   | Private Header (P-Header) Extensions to the Session Initiation Protocol (SIP) for the 3rd Generation Partnership Project (3GPP) | Compliant           |                              |

*Table 2 IETF RFCs Specifications*

| <b>Specification</b>     | <b>Title</b>   | <b>Compliance</b>   | <b>Comment</b>                 |
|--------------------------|--|---------------------|--------------------------------|
| RFC 3485 (February 2003) | The Session Initiation Protocol (SIP) and Session Description Protocol (SDP) static dictionary for Signaling Compression (SigComp) | Not Compliant       |                                |
| RFC 3486 (February 2003) | Compressing the Session Initiation Protocol (SIP)  | Not Compliant       |                                |
| RFC 3515 (April 2003)    | The Session Initiation Protocol (SIP) REFER method   | Partially Compliant | Does not establish a dialogue. |
| RFC 3556 (July 2003)     | Session Description Protocol (SDP) Bandwidth Modifiers for RTP Control Protocol (RTCP) Bandwidth                                   | Compliant           |                                |
| RFC 3581 (August 2003)   | An Extension to the Session Initiation Protocol (SIP) for Symmetric Response Routing   | Not Compliant       |                                |
| RFC 3608 (October 2003)  | Session Initiation Protocol (SIP) Extension Header Field for Service Route Discovery During Registration                           | Compliant           |                                |
| RFC 3680 (March 2004)    | A Session Initiation Protocol (SIP) Event Package for Registrations  | Compliant           |                                |
| RFC 3761 (April 2004)    | The E.164 to Uniform Resource Identifiers (URI) Dynamic Delegation Discovery System (DDDS) Application (ENUM)                      | Compliant           |                                |



*Table 2 IETF RFCs Specifications*

| <b>Specification</b>      | <b>Title</b>  | <b>Compliance</b> | <b>Comment</b>                             |
|---------------------------|---|-------------------|--|
| RFC 3840 (August 2004)    | Indicating User Agent Capabilities in the Session Initiation Protocol (SIP)           | Compliant         |  |
| RFC 3841 (August 2004):   | Caller Preferences for the Session Initiation Protocol (SIP)                          | Compliant         | No support for Request-Disposition header. |
| RFC 3890 (September 2004) | A Transport Independent Bandwidth Modifier for the Session Description Protocol (SDP) | Not Compliant     |  |
| RFC 3891 (September 2004) | The Session Initiation Protocol (SIP) "Replaces" Header                               | Compliant         |  |
| RFC 3892 (September 2004) | The Session Initiation Protocol (SIP) Referred-By Mechanism                           | Compliant         |  |
| RFC 3903 (October 2004)   | An Event State Publication Extension to the Session Initiation Protocol (SIP)         | Compliant         |  |
| RFC 3911 (October 2004)   | The Session Initiation Protocol (SIP) "Join" Header                                   | Compliant         |  |
| RFC 3966 (December 2004)  | The tel URI for Telephone Numbers   | Compliant         |  |
| RFC 4028 (April 2005)     | Session Timers in the Session Initiation Protocol (SIP)                               | Compliant         |  |
| RFC 4077 (May 2005)       | A Negative Acknowledgement Mechanism for Signaling Compression                        | Not Compliant     |  |
| RFC 4122 (July 2005)      | A Universally Unique Identifier (UUID) URN Namespace                                  | Not Compliant     |  |

*Table 2 IETF RFCs Specifications*

| <b>Specification</b>         | <b>Title</b>   | <b>Compliance</b>   | <b>Comment</b>  |
|------------------------------|--|---------------------|---|
| RFC 4145<br>(September 2005) | TCP-Based Media Transport in the Session Description Protocol (SDP)                                      | Compliant           |   |
| RFC 4168 (October 2005)      | The Stream Control Transmission Protocol (SCTP) as a Transport for the Session Initiation Protocol (SIP) | Not Compliant       |   |
| RFC 4235 (November 2005)     | An INVITE-Initiated Dialog Event Package for the Session Initiation Protocol (SIP)                       | Compliant           |   |
| RFC 4240 (December 2005)     | Basic Network Media Services with SIP  | Not Compliant       |   |
| RFC 4244 (November 2005)     | An Extension to the Session Initiation Protocol (SIP) for Request History Information                    | Not Compliant       |   |
| RFC 4320 (January 2006)      | Actions Addressing Identified Issues with the Session Initiation Protocol's (SIP) Non-INVITE Transaction | Not Compliant       |   |
| RFC 4346 (April 2006)        | The TLS Protocol Version 1.1   | Not Compliant       |   |
| RFC 4412 (February 2006)     | Communications Resource Priority for the Session Initiation Protocol (SIP)                               | Partially Compliant | The Resource-Priority Header is supported for the name spaces ets.0 and wps.0 to wps.4. |
| RFC 4457 (April 2006)        | The Session Initiation Protocol (SIP) P-User-Database Private-Header (P-Header)                          | Compliant           |   |



*Table 2 IETF RFCs Specifications*

| Specification             | Title  | Compliance          | Comment   |
|---------------------------|--|---------------------|---|
| RFC 4458 (January 2006)   | Session Initiation Protocol (SIP) URIs for Applications such as Voicemail and Interactive Voice Response (IVR) | Compliant           |   |
| RFC 4566 (June 2006)      | SDP: Session Description Protocol  | Partially Compliant | Implementation based on RFC2327.                            |
| RFC 4694 (October 2006)   | Number Portability Parameters for the tel URI  | Compliant           |   |
| RFC 4733 (December 2006)  | RTP Payload for DTMF Digits, Telephony Tones and Telephony Signals   | Partially Compliant | Support only as an SDP media format, not as a MIME subtype. |
| RFC 4769 (November 2006)  | IANA Registration for an Enumservice Containing Public Switched Telephone Network (PSTN) Signaling Information | Compliant           |   |
| RFC 4896 (June 2007)      | Signaling Compression (SigComp) Corrections and Clarifications Implementer's Guide for SigComp                 | Not Compliant       |   |
| RFC 4967 (July 2007)      | Dial String Parameter for the Session Initiation Protocol Uniform Resource Identifier                          | Not Compliant       |   |
| RFC 4975 (September 2007) | The Message Session Relay Protocol (MSRP)  | Not Applicable      |   |
| RFC 5002 (August 2007)    | The Session Initiation Protocol (SIP) P-Profile-Key Private Header (P-Header)                                  | Compliant           |   |

*Table 2 IETF RFCs Specifications*

| <b>Specification</b>         | <b>Title</b>   | <b>Compliance</b>      | <b>Comment</b>   |
|------------------------------|--|------------------------|--|
| RFC 5009<br>(September 2007) | Private Header<br>(P-Header)<br>Extension to the<br>Session Initiation<br>Protocol (SIP) for<br>Authorization of Early<br>Media                          | Not Compliant          |  |
| RFC 5031 (January<br>2008)   | A Uniform Resource<br>Name (URN) for<br>Services   | Partially<br>Compliant | The “sos” service is<br>supported but the<br>“counseling” service is<br>not supported. |
| RFC 5049 (December<br>2007)  | Applying Signaling<br>Compression<br>(SigComp) to the<br>Session Initiation<br>Protocol (SIP)  | Not Compliant          |  |
| RFC 5079 (December<br>2007)  | Rejecting Anonymo<br>us Requests in the<br>Session Initiation<br>Protocol (SIP)  | Compliant              |  |
| RFC 5112 (January<br>2008)   | The Presence-Specif<br>ic Static Dictionary<br>for Signaling<br>Compression<br>(SigComp)   | Not Compliant          |  |
| RFC 5245 (April<br>2010)     | Interactive Connec<br>tivity Establishment<br>(ICE): A Protocol<br>for Network Address<br>Translator (NAT)<br>Traversal for<br>Offer/Answer<br>Protocols | Not Compliant          |  |
| RFC 5373 (November<br>2008)  | Requesting<br>Answering Modes for<br>the Session Initiation<br>Protocol (SIP)  | Compliant              |  |
| RFC 5389 (October<br>2008)   | Session Traversal<br>Utilities for NAT<br>(STUN)   | Not Compliant          |  |



*Table 2 IETF RFCs Specifications*

| <b>Specification</b>     | <b>Title</b>   | <b>Compliance</b>   | <b>Comment</b>                    |
|--------------------------|--|---------------------|-----------------------------------|
| RFC 5393 (December 2008) | Addressing an Amplification Vulnerability in Session Initiation Protocol (SIP) Forking Proxies                       | Not Compliant       |                                   |
| RFC 5502 (April 2009)    | The SIP P-Served-User Private-Header (P-Header) for the 3GPP IP Multimedia (IM) Core Network (CN) Subsystem          | Compliant           |                                   |
| RFC 5626 (October 2009)  | Managing Client Initiated Connections in the Session Initiation Protocol (SIP)                                       | Not Compliant       | Support sip.instance feature tag. |
| RFC 5627 (October 2009)  | Obtaining and Using Globally Routable User Agent URIs (GRUUs) in the Session Initiation Protocol (SIP)               | Partially Compliant | Temporary GRUU is not supported   |
| RFC 5628 (October 2009)  | Registration Event Package Extension for Session Initiation Protocol (SIP) Globally Routable User Agent URIs (GRUUs) | Partially Compliant | Temporary GRUU is not supported   |
| RFC 5688 (January 2010)  | A Session Initiation Protocol (SIP) Media Feature Tag for MIME Application Subtype                                   | Compliant           |                                   |
| RFC 5768 (April 2010)    | Indicating Support for Interactive Connectivity Establishment (ICE) in the Session Initiation Protocol (SIP)         | Not Compliant       |                                   |

*Table 2 IETF RFCs Specifications*

| <b>Specification</b>      | <b>Title</b>   | <b>Compliance</b>   | <b>Comment</b>   |
|---------------------------|--|---------------------|--|
| RFC 6140 (March 2011)     | Registration for Multiple Phone Numbers in the Session Initiation Protocol (SIP) | Partially Compliant | Supported by the I-CSCF. Supported by the S-CSCF except for the interaction with GRUU. Not supported by the P-CSCF.                    |
| RFC 7339 (September 2014) | Session Initiation Protocol (SIP) Overload Control                               | Compliant           | Only the default oc algorithm <code>loss</code> is supported. The alternative mechanism that uses SIP event packages is not supported. |