

# Glossary of Terms and Acronyms

## Call Session Control Function

### TERMINOLOGY

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# 1 Introduction

This document defines the terms and acronyms used in the documentation for the Call Session Control Function (CSCF).





## 2 Terms

<b>2-tuple</b>	2-tuple is a hash used by eVIP over the source and destination addresses for traffic distribution. All traffic with the same source and destination ends up on the same CPU core on the same blade. As a result, the blade load is heavy.
<b>5-tuple</b>	5-tuple is a hash used by eVIP over local IP address, remote IP address, local port, remote port, and transport protocol. As a result, the blade load is distributed.
<b>-A</b>	The -A option can be omitted, if the password-less logon is not configured. The -A option enables the forwarding of the authentication agent connection.
<b>Accounting</b>	The act of collecting information on resource use for the purpose, among others, of billing or cost allocation.
<b>Action</b>	An executable operation triggered by setting attributes on an MO. Each action is defined in the related MOC description.
<b>AF</b>	Application Function. Element offering applications that use IP bearer resources. One example of an AF is the S-CSCF.
<b>Alarm</b>	An event raised by unplanned system fault that prevents the system from operating properly or requires immediate action from node administrator. Alarms are automatically cleared when fault is corrected.
<b>Alarm issuer</b>	Component that reports an alarm.
<b>Alert</b>	A stateless alarm, that is, an alarm that can only have the raised state. As an alarm, an alert has an associated Operating Instructions document and is reported in real time as an SNMP notification. Alerts are recorded in the Alert Log but are not exposed in any list over the NBI.
<b>Alias Role</b>	Identity of a role, which has meaning to the user. An alias role is an alias for one or more real roles. The definition of alias role allows the user to use names of roles that the user is used to. Also, the same alias can be used for several real roles. The latter can be useful when different types of MEs have defined real roles with different names, but which requires the same (or similar) authority.



<b>Application</b>	A service enabler deployed by service providers, manufacturers, or users. Individual applications are often enablers for a wide range of services.
<b>Attribute</b>	Represents the configuration. The read-only attributes in the MOs describe configuration state and operational values. The writable attributes control the operation and configuration for the particular network resource. Each attribute is defined in the related MOC description.
<b>Authentication</b>	The process of verifying the identity of an entity.
<b>Authorization</b>	The granting of permission based on authenticated identification.
<b>AUTN</b>	Authentication Token. A component of an Authentication Vector (AV), used to authenticate a network to a UE.
<b>AUTS</b>	Authentication Token. A value generated by the UE upon experiencing an SQN synchronization failure.
<b>AVP</b>	Attribute-Value Pair. Diameter AVPs carry specific Authentication, Authorization, and Accounting information, security information, and configuration details for the request and the reply.
<b>Basic Compression</b>	In basic compression, no state is saved except for the byte code, which is uploaded in the first message. Returned parameters are used.
<b>Called Party Number</b>	The called party number is a telephone number identifying the called user. The telephone number is included in a SIP request either in the format of a tel URI or in the format of a SIP URI with the telephone number in the user field.
<b>Cardinality</b>	Can exist in the MOM between MOs in parent-child relationships, and in associations between MOs.
<b>Charging Determination</b>	Charging determination is the process by which the S-CSCF extracts relevant data from the SIP signalling received and compare it with a set of preconfigured charging triggers to determine whether charging is to be applied, which charging mechanism (online or offline), and whether session or event charging is to be applied.





<b>Charging Profile</b>	A set of configured rules assigned to a particular charging trigger and defining the charging behavior to apply, and the reference to the concrete configuration options of the charging protocols applicable.
<b>Charging Rule</b>	A set of information including the service data flow filters (IP 5 tuple – local/remote IP address, local/remote port, and transport protocol), the gating status (pass/drop packets matching the rule), and the rating group, for a single service data flow.
<b>Charging Trigger</b>	A set of configured rules containing the criteria by which the SIP request received in the S-CSCF is analyzed to determine whether it must be charged or not and which type of charging mechanism is to be applied.
<b>CM</b>	Configuration Management. An area in the model, covering for, example system, configuration, network provisioning, subscriber provisioning, backup, and restore.
<b>Compute Host</b>	A physical computer where one or more Virtual Machines are running.
<b>CPI</b>	Customer Product Information. Documentation for an ME, delivered in the Active Library Explorer.
<b>Credit Control</b>	Credit control is a mechanism that directly interacts in real time with an account and controls or monitors the charges related to the service use. Credit control is a process of checking whether credit is available.
<b>CscfTrustedASEntry</b>	The S-CSCF verifies that the Application Server transport address is in the list of trusted Application Servers.
<b>CSR</b>	Customer Service Request. Used during the trouble reporting process to describe the problems identified.
<b>Cx</b>	The 3GPP reference point between a CSCF and an HSS.
<b>Data Model</b>	A mapping of the contents of an information model into a form that is specific to a particular type of data store or repository. A data model is basically the rendering of an information model according to a specific set of mechanisms for representing, organizing, storing, and handling data. In contrast to an Information Model, a Data Model includes implementation (and protocol-) specific details. That is, rules that explain how to map MOs onto lower-level protocol constructs.



**Derived Data Type**

Data type enhanced with extra restrictions and properties. Derived string data types contain, for example, length and content constraints. Derived integer data types contain extra range constraints. Each derived data type is defined in the related MOC description.

**Distinct IMPU**

A Distinct IMPU is provisioned in the HSS and identifies a single non-wildcarded Public User Identity that can belong to any service profile. The Distinct IMPU can be or not be within the range of a wIMPU. The Distinct IMPU is part of the same Implicit Registration Set as one or more wIMPUs. An Implicit Registration Set can have any combination of wIMPUs and Distinct IMPUs, with any combination of service profiles.

**DN**

Distinguished Name. The name of an object in an object tree that is shared between the system and the Management System. The DN is in 3GPP® format (from root to leaf). The DN is used to identify an MO uniquely in the system. It gives the path of the MO in the tree of objects. The system uses 3GPP formatted DNs where each relative DN part consists of the MOC name equal the MO identity. If the key attribute name is not equal to the MOC name plus ID, then the key attribute name is also appended to the MOC name separated by a dot.

**Downlink**

Refers to the direction of traffic from the network to the user equipment.

**Dx**

The 3GPP reference point between a CSCF and an SLF.

**E.164**

The International Public Telecommunication Numbering Plan, ITU-T Recommendation E.164.

**ECIM**

Ericsson Common Information Model. Controls the MOM structure. The ECIM is based on the CIM standard.

**ECLI**

Ericsson Command-Line Interface. A terminal-based Command-Line Interface that is used to monitor and manage the ME. The ECLI is based on industry de facto standard patterns.

**Enumeration**

Integer-name pairs defining a fixed set of named values for an attribute, return value, or action parameter. Each enumeration is defined in the MOM.

**Ericsson NETCONF Interface**

A Machine to Machine interface for configuration management of the ME using the NETCONF protocol over the Secure Shell.



<b>Event</b>	Occurrence of significance to users, the MEs under surveillance and Network Management specifications. Events do not have states.
<b>Explicit iFC</b>	Initial Filter Criteria specified explicitly in the user profile received from the HSS.
<b>Explicit Preference</b>	A caller preference indicated explicitly in the Accept-Contact or Reject-Contact header fields.
<b>External Router</b>	A Layer 3 capable router to which the CSCF VNF is connected. It can reside outside or inside the cloud infrastructure.
<b>Failover</b>	The mechanism that is done by an I-CSCF for forwarding a request to the secondary S-CSCF after the I-CSCF detects the primary S-CSCF has experienced a service interruption.
<b>Feature tag</b>	A name that identifies a feature. An example is "sip.methods".
<b>First Match Analysis</b>	A first match analysis is defined as an analysis where a set of characters, for example, a set of characters representing a telephone number, is matched against the entries in a list and the analysis is performed character by character against the entries in the list until either a match is found or it has been concluded that no match exists.
<b>Fixed Domain</b>	The set of nodes that cannot be subject of a scaling operation. Fixed domain of the CSCF consists of SC-1 and SC-2 nodes permanently. The domain cannot be changed.
<b>Flow Description</b>	See Service Data Flow.



## **Freephone Service**

Two accesses to the freephone databases are normally done for routing a call to a freephone number. The first one is done by the originating network that queries a freephone database for the CIC information so that the call can be routed to the serving freephone service provider of the called freephone number. The first freephone database contains the CIC information for all the active freephone numbers. The CIC information is returned in the query response but the `npdi` indicator is not to be set.

When the call reaches the serving freephone provider, the second database access is performed to map the freephone number to a geographical telephone number, or internal routing information, or both. The second freephone database contains mapping information only for those freephone numbers served by a freephone service provider.

When a geographical telephone number is returned in the response, it is possible that the NP-related information for that geographical telephone number could be also returned. In that case, the `npdi` parameter and the `rn` parameter containing the Routing Number is added to the query response.

It is possible that the originating carrier can provide freephone service, and its freephone database contains the CIC information for all the active freephone numbers plus the mapping information for those freephone numbers it serves.

## **Gating**

A mechanism to enable or disable flows at the PCEF. It is used to prevent fraud. Charging rules are installed with status closed until the SIP session is established that the status is changed to open. It can be used when a media is temporarily paused.

## **Gm**

The 3GPP reference point between a UE and a CSCF.

## **GP**

Granularity Period. The time between the initiation of two successive gatherings of measurement data.

## **Guest**

Virtual Machine is sometimes referred to as the Guest.

## **Guest OS**

The operating system running inside a Virtual Machine.

## **HA**

High Availability. A system or component that is continuously operational for a desirably long length of time. Availability is measured relative to 100% operational status.



<b>Heartbeats</b>	Used by a Management System to monitor the interface over which the alarms or alerts are to be sent. Heartbeats are needed because a management system cannot assume that a “silent” ME behaves properly. The Heartbeat event is reported as an SNMP notification at regular intervals.
<b>HSS</b>	Home Subscriber Server. An IMS database that contains the subscription-related information (subscriber profiles), performs authentication and authorization of the user, and can provide information about the location and IP information of the subscriber.
<b>ICE</b>	Interactive Connectivity Establishment. A technique for NAT traversal for media streams established by the offer/answer model. ICE is an extension to the offer/answer model, and it works by including a multiplicity of IP addresses and ports in the SDP offers and answers that are then tested for connectivity by peer-to-peer connectivity checks. The IP addresses and ports included in the SDP and the connectivity checks are performed using the revised STUN.
<b>ICMP</b>	Internet Control Message Protocol. A message control and error-reporting protocol between a host server and a gateway to the Internet.
<b>Implicit Preference</b>	A caller preference that is implied through the presence of other aspects of a request. For example, if the request method is INVITE, it represents an implicit caller preference to route the request to a UE that supports the INVITE method.
<b>IMS Service Session</b>	An IMS session established between the UEs.
<b>Information Model</b>	An abstraction and representation of the entities (or MOs) in a managed environment, their properties, attributes, and operations, as well as the way that they relate to each other. It is independent of any specific repository, software use, protocol, or platform.
<b>Initial Request</b>	A SIP request that either initiates the creation of a new dialog or is a standalone request.



### **Interrogating Call Session Control Function**

The terminating I-CSCF is the entity that receives the SIP request. It analyses the SIP request and, depending on the result of the analysis, routes the SIP request to the BGCF, from which the Number Portability function can be started.

### **Inter-Operator Identifier**

Used to identify the networks associated with a session setup and is used for charging purposes. The inter-operator identifiers are included in the P-Charging-Vector SIP header: the orig-ioi identifies the originating network and the term-ioi identifies the terminating network of the session. The inter-operator identifiers are included (optionally) when charging data is sent to the Charging Data Function.

### **IP Flow**

A unidirectional flow of IP packets with the same source IP address and port number, the same destination IP address and port number, and the same transport protocol. Port numbers are only applicable if used by the transport protocol.

### **IP Multimedia Subsystem**

An architectural framework for delivering IP Multimedia services as defined by 3GPP 23:228.

### **IS-CSCF**

A physical node containing I-CSCF and S-CSCF logic

### **K**

A secret Key used in AKA authentication

### **Load Balancing**

The distribution of processing and communications activity evenly across a network so that no single node is overwhelmed.

### **LOT**

Linux® Open Telecom Cluster. A custom Ericsson operating system distribution based on GNU/Linux. The LOTC provides a Linux cluster with High Availability characteristics.

### **LSS**

Local Subsystem. A subsystem located in the own node.

### **MAC**

Message Authentication Code. Included in AUTN.

### **Managed Object Management**

A folder in the Active Library Explorer that contains the MOM.

### **ME**

Managed Element. A node in the network. `ManagedElement` is a single root element object in the MOM and is the starting point for navigation.

**Media Component**

A part of an IMS session description conveying information about media (for example, media type, format, IP address, ports, transport protocol, bandwidth, direction).

The media described by a media component can be either bi- or unidirectional. Media using RTP for transport also have associated RTCP. The media component also conveys information about the associated RTCP (port and possibly bandwidth).

An IMS session description can consist of more than one media component.

Media component can consist of media subcomponents.

**MIB**

Management Information Base. The collection of MOs, which control the configuration of an ME and its functionality.

**MIM**

Management Information Model. A view of the MOM, where certain parts of the MOM can be hidden from the user, depending on the use case. The MOM is traditionally stored offline, while a MIM is traditionally stored online for use by tools. Often the MIM is represented in a different language to the MOM, for example, XML. There is normally one file, in whatever modeling format, per MIM. The cardinality between a MOM and a MIM is one to one.

**MIP**

Movable Internet Protocol. In this context MIP is used when moving an IP address between two or several blades. Another description of MIP is Mobile IP, which is an Internet Engineering Task Force (IETF) standard communications protocol that is designed to allow mobile device users to move from one network to another while maintaining a permanent IP address.

**MO**

Managed Object. A software object that encapsulates the manageable characteristics and behavior of a particular hardware or software resource. An MO is an instance of a MOC. An MO normally has attributes that provide information used to characterize the MOs that belong to the MOC. An MO can also have actions that allow the user to perform operations on the underlying implementation.

**MOC**

Managed Object Class. The MOM has one or more defined MOCs. The MOCs are instantiated with real data on a deployed ME. The MOC maintains all characteristics of an MO such as attributes and actions.



<b>MOM</b>	Managed Object Model. A structured collection of configuration information that defines the O&M capability on an ME. The MOM is defined as a set of MOCs. The MOCs contain attributes representing the configuration that can be performed by the user, and actions representing the operations that can be started by the user. The MOM is a static blueprint for the creation of the actual object model.
<b>MSISDN</b>	Mobile Subscriber Integrated Services Digital Network Number. A number uniquely identifying a subscription in a GSM or a UMTS mobile network.
<b>Mw</b>	SIP interface between the P-CSCF and the I/S/E-CSCF.
<b>NBI</b>	Northbound Interface. The interface to a Management System and a CLI client. The protocols used are ECLI, NETCONF, SFTP, and SNMP.
<b>NETCONF</b>	Network Configuration. A Network Management protocol developed in the IETF and published as RFC 4741.
<b>NeLS</b>	Network License Manager
<b>Node</b>	Refers to a compute resource and can be a physical hardware blade or a virtual machine (VM) instantiation.
<b>Not registered</b>	The Public Identity has not been registered and it is not in unregistered state.
<b>Notification</b>	A general term for a message that carries an alarm or alert instance.
<b>Notifier</b>	A notifier is a user agent who generates NOTIFY requests for notifying subscribers of the state of a resource. Notifiers typically also accept SUBSCRIBE requests to create subscriptions. For further information, see Session Initiation Protocol (SIP)-Specific Event Notification - RFC3265.
<b>NSSA</b>	Not So Stubby Area. An extension of the stub area feature allowing the injection of external routes in a limited fashion into the stub area.
<b>Offline Charging</b>	A charging mechanism where charging information does not affect, in real time, the service rendered. Information is generated for post-processing of billing, accounting, capacity and trend analysis, cost allocation and auditing.





<b>Online Charging</b>	Charging mechanism where charging information can affect the service rendered in real time and therefore a direct interaction of the charging mechanisms with the session/service control is required.
<b>Or-Vnfm</b>	Reference point between Network Functions Virtualization Orchestrator (NFVO) and Virtual Network Function Manager (VNFM).
<b>Or-Vi</b>	Reference point between NFVO and Virtual Infrastructure Manager (VIM).
<b>OSS</b>	Operations Support System. Systems dealing with the telecom network to support processes such as maintaining network inventory, provisioning services, configuring network components, and managing faults.
<b>OSS-RC</b>	Operations Support System for Radio and Core. The OSS-RC is a Network Management System, used for fault and performance management.
<b>Outgoing Gateway</b>	The outgoing gateway accepts SIP requests for a user connected to another network, for example, PSTN or another IMS network. The Number Portability function does not directly interact with the outgoing gateway, but just provides a, possibly modified, called party number to be used as input for the further analysis to select an outgoing gateway.
<b>Performance Management</b>	A functional area for collection and configuration of performance data.
<b>P-Header</b>	Private Header
<b>Ported Number</b>	A ported number is a user telephone number that has been kept when the user has changed its subscription from one operator to another one.



### **Preservation of Restoration Data**

Different contacts of a user are to be registered in different Register requests. To avoid the existing restoration information in the HSS being overwritten by subsequent registration of a different contact, the restoration procedure uses the Multiple-registration-indication AVP in the SAR message.

According to 3GPP TS 23.380, when the HSS receives an SAR with Multiple-registration-indication and the Public Identity is stored as “registered” and there exists restoration information, the HSS does not overwrite the stored restoration information. Instead, the HSS rejects the SAR request and includes the existing restoration information in the SAA response. The S-CSCF updates the received restoration information with data of the new contact.

The updated restoration information is sent back to the HSS through another SAR with SAT equals to re-registration. This time the HSS accepts the restoration information update.

### **Primary S-CSCF**

The S-CSCF serving the user before a failover.

### **RADIUS**

Remote Authentication Dial In User Service. An internet protocol for carrying authentication, authorization and configuration information (RFC 2865), or accounting information (RFC2866 and RFC 2867) between a Network Access Server and a shared authentication/accounting server.

### **RAND**

Random Challenge. A component of an AV, used to challenge a UE to authenticate itself to a network.

### **RAR**

Re-Auth-Request. Rate based throttling provides a mechanism to restrict the rate of initial SIP requests from access networks toward the core network on a per SIP method basis.

### **Rating**

The act of determining the cost of the service event.

### **Registered state**

The subscriber has at least one registered contact.

### **Registered**

The Public Identity has successfully completed the registration procedure.



<b>Registrar</b>	A registrar is a server that accepts REGISTER requests and places the information it receives in those requests into the Location Service for the domain it handles. For further information, see Session Initiation Protocol - IETF RFC 3261.
<b>Registration</b>	Binding of a contact address to a Public User Identity.
<b>Restoration</b>	The mechanism that is done by an S-CSCF for retrieving the restoration information from the HSS.
<b>Restoration Backup</b>	The mechanism done by an S-CSCF for storing the restoration information to the HSS.
<b>Returned parameters</b>	Information (CPB, DMS, SMS, version, and state identifiers) returned in the SigComp header to the other peer.
<b>Role</b>	A physical node contains functions like S-CSCF, I-CSCF, and E-CSCF. These functions can be used separately or combined. A role is either a function or a combination of functions that is possible to start from an external node using a defined port. Examples of roles are I, S, and IS.
<b>Rule</b>	Authorization rules specify the permissions to a set of resources within the ME. The authorization rules are grouped into roles. Authorization rules are defined locally on the ME.
<b>S-CSCF Service Interruption</b>	A time period in which the S-CSCF does not respond to requests and does not send any requests to the rest of the IMS network.
<b>SA</b>	Security Association. The establishment of shared security attributes between two network entities to support secure communication. An SA can, for example, include the following attributes: cryptographic algorithm and mode; traffic encryption key; and parameters for the network data to be passed over the connection.
<b>Scaling Domain</b>	The set of nodes that can be subject of a scaling operation. The CSCF scaling domain consists of all traffic nodes (PL-3, PL-4, PL-5 ... PL-N).
<b>SCP</b>	Secure Copy. A remote file copy program.



<b>SDP</b>	Software Delivery Package. An archive file (TAR file) with RPM® software packages and a file describing the Ericsson product data. A software item can be an SDP. A software item represents any kind of Ericsson software product that is present on the ME.
<b>SDP offer/answer</b>	A procedure used in IMS (SIP) to negotiate a multimedia (IMS) session between end points and arrives at a common view of the media parameters. For further information, see An Offer/Answer model with the Session Description Protocol (SDP) - IETF RFC 3264.
<b>Secondary S-CSCF</b>	The S-CSCF serving a user after the primary S-CSCF has failed.
<b>Selectors</b>	IP source address, IP destination address, IP protocol, IP source port, and IP destination port.
<b>Server Capabilities</b>	The S-CSCF capability to support the defined service profiles of a user.
<b>Service Data Flow</b>	An aggregate set of IP flows. For GPRS/WCDMA, it must be possible that a service data flow is more granular than a PDP context.
<b>Service Data Flow Filter</b>	A set of filter parameters used to identify one or more of the IP flows constituting a service data flow. At least the following means for the IP flow identification to be supported; source and destination IP address+port, protocol. The Service Data Flow Filter is used by the PCRF and the PCEF.
<b>Service Record</b>	A DNS Resource Record for specifying the location of services.
<b>Serving Call Session Control Function</b>	The S-CSCF is the entity that receives the SIP request. It analyses the SIP request and, depending on the result of the analysis, routes the SIP request to the BGCF, from which the Number Portability function can be started.
<b>Session Refresh Request</b>	An INVITE or UPDATE request sent within a dialog, where at least one of the UEs supports the session timer procedure according to RFC4028.



<b>SF</b>	System Functions. Common system functions and resources for the management entity such as Fault Management (Fm), Performance Management (Pm), and Security Management (SecM). <i>SystemFunctions</i> is one of the first-level branches in the MOM.
<b>Shared iFC</b>	Initial Filter Criteria derived from the local definition associated with the Shared iFC Set ID present in the user profile received from the HSS.
<b>SQN</b>	Sequence Number. Used to compute XRES, CK, IK, and AUTN.
<b>Standalone Request</b>	A SIP request that does not create a dialog or is not part of an existing dialog.
<b>State</b>	Data saved for retrieval by a SigComp message.
<b>Stateless Compression</b>	In Stateless Compression, no state is saved, that is, SMS = 0. Hence, the byte code is sent in each SigComp message.
<b>Struct</b>	Handles structured attributes that can contain an arbitrary number of elements of the same or different type. Each struct is defined in the related MOC description.
<b>Stub Area</b>	A stub area is an area which does not receive route advertisements external to the autonomous system and routing from within the area is based entirely on a default route.
<b>STUN</b>	Session Traversal Utilities for NAT. A feature, as defined by RFC 5389, to allow an end host to discover its public IP address if it is located behind a NAT. It is used to permit NAT traversal for applications of real-time voice, video, messaging, and other interactive IP communications.
<b>Subscriber</b>	Generally a subscriber is a user agent who receives NOTIFY requests from notifiers; these NOTIFY requests contain information about the state of a resource in which the subscriber is interested. Subscribers typically also generate SUBSCRIBE requests and send them to notifiers to create subscriptions. For this event, a subscriber wants to get informed about registration state changes for a specific registered public identity/identities.
<b>Subsequent Request</b>	A SIP request that is part of an existing dialog.



<b>SysM</b>	System Management. Represents the system-level functions such as time handling and version handling. <i>SysM</i> is a system function.
<b>TCP</b>	Transmission Control Protocol. Part of the TCP/IP protocol stack. Provides a connection-oriented way to move data across the network. The protocol support byte oriented transfer of data between the applications, and is a reliable end-to-end transport protocol between the TCP processes.
<b>Telephone Object Request Broker</b>	An Ericsson propriety operating system. It is a CORBA®-compliant, distributed real-time processing environment, providing a robust cluster-based platform for telecom applications.
<b>Transaction</b>	Configuration changes are applied through atomic transactions. Thus, it is ensured that all or none of the operations are executed.
<b>Transport Management</b>	Transport-related functions and resources, for example, load sharing between all configured and available blades in the cluster, and distribution of incoming traffic to the system. <i>Transport</i> is one of the first-level branches in the MOM.
<b>Trap</b>	An unacknowledged SNMP message that carries a notification or heartbeat.
<b>UA</b>	User Agent. An endpoint in a SIP-based network that initiates SIP requests and generates accept, reject, and redirect responses on the behalf of the user.
<b>Unregistered</b>	The Public Identity has a state stored in the HSS as a consequence of a call from or to an unregistered service.
<b>Unregistered state</b>	The subscriber is not registered, but it has services related to its unregistered state.
<b>Update of Restoration Information</b>	An S-CSCF updates the restoration information in the HSS once changes are detected, the S-CSCF uploads to the HSS the whole set of restoration information belonging to the IMPI/IMPU or IMPI/IRS pair including both changed and unchanged information.



<b>Upgrade</b>	A product or product version that is created to provide an increased level of functionality or performance to a user. Upgrade is also the operation to replace a previous product or product version with a new product or product version that provides an increased level of functionality.
<b>Uplink</b>	The direction of traffic from the UE to the network.
<b>URL</b>	Uniform Resource Locator. The addressing system used by the server and the client to request, for example, a document. It is often called a location. The format of a URL is [protocol]://[machine:port]/[document]. The port number is necessary only on selected servers.
<b>UTC</b>	Coordinated Universal Time. UTC is the time-scale maintained by the Bureau International des Poids et Mesures (BIPM), with assistance from the International Earth Rotation Service (IERS), which forms the basis of a coordinated dissemination of standard frequencies and time signals. It corresponds exactly in rate with International atomic time (TAI) but differs from it by an integer number of seconds.
<b>Vi-Vnfm</b>	Reference point between Virtual Infrastructure Manager (VIM) and VNFM.
<b>Virtual Network</b>	A cloud infrastructure building block which provides logical separation of networking between VNF instances.
<b>Virtual Network Function</b>	One or more Virtual Machine (VM) instances that forms a VNF and delivers a network service/feature, or set of services/features, to its users.
<b>Virtual Network Function Instance</b>	An instantiation of VNF at time of deployment when a VNF is deployed in a cloud infrastructure. Multiple VNF instances of the same type can exist in parallel in the same cloud infrastructure.
<b>Virtual Routing Function</b>	A cloud infrastructure building block that provides Layer 3 routing capabilities to Virtual Networks.



<b>White List Logic</b>	<p>Implementing a screening function using White List Logic means that the list contains entries that are allowed to be used.</p> <p>For Payload Type Screening, this means that the list contains payload types that are allowed to be used. If a payload type is not specified in the list, the payload type is implicitly not allowed to be used.</p>
<b>Wildcarded Public Identity</b>	<p>A Wildcarded Public User Identity or a Wildcarded Public Service Identity.</p>
<b>Wildcarded Public Service Identity</b>	<p>A Wildcarded Public Service Identity represents a collection of Public Service Identities. A PSI identifies a service, or a specific resource created for a service on an Application Server. A Wildcarded Public Service Identity can take the form of a SIP URI or a tel URI.</p>
<b>Wildcarded Public User Identity</b>	<p>An HSS provisioned identity that identifies a grouped set of Public User Identities that share service profile and are handled in one Implicit Registration Set. A Wildcarded Public User Identity can take the form of a SIP URI or a tel URI as defined in TS23.003.</p>
<b>XMAC</b>	<p>Expected MAC, a value computed by a UE and compared to a received MAC value.</p>
<b>XPath</b>	<p>XPath is a language for selecting parts of an XML document.</p>
<b>XRES</b>	<p>Expected RES, a value computed by an AuC and used by the S-CSCF to validate a received RES value.</p>





# Glossary

**3GPP**

3rd Generation Partnership Project (UMTS)

**3GPP2**

3rd Generation Partnership Project (CDMA)

**-A**

The -A option can be omitted, if the password-less logon is not configured. The -A option enables the forwarding of the authentication agent connection.

**AAA**

AA Answer

**AAR**

AA Request

**ABNF**

Augmented Backus-Naur Form

**ABR**

Area Border Router

**AC**

Area Code

**ACA**

Accounting-Answer

**ACDC**

Aggregated CSR Data Collection

**ACQ**

All Call Query

**ACR**

Accounting-Request

**AF**

Application Function

**AIT**

Automatic Installation Tool

**AKA**

Authentication and Key Agreement

**ALB**

Abstract Load Balancer

**ALG**

Application Layer Gateway

**AMR**

Adaptive Multi-Rate

**ANSI**

American National Standards Institute

**AoC**

Advice of Charge

**AOR**

Address Of Record

**API**

Application Programming Interface

**AppTrace**

Application Trace

**ARP**

Address Resolution Protocol

**AS**

Application Server

**ASA**

Abort-Session-Answer

**ASP**

Application Service Part

**ASR**

Abort-Session-Request

**ATCF**

Access Transfer Control Function

**ATM**

Asynchronous Transfer Mode

**AuC**

Authentication Center



**AV**  
Authentication Vector

**AVP**  
Attribute-Value Pair

**B2BUA**  
Back-to-Back User Agent

**BCF**  
Break-in Control Function

**BFD**  
Bidirectional Forwarding Detection

**BGCF**  
Breakout Gateway Control Function

**BNC**  
Bulk Number Contact

**BNF**  
Backus-Naur Form

**BRF**  
Backup and Restore Framework

**BSP**  
Blade Server Platform

**CAAS**  
Centralized Authentication and Authorization Server

**CAS**  
Central Authentication Service

**CAT**  
Customized Alerting Tones

**CBA**  
Component Based Architecture

**CC**  
Country Code

**CCA**  
Credit Control Answer

**CCF**  
Charging Collection Function

**CCI**  
Communication Content Inspection

**CCR**  
Credit Control Request

**CDF**  
Charging Data Function

**CDR**  
Call Detail Record

**CDSv**  
Container Distribution Service

**CEA**  
Capabilities-Exchange-Answer

**CEE**  
Cloud Execution Environment

**CER**  
Capabilities-Exchange-Request

**CIC**  
Carrier Identification Code | Cloud Infrastructure Controller

**CK**  
Ciphering Key | Confidentiality Key

**CLI**  
Command-Line Interface

**CLU**  
Command-Line Utility

**CM**  
Configuration Management

**CMF**  
Configuration Management and provisioning Framework

**CN**  
Core Network

**COM**  
Common Operation and Maintenance

**COOB**  
Call Out Of the Blue

**COTS**

Commercial-of-the-Shelf

**CPB**

Cycles Per Bit

**CRS**

Customized Ringing Signal

**CS**

Circuit Switch

**CSCF**

Call Session Control Function

**CSI**

Combinational Services

**CSM**

CBA System Model

**CSR**

Customer Service Request

**CST**

Call Setup Time

**CTF**

Charging Trigger Function

**CUDB**

Centralized User Database

**DAI**

Dial Around Indicator

**DBN**

Database Network

**DBPA**

Diameter Base Protocol Accounting

**DCCA**

Diameter Credit Control Application

**DDoS**

Distributed Denial of Service

**DHCP**

Dynamic Host Configuration Protocol

**DMZ**

Demilitarized Zone

**DN**

Distinguished Name

**DNS**

Domain Name System | Domain Name System Server

**DoS**

Denial of Service

**DPI**

Deep Packet Inspection

**DRBD**

Distributed Replicated Block Device

**DRF**

Domain Routing Function

**DRS**

Distributed Resource Schedule

**DSCP**

Differentiated Services Code Point

**DSL**

Digital Subscriber Line

**DTD**

Document Type Definition

**DTLS**

Datagram Transport Layer Security

**DUA-DB**

Dynamic User Association Database

**DUA-R**

Dynamic User Association Router

**DUA-S**

Dynamic User Association Server

**DUIS**

Dynamic User Identity Support

**EATF**

Emergency Access Transfer Function

**E-CSCF**

Emergency Call Session Control Function



**ECIM**  
Ericsson Common Information Model

**ECLI**  
Ericsson Command-Line Interface

**ECMP**  
Equal-Cost Multipath

**ECS**  
Ericsson Cloud System

**ECUR**  
Event Charging with Unit Reservation

**EMS**  
Element Management System

**ENB**  
Ericsson NETCONF Browser

**ENM**  
Ericsson Network Manager

**ENS**  
External Network Selection

**ENUM**  
E.164 number

**EO**  
Ericsson Orchestrator

**EOS**  
End-Of-Selection

**EP**  
Emergency Package

**ESRN**  
Emergency Service Routing Number

**ETS**  
Emergency Telecommunications Service

**eVIP**  
Evolved Virtual Internet Protocol

**FE**  
Flow Entry

**FEE**  
Front-End Element

**FHRP**  
First Hop Redundancy Protocol

**FQDN**  
Fully Qualified Domain Name

**FS**  
File System

**FTU**  
File Transfer Utility

**GETS**  
Government Emergency Telecommunications Service

**GETS-AN**  
Government Emergency Telecommunications Service Access Number

**GETS-FC**  
Government Emergency Telecommunications Service Feature Code

**GGSN**  
Gateway GPRS Support Node

**GIBA**  
GPRS IMS Bundled Authentication

**gin**  
Generate Implicit Number

**GPRS**  
General Packet Radio Services

**GRUU**  
Globally Routable User Agent URI

**GSTN**  
Global Switched Telephone Network

**GTP**  
GPRS Tunneling Protocol

**HDS**  
Ericsson Hyperscale Datacenter System

**HOT**  
Heat Orchestration Template

**HSS**

Home Subscriber Server

**HTTP**

Hypertext Transfer Protocol

**IaaS**

Infrastructure as a Service

**IARI**

IMS Application Reference Identifier

**IBCF**

Interconnection Border Control Function

**ICE**

Interactive Connectivity Establishment

**ICID**

IMS Charging Identifier

**ICMP**

Internet Control Message Protocol

**I-CSCF**

Interrogating Call Session Control Function

**IDP**

International Dialing Prefix

**IEC**

Immediate Event Charging

**IETF**

The Internet Engineering Task Force

**IFC**

Initial Filter Criteria

**IK**

Integrity Key

**IKEv1**

Internet Key Exchange version 1

**IKEv2**

Internet Key Exchange version 2

**IM**

IP Multimedia

**IMEI**

International Mobile Station Equipment Identity

**IMM**

Information Model Management

**IMPI**

IMS Private Identity

**IMPU**

IMS Public Identity | IP Multimedia Public Identity

**IMS**

IP Multimedia Subsystem

**IOI**

Inter-Operator Identifier

**IOPS**

Input/Output Operations per Second

**IP**

Internet Protocol

**IP-CAN**

IP Connectivity Access Network

**IP-PBX**

Internet Protocol Private Branch Exchange

**IPsec**

IP Security

**IPv4**

IP version 4

**IPv6**

IP version 6

**IRS**

Implicit Registration Set

**IRP**

Integration Reference Point

**IS**

Information Service

**ISC**

IMS Service Control Interface

**ISDN**

Integrated Services Data Network

**ISIM**

IP Multimedia Services Identity Module

**ISP**

In-Service Performance

**ITU**

International Telecommunication Union

**KQI**

Key Quality Indicator

**LBaaS**

Load-Balancing-as-a-Service

**LBE**

Load Balancer Element

**LDAP**

Lightweight Directory Access Protocol

**LDE**

Linux Distribution Extension

**LDN**

Local Distinguished Name

**LEM**

Lightweight Entity Management

**LI**

Lawful Interception

**LIA**

Location Information Answer

**LIR**

Location Information Request

**LISA**

Location Information Service Authority

**LM**

Load Module

**LRF**

Location Retrieval Function

**LSA**

Link-State Advertisement

**LZBS**

Lempel-Ziv Back-Skip

**MAC**

Message Authentication Code

**MAA**

Multimedia-Authentication-Answer

**MAR**

Multimedia-Authentication-Request

**MCC**

Mobile Country Code

**MCID**

Malicious Communication Identification

**MGC**

Media Gateway Controller

**MGCF**

Media Gateway Control Function

**MGW**

Media Gateway

**MIB**

Management Information Base

**MIM**

Management Information Model

**MIME**

Multipurpose Internet Mail Extensions

**MIP**

Movable Internet Protocol

**MMI**

Man–Machine Interfaces

**MNC**

Mobile Network Code

**MO**

Managed Object

**MOC**

Managed Object Class

**MOI**

Managed Object Instance

**MOM**

Managed Object Model

**MRF**

Media Resource Function

**MRFP**

Media Resource Function Processor

**MS**

Mobile Station

Managed System

**MSC**

Mobile Switching Center

**MSISDN**

Mobile Subscriber ISDN Number

**MSRP**

Message Session Relay Protocol

**MT**

Mobile Termination

**MTBF**

Mean Time Between Failures

**MTU**

Maximum Transmission Unit

**MW**

Middleware

**MWI**

Message Waiting Indication

**NAI**

Network Provided Terminal Identity

**NAPTR**

Naming Authority Pointer

**NASS**

Network Attachment Subsystem

**NAT**

Network Address Translation

**NBA**

NASS Bundled Authentication

**NBI**

Northbound Interface

**NDS**

Network Domain Security

**NE**

Network Element

**NENA**

National Emergency Number Association

**NetRed**

Network Redundant

**NFV**

Network Functions Virtualization

**NFVO**

Network Functions Virtualization Orchestrator

**NFVI**

Network Functions Virtualization Infrastructure

**NIC**

Network Interface Controller

**NM**

Node Management

**NNI**

Network-Node-Interface

**NPDB**

Number Portability Database

**NPDI**

Number Portability Database Indicator

**nPMF**

new Performance Management Function

**NPTI**

Network Provided Terminal Identity

**NSNs**

National Significant Numbers

**NTP**

Network Time Protocol

**NumNorm**

Number Normalization



**O&M**

Operation and Maintenance

**OA**

Overload Abatement

**OAM**

Operations, Administration, and Maintenance

**OCS**

Online Charging System

**ODI**

Original Dialog Identifier

**OID**

Original Dialog Identifier

**OMR**

Optimal Media Routing

**OPI**

Operating Instructions

**oPMF**

old Performance Management Function

**OR**

Onward Routing

**OSA**

Open Service Architecture

**OSPF**

Open Shortest Path First

**OSN**

Operator Service Number

**OSS**

Operations Support System

**OSS-RC**

Operations Support System for Radio and Core

**OVA**

Open Virtual Appliance | Open Virtual Alliance

**OVF**

Open Virtualization Format

**OVFD**

Open Virtualization Format Descriptor

**PAI**

P-Asserted-Identity

**PANI**

P-Access-Network-Info

**PBR**

Policy Based Routing

**PBX**

Private Branch Exchange

**PCFA**

P-Charging-Function-Address

**PCRF**

Policy and Charging Rules Function

**P-CSCF**

Proxy Call Session Control Function

**PCV**

P-Charging-Vector

**PDB**

Parameter Database

**PDBCLI**

Parameter Database Command-Line Interface

**PDBGUI**

Parameter Database Graphical User Interface

**PDN**

Public Data Network

**PDP**

Packet Data Protocol

**PDSN**

Packet Data Serving Node

**PDU**

Protocol Data Unit

**PIDF-LO**

Presence Information Data Format Location Object

**PL**

Payload



**PLMN**

Public Land Mobile Network

**PM**

Performance Management

**PMC**

Performance Management Counters

**PMF**

Performance Management Function

**PNF**

Physical Node Function

**PoC**

Push to Talk over Cellular

**PPA**

Push-Profile-Answer

**PPI**

P-Preferred-Identity

**PPR**

Push-Profile-Request

**PRC**

Primary Restore Candidate

**PS**

Packet Switched

**PSAP**

Public Safety Answering Point

**PSI**

Public Service Identity

**PSTN**

Public Switched Telephone Network

**PT**

Payload Type

**PXE**

Preboot Execution Environment

**QoR**

Query on Release

**QoS**

Quality of Service

**RAA**

Re-Auth-Answer

**RADIUS**

Remote Authentication Dial In User Service

**RAND**

Random Challenge

**RAR**

Re-Auth-Request

**RCA**

Root Cause Analysis

**RDF**

Routing Determination Function

**RDN**

Relative Distinguished Name

**RES**

Remote-control Equipment Subsystem

**RFC**

Request for Comments

**RN**

Routing Number

**RPH**

Resource-Priority Header

**RPM**

RPM Package Manager

**RS**

Registration Surrogate

**RTA**

Registration Termination Answer

**RTCP**

RTP Control Protocol

**RTP**

Real-Time Transport Protocol

**RTR**

Registration Termination Request

**RTT**

Round-Trip Time

**RUI**

Resource Utilization Information

**SA**

Security Association

**SAA**

Server-Assignment-Answer

**SAD**

Security Association Database

**SAF**

Service Application Framework

**SAN**

Storage Area Network

**SAP**

Service Access Point

**SAR**

Server-Assignment-Request

**SAT**

Server\_Assignment\_Type

**SBC**

Session Border Controller

**SBG**

Session Border Gateway

**S-CSCF**

Serving Call Session Control Function

**SC**

System Controller

**SCC AS**

Service Centralization and Continuity  
Application Server

**SCSv**

Statistics Collection Service

**SCTP**

Stream Control Transmission Protocol

**SCUR**

Session Charging with Unit Reservation

**SDP**

Session Description Protocol | Software  
Delivery Package

**SFTP**

SSH File Transfer Protocol

**SGSN**

Serving GPRS Support Node

**SiFC**

Shared iFC

**SigComp**

Signalling Compression

**SIM**

Subscriber Identity Module

**SIP**

Session Initiation Protocol

**SLF**

Subscriber Location Function

**SMP**

Subscribed Media Profile

**SMP ID**

Subscribed Media Profile Identifier

**SMS**

State Memory Size

**SNMP**

Simple Network Management Protocol

**SOAP**

Simple Object Access Protocol

**SoC**

Statement of Compliance

**SP**

Service Provider

**SPI**

Security Parameter Index

**SPT**

Service Point Trigger



<b>SQN</b> Sequence Number	<b>TP</b> Traffic Processor
<b>SRT</b> Signaling Route Test	<b>TRs</b> Trouble Reports
<b>SRV</b> Service Record	<b>TFTP</b> Trivial File Transfer Protocol
<b>SRVCC</b> Single Radio Voice Call Continuity	<b>UA</b> User Agent
<b>SS</b> Solution Set	<b>UAA</b> User-Authorization-Answer
<b>SSH</b> Secure Shell	<b>UAC</b> User Agent Client
<b>SSHD</b> Secure Shell Daemon	<b>UAR</b> User-Authorization-Request
<b>SSO</b> Single Sign-On	<b>UAS</b> User Agent Server
<b>STA</b> Session-Termination-Answer	<b>UAT</b> User Authorization Type
<b>STR</b> Session-Termination-Request	<b>UDP</b> User Datagram Protocol
<b>STUN</b> Session Traversal Utilities for NAT	<b>UE</b> User Equipment
<b>TCP</b> Transmission Control Protocol	<b>UICC</b> Universal Integrated Circuit Card
<b>TCAP</b> Transaction Capabilities Application Part	<b>UMTS</b> Universal Mobile Telecommunications System
<b>TCO</b> Total Cost Ownership	<b>URI</b> Uniform Resource Identifier
<b>TelORB</b> Telephone Object Request Broker	<b>URL</b> Uniform Resource Locator
<b>tel URI</b> Telephone Uniform Resource Locator	<b>URN</b> Uniform Resource Name
<b>TIPC</b> Transparent Inter-Process Communication	<b>USIM</b> Universal Subscriber Identity Module
<b>TLS</b> Transport Layer Security	<b>UTC</b> Coordinated Universal Time



**UTRAN**

Universal Terrestrial Radio Access Network

**UII**

User-User Information Element

**UUID**

Universally Unique Identifier

**VAPP**

Virtual Application

**VCPU**

Virtual CPU

**vCSCF**

Virtual Call Session Control Function

**VDC**

Virtual Data Center

**VDP**

Virtual Deployment Package

**VDU**

Virtualization Deployment Unit

**VIP**

Virtual IP

**VLAN**

Virtual Local Area Network

**VM**

Virtual Machine

**VMDK**

Virtual Machine Disk

**VMM**

Virtual Machine Monitor

**VNF**

Virtual Network Function

**VNFC**

Virtual Network Function Component

**VNF-LCM**

Virtual Network Function Life Cycle Manager

**VNFM**

Virtual Network Function Manager

**VNIC**

Virtual Network Interface Controller | Virtual Network Interface Card

**VoLTE**

Voice over LTE

**VP**

Virtual Path

**VPN**

Virtual Private Network

**RRP**

Virtual Router Redundancy Protocol

**wIMPU**

Wildcarded Public User Identity

**WLAN**

Wireless Local Area Network

**WP**

Wholesale Partner

**WPS**

Wireless Priority Service

**wPSI**

Wildcarded Public Service Identity

**WSDL**

Web Services Description Language

**XCAP**

XML Configuration Access Protocol

**XDMS**

XML Document Management Server

**XMAC**

Expected MAC

**XRES**

Expected RES

**XSD**

XML Schema Definition