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G. Camarillo
Ericsson
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The Internet Assigned Number Authority (IANA) Header Field Parameter
Registry for the Session Initiation Protocol (SIP)
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Abstract

This document creates an IANA registry for SIP header field parameters and parameter values. It also lists the already existing parameters and parameter values to be used as the initial entries for this registry.

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SIP Parameter Registry

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1. Introduction

[RFC 3261](#) [3] allows new header field parameters and new parameter values to be defined. However, [RFC3261](#) omitted an IANA registry for them. This document creates such a registry.

[RFC 3427](#) [4] documents the process to extend SIP. This document updates [RFC 3427](#) by specifying how to define and register new SIP header field parameters and parameter values.

2. Terminology

In this document, the key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL" are to be interpreted as described in [BCP 14](#), [RFC 2119](#) [1] and indicate requirement levels for compliant implementations.

3. Use of the Registry

SIP header field parameters and parameter values MUST be documented in an RFC in order to be registered by IANA. This documentation MUST fully explain the syntax, intended usage and semantics of the parameter or parameter value. The intent of this requirement is to assure interoperability between independent implementations, and to prevent accidental namespace collisions between implementations of dissimilar features.

Note that this registry, unlike other protocol registries, only deals with parameters and parameter values defined in RFCs (i.e., it lacks a vendor-extension tree). [RFC 3427](#) [4] documents concerns with regards to new SIP extensions which may be damaging towards security, greatly increase the complexity of the protocol, or both. New parameters and parameter values need to be documented in RFCs as a result of these concerns.

RFCs defining SIP header field parameters or parameter values MUST register them with IANA as described below.

Registered SIP header field parameters and parameter values are to be considered "reserved words". In order to preserve interoperability, registered parameters and parameter values MUST be used in a manner consistent with that described in their defining RFC. Implementations MUST NOT utilize "private" or "locally defined" SIP header field parameters or parameter values that conflict with registered parameters.

Note that although unregistered SIP header field parameters and parameter values may be used in implementations, developers are cautioned that usage of such parameters is risky. New SIP header field parameters and parameter values may be registered at any time, and there is no assurance that these new registered parameters or parameter values will not conflict with unregistered parameters currently in use.

Some SIP header field parameters only accept a set of predefined parameter values. For example, a parameter indicating the transport protocol in use may only accept as valid values the predefined tokens TCP, UDP, and SCTP. Registering all parameter values for all SIP header field parameters of this type would require a large number of subregistries. Instead, we have chosen to register parameter values by reference. That is, the entry in the parameter registry for a given header field parameter contains references to the RFCs defining new values of the parameter. References to RFCs defining parameter values appear in brackets in the registry.

So, the header field parameter registry contains a column that indicates whether or not each parameter only accepts a set of predefined values. Implementers of parameters with a "yes" in that column need to find all the valid parameter values in the RFCs provided as references.

4. IANA Considerations

[Section 27 of RFC 3261](#) [3] creates an IANA registry for method names,

header field names, warning codes, status codes, and option tags. This specification instructs the IANA to create a new sub-registry for header field parameters under

<http://www.iana.org/assignments/sip-parameters>:

4.1 Header Field Parameters Sub-Registry

The majority of the SIP header fields can be extended by defining new parameters. New SIP header field parameters are registered by the IANA. When registering a new parameter for a header field or a new value for a parameter, the following information **MUST** be provided.

- o Header field in which the parameter can appear.
- o Name of the header field parameter being registered.
- o Whether the parameter only accepts a set of predefined values.
- o A reference to the RFC where the parameter is defined and to any RFC that defines new values for the parameter. References to RFCs defining parameter values appear in brackets in the registry.

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Parameters that can appear in different header fields **MAY** have the same name. However, parameters that can appear in the same header field **MUST** have different names.

The following are the initial values for this sub-registry.

Header Field	Parameter Name	Predefined Values	Reference
Accept	q	No	RFC 3261
Accept-Encoding	q	No	RFC 3261
Accept-Language	q	No	RFC 3261
Authorization	algorithm	Yes	RFC 3261 [RFC 3310]
Authorization	auts	No	RFC 3310
Authorization	cnonce	No	RFC 3261
Authorization	nc	No	RFC 3261
Authorization	nonce	No	RFC 3261
Authorization	opaque	No	RFC 3261
Authorization	qop	Yes	RFC 3261

Authorization	realm	No	RFC 3261
Authorization	response	No	RFC 3261
Authorization	uri	No	RFC 3261
Authorization	username	No	RFC 3261
Authentication-Info	cnonce	No	RFC 3261
Authentication-Info	nc	No	RFC 3261
Authentication-Info	nextnonce	No	RFC 3261
Authentication-Info	qop	Yes	RFC 3261
Authentication-Info	rspauth	No	RFC 3261
Call-Info	purpose	Yes	RFC 3261
Contact	expires	No	RFC 3261
Contact	q	No	RFC 3261
Content-Disposition	handling	Yes	RFC 3261
Event	id	No	RFC 3265
From	tag	No	RFC 3261
P-Access-Network-Info	cgi-3gpp	No	RFC 3455
P-Access-Network-Info	utran-cell-id-3gpp	No	RFC 3455
P-Charging-Function-Addresses	ccf	No	RFC 3455
P-Charging-Function-Addresses	ecf	No	RFC 3455
P-Charging-Vector	icid-value	No	RFC 3455
P-Charging-Vector	icid-generated-at	No	RFC 3455
P-Charging-Vector	orig-ioi	No	RFC 3455
P-Charging-Vector	term-ioi	No	RFC 3455
P-DCS-Billing-Info	called	No	RFC 3603
P-DCS-Billing-Info	calling	No	RFC 3603
P-DCS-Billing-Info	charge	No	RFC 3603
P-DCS-Billing-Info	locroute	No	RFC 3603

P-DCS-Billing-Info	rksgroup	No	RFC 3603
P-DCS-Billing-Info	routing	No	RFC 3603
P-DCS-LAES	content	No	RFC 3603
P-DCS-LAES	key	No	RFC 3603
P-DCS-Redirect	count	No	RFC 3603
P-DCS-Redirect	redirector-uri	No	RFC 3603
Proxy-Authenticate	algorithm	Yes	RFC 3261
[RFC 3310]			
Proxy-Authenticate	domain	No	RFC 3261
Proxy-Authenticate	nonce	No	RFC 3261
Proxy-Authenticate	opaque	No	RFC 3261
Proxy-Authenticate	qop	Yes	RFC 3261
Proxy-Authenticate	realm	No	RFC 3261
Proxy-Authenticate	stale	Yes	RFC 3261

Proxy-Authorization	algorithm	Yes	RFC 3261 [RFC 3310]
Proxy-Authorization	auts	No	RFC 3310
Proxy-Authorization	cnonce	No	RFC 3261
Proxy-Authorization	nc	No	RFC 3261
Proxy-Authorization	nonce	No	RFC 3261
Proxy-Authorization	opaque	No	RFC 3261
Proxy-Authorization	qop	Yes	RFC 3261
Proxy-Authorization	realm	No	RFC 3261
Proxy-Authorization	response	No	RFC 3261
Proxy-Authorization	uri	No	RFC 3261
Proxy-Authorization	username	No	RFC 3261
Reason	cause	Yes	RFC 3326
Reason	text	No	RFC 3326
Retry-After	duration	No	RFC 3261
Security-Client	alg	Yes	RFC 3329
Security-Client	ealg	Yes	RFC 3329
Security-Client	d-alg	Yes	RFC 3329
Security-Client	d-qop	Yes	RFC 3329
Security-Client	d-ver	No	RFC 3329
Security-Client	mod	Yes	RFC 3329
Security-Client	port1	No	RFC 3329
Security-Client	port2	No	RFC 3329
Security-Client	prot	Yes	RFC 3329
Security-Client	q	No	RFC 3329
Security-Client	spi	No	RFC 3329
Security-Server	alg	Yes	RFC 3329
Security-Server	ealg	Yes	RFC 3329
Security-Server	d-alg	Yes	RFC 3329
Security-Server	d-qop	Yes	RFC 3329
Security-Server	d-ver	No	RFC 3329
Security-Server	mod	Yes	RFC 3329
Security-Server	port1	No	RFC 3329
Security-Server	port2	No	RFC 3329

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Security-Server	prot	Yes	RFC 3329
Security-Server	q	No	RFC 3329
Security-Server	spi	No	RFC 3329
Security-Verify	alg	Yes	RFC 3329
Security-Verify	ealg	Yes	RFC 3329
Security-Verify	d-alg	Yes	RFC 3329
Security-Verify	d-qop	Yes	RFC 3329

Security-Verify	d-ver	No	RFC 3329
Security-Verify	mod	Yes	RFC 3329
Security-Verify	port1	No	RFC 3329
Security-Verify	port2	No	RFC 3329
Security-Verify	prot	Yes	RFC 3329
Security-Verify	q	No	RFC 3329
Security-Verify	spi	No	RFC 3329
Subscription-State	expires	No	RFC 3265
Subscription-State	reason	Yes	RFC 3265
Subscription-State	retry-after	No	RFC 3265
To	tag	No	RFC 3261
Via	branch	No	RFC 3261
Via	comp	Yes	RFC 3486
Via	maddr	No	RFC 3261
Via	received	No	RFC 3261
Via	rport	No	RFC 3581
Via	ttl	No	RFC 3261
WWW-Authenticate	algorithm	Yes	RFC 3261
			[RFC 3310]
WWW-Authenticate	domain	Yes	RFC 3261
WWW-Authenticate	nonce	No	RFC 3261
WWW-Authenticate	opaque	No	RFC 3261
WWW-Authenticate	qop	Yes	RFC 3261
WWW-Authenticate	realm	No	RFC 3261
WWW-Authenticate	stale	Yes	RFC 3261

[4.2](#) Registration Policy for SIP Header Field Parameters

As per the terminology in [RFC 2434](#) [2], the registration policy for SIP header field parameters and parameter values shall be "Specification Required".

For the purposes of this registry, the parameter or the parameter value for which IANA registration is requested MUST be defined by an RFC. There is no requirement that this RFC be standards-track.

[5.](#) Security Considerations

There are no security considerations associated to this document.

6. Acknowledgements

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7 Normative References

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Author's Address

Gonzalo Camarillo
Ericsson
Hirsalantie 11
Jorvas 02420
Finland

EMail: Gonzalo.Camarillo@ericsson.com

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