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**The Internet Assigned Number Authority (IANA) Universal
Resource Identifier (URI) Parameter Registry for the Session
Initiation Protocol (SIP)**

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Abstract

This document creates an IANA registry for SIP and SIPS URI parameters, and their values. It also lists the already existing parameters to be used as initial values for that registry.

Table of Contents

<u>1</u>	Introduction	<u>3</u>
<u>2</u>	Terminology	<u>3</u>
<u>3</u>	Use of the Registry	<u>3</u>
<u>4</u>	IANA Considerations	<u>4</u>
<u>4.1</u>	SIP and SIPS URI Parameters Sub-Registry	<u>4</u>
4.2	Registration Policy for SIP and SIPS URI Parameters .	5
<u>5</u>	Security Considerations	<u>5</u>
<u>6</u>	Acknowledgements	<u>5</u>
<u>7</u>	Authors' Addresses	<u>5</u>
<u>8</u>	Normative References	<u>6</u>
<u>9</u>	Informative References	<u>6</u>

1 Introduction

[RFC3261](#) [1] allows new SIP URI and SIPS URI parameters, and new parameter values to be defined. However, [RFC3261](#) omitted an IANA registry for them. This document creates such a registry.

[RFC 3427](#) [2] documents the process to extend SIP. This document updates [RFC 3427](#) by specifying how to define and register new SIP and SIP URI parameters and their values.

2 Terminology

In this document, the key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" are to be interpreted as described in [RFC 2119](#) [3] and indicate requirement levels for compliant SIP implementations.

3 Use of the Registry

SIP and SIPS URI parameters and values for these parameters MUST be documented in a standards-track RFC in order to be registered by IANA. This documentation MUST fully explain the syntax, intended usage, and semantics of the parameter. 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](#) [2] 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 URI, SIPS URI parameters, or parameter values MUST register them with IANA as described below.

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

Note that although unregistered SIP and SIPS URI parameters may be used in implementations, developers are cautioned

that usage of such parameters is risky. New SIP and SIPS URI parameters and new values for them may be registered at any time, and there is no assurance that these new registered URI parameters will not conflict with unregistered parameters currently in use.

Some SIP and SIPS URI 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 and SIPS URI parameters of this type would require a large number of subregistries. Instead, we have chosen to register URI parameter values by reference. That is, the entry in the URI parameter registry for a given URI 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 SIP and SIPS URI 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](#) [1] 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 under <http://www.iana.org/assignments/sip-parameters>:

- o SIP/SIPS URI Parameters

4.1 SIP and SIPS URI Parameters Sub-Registry

New SIP and SIPS URI parameters and new parameter values are registered by the IANA. When registering a new SIP or SIPS parameter or a new value for a parameter, the following information MUST be provided.

- o Name of the parameter.
- o Whether the parameter only accepts a set of predefined values.
- o Reference to the RFC defining the parameter and to any RFC that defines new values for the parameter. References to RFCs defining parameter values appear in brackets in the registry.

Table 1 contains the initial values for this sub-registry.

Parameter Name	Predefined Values	Reference
comp	Yes	RFC 3486
lr	No	RFC 3261
maddr	No	RFC 3261
method	Yes	RFC 3261
transport	Yes	RFC 3261
ttl	No	RFC 3261
user	Yes	RFC 3261

Table 1: IANA SIP and SIPS URI parameter sub-registry

Note that any given parameter name is registered both as a SIP and as a SIPS URI parameter. Still, some parameters may not apply to one of the schemes. We have chosen to register any parameter as both SIP and SIPS URI parameter anyway to avoid having two parameters with the same name, one applicable to SIP URIs and one to SIPS URIs, but with different semantics. Implementors are urged to read the parameter specifications for a detailed description of the semantics of any parameter.

[4.2](#) Registration Policy for SIP and SIPS URI Parameters

As per the terminology in [RFC 2434](#) [4], the registration policy for SIP and SIPS URI parameters shall be "Specification Required".

For the purposes of this registry, the parameter for which IANA registration is requested MUST be defined by a standards-track RFC.

[5](#) Security Considerations

There are no security considerations associated to this document.

[6](#) Acknowledgements

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8 Normative References

- [1] J. Rosenberg, H. Schulzrinne, G. Camarillo, A. R. Johnston, J. Peterson, R. Sparks, M. Handley, and E. Schooler, "SIP: session initiation protocol," [RFC 3261](#), Internet Engineering Task Force, June 2002.
- [2] A. Mankin, S. Bradner, R. Mahy, D. Willis, J. Ott, and B. Rosen, "Change process for the session initiation protocol (SIP)," [RFC 3427](#), Internet Engineering Task Force, Dec. 2002.
- [3] S. Bradner, "Key words for use in RFCs to indicate requirement levels," [RFC 2119](#), Internet Engineering Task Force, Mar. 1997.
- [4] T. Narten and H. Alvestrand, "Guidelines for writing an IANA considerations section in RFCs," [RFC 2434](#), Internet Engineering Task Force, Oct. 1998.

9 Informative References

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