

Internet Assigned Numbers Authority (IANA) Registration  
of Instant Messaging and Presence DNS SRV RRs  
for the Session Initiation Protocol (SIP)

Status of this Memo

This document specifies an Internet standards track protocol for the Internet community, and requests discussion and suggestions for improvements. Please refer to the current edition of the "Internet Official Protocol Standards" (STD 1) for the standardization state and status of this protocol. Distribution of this memo is unlimited.

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Abstract

This document registers with IANA two new DNS SRV protocol labels for resolving Instant Messaging and Presence services with SIP.

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## 1. Introduction

The Service Record (SRV) [RFC2782] identifies the host(s) that will support particular services. The DNS is queried for SRV RR in the general form:

`_Service._Proto.Name`

Service: the symbolic name of the desired service

Proto: the protocol of the desired service

Name: the domain name for which this record is valid

"Address Resolution for Instant Messaging and Presence" [RFC3861] provides guidance for locating the services associated with URIs that employ the following two URI schemes [RFC3986]: 'im' for INSTANT INBOXes [RFC3860] and 'pres' for PRESENTITIES [RFC3859].

In order to ensure that the association between "\_im" and "\_pres" and their respective underlying services are deterministic, the IANA has created two independent registries: the Instant Messaging SRV Protocol Label registry and the Presence SRV Protocol Label registry.

This document defines and registers the "\_sip" protocol label in both registries so that computer programs can resolve 'im:' and 'pres:' URIs down to SIP addresses.

Moreover, this document explains how the use of SIP for Presence and Instant Messaging uses SRV.

## 2. Terminology

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119 [RFC2119].

## 3. DNS SRV Usage of SIP with 'im' and 'pres' URIs

Although there are standard procedures for resolving 'im' and 'pres' URIs (Section 3 of [RFC3861]), the labels for SIP are not registered.

Section 5 of [RFC3428] states that if a user agent (UA) is presented with an IM URI (e.g., "im:fred@example.com") as the address for an instant message, it SHOULD resolve it to a SIP URI, and place the resulting URI in the Request-URI of the MESSAGE request before

sending.

Following the procedures defined in [RFC3861], in order to resolve the IM URI, the UA performs a SRV lookup for:

`_im._sip.example.com`

Assuming that the example.com domain offers a SIP service for instant messaging at simple.example.com, this will result in a resolution of `_im._sip.example.com` to simple.example.com. Thus, the instant messaging URI `im:fred@example.com` would resolve to a SIP URI of `sip:fred@simple.example.com`.

SIP supports both pager [RFC3428] and session [RFC4975] IM mode. However, a DNS SRV lookup does not specify which SIP IM mode a domain offer. If the user agent client (UAC) supports both session mode and pager mode, it is then suggested to try session mode first; if that mode is rejected, the UAC has to be ready to fall back to pager mode.

Section 5 of [RFC3856] states that procedures defined in [RFC3861] are also used to resolve the protocol-independent PRES URI for a presentity (e.g., "pres:fred@example.com") into a SIP URI.

Following the procedures defined in [RFC3861], in order to resolve the PRES URI, the UA performs a SRV lookup for:

`_pres._sip.example.com`

Assuming that the example.com domain offers a SIP presence service at simple.example.com, this will result in a resolution of `_pres._sip.example.com` to simple.example.com. Thus, the protocol-independent PRES URI `pres:fred@example.com` would resolve to a SIP URI of `sip:fred@simple.example.com`.

#### 4. Security Considerations

This document merely serves for the registration of DNS SRV labels in the appropriate IANA registry. The document does not specify a protocol; therefore, there are no security issues associated with it.

#### 5. IANA Considerations

This specification registers a new SRV protocol label in both the Instant Messaging SRV Protocol Label registry and the Presence SRV Protocol Label registry.

### 5.1. Instant Messaging SRV Protocol Label Registration

"Address Resolution for Instant Messaging and Presence" [RFC3861] defines an Instant Messaging SRV Protocol Label registry for protocols that can provide services that conform to the "\_im" SRV Service label. Because SIP is one such protocol, IANA registers the "\_sip" protocol label in the "Instant Messaging SRV Protocol Label Registry", as follows:

Protocol label: \_sip

Specification: RFC 5509

Description: Instant messaging protocol label for the use of SIP for Presence and Instant Messaging protocol as defined by [RFC3428].

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### 5.2. Presence SRV Protocol Label Registration

"Address Resolution for Instant Messaging and Presence" [RFC3861] defines a Presence SRV Protocol Label registry for protocols that can provide services that conform to the "\_pres" SRV Service label. Because the use of SIP for Presence and Instant Messaging is one such protocol, the IANA registers the "\_sip" protocol label in the "Presence SRV Protocol Label Registry", as follows:

Protocol label: \_sip

Specification: RFC 5509

Description: Presence protocol label for the use of SIP for Presence and Instant Messaging protocol as defined by [RFC3856].

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## 6. Acknowledgments

The need for this registration was discussed with Jon Peterson and Peter Saint-Andre.

Miguel Garcia reviewed this document on behalf of the Real-time Applications and Infrastructure (RAI) Area Review Team (ART).

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