SIP and IMS Extensions

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SIP Extensions in the SIP Servlets Server are based on the Internet Engineering Task Force's (IETF) Request for Comments (RFC) protocol recommendations. Supported SIP Extensions lists the supported RFCs for the SIP Servlets Server.

Table 1. Supported SIP Extensions

Extension	RFC Number	Description
DNS	RFC 3263	SIP: Locating SIP Servers
ENUM	RFC 2916	E.164 number and DNS
INFO	RFC 2976	The SIP INFO Method
IPv6	RFC 2460	Internet Protocol, Version 6 (IPv6) Specification
JOIN	RFC 3911	The SIP "Join" Header
MESSAGE	RFC 3428	SIP Extension for Instant Messaging
PATH	RFC 3327	SIP Extension Header Field for Registering Non-Adjacent Contacts
PRACK	RFC 3262	Reliability of Provisional Responses in the SIP
PUBLISH	RFC 3903	SIP Extension for Event State Publication
REASON	RFC 3326	The Reason Header Field for the Session Initiation Protocol (SIP)
REFER	RFC 3515	The SIP Refer Method
REPLACES	RFC 3891	The SIP "Replaces" Header
STUN	RFC 3489	STUN - Simple Traversal of User Datagram Protocol (UDP) through Network Address Translators (NATs)
SUBSCRIBE/NOTIFY	RFC 3265	SIP-specific Event Notification
Symmetric Response Routing	RFC 3581	An Extension to the Session Initiation Protocol (SIP) for Symmetric Response Routing
Multipart type	RFC 4662	A Session Initiation Protocol (SIP) Event Notification
To/From Header Modification	RFC 4916	Connected Identity in the Session Initiation Protocol (SIP)

IMS Private Header (P-Header) Extensions are provided according to the recommendations of the 3rd Generation Partnering Project (3GPP) and the IETF. P-Header extensions are primarily used to store information about the networks a call traverses, including security or call charging details.

IMS P-Header Extensions describes the list of supported P-Headers, including links to the relevant ITEF memorandum where available.

Table 2. IMS P-Header Extensions

AuthorizationHeaderIMS	**Defines a new auth-param for the Authorization header used in REGISTER requests.**
PAccessNetworkInfoHeader	Contains information regarding the access network the User Agent (UA) uses to connect to the SIP Proxy. The information contained in this header may be sensitive, such as the cell ID, so it is important to secure all SIP application that interface with this header.
PAssertedIdentityHeader	Contains an identity resulting from an authentication process, derived from a SIP network intermediary. The identity may be based on SIP Digest authentication.
PAssertedServiceHeader	Contains information used by "trust domains", according to Spec(T) specifications detailed in RFC 3324.
PAssociatedURIHeader	Contains a list of URIs that are allocated to the user. The header is defined in the 200 OK response to a REGISTER request. It allows the User Agent Client (UAC) to determine the URIs the service provider has associated to the user's address-of-record URI.
PathHeader	SIP Extension header, with syntax similar to the RecordRoute header. Used in conjunction with SIP REGISTER requests and 200 class messages in response to REGISTER responses.
PCalledPartyIDHeader	Typically inserted en-route into an INVITE request by the proxy, the header is populated with the Request_URI received by the proxy in the request. The header allows the User Agent Server (UAS) to identify which address-of-record the invitation was sent to, and can be used to render distinctive audio-visual alert notes based on the URI.
PChargingFunctionAddressesHeader	Contains a list of one or more of the Charging Collection Function (CCF) and the Event Charging Function (ECF) addresses. The CCF and ECF addresses may be passed during the establishment of a dialog, or in a standalone transaction.

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PChargingVectorHeader	Contains a unique charging identifier and correlation information, which is used by network operators to correctly charge for routing events through their networks.
PMediaAuthorizationHeader	Contains one or more session-specific media authorization tokens, which are used for QoS of the media streams.
PPreferredIdentityHeader	Contains a SIP URI and an optional display-name. For example, "James May" <sip:james@domain.com>. This header is used by trusted proxy servers to identify the user to other trusted proxies, and can be used to select the correct SIP URI in the case of multiple user identities.
PPreferredServiceHeader	Used by the PAssertedService Header to determine the preferred user service. Multiple PPreferreedService headers may be present in a single request.
PProfileKeyHeader	Contains a key used by a proxy to query the user database for a given profile. The key may contain wildcards that are used as part of the query into the database.
PrivacyHeader	Contains values that determine whether particular header information is deemed as private by the UA for requests and responses.
PServedUserHeader	Contains an identity of the user that represents the served user. The header is added to the initial requests for a dialog or standalone request, which are then routed between nodes in a trusted domain.
PUserDatabaseHeader	Contains the address of the HSS handling the user that generated the request. The header field is added to request routed from an Interrogating Call Session Control Function (I-CSCF) to a Serving Call Session Control Function (S-CSCF).
PVisitedNetworkIDHeader	Contains the identifier of a visited network. The identifier is a text string or token than it known by both the registrar or the home proxy at the home network, and the proxies in the visited network.
SecurityClientHeader, SecurityServerHeader, SecurityVerifyHeader	Contains information used to negotiate the security mechanisms between a UAC, and other SIP entities including UAS, proxy and registrar.

AuthorizationHeaderIMS	**Defines a new auth-param for the Authorization header used in REGISTER requests.**
ServiceRouteHeader	Contains a route vector that will direct requests through a specified sequence of proxies. The header may be included by a registrar in response to a REGISTER request.
WWWAuthenticateHeaderIms	Extends the WWWAuthenticateResponse header functionality by defining an additional authorization parameter (auth-param).