Configurable Pass-through of SIP INVITE Parameters

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The Configurable Pass-through of SIP INVITE Parameters feature enables the Cisco Unified Border Element (Cisco UBE) platform to pass through end-to-end headers at a global or dial-peer level, that are not processed or understood in a SIP trunk to SIP trunk scenario. The pass through functionality includes all or only a configured list of unsupported or non-mandatory SIP headers, and all unsupported content/ MIME types.

Finding Feature Information

Your software release may not support all the features documented in this module. For the latest feature information and caveats, see the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the Feature Information Table at the end of this document.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Prerequisites for Configurable Pass-through of SIP INVITE Parameters

- Configuring the media flow-around command is required for Session Description Protocol (SDP) pass-through. When flow-around is not configured, the flow-through mode of SDP pass-through will be functional.

Americas Headquarters:
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

- When the dial-peer media flow mode is asymmetrically configured, the default behavior is to fallback to SDP pass-through with flow-through.

Cisco Unified Border Element

- Cisco IOS Release 15.0(1)M or a later release must be installed and running on your Cisco Unified Border Element.

Cisco Unified Border Element (Enterprise)

- Cisco IOS XE Release 3.1S or a later release must be installed and running on your Cisco ASR 1000 Series Router.

Restrictions for Configurable Pass-through of SIP INVITE Parameters

When SDP pass-through is enabled, some of interworking that the Cisco Unified Border Element currently performs cannot be activated. These features include:

- Delayed Offer to Early Offer Interworking
- Supplementary Services with triggered Invites
- DTMF Interworking scenarios
- Fax Interworking/QoS Negotiation
- Transcoding

Information About Configurable Pass-through of SIP INVITE Parameters

The Cisco UBE does not support end-to-end media negotiation between the two endpoints that establish a call session through the Cisco UBE. This is a limitation when the endpoints intend to negotiate codec/payload types that the Cisco UBE does not process, because currently, unsupported payload types will never be negotiated by the Cisco UBE. Unsupported content types include text/plain, image/jpeg and application/resource-lists+xml. To address this problem, SDP is configured to pass through transparently at the Cisco UBE, so that both the remote ends can negotiate media independently of the Cisco UBE.

SDP pass-through is addressed in two modes:

- Flow-through--Cisco UBE plays no role in the media negotiation, it blindly terminates and re-originates the RTP packets irrespective of the content type negotiated by both the ends. This supports address hiding and NAT traversal.
- Flow-around--Cisco UBE neither plays a part in media negotiation, nor does it terminate and re-originate media. Media negotiation and media exchange is completely end-to-end.

How to Configure Configurable Pass-through of SIP INVITE Parameters

Configuring Configurable Pass-through of SIP INVITE Parameters at the Global Level

To configure Unsupported Content Pass-through on a Cisco UBE platform at the global level, perform the steps in this section.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **voice service voip**
4. **sip**
5. **pass-thru** {**content** {**sdp** | **unsupp**} | **headers** {**unsupp** | *list tag*}}
6. **exit**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable** **Example:** `Router> enable`	Enables privileged EXEC mode. - Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Router# configure terminal`	Enters global configuration mode.
Step 3	**voice service voip** **Example:** `Router(config)# voice service voip`	Enters voice service VoIP configuration mode.

	Command or Action	Purpose
Step 4	**sip** **Example:** `Router(conf-voi-serv)# sip`	Enters SIP configuration mode.
Step 5	**pass-thru** {**content** {**sdp** | **unsupp**} | **headers** {**unsupp** | *list tag*}} **Example:** `Router(conf-serv-sip)# pass-thru content unsupp`	Passes the SDP transparently from in-leg to the out-leg with no media negotiation.
Step 6	**exit** **Example:** `Router(conf-serv-sip)# exit`	Exits the current mode.

Configuring Configurable Pass-through of SIP INVITE Parameters at the Dial Peer Level

To configure Unsupported Content Pass-through on a Cisco UBE platform at the dial-peer level, perform the steps in this section.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **dial-peer voice** *tag* **voip**
4. **voice-class sip pass-thru** {**content** {**sdp** \| **unsupp**} \| **headers** {**unsupp** \| **list** *tag*}} [**system**]
5. **exit**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable** **Example:** `Router> enable`	Enables privileged EXEC mode. • Enter your password if prompted.

	Command or Action	Purpose
Step 2	**configure terminal** **Example:** Router# configure terminal	Enters global configuration mode.
Step 3	**dial-peer voice** *tag* **voip** **Example:** Router(config)# dial-peer voice 2 voip	Enters dial peer VoIP configuration mode.
Step 4	**voice-class sip pass-thru** {**content** {**sdp** | **unsupp**} | **headers** {**unsupp** | **list** *tag*}} [**system**] **Example:** Router(config-dial-peer)# voice-class sip pass-thru content sdp	Passes the SDP transparently from in-leg to the out-leg with no media negotiation.
Step 5	**exit** **Example:** Router(config-dial-peer)# exit	Exits the current mode.

Feature Information for Configurable Pass-through of SIP INVITE Parameters

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Feature History Table entry for the Cisco Unified Border Element.

Table 1   *Feature Information for Configurable Pass-through of SIP INVITE Parameters*

Feature Name	Releases	Feature Information
Configurable Pass-through of SIP INVITE Parameters	15.0(1)M	This feature enables the Cisco UBE to pass through end-to-end headers at a global or dial-peer level, that are not processed or understood in a SIP trunk to SIP trunk scenario. The pass through functionality includes all or only a configured list of unsupported or non-mandatory SIP headers, and all unsupported content/ MIME types. This feature introduces the following commands: **pass-thru**and **voice-class sip pass-thru**.

Feature History Table entry for the Cisco Unified Border Element (Enterprise).

Table 2   *Feature Information for Configurable Pass-through of SIP INVITE Parameters*

Feature Name	Releases	Feature Information
Configurable Pass-through of SIP INVITE Parameters	Cisco IOSXE Release 3.1S	This feature enables the Cisco UBE to pass through end-to-end headers at a global or dial-peer level, that are not processed or understood in a SIP trunk to SIP trunk scenario. The pass through functionality includes all or only a configured list of unsupported or non-mandatory SIP headers, and all unsupported content/ MIME types. This feature introduces the following commands: **pass-thru**and **voice-class sip pass-thru**.

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