



Pass Unsupported SIP Headers

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Overview

This feature is used to pass parameters that are unsupported by Cisco Unified Border Element (CUBE), but mandatory to the service provider from one leg to another. When a SIP message is received, a check is done for the header, and if it is available, it is copied into a copy list and passed on to the outbound dial peer leg. The 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 Session Initiation Protocol (SIP) trunk to SIP trunk scenario.

Feature Information

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.

Table 1: Feature Information for Copying with SIP Profiles

Feature Name	Releases	Feature Information
Support for conditional header manipulation of SIP headers	Baseline Functionality	This feature modifies the following commands: voice class sip-profiles , response , request , voice-class sip copy-list , sip-header

Prerequisites

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

Restrictions

When Session Description Protocol (SDP) pass-through is enabled, some of the interworking that the CUBE currently performs cannot be activated. These features include:

- Delayed Offer to Early Offer Interworking
- Supplementary Services with Triggered Invites
- Flow-around calls will not work with SDP pass through
- DTMF Interworking Scenarios
- Fax Interworking/QoS Negotiation
- Transcoding

For configurable pass-through of SIP INVITE parameters, the following features for Session Initiation Protocol (SIP)-SIP dial-peer rotary calls are not supported:

- Unsupported header pass-through functionality for SIP-SIP dial-peer rotary calls
- Unsupported content pass-through functionality for SIP-SIP dial-peer rotary calls



Note With CSCty41575, the unsupported header and content pass-through functionalities mentioned above are addressed.

Supported SIP Headers

Mandatory SIP Headers

The following table provides a list of mandatory headers:

Table 2: List of Mandatory Headers

Also	Authorization	Call_ID
CC-Diversion	CC-Redirect	Cisco_Gcid
Cisco_Ccid	Contact	Content-Disposition

Content-Encoding	Content-Length	Content-Type
Cseq	Date	From
Max-Forwards	MIME-Version	P-Asserted-Identity
P-Preferred-Identity	Privacy	Proxy-Authenticate
Proxy-Authorization	Record-Route	Route
Session-Expires	Timestamp	To
User-Agent	Via	WWW-Authenticate

Unsupported Headers

You can configure CUBE to pass through unsupported headers (headers CUBE cannot understand). The following are some of the examples for SIP headers that are unsupported on CUBE:

- P-Early-Media
- SIP-Req-URI

Enable Configurable Pass-Through of SIP INVITE Parameters (Global Level)

Perform this task to configure unsupported content pass-through on a CUBE platform at the global level.

SUMMARY STEPS

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

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Device> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.

Example: Enabling Configurable Pass-Through of SIP INVITE Parameters (Global Level)

	Command or Action	Purpose
Step 2	configure terminal Example: Device# <code>configure terminal</code>	Enters global configuration mode.
Step 3	voice service voip Example: Device(config)# <code>voice service voip</code>	Enters voice service VoIP configuration mode.
Step 4	sip Example: Device(conf-voi-serv)# <code>sip</code>	Enters SIP configuration mode.
Step 5	pass-thru {content {sdp un supp} headers {un supp list-tag}} Example: Device(conf-serv-sip)# <code>pass-thru content un supp</code>	Passes the Session Description Protocol (SDP) transparently from in-leg to the out-leg with no media negotiation.
Step 6	end Example: Device(conf-serv-sip)# <code>end</code>	Ends the current configuration session and returns to privileged EXEC mode.

Example: Enabling Configurable Pass-Through of SIP INVITE Parameters (Global Level)

```
Device> enable
Device# configure terminal
Device(config)# voice service voip
Device(conf-voi-serv)# sip
Device(conf-serv-sip)# pass-thru content un supp
Device(conf-serv-sip)# end
```

Enable Configurable Pass-Through of SIP INVITE Parameters (Dial Peer Level)

Perform this task to configure unsupported content pass-through on a CUBE platform at the dial-peer level.

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. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Device> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	configure terminal Example: Device# configure terminal	Enters global configuration mode.
Step 3	dial-peer voice tag voip Example: Device(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: Device(config-dial-peer)# voice-class sip pass-thru content sdp	Passes the Session Description Protocol (SDP) transparently from in-leg to the out-leg with no media negotiation.
Step 5	end Example: Device(config-dial-peer)# end	Ends the current configuration session and returns to privileged EXEC mode.

Example: Enabling Configurable Pass-Through of SIP INVITE Parameters (Dial Peer Level)

```

Device> enable
Device# configure terminal
Device(config)# dial-peer voice 2 voip
Device(config-dial-peer)# voice-class sip pass-thru content sdp
Device(config-dial-peer)# end

```

Configure a Route String Header Pass-Through Using Pass-Through List

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **voice class sip-hdr-passthru list-tag**
4. **passthru-hdr header-name**
5. **passthru-hdr-unsupp**
6. **exit**
7. **dial-peer voice tag voip**
8. **description string**
9. **session protocol sipv2**
10. **voice-class sip pass-thru headers list-tag**
11. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Device> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	configure terminal Example: Device# configure terminal	Enters global configuration mode.
Step 3	voice class sip-hdr-passthru list-tag Example: Device(config)# voice class sip-hdr-passthru list-tag 101	Configures list of headers to be passed through and enters voice class configuration mode.
Step 4	passthru-hdr header-name Example: Device(config-class)# passthru-hdr Resource-Priority	Adds header name to the list of headers to be passed through. Repeat this step for every non-mandatory header.
Step 5	passthru-hdr-unsupp Example: Device(config-class)# passthru-hdr-unsupp	Adds the unsupported headers to the list of headers to be passed through.

	Command or Action	Purpose
Step 6	exit Example: Device(config-class)# exit	Exits the current configuration session and returns to global configuration mode.
Step 7	dial-peer voice tag voip Example: Device(config)# dial-peer voice 1 voip	Enters dial peer voice configuration mode.
Step 8	description string Example: Device(config-dial-peer)# description inbound-dialpeer	Adds descriptive information about the dial peer.
Step 9	session protocol sipv2 Example: Device(config-dial-peer)# session protocol sipv2	Configures the IETF Session Initiation Protocol (SIP) for the dial peer.
Step 10	voice-class sip pass-thru headers list-tag Example: Device(config-dial-peer)# voice-class sip pass-thru headers 101	Enables call routing based on the destination route string for a dial peer.
Step 11	end Example: Device(config-dial-peer)# end	Exits the current configuration mode and returns to privileged EXEC mode.

Example: Configuring a Route String Header Pass-Through Using Pass-Through List

```

Device> enable
Device# configure terminal
Device(config)# voice class sip-hdr-passthru list 101
Device(config-class)# passthru-hdr X-hdr-1
Device(config-class)# passthru-hdr Resource-Priority
Device(config-class)# passthru-hdr-unsupp
Device(config-class)# exit
Device(config)# dial-peer voice 1 voip
Device(config-dial-peer)# description inbound-dialpeer
Device(config-dial-peer)# session protocol sipv2
Device(config-dial-peer)# voice-class sip pass-thru headers 101
Device(config-dial-peer)# end

```

Example: Passing a Header Not Supported by CUBE

CUBE does not pass “x-cisco-tip”. However, certain TelePresence equipments require “TIP”.

The SIP profile below will look for "x-cisco-tip" in the inbound contact header then pass it in the outbound contact header.

Inbound Contact Header

```
Contact: <sip:89016442998@161.44.77.193;transport=udp>;x-cisco-tip
```

Outbound Contact Header

```
Contact: <sip:89016442998@10.86.176.19:5060>;x-cisco-tip
```

Create a copylist to pass the Contact Header from the incoming message to the outgoing message. The “x-cisco-tip” is not copied in this step as it is unsupported by CUBE.

```
!Create a copyList
Device(config)# voice class sip-copylist 1
Device(config-class)# sip-header Contact
Device(config-class)# exit
```

!Apply the copylist to incoming dial peer.

```
Device(config)# dial-peer voice 1 voip
Device(config-dial-peer)# description incoming SIP Trunk
Device(config-dial-peer)# incoming called-number
Device(config-dial-peer)# voice-class sip copy-list 1
```

Create a SIP profile that copies “x-cisco-tip” into a variable, and use that variable to modify the outgoing Contact header. Apply the SIP profile to an outbound dial peer.

```
Device# voice class sip-profiles 3001
```

!Copy the Contact header from the incoming dial peer into variable u01

```
Device(config-class)# request INVITE peer-header sip Contact copy "(;x-cisco-tip)" u01
```

!Modify the outgoing SIP Invite with this variable.

```
Device(config-class)# request INVITE sip-header Contact modify "$" "\u01"
```

!Apply the SIP Profile to the outgoing dial peer.

```
Device(config)# dial-peer voice 5000 voip
Device(config-dial-peer)# description outbound SIP
Device(config-dial-peer)# destination-pattern 5...$
Device(config-dial-peer)# voice-class sip profiles 3001
```