



# Support for Tel URI in SIP Diversion Header Feature Module

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## Document Release History

Publication Date	Comments
April 30, 2012	Initial release of the document.

## Feature History

Release	Modification
9.8(1)	The Support for Tel URI in SIP Diversion Header feature is introduced in the Cisco PGW 2200 Softswitch software.

This document describes the Support for tel Uniform Resource Identifier (URI) in the Session Initiation Protocol (SIP) Diversion Header feature. Details of this feature are provided in the following sections:

- [Feature Description, page 2](#)
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- [Provisioning Examples, page 5](#)
- [Obtaining Documentation and Submitting a Service Request, page 6](#)
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## Feature Description

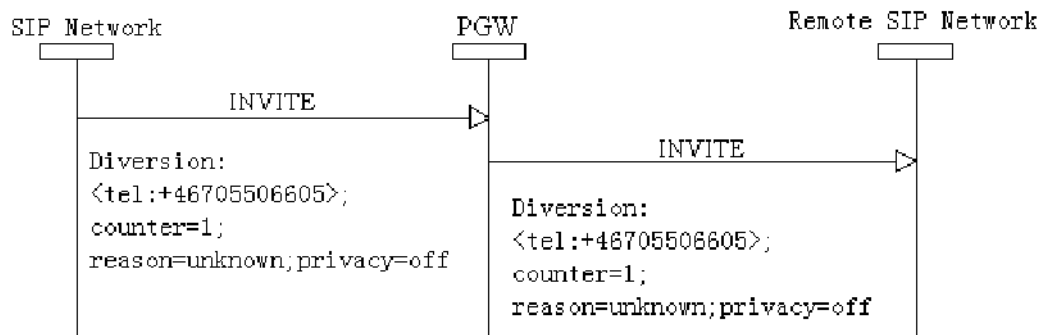
Diversion information in incoming SIP messages, such as INVITE and 3xx, may have tel URI. Currently, the Cisco PGW 2200 Softswitch supports only the SIP URI in the Diversion header. The Support for Tel URI in SIP Diversion Header feature enables the Cisco PGW 2200 Softswitch to relay the Diversion headers received with incoming SIP requests or responses to the outgoing SIP network. If multiple Diversion headers are present, the Cisco PGW 2200 Softswitch relays information pertaining to all the Diversion headers to the outgoing SIP network. The Cisco PGW 2200 Softswitch will also parse and handle the tel-URI-formatted Diversion headers in the SIP.

The following is a summary of the different scenarios in which the Support for Tel URI in SIP Diversion Header feature is enabled:

- In SIP-to-SIP calls, the diversion information that is received either in the SIP URI format or in the tel URI format, will be relayed to the peer SIP network.

Figure 1 shows a sample call flow that illustrates the relaying of the tel URI received in the Diversion header of the INVITE for the SIP-to-SIP calls.

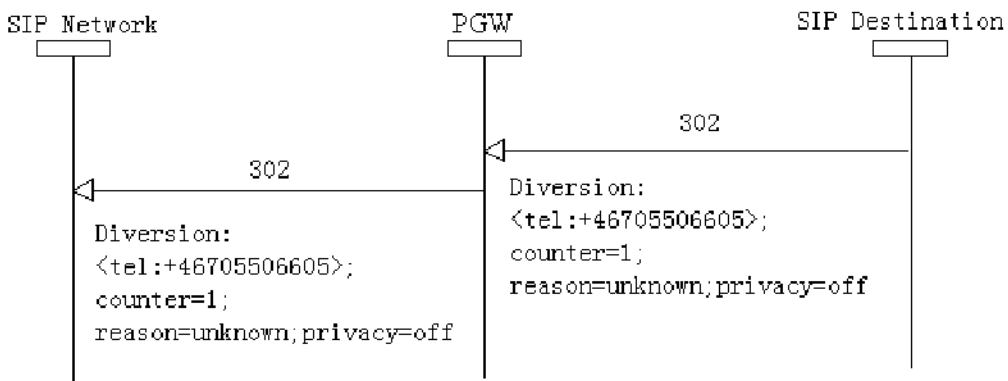
**Figure 1** Sample Call Flow 1 for SIP-to-SIP Calls



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Figure 2 show a sample call flow that illustrates how the Cisco PGW 2200 Softswitch receives 302 back from a SIP destination and relays the same back to the peer SIP network.

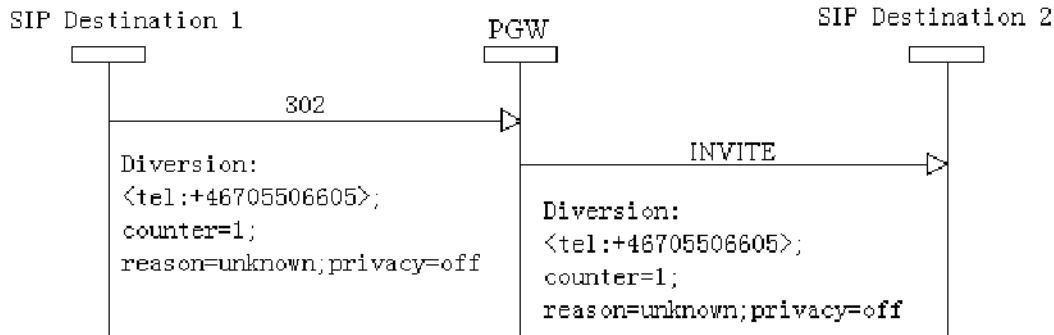
**Figure 2** Sample Call Flow 2 for SIP-to-SIP Calls



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Figure 3 shows a sample call flow that illustrates how the Cisco PGW 2200 Softswitch receives 302 back from a SIP destination and sends an INVITE to a new SIP destination.

**Figure 3** Sample Call Flow 3 for SIP-to-SIP Calls

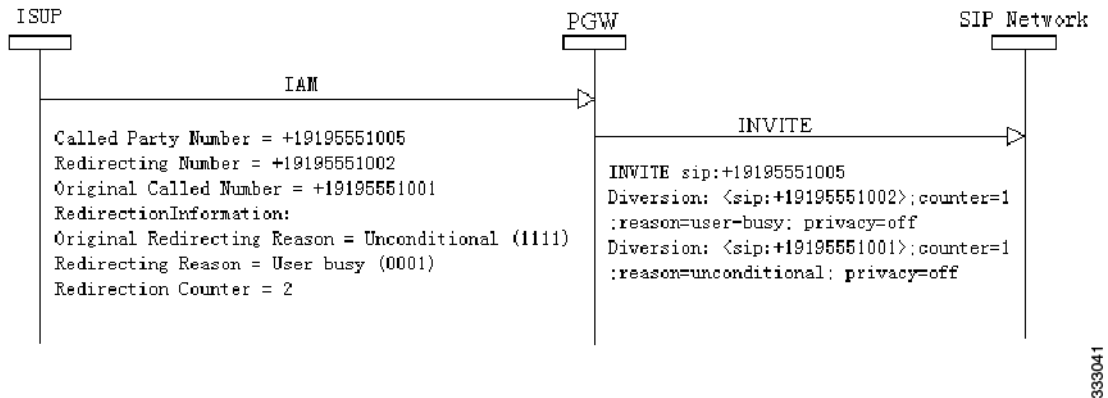


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- In SIP-to-ISUP or SIP-to-ISDN calls, the Diversion information only with SIP URI that is received from the SIP end will be relayed to the ISUP or ISDN end.
- In ISUP-to-SIP or ISDN-to-SIP calls, if the Redirection or Diversion information is received from ISUP or ISDN, and it has to be relayed to the peer SIP end, the Cisco PGW 2200 Softswitch will always encode, and send the SIP-URI-formatted Diversion header in such outgoing SIP messages. This behavior is already available for Cisco PGW 2200 Softswitch and nothing changes with the introduction of the Support for Tel URI in SIP Diversion Header feature.

Figure 4 show a sample call flow illustrating an ISUP-to-SIP interoperation.

**Figure 4** Sample Call Flow showing ISUP-to-SIP Interoperation



- Call scenarios without SIP, such as ISUP or ISDN to ISUP or ISDN, will be handled with the existing logic of Cisco PGW 2200 Softswitch and nothing changes with the introduction of this feature.
- For SIP-I or SIP-GTD, the exiting behavior of Cisco PGW 2200 Softswitch continues and nothing changes with the introduction of this feature.

## Benefits

This feature provides the following benefits:

- Supports the relay of Diversion headers for SIP-to-SIP calls.
- Supports the relay of Diversion headers for SIP-to-ISUP or SIP-to-ISDN interoperations.

## Prerequisites

The Cisco PGW 2200 Softswitch must be running Cisco PGW 2200 Softswitch software Release 9.8(1). The prerequisites for this release of Cisco PGW 2200 Softswitch can be found in *Release Notes for the Cisco PGW 2200 Softswitch Release 9.8(1)* at:

[http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/pgw/9/release/note/rn981.html](http://www.cisco.com/en/US/docs/voice_ip_comm/pgw/9/release/note/rn981.html)

## Restrictions or Limitations

The Support for Tel URI in SIP Diversion Header feature has the following limitations:

The Cisco PGW 2200 Softswitch will relay all the information mentioned in this document to the outgoing SIP network. This does not cover the local processing of tel URI received in the diversion header.

## Related Documents

This document contains information that is strictly related to this feature. Documents that contain additional information about the Cisco PGW 2200 Softswitch are available at:

[http://www.cisco.com/en/US/products/hw/vcallcon/ps2027/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/hw/vcallcon/ps2027/tsd_products_support_series_home.html)

## Supported Standards, MIBs, and RFCs

This section identifies the new or modified standards, MIBs, and RFCs that are supported by this feature.

### Standards

No new or modified standards are supported by this feature.

### MIBs

No new or modified MIBs are supported by this feature.

For more information on the MIBs used in the Cisco PGW 2200 Softswitch, see *Cisco PGW 2200 Softswitch MIBs* at:

[http://www.cisco.com/iam/PGW\\_MIBS/index.html](http://www.cisco.com/iam/PGW_MIBS/index.html)

### RFCs

No new or modified RFCs are supported by this feature.

## Provisioning Examples

This section provides provisioning examples for this feature. Additional provisioning examples pertaining to the Cisco PGW 2200 Softswitch can be found in the *Cisco PGW 2200 Softswitch Release 9.8 Provisioning Guide*. Additional dial plan examples pertaining to the Cisco PGW 2200 Softswitch can be found in the *Cisco PGW 2200 Softswitch Release 9.8 Dial Plan Guide*.

# Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.

## Glossary

**Table 1**      **Acronym Expansions**

Acronym	Expansion
ISUP	ISDN User Part
MML	Man-Machine Language
PGW	PSTN Gateway
SIP	Session Initiation Protocol
Tel URI	Telephone Uniform Resource Identifier

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