

Third Party H323 Calls Fail with Cisco IOS Later than 12.2(8)T

Document ID: 25998

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Introduction

With Cisco IOS® Software Release 12.2(8)T H323 version 3 and 12.2(11)T and later, some components of H323 version 4 protocol support is used. This support causes compatibility issues with certain H323 stacks of earlier versions. H323 is designed so that newer versions of the specification can be compatible with earlier releases. This is accomplished because newer fields in the UUIE ASN.1 encoding should be ignored if they are not understood. However, some implementations of the standard in various H323 devices have difficulty interworking with this newer release.

Prerequisites

Requirements

Readers of this document should be knowledgeable of the following:

- Knowledge of H323

Components Used

The information in this document is based on the software version below:

- Cisco IOS Software Release later than 12.2(8)T

The information presented in this document was created from devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If you are working in a live network, ensure that you understand the potential impact of any command before using it.

Conventions

For more information on document conventions, see the Cisco Technical Tips Conventions.

Problem

An upgrade of the Cisco IOS gateway to a software release later than Cisco IOS 12.2(8)T causes calls to and from NetMeeting, or another third party H323 device, to fail.

Solution

When a connection cannot be made on the third party H323 stack, there are two **voice service voip** commands that may help. There is a greater chance this will be true if the typology in question previously worked while interworking with Cisco IOS gateways running a software release earlier than Cisco IOS 12.2(8)T.

Both of these commands are hidden (CLI parser help will not show them) **voice service voip** subcommands. The format is as shown in this configuration mode:

```
esc-3640-3(config)#voice service
voip

!--- Enters voice service configuration mode and specifies
!--- a voice encapsulation type as Voice over IP (VoIP) encapsulation.
!--- Voice service configuration mode is used for packet Telephony service
!--- commands that affect the gateway globally.

esc-3640-3(conf-voi-serv)#h323

!--- Used to enable the H323 voice service configuration commands.

esc-3640-3(conf-serv-h323)#h245 caps
mode restricted esc-3640-3(conf-serv-h323)#h245
tunnel disable
```

h245 caps mode restricted

The **h245 caps mode restricted** command is present in Cisco IOS Software Release 12.2(11)T, and prevents Dual Tone Multifrequency (DTMF) Named Telephone Events (NTEs) as well as T38 capability indication in the H245 Terminal Capability Set packet. When these options are present, it can prevent the H245 negotiation from completing with some devices, specifically with NetMeeting. Without the **h245 caps mode restricted** command, calls in either direction fail.



Caution: If the **debug h245 asn** command is enabled, this message comes from NetMeeting. Caution should always be taken when you enable debug, as this can have a severe impact on the performance of the router. The **debug h245 asn** command is verbose and should be used in a limited manner and with precautions such as disabled console logging on the router.

Note: Before issuing **debug** commands, refer to Important Information on Debug Commands.

```
Aug 16 18:58:14.035: H245 MSC
INCOMING PDU ::= value MultimediaSystemControlMessage ::= indication :
functionNotSupported : { cause syntaxError : NULL returnedFunction
'0270010600088175000780138000140001000001...'H }
```

Also make sure that the **voice dial-peer voip** command that is matched either inbound or outbound for that call is not configured with the **fax protocol t38** or **dtmf-relay rte-nte** commands.

h245 tunnel disable

By default, H245 tunneling is enabled. This H323 feature allows any H245 message to use the available H225 Transmission Control Protocol (TCP) session as an alternative to the use of a second TCP session for H245. This can cause a problem when interworking with previous version of H323. This feature is disabled when the **h245 tunnel disable** command is issued.

Related Information

- **Outbound ISDN Calls Fail when Originated from NetMeeting or Similar Third Party H.323 Devices**
 - **How-to Configure Microsoft NetMeeting with Cisco IOS Gateways**
 - **VR: Cisco IOS Voice, Video, and Fax Command Reference**
 - **Voice Technology Support**
 - **Voice and Unified Communications Product Support**
 - **Recommended Reading Troubleshooting Cisco IP Telephony**
 - **Technical Support – Cisco Systems**
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Updated: Feb 02, 2006

Document ID: 25998
