

CallManager CallerID Feature Issues

Document ID: 44102

Introduction

Prerequisites

- Requirements
- Components Used
- Conventions

CallManager and Calling Party Name

- Display IE
- ISO-based Q.SIG
- NI2/NI3 CNID (Bellcore GR-1367)
- CallManager 4.x
- Shared Lines
- Calling Name when using QSIG
- First character missing in calling name display on Cisco 7942 IP phones

Related Information

Introduction

There is currently a rapid conversion of infrastructure among PBX systems, and more importantly, the public switched telephone network (PSTN) as a whole, into a purely digital world. The result has been the emergence of enhanced features, for example, Caller ID and Calling Name Delivery. Calling Name Delivery simply refers to alphanumeric text that passes from the calling party to the called party (in preference, or in addition, to the number of the calling party). Calling Name Delivery is available only by way of PRI circuits.

Cisco CallManager has also evolved each step of the way. With the advent of Cisco CallManager 3.3(3), there are three methods through which CallManager and the associated gateways can exchange Calling Name information with the PSTN or a PBX:

- Calling Party Name through the Display Information Element (IE)
- ISO-based Q.SIG
- National ISDN 3 Calling Name Identification Delivery (NI3 CNID Bellcore GR-1367)

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Understanding Voice Gateways

Components Used

The information in this document is based on these software and hardware versions:

- Cisco CallManager 3.1(x), 3.2(x) and 3.3(x) and 4.x

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure

that you understand the potential impact of any command.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

CallManager and Calling Party Name

This section explains each of the three methods through which Cisco CallManager and the associated gateways can exchange Calling Name information.

Display IE

Cisco CallManager versions 3.1(x) and 3.2(x) support Calling Name Delivery through the Display IE of the Q.931 PRI protocol. This option is available provided that the PBX or PSTN link understands and processes text messages within the Display IE, and is connected by way of H.323 inter-cluster trunks or Media Gateway Control Protocol (MGCP) gateways. Figure 1 shows the Display IE check box selected on an inter-cluster trunk.

Figure 1 Display IE Delivery Option is Selected

Product : H.323 Gateway
Gateway : 1.2.3.4
Device Protocol: Inter-Cluster Trunk
Registration: Unknown
IP Address: 1.2.3.4

Status: Ready

Device Name*	<input type="text" value="1.2.3.4"/>
Description	<input type="text"/>
Device Pool*	<input type="text" value="Default"/>
Media Resource Group List	<input type="text" value=" < None >"/>
Network Hold Audio Source	<input type="text" value=" < None >"/>
User Hold Audio Source	<input type="text" value=" < None >"/>
Calling Search Space	<input type="text" value=" < None >"/>
Location	<input type="text" value=" < None >"/>
Caller ID DN	<input type="text"/>
Calling Party Selection*	<input type="text" value="Originator"/>
Presentation Bit*	<input type="text" value="Allowed"/>
Display IE Delivery	<input checked="" type="checkbox"/>

ISO-based Q.SIG

Cisco CallManager version 3.3(2) introduced basic voice call support and some supplementary features for the ISO-based Q.SIG protocol that allow for CallerID and Calling Party Name:

- Calling Line ID Presentation (CLIP)
- Calling Name ID Presentation (CNIP)
- Connected Name ID Presentation (CONP)
- Calling Line ID Restriction (CLIR)

If the gateway is configured for ISO-based Q.SIG, CNIP and CONP are passed within the Q.SIG Facility IE. Figure 2 displays a Q.SIG gateway configuration with the relevant parameters set.

Figure 2 Q.SIG Gateway Configuration

The screenshot shows a configuration interface for a Q.SIG gateway. It is divided into two main sections: 'Interface Information' and 'PRI Protocol Type Specific Information'. The 'Interface Information' section includes fields for 'PRI Protocol Type*' (set to 'PRI ISO QSIG T1'), 'Protocol Side*' (set to 'User'), 'Channel Selection Order*' (set to 'Bottom Up'), 'Channel IE Type*' (set to 'Use Number when 1B'), 'Delay for first restart (1/8 sec ticks)' (set to '32'), and 'Delay between restarts (1/8 sec ticks)' (set to '4'). There are also checkboxes for 'Inhibit restarts at PRI initialization' (checked) and 'Enable status poll' (unchecked). The 'PRI Protocol Type Specific Information' section includes several checkboxes: 'Display IE Delivery' (checked), 'Redirecting Number IE Delivery - Outbound' (checked), 'Redirecting Number IE Delivery - Inbound' (checked), 'Send Extra Leading Character In DisplayIE***' (checked), 'Setup non-ISDN Progress Indicator IE Enable****' (unchecked), 'MCDN Channel Number Extension Bit Set to Zero**' (unchecked), 'Send Calling Name In Facility IE' (unchecked), and 'Interface Identifier Present**' (unchecked). At the bottom, there is a text input field for 'Interface Identifier Value**' with the value '0'.

Interface Information	
PRI Protocol Type*	PRI ISO QSIG T1
Protocol Side*	User
Channel Selection Order*	Bottom Up
Channel IE Type*	Use Number when 1B
Delay for first restart (1/8 sec ticks)	32
Delay between restarts (1/8 sec ticks)	4
<input checked="" type="checkbox"/> Inhibit restarts at PRI initialization	
<input type="checkbox"/> Enable status poll	

PRI Protocol Type Specific Information	
<input checked="" type="checkbox"/> Display IE Delivery	
<input checked="" type="checkbox"/> Redirecting Number IE Delivery - Outbound	
<input checked="" type="checkbox"/> Redirecting Number IE Delivery - Inbound	
<input checked="" type="checkbox"/> Send Extra Leading Character In DisplayIE***	
<input type="checkbox"/> Setup non-ISDN Progress Indicator IE Enable****	
<input type="checkbox"/> MCDN Channel Number Extension Bit Set to Zero**	
<input type="checkbox"/> Send Calling Name In Facility IE	
<input type="checkbox"/> Interface Identifier Present**	
Interface Identifier Value**	0

Note: With ISO-based Q.SIG configured, all Calling Name information uses the Q.SIG Facility IE to exchange Calling Name information. This picture shows the Send Calling Name in Facility IE option greyed out, as this option relates only to when you use the NI2/NI3 Bellcore 1367 standards that the NI2/NI3 CNID (Bellcore GR-1367) section discusses.

Note: Sending Calling Name through the Display IE is supported using both H.323 and MGCP Gateways whereas Sending Calling Name through the Facility IE is supported only with the MGCP Gateway.

NI2/NI3 CNID (Bellcore GR-1367)

With the advent of Cisco CallManager 3.3(3), CallManager supports Calling Party Name by way of the Q.931 Facility IE on the basis of Bellcore GR-1367-CORE specification. This is also known as the NI3 CNID service. Briefly stated, Cisco CallManager PRI gateways are able to use the Facility IE encoded with the CallingName Remote Operations Service Element.

When you select Primary NI2 as the protocol, the Send Calling Name in Facility IE check box becomes available (see Figure 3):

Figure 3 The Send Calling Name in Facility IE Option

The screenshot shows a configuration window with two main sections:

- Interface Information:** Contains several dropdown menus and text input fields:
 - PRI Protocol Type*: PRI NI2
 - Protocol Side*: User
 - Channel Selection Order*: Bottom Up
 - Channel IE Type*: Use Number when 1B
 - Delay for first restart (1/8 sec ticks): 32
 - Delay between restarts (1/8 sec ticks): 4
 - Inhibit restarts at PRI initialization
 - Enable status poll
- PRI Protocol Type Specific Information:** Contains a list of checkboxes:
 - Display IE Delivery (highlighted with a green dashed box)
 - Redirecting Number IE Delivery - Outbound
 - Redirecting Number IE Delivery - Inbound
 - Send Extra Leading Character In DisplayIE****
 - Setup non-ISDN Progress Indicator IE Enable****
 - MCDN Channel Number Extension Bit Set to Zero**
 - Send Calling Name In Facility IE
 - Interface Identifier Present**

At the bottom, there is a text input field for 'Interface Identifier Value**' with the value '0'.

Note: This feature does not change or interfere with the Q.SIG implementation discussed in this document. It is also independent of the delivery of Calling Name text within a Display IE. But if both Display IE and Facility IE are present, the latter precedes and is used by Cisco CallManager.

CallManager 4.x

Cisco CallManager 4.x includes a new feature called Call Display Restrictions. This feature allows you to choose the information you want to display for calling and connected lines on the basis of parties involved. These parameters are introduced in Cisco CallManager 4.x and you can configure these parameters on the Route Pattern and Translation Pattern configuration screens:

- Calling Line ID Presentation
- Calling Name Presentation
- Connected Line ID Presentation
- Connected Name Presentation

Refer to the Call Display Restrictions Configuration Guide for more information on the use of these parameters.

Note: If you forward a call to a number and the call is then transferred from there, it is not possible to forward the call information, such as caller ID, onto the last phone.

Note: If the first character of the caller name does not display on outbound external calls, make sure the Switch Type is correctly configured on the Cisco CallManager Gateway Configuration page.

Shared Lines

When a Cisco IP Phone places a call to a shared line DN, and the phone begins to ring on the remote side, the calling phone displays the 'calling-to' information. Currently, the calling phone displays the ID of the last phone configured as part of the shared line. After one of the shared line users picks up the call, the calling phone displays the Internal Caller ID of the corresponding phone.

In order to resolve this problem, from Cisco CallManager release 4.1(2) onwards, a new parameter known as **Alerting Name** is available in the **Directory Number Configuration** page. This parameter is common to the line settings of all the phones configured on the shared line DN.

Figure 4 The Alerting Name Parameter

The image shows a screenshot of the Cisco CallManager configuration interface. It is divided into two main sections: "Line Settings for all Devices" and "Line Settings for this Device".

- Line Settings for all Devices:** This section has a light green header. Below it, the "Alerting Name" parameter is shown with a text input field. The entire "Alerting Name" row is highlighted with a red border.
- Line Settings for this Device:** This section also has a light green header. Below it, there are four rows of configuration options, each with a text input field or a dropdown menu:
 - Display (Internal Caller ID): Text input field.
 - Line Text Label: Text input field.
 - External Phone Number Mask: Text input field.
 - Message Waiting Lamp Policy: Dropdown menu with "Use System Policy" selected.

When you configure a value for the **Alerting Name** parameter, the configured value appears at the caller's end while the shared line phones ring. When one of the shared line users picks up the call, the calling phone displays the Internal Caller ID of the corresponding phone.

For more information on use of this parameter, refer to the Identification Services section of Understanding IP Telephony Protocols – Cisco CallManager System Guide, Release 4.1(2).

Calling Name when using QSIG

The calling ID display or calling name indicates text that appears on the called party phone when a call is placed from this line. When Cisco Voice Gateways are connected with a PBX using the Q Interface Signaling Protocol (QSIG), the calling name might not display on the phones connected to that PBX when:

- The QSIG calling name presentation used is **simple**.
- The calling name used by the Cisco IP phone is **extended**.

Simple calling name presentations use only ASCII characters, so non-english characters that include tildes or accent marks are not included. In order to make the calling name sent from a Cisco IP phone to be simple, use **only** ASCII characters in the calling name or use **English United States** as the User Locale in the IP phone configuration.

First character missing in calling name display on Cisco 7942 IP phones

When a call is placed from a PSTN (external) to Cisco 7942 IP phones, the first character of the calling name does not appear in the display of the phone. For example, if the calling name is xyz, the IP phone shows yz only.

In order to resolve this issue, check the **Send Extra Leading Character in Display IE** box under the `PRI Protocol Type Specific Information` in the Cisco CallManager.

Related Information

- [Understanding IP Telephony Protocols](#)
- [Voice Technology Support](#)
- [Voice and Unified Communications Product Support](#)
- [Recommended Reading: Troubleshooting Cisco IP Telephony](#)
- [Technical Support & Documentation – Cisco Systems](#)

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Updated: Jan 23, 2007

Document ID: 44102
