

Configuring Overlap Sending and Receiving with Cisco CallManager

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Contents

Introduction

Prerequisites

- Requirements
- Components Used
- Conventions

Background

Configuring Overlap Receiving

- Step-By-Step Instructions
- Verifying the Configuration

Configuring Overlap Sending

- Step-By-Step Instructions
- Verifying the Configuration

Related Information

Introduction

This document describes how to configure overlap sending and receiving with Cisco CallManager.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

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

- Cisco CallManager version 3.2 and later
- Catalyst 6500 with WS-X6608-E1 Card
- Cisco 2600 and 3600 series routers running Cisco IOS® Software Release 12.2(2)XN

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

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

Background

Overlap signaling requires that called digits be sent one-by-one as they are received from the calling device. For Q.931, the first digit is sent in a call setup message and subsequent digits are sent in information messages. This technique is used when a receiving PBX must be able to recognize variable-length phone numbers, and requires that the sender signal the end of the call setup process. For Q.931, a sending complete message is used for this purpose.

The alternative to overlap signaling is enbloc signaling, which is the predominant dialing method in use today. When called numbers are sent enbloc, the digits are collected before being sent. For Q.931, digits are sent in a call setup message.

Configuring Overlap Receiving

Step-By-Step Instructions

To configure the Cisco CallManager server for overlap receiving, perform these steps:

1. Open the Cisco CallManager Administration page.
2. From the Service menu, choose **Service Parameters**.

The Service Parameters Configuration window appears. For more information, refer to Service Parameters Configuration.

3. Choose a server.
 - ◆ When choosing the server from the drop-down list box, select your publisher server.
 - ◆ When choosing the service from the left menu, select **Cisco CallManager Service**.
4. Change the value of the OverlapReceivingForPriFlag field (or the OverlapReceivingFlagforPRI field in CallManager 3.3(3) and later) to **True**.



OverlapReceivingForPriFlag* True True

5. Repeat Steps 3 and 4 for all subscriber servers.
6. Stop and start the Cisco CallManager service on all servers.

For more information, refer to Starting and Stopping Services.

Verifying the Configuration

To confirm that your configuration is working properly, collect the Cisco CallManager traces and open them with the Q.931 Translator. For more information, refer to Q.931 Translator.

This screen appears, showing this trace sequence:

Q931 Translation

File Name : com00000164a.txt

[Back to List Trace Files](#)
[IOS Format](#)

ISDN Message Text

Date and Time	Call Reference	Direction	Message Type
04/25/2002 14:48:17.417	0x8001	RX	SETUP
04/25/2002 14:48:17.427	0x0001	TX	SETUP_ACK
04/25/2002 14:48:17.776	0x8001	RX	INFORMATION
04/25/2002 14:48:18.058	0x8001	RX	INFORMATION
04/25/2002 14:48:18.899	0x8001	RX	INFORMATION
04/25/2002 14:48:18.929	0x0001	TX	CALL_PROC
04/25/2002 14:48:18.929	0x0001	TX	ALERTING

IOS Translation

```
SETUP pd = 8 called = 0x8001  
Bearer Capability i = 0x8090A3  
Channel ID i = 0xA9889F  
Progress Ind i = 0x8083 - Origination address is non-ISDN  
Calling Party Number i = 0x0080, '5011'  
Called Party Number i = 0x80, '8'
```

Note: Certain **show** commands are supported by the Output Interpreter (registered customers only) , which allows you to view an analysis of **show** command output.

Configuring Overlap Sending

Step-By-Step Instructions

To configure the Cisco CallManager server for overlap sending, perform these steps:

1. Open the Cisco CallManager Administration page.
2. From the Service menu, choose **Service Parameters**.

The Service Parameters Configuration window appears. For more information, refer to Service Parameters Configuration.

3. Choose a server.
 - ◆ When choosing the server from the drop-down list box, select your publisher server.
 - ◆ When choosing the service from the left menu, select **Cisco CallManager Service**.
4. Change the value of the SendingCompleteIndicator field to **False**.

SendingCompleteIndicator*	False	False
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Note: For CallManager 4.0x the SendingCompleteIndicator field is no longer an option in the Service Parameters Configuration window. The decision to include Sending Complete Indicator in the setup is determined by the Allow Overlap Sending check box in the route pattern and by the protocol.

Route Option	<input checked="" type="radio"/> Route this pattern	<input type="radio"/> Block this pattern	— Not Selected —
<input checked="" type="checkbox"/> Provide Outside Dial Tone	<input checked="" type="checkbox"/> Allow Overlap Sending	<input type="checkbox"/> Urgent Priority	

5. Repeat Steps 3 and 4 for all subscriber servers.

6. Stop and start the Cisco CallManager service on all servers.

For more information, refer to [Starting and Stopping Services](#).

7. Create a route pattern by including a number in the Route Pattern field.

For example, enter **9.** where 9 is the prefix for outside dialing. For more information about creating route patterns, refer to [Route Pattern Configuration](#).

8. In the Discard Digits field, select **PreDot**.

Note: You can create a more specific route pattern, such as **9.12** or **9.1X**.

Route Pattern/Hunt Pilot Configuration

[Add a New Route Pattern/Hunt Pilot](#)
[Back to Find/List Route Patterns and Hunt Pilots](#)

Route Pattern/Hunt Pilot: New
Status: Ready
Note: Any update to this Route Pattern or Hunt Pilot automatically resets the associated gateway or Route/Hunt List

Pattern Definition

Route Pattern/Hunt Pilot*	<input type="text" value="9X"/>	
Partition	<input type="text" value="< None >"/>	
Description	<input type="text"/>	
Numbering Plan*	<input type="text" value="North American Numbering Plan"/>	
Route Filter	<input type="text" value="< None >"/>	
MLPP Precedence	<input type="text" value="Default"/>	
Gateway or Route/Hunt List*	<input type="text" value="S0/DS1-0@testmgcp"/>	
Route Option	<input checked="" type="radio"/> Route this pattern <input type="radio"/> Block this pattern <input type="text" value="— Not Selected —"/>	
<input checked="" type="checkbox"/> Provide Outside Dial Tone	<input checked="" type="checkbox"/> Allow Overlap Sending	<input type="checkbox"/> Urgent Priority

Calling Party Transformations

Use Calling Party's External Phone Number Mask

Calling Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>
Calling Line ID Presentation	<input type="text" value="Default"/>
Calling Name Presentation	<input type="text" value="Default"/>

Connected Party Transformations

Connected Line ID Presentation	<input type="text" value="Default"/>
Connected Name Presentation	<input type="text" value="Default"/>

Called Party Transformations

Discard Digits	<input type="text" value="PreDot"/>
Called Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>

ISDN Network-Specific Facilities Information Element

Carrier Identification Code	<input type="text"/>				
Network Service Protocol	<input type="text" value="— Not Selected —"/>				
Network Service	<input type="text" value="— Not Selected —"/>	Service Parameter Name	<input type="text" value="< Not Exist >"/>	Service Parameter Value	<input type="text"/>

* indicates required item.

Verifying the Configuration

To confirm that your configuration is working properly, collect the Cisco CallManager traces and open them with the Q.931 Translator. For more information, refer to Q.931 Translator.

This screen appears, showing this trace sequence:

Q931 Translation

File Name : ccm00000052.txt [Back to List Trace Files](#)
[IOS Format](#)

ISDN Message Text

Date and Time	Call Reference	Direction	Message Type
04/26/2002 11:35:01.888	0x0001	TX	SETUP
04/26/2002 11:35:01.998	0x8001	RX	SETUP_ACK
04/26/2002 11:35:02.217	0x0001	TX	INFORMATION
04/26/2002 11:35:02.732	0x0001	TX	INFORMATION
04/26/2002 11:35:02.998	0x0001	TX	INFORMATION
04/26/2002 11:35:03.279	0x0001	TX	INFORMATION
04/26/2002 11:35:03.310	0x8001	RX	CALL_PROC

IOS Translation

```
SETUP pd = 8 callref = 0x0001
Bearer Capability i = 0x8090A3
Channel ID i = 0x29899F
Progress Ind i = 0x8083 - Origination address is non-ISDN
Calling Party Number i = 0x0080, '5011'
Called Party Number i = 0x80
```

Note: Certain **show** commands are supported by the Output Interpreter (registered customers only) , which allows you to view an analysis of **show** command output.

Related Information

- [Voice Technology Support](#)
- [Voice and Unified Communications Product Support](#)
- [Troubleshooting Cisco IP Telephony](#) 
- [Technical Support – Cisco Systems](#)

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