

Busy-Out ISDN B-Channels from Cisco CallManager Configuration Example

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Introduction

When ISDN PRI users experience intermittent fast busy on outbound calls, you can gracefully **busy-out** (graceful out-of-service) B-channels for troubleshooting purposes. This document discusses how to busy-out B-channels from a Cisco CallManager for Media Gateway Control Protocol (MGCP) controlled T1 or E1 voice ports.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on Cisco CallManager 3.3, but has been verified on the 4.x and 5.x platforms.

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 the Cisco Technical Tips Conventions for more information on document conventions.

Busy-Out B-Channels in Cisco CallManager

In this section, you are presented with the information to configure the features described in this document.

You can gracefully busy-out B-channels from Cisco CallManager for troubleshooting purposes. This can be configured in the Cisco CallManager Administrator web pages. Complete these steps:

1. Go to the Cisco CallManager Administrator web page.
2. Choose **Service > Service Parameters**.

3. Select any server from the drop-down box, and choose **Cisco CallManager** from the drop-down box.
4. Choose **Advanced** in order to display all of the advanced service parameters.
5. Under the **Cluster Wide Parameters (Device – PRI and MGCP Gateway)** heading, enter the value for the parameter called **Change B-Channel Maintenance Status 1** (with four other parameters with similar titles for status 2-5).

This parameter allows the Cisco CallManager to change the individual B-channel maintenance status for PRI interface in real-time for troubleshooting. The input format for this parameter is **Device Name = B-Channel Maintenance Status**. The device name must exactly match the gateway name on the top of the gateway configuration web page. For example, *S0/DS1-0@SDA123456789ABC = 0000 1111 0000 0000 0000 0001* (24 bits for T1. Channel number begins with 1 to 24 from left to right. **The last one specifies the D-Channel, which is not affected.** In this example, 5th-8th B-Channels are out of service.) Copy and paste the Device Name from CallManager Gateway Configuration Page to this service parameter in order to avoid any manual input mistake. The = is mandatory and unique to distinguish the **Device Name** and **B-Channel Maintenance Status** fields. *B-Channel Maintenance Status = xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx*, where **x** can be one of these:

- ◆ 0 In service.
- ◆ 1 Graceful out of service. Change channel status after the active call ends if an active call exists on that channel.
- ◆ 2 Forceful out of service. Tear down the active call and change status immediately if an active call exists on that channel.

The system treats any other value as invalid, and the value does not take effect. Make sure that the total number of **x** is either 24 for T1 or 32 for E1. Any other invalid length or mismatch (24 for E1) gets treated as an error, and no action gets taken for that device.

Parameter Name	Parameter Value	Suggested Value
ASN.1 ROSE OID Encoding*	Use Local Value	Use Local Value
QSIG Variant*	ISO (Protocol Profile 0x9F)	ISO (Protocol Profile 0x9F)
Caller ID		
Calling Name Not Available Timeout (msec)*	2000	2000
Calling Party Number Screening Indicator*	CallManager sets the screening indicator value - Default setting	CallManager sets the screening indicator value - Default setting
Change B-Channel Maintenance Status 1		
Change B-Channel Maintenance Status 2		
Change B-		

Choose the service parameter to bring up the context-sensitive help in order to find a detailed description of how to configure these advanced service parameters.

6. Choose **PRI Gateway Configuration** in the Cisco CallManager and complete these tasks:

- ◆ Uncheck **Inhibit restarts at PRI initialization**.

- ◆ Check **Enable status poll**.
- ◆ Restart the gateway in order for the changes to take effect.

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

Note: For H.323 and SIP gateways, you can also busy-out B-channels for the CAS or CCS(PRI) trunks from the Voice Gateway. Refer to the Troubleshoot section of TDM Switching of Voice and Data Calls on AS5400 Gateways Configuration Example for more information.

Note: You cannot busy-out more than five gateways as documented by Cisco bug ID CSCdx92111 (registered customers only) .

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Related Information

- **Advanced Voice Busyout**
- **Cisco CallManager Service Parameters Configuration**
- **Voice Technology Support**
- **Voice and Unified Communications Product Support**
- *** Recommended Reading: Troubleshooting Cisco IP Telephony**
- **Technical Support & Documentation – Cisco Systems**

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