IP Phone: Call Forward Busy Gives a Fast Busy Tone

Document ID: 107346

Contents

Introduction

This document describes how to resolve the fast busy problem in a Cisco IP Phone when a caller gets a fast busy from the call forwarded number and the forwarded call fails.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco Unified Communication Manager
- Cisco 7900 series IP Phone

Components Used

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

- Cisco Unified Callmanager 4.x
- Cisco Unified Communication Manager 5.x
- Cisco IP Phone 7960

The information in this document is based on the Cisco Unified Communication Manager 4.1(3).

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.

Call Forward

Call Forward is used when a call is extended to an IP Phone, but it goes unanswered because the called party is busy or unavailable. The forwarded call can be directed to another telephone number or a voicemail number.

Problem

When a Cisco IP Phone is set to forward a call, the forwarded call does not work, and the caller hears a busy or a engaged tone. This occurs for both internal and external forwarded calls.

Solution

Call Forward fails because the Forward Loop Prevention is falsely triggered due to a leak in the MaxForwardsToDn counter.

Forward Maximum Hop Count: The counter increments each time a call is forwarded from that dialed number. Once the call is cleared or connected, the counter is decremented. This logic detects and clears external loops between CCM and PSTN, or CCM and another PBX.

Cisco CallManager terminates the call if the number of hops specified in this parameter is exceeded and the final destination is unavailable (for example, busy or not registered). If the number of hops specified in this parameter is exceeded, the call is terminated. If a rush of calls come in at the same time and are not answered, this count could increase and exceed the maximum, and calls are terminated.

In order to resolve this problem, complete these steps to reset the **MaxForwardsToDn** counter:

1. Go off hook on the phonethat has the high counter and register it to CCM:

   Enter ****##*30** from the dialpad in order to enable the phone to accept the code.
2. Go off hook again on the same Cisco IP phone, and enter ****##*35** from the dialpad in order to clear the **MaxForwardsToDn** counters.
3. Complete calls to the IP Phone in order to verify if the problem is solved.

Related Information

- **Voice Technology Support**
- **Voice and Unified Communications Product Support**
- **Troubleshooting Cisco IP Telephony**
- **Technical Support & Documentation – Cisco Systems**

Updated: May 30, 2008   Document ID: 107346