IP Phone Error Message: "Not Enough Bandwidth"

Document ID: 99883

Contents

Introduction

This document explains this IP phone error message and the necessary steps to troubleshoot it:

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Not Enough Bandwidth
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Prerequisites

Requirements

Cisco recommends that you have knowledge of Cisco Communications Manager (CallMananger) and Cisco IP Phones.

Components Used

The information in this document is based on Cisco Unified Communications Manager version 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.

Problem

The `Not Enough Bandwidth` error message appears on an IP phone when remote branch offices are called from the Central site.

Solution

When the Cisco CallManager gateway location parameter is set to None, it is not assigned a location, and there are no restrictions on bandwidth usage or consumption. A large number of calls through the gateway and back to the Cisco CallManager central site can potentially exhaust the available bandwidth between the sites,

which causes the `Not Enough Bandwidth` error message to appear.

In order to resolve this issue, use the low bandwidth codec between the sites. In order to use the low bandwidth codec between the sites, configure locations and regions for both IP phones and their site gateway. Configured locations (bandwidth) or regions (codecs) for IP phones cannot be guaranteed to serve their purpose unless gateways are also assigned to locations.

Refer to the Locations and Regions section of Configuring Locations for more information.

This issue is important to connections that use compression in order to preserve bandwidth in lower bit rate codecs, such as G.729 and G.723. IP phones and gateways must also be assigned a region

This issue can be more common for initial configurations or networks that have increased the site−to−site bandwidth usage

In installations where the locations and regions are already in place, this error can appear for these reasons:

- The number of allowed calls between sites is exceeded. In other words, all the allowed bandwidth is consumed. Each time a call is initiated between locations, Cisco CallManager deallocates a certain amount of bandwidth from the configured pool based upon the codec used for the call. When there is not enough bandwidth in the pool for a given call, the Not Enough Bandwidth message appears on the phone that tries to make the call.
- In some of the initial versions of Cisco Communications Mananger (Cisco CallManager), this error sometimes occurs even when the limit is not reached. This is due to bugs in the Cisco Communications Mananger where the bandwidth is not returned to the pool by the disconnected calls. These problems are fixed in the latest service packs. In order to resolve the issue, upgrade to the latest service packs.
- This error message might appear when an incorrect server name is used in the CCM server group configuration. Ensure that the correct server name is added under the CCM server group configuration.
- If possible, try to restart the Database Layer (DBL) Monitor Service.

Restart Cisco CallManager for an immediate workaround to this problem.

In order to monitor bandwidth, complete these steps:

1. Create a LocationsTraceDetailsFlag service parameter in Cisco CallManager service parameters. Make the type boolean, and set the value to **True**.
2. Enable detailed traces for the Cisco CallManager service. Specify the calling and called number, as well as when the problem occurs.
3. Check the amount of bandwidth available in all locations with Perfmon. Add the counters CurrentAvailableBandwidth and MaxAvailableBandwidth from the Cisco Locations object. This puts bandwidth values in the trace file for each call. Look at the trace file in order to determine if it runs out of bandwidth and when.

Related Information

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

Updated: Nov 13, 2007 Document ID: 99883