Cisco 12SP+ and VIP30 IP Phone Issues and Solutions

Document ID: 8304

Contents

Introduction

This document addresses the common problems, symptoms and resolutions related to Cisco IP Phones in Architecture for Voice, Video and Integrated Data (AVVID).

Before You Begin

Conventions

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

Prerequisites

There are no specific prerequisites for this document.

Components Used

The information in this document is based on:

- Cisco 12SP+ and VIP30 IP Phones

Faulty Speakerphone

Problem

Users of the Cisco IP Phone will hear a noticeable noise when the speakerphone is in use. Noise is not heard when using the handset. This is due to a problem detected with the speaker phone circuitry.

Solution

The Cisco IP Phone has to be replaced. Please open up a case with Cisco TAC for replacement details and RMA.

Cisco IP Phone Registration Problem

Problem

The Cisco IP Phone does not register with Cisco CallManager. Some of the symptoms are described below.

- Phone LCD shows:
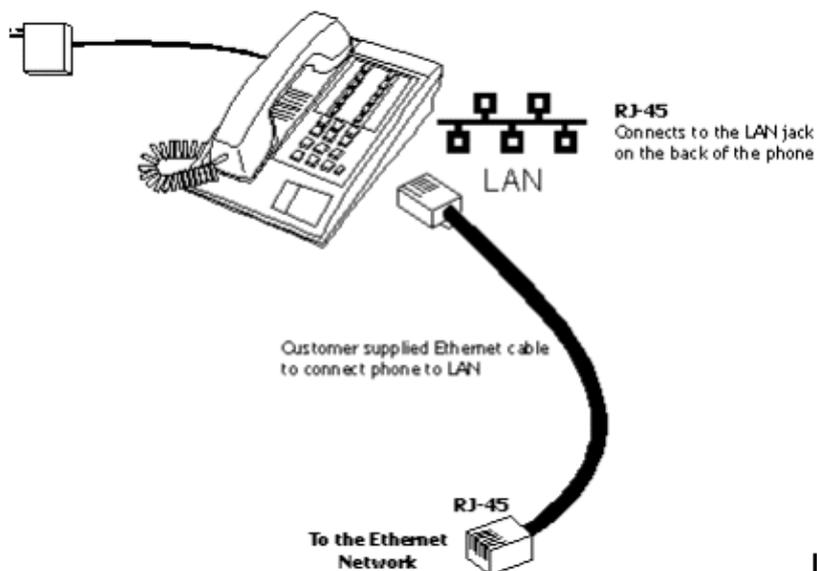
      Copyright 1999 F2?.

      Cisco Systems Inc.

- First light on the phone blinks
- Phone can't properly download configuration and load ID
- There is no dialtone

Solution

Check the following:

- Physical connectivity Verify that network cable is plugged into the correct port on the back of the Cisco IP phone.

- IP configuration on the phone Incorrect IP configuration, such as the incorrect Trivial File Transfer Protocol (TFTP) server address and incorrect default gateway address prohibits the phone from proper

registration with Cisco CallManager. Check Cisco IP Phone configuration by pressing * * # #. You should see the correct host address. Keep pressing # for Gateway, Domain Name System (DNS), TFTP and address.

If there is anything wrong, reconfigure the phone with the correct IP information. Refer to the System Guide for phone configuration.

- Cisco IP Phone registration You can troubleshoot phone startup by looking at the LEDs during bootup. The bootup steps are listed below:

    1. Broadcast for a Dynamic Host Configuration Protocol (DHCP) server. This will resolve the station's IP address, default gateway, TFTP server, and DNS server.
    2. Establish a Transmission Control Protocol (TCP) connection with the Cisco CallManager to register itself. After four attemps, the phone will reset.
    3. The Cisco CallManager registers the phone and sends an acknowledgement to it. Failure during this state may mean that there aren't enough licenses or that the acknowledgement got lost.
    4. A software load is requested by the phone. The download begins.
    5. Once the download is complete, a keypad template is downloaded from the Cisco CallManager. Finally, the station will display the date and time. This indicates that the phone has booted properly.
    6. Reboot.

- Error codes appear on display phones whenever a connection error occurs:

Error	Description
Resetting E3	No TCP connection could be made to a Cisco CallManager.
Resetting E4	DHCP timed out and there is no configuration information stored in the phone's Flash memory.
Resetting E5	Resetting in response to a StationRegisterRejectMessage request from the Cisco CallManager.
Resetting E6	The configuration file contained invalid information.
Resetting E7	DNS failed on the TFTP server name.
Resetting E8	Resetting in response to a StationResetID request from the Cisco CallManager.
Resetting E9	Resetting in response to DHCP/BOOTP server response of 255.255.255.255 for any of the following: Host, TFTP, DNS, or Default gateway (router) IP address.

Note: Press * * to get status from the phone for more info. Match it up with a code in this Status Code table. When everything is working correctly, you'll get a status of 0x04800.

Cisco IP Phone No Longer Works

Problem

A working IP phone stops functioning when user has moved it to a new physical location. The first two lights will be blinking. The Phone LCD will display " Copyright 1999 ?." Press * * , and you will probably see status code 04025.

Solution

This is due to a connectivity problem with the phone and the IP network. The probable cause is that the Cisco IP Phone is using a static address that may not be routed correctly from the new network location that the phone has been moved to. Check whether the phone is using a static IP address and change this to be part of the new subnet that the phone has been connected to.

New Static IP Address

Problem

The Cisco IP Phone refuses to accept a new static IP address. When you check the IP phone configuration, you will see the old configuration values. This means the new configuration value was not saved and it can't find the TFTP server if the TFTP server IP address was not saved. It can't register with the Cisco CallManager if the CallManager is on the other subnet and the correct gateway IP address was not saved.

Solution

- A user will commonly press the # key instead of the * key after the last octet is entered.
- After TFTP configuration, you will be asked to press * to exit or 1 to disable DHCP. Y ou should press 1, then you will receive a "Programming" message.

Crackling Noise

Problem

Crackling noise is heard on both the handset and speaker of the Cisco IP Phone.

Solution

The most probable cause is a faulty power supply module. Replacing the faulty module should fix the problem. Verify it's a bad power supply by exchanging with a known good supply. Open up a case with Cisco TAC for replacement detail and RMA.

Echo on Cisco IP Phone

Problem

Echo is heard on the Cisco IP Phone.

Solution

Customer commonly mistakes echo for jitter in a Cisco IP Phone to IP Phone connection. This can be resolved by working on Quality of Service (QOS).

Check if a gateway is involved. If echo is heard by the Cisco IP phone, then hybrid echo is probably caused by one or both of the following:

- Dirty or noisy line which causes reflection
- Signal is coming in too hot

The inbound signal should be 15 dB. If the phone on the far side of the gateway hears echo, this is not a Cisco issue to resolve. Central Office (CO) is responsible for echo cancellation.

Try to resolve this issue first by checking the volume for the Cisco IP Phone handset. If the volume is set too high, you might hear an echo. Turn down the volume on the handset until the echo disappears.

Phone Booting Problems

Problem

Cisco IP Phone takes a long time to re−register.

Solution

Usually, Port Fast is disabled. Enable Port Fast on the switch to fix this. If there is latency in your network, it will take longer than usual to register.

Call Drop Outs

Problem

The user experiences call drop outs. This is usually a network problem.

Solution

Check the following:

- Look to if it is on a shared network.
- Make sure collisions are less then 10%.
- Determine if there is any link flap on the WAN if the traffic crosses WAN.

Cisco Phone LCD Shows: "Connected to Wrong CallManager?"

Problem

Cisco IP Phone LCD shows "Connected to Wrong Call Mgr?" There is no problem when dialing other numbers.

Solution

This is actually not a problem. This message occurs because there is only one phone locally connected to the Cisco CallManager. Once you connect and register another Cisco IP Phone to the CallManager, this message will disappear. The SCM.INI file can be modified so that it won't generate this message when there is only one phone registered with the CallManager. This is not recommended, however; because this message is harmless, and there might be a case when we'd want to be notified that this is the only phone connected to the CallManager.

Incorrect Route Plan on Cisco CallManager or Gateway

Problem

There is an incorrect route plan on the Cisco CallManager or Gateway. A dial tone exists and the IP information is correct, but calls can't be made to certain numbers.

Solution

- Check the route plan on Cisco CallManager. The destination number should be registered with this CallManager, or the gateway to the destination should be registered in the route plan. For example, if you want to make a call to 2222 and the phone with this number is across a Cisco gateway (a Cisco 3600 or 2600, for example) or Selsius gateway, the CallManager's route plan must point the gateway to properly route the call.
- Go to CallManager Administration, then select **Configuration**. Determine whether the Route plan summary shows the gateway with the proper route plan (such as 2222 or 2xxx or 2@). If it does not show the proper route plan, click **Configure on Route Plan Summary**, and **Configure on Route Pattern**.

Note: The gateway should already be configured before you do this. If the gateway is not registered, go to **Device Wizard**, and then register the gateway. The device type should be "Analog Access" or "Digital Access" if the gateway is a Selsius gateway. The device type should be H.323 if the gateway is a Cisco router.

Refer to the System Guide for gateway registration and route plan additions.

CODEC Mismatch Between Cisco IOS Gateway and IP Phone

Problem

The call fails when a different coder/decoder (CODEC) is configured on a Cisco IOS® Gateway and IP Phone. The Cisco IP phone can't make a call to a phone connected over Cisco gateway. The call will fail and you will hear re–order tones.

Solution

The Cisco IP Phone is capable of G.711 (in the same region) and G.723.1 (between regions), but Cisco IOS Gateway defaults to G.729. Change the Cisco Gateway configuration to G.711 or G.723.1. See the following table for CODEC compatibility.

	26xx/36xx NM–1V/2V1	26xx/36xx NM–HDV1	3810[6]	5300	7200[2]	7500[2]	IP Phones
G.711 PCM (64K)	Yes	12.0(5)XK	12.0(6)Xx	Yes	12.0(5)XE	12.0(6)XE	CM 2.2
G.726 ADPCM (32K)	12.0(5)T	12.0(5)XK	12.0(6)Xx	No[8]	12.0(5)XE	12.0(6)XE	No
G.726 ADPCM (24K)	12.0(5)T	12.0(5)XK	No	No[8]	12.0(5)XE	12.0(6)XE	No

G.726 ADPCM (16K)	12.0(5)T	12.0(5)XK	No	No[8]	12.0(5)XE	12.0(6)XE	No
G.728 LD–CELP (16K)	12.0(5)T	12.0(5)XK	No	No[8]	12.0(5)XE	12.0(6)XE	No
G.729[3] CS–ACELP (8K)	Yes	12.0(5)XK	12.0(6)Xx	Yes	12.0(5)XE	12.0(6)XE	No
G.729A[5] CS–ACELP (8K)	Yes	12.0(5)XK	12.0(6)Xx	Yes	12.0(5)XE	12.0(6)XE	No
G.729B (8K) [VAD[4]]	12.0(5)T	12.0(5)XK	No	No[8]	12.0(5)XE	12.0(6)XE	No
G.729AB[5] (8K)	12.0(5)T	12.0(5)XK	No	No[8]	12.0(5)XE	12.0(6)XE	No
G.723.1 MP–MLQ (6.3K)	12.0(5)T	12.0(5)XK	12.0(6)Xx[7]	12.0(2)XH	12.0(5)XE	12.0(6)XE	CM 2.2
G.723.1 ACELP (5.3K)	12.0(5)T	12.0(5)XK	12.0(6)Xx[7]	12.0(2)XH	12.0(5)XE	12.0(6)XE	No
G.723.1A MP–MLQ (6.3K)	12.0(5)T	12.0(5)XK	No	12.0(2)XH	12.0(5)XE	12.0(6)XE	No
G.723.1A ACELP (5.3K)	12.0(5)T	12.0(5)XK	No	12.0(2)XH	12.0(5)XE	12.0(6)XE	No

Cisco IP Phone Resetting with the "Resetting 73" Message

Problem

The Cisco IP Phone receives a configuration file from the CallManager, but fails to open a TCP port with the CallManager. The Phone displays the status message "Resetting 73".

Solution

A PC running Cisco CallManager has two Network Interface Cards (NICs) installed, and the CallManager is pointing to the secondary (not the primary) NIC. CallManager can only 'listen' to the primary NIC.

Set up the Cisco CallManager PC so that the IP address used for CallManager (as is configured in SWTFTP) is the primary NIC.

Note: NT uses 'Last IN' for adapter assignments. If you install two NICs, the second one installed is frequently assigned as Adapter 1 (primary).

Related Information

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

Updated: Jan 10, 2006   Document ID: 8304