Troubleshoot and Clean an IP Phone Hookswitch

Contents

Introduction

This document describes best practices to clean and troubleshoot Cisco IP Phone Hookswitches in order to prevent unnecessary Return Material Authorizations (RMAs).

Prerequisites

Requirements

There are no specific prerequisites for this document.

Components Used

The information in this document is based on the Cisco 7800 and 8800 series IP Phones.

Background Information

A thorough analysis of a large number of Cisco IP Phones that have been reported as hardware failures reveals that the great majority of these phones do not have any determinable failure. The standard by which the phone industry measures phone failures is based on Bell Corp/Telcordia standards and the standard acceptable failure rate is set at four percent. The Cisco IP Phone's overall failure rate is well under the acceptable industry average. Many of the problems that have been reported as hardware failures are really either operational or cleanup issues. This document describes some common steps you can take to troubleshoot certain issues before you replace a Cisco IP Phone.

Clean and Troubleshoot the Cisco IP Phone Hookswitch

This section highlights some guidelines for phone usage and what to look for if you suspect a hookswitch failure.

Note: A slightly dampened soft cloth must be used to clean or wipe down the phone. Do not use any liquids or powders directly on the phone to clean or for other purposes. As with all but weatherproof electronics, liquids and powders can contaminate the components and cause failures.

Signaling

Check to see whether signaling works properly between the phone and the Cisco CallManager. Use the speaker button to answer the phone or take the phone off-hook. If the call is answered or dial tone is received, signaling is active.

Cradle Clip

The phones are designed with a reversible clip in the handset cradle area. The clip is used with the tab out when the phone is wall-mounted. Check to see whether the cradle handset clip is in the wall-mounted position (with a plastic tab that protrudes upward). If the phone is on a desktop, slide the clip upward to remove it, rotate 180 degrees, and slide back in so that the tab is hidden.

This tab can interfere with the handset as it is replaced on the base (in the cradle), which causes the hookswitch to remain in the up position. When the handset is lifted later in an attempt to initiate a new call or answer one, the hookswitch is not activated. If you answer a call, the phone continues to ring; if you place a call, no dial tone occurs.

LAN Cord

Check to see whether the dark gray cord / LAN cable that was packaged with the phone is in use. If a different patch cable is in use, position it to pass out the side of the phone, between the base and the footstand. Other cables such as Cat-5, Cat-5E, or Cat-6 that have larger diameters can be too large for the pass-through opening and tilt the phone forward. The footstand is designed to allow the most number of positions to eliminate glare from the display. When the phone is adjusted to the most vertical position, larger diameter cords can force the phone forward to the point where the handset does not sit firmly on the hookswitch. This creates false off-hook conditions.

Keep the phone one notch from the most vertical position to ensure that the handset firmly rests on the hookswitch.

Self-Clean Hookswitch Contacts

The hookswitch contacts design uses a wipe action to self-clean the contacts. Extended periods of time without use of the phone allow air impurities such as dust and other contaminants to hinder contact performance, which results in intermittent operation. Press and release the hookswitch rapidly a dozen times or so to clean the contacts.

Note: If none of these solutions resolve the issue, you can start the RMA process for the phone.