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CallPilot

Troubleshooting Reference Guide

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NORTEL NETWORKS™

CallPilot

Troubleshooting Reference Guide

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Chapter 1

Overview

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General

The Troubleshooting Reference Guide describes symptoms that can appear on all CallPilot server platforms, and provides step-by-step troubleshooting procedures. The troubleshooting procedures can be slightly different for different CallPilot releases.

Each troubleshooting area contains symptom tables outlining basic checks that include diagnostics and resolutions for each check. This guide is applicable to all CallPilot servers. The exceptions are noted for each server, where necessary, in the heading for each symptom or check.

This document provides only basic troubleshooting procedures. You can find additional troubleshooting information in the CallPilot documents that are referenced throughout this document.

Reference documents

CallPilot Customer Documentation Map

NTP Number 555-7101-(nnn)

- **Fundamentals**
  - CallPilot Fundamentals (-010)
- **Planning and Engineering**
  - Planning and Engineering Guide (-101)
  - Network Planning Guide (-102)
  - Data Networking for Voice over IP (553-3001-160)
- **Installation and Configuration**
  - Installation and Configuration Task List (-210)
  - **Server Installation Guides**
    - 201i Server Hardware Installation (-220)
    - 703t Server Hardware Installation (-226)
    - 1002rp Server Hardware Installation (-205)
  - **Configuration and Testing Guides**
    - Meridian 1 and CallPilot Server Configuration (-222)
    - Succession 1000 System and CallPilot Server Configuration (-510)
  - **Unified Messaging Software Installation**
    - Desktop Messaging and MyCallPilot Installation Guide (-505)
- **Administration**
  - Administrator's Guide (-301)
  - Software Administration and Maintenance Guide (-202)
  - Desktop Messaging and MyCallPilot Administration Guide (-503)
  - Meridian Mail to CallPilot Migration Guide (-801)
  - Application Builder Guide (-325)
  - Reporter Guide (-310)
- **Maintenance**
  - Troubleshooting Guide (-501)
  - **Server Maintenance and Diagnostics**
    - 201i Server Maintenance and Diagnostics (-119)
    - 703t Server Maintenance and Diagnostics (-227)
    - 1002rp Server Maintenance and Diagnostics (-206)
- **End User Information**

End User Cards	End User Guides
Unified Messaging Quick Reference Card	Multimedia Messaging User Guide
Unified Messaging Wallet Card	Speech Activated Messaging User Guide
Command Comparison Card A-Style	Desktop Messaging User Guide for Microsoft Outlook
Command Comparison S-Style	Desktop Messaging User Guide for Lotus Notes
Menu Interface Quick Reference Card	Desktop Messaging User Guide for Novell Groupwise
Alternate Command Interface Quick Reference Card	Desktop Messaging User Guide for Internet Clients
	MyCallPilot User Guide

Chapter 2

Hardware troubleshooting

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201i server

System troubleshooting

Trouble	Action
The system emits beep codes.	The state of the PC chip set is associated with beep codes. Some codes indicate relatively harmless failure situations that allow you to start up the CallPilot server, even though the system is not fully functional unless you solve the trouble. Some beep codes indicate catastrophic failures that cannot be easily resolved at the customer site. For example, the series of beep codes 1-3-3-1 indicates a defective or missing memory DIMM. Declare the system an out-of-box failure (OBF) and return it to the channel partner. **Note:** The 201i server emits one pulse beep at startup. This is a normal beep and does not indicate a system failure.
The HEX display is not on at startup.	The system can be in a catastrophic failure state. ■ The power supplies have malfunctioned. ■ The 8051 system controller failed. The 8051 system controller and the HEX display work together and perform a quick system hardware test before the operating system starts up. Refer to the *201i Server Maintenance and Diagnostics* document (555-7101-119) for information on interpreting the HEX display.
The red light on the back of the 201i board is on.	The onboard DSP field programmable gate array (FPGA) is not loading properly. Sometimes the system boots to the operating system, but CallPilot does not function. Declare the system an OBF and return it to the channel partner.
The DSP card socket light is on, but no DSP card is plugged in.	The DSPs failed to load. Sometimes the system boots to the operating system, but CallPilot does not function. Declare the system an OBF and return it to the distributor.
The server does not fit or seat properly into the shelf.	**ATTENTION!** Do not force the 201i server into the shelf. Ensure that you set the proper physical spacing on the back of the server. The Option 11 and Meridian 1 cabinets have two different card spacing options. Use a Phillips screwdriver to adjust the bracket on the back of the 201i server (the backplane card edge connector). Refer to the *201i Server Hardware Installation* guide.

Trouble	Action
The green HEX display indicates that the system works properly and you hear the hard drive spin, but no information is displayed on screen.	Verify that the monitor is properly connected to the power supply and to the CallPilot server. Ensure that the monitor is not defective. If the system still does not display information on screen, then declare the system an OBF and return it to the distributor.

SCSI peripheral troubleshooting

Trouble	Action
The system does not start from the CD-ROM.	The 201i server does not support this feature at this time.
The system displays error messages while the operating system is installed from the CD-ROM.	Ensure that the most recent version of the CD-ROM SCSI driver is installed on your system. Newer CD-ROM drives are very fast and the cables that connect them to the server can be too long. The faster the SCSI CD-ROM runs, the shorter the cable must be. The newest CallPilot SCSI drive driver is a de-stroked driver, which forces the SCSI drive to run more slowly and reliably with longer SCSI cables supplied by Nortel Networks. If you get random installation errors during the loading of the operating system, then the SCSI driver installed on your system is not the most recent.
The CD-ROM drive is not shown in the operating system. Errors occur during CD-ROM or tape operation.	Because the SCSI cable can be plugged and unplugged from the faceplate of the 201i server, the cable connector pins can get bent or pushed in. Inspect the connector of the SCSI cable and ensure that all the connector pins are straight and level. Ensure that the cable is properly and fully plugged in and latched to the 20i server faceplate.

Ethernet cable troubleshooting

Trouble	Action

The Ethernet link LEDs are not on.	When an Ethernet cable is properly connected at both ends, the link LED associated with the Ethernet connector must be on at both ends of the Ethernet cable even when the operating system is not running.
	The 201i faceplate has a row of four green LEDs labelled E, C, I and S.
	■ The leftmost LED (E) is associated with the ELAN link.
	■ The second LED (C) is associated with the CLAN link.
	■ The other two LEDs indicate the IDE (I) and SCSI (S) activity of the following devices:
	  ■ IDE (I)
	  ■ SCSI (S)
	If the Ethernet link LEDs are not on, check the Ethernet cabling.
	Note: The link LEDs blink to indicate network activity.

The CallPilot CLAN does not work when the server is connected to a large Meridian 1 system.	The 201i server uses two auto-negotiating Ethernet network interface cards (NIC). When the NICs are connected to a 10/100Base-T port, they try automatically to negotiate transfer rates at the higher speed. The large Meridian 1 systems have filtered backplanes that generate loss on all signals, except on the signals routed to the bottom four pins (the ELAN pins). As a result, the server can go into a loop or appear unresponsive on the CLAN. ■ Use an unfiltered Ring/Tip cable supplied by Nortel Networks. or ■ Remove the filter block on the back of the Meridian 1 newer systems and connect the switch directly to the 201i server I/O cable. **CAUTION** Dangerous voltage levels can be present in the back of the Meridian 1 switch. Use the proper cable, as indicated in the *201i Server Hardware Installation* guide.

703t server

Server LEDs

The LEDs indicate the state of your server and can help you troubleshoot startup problems. The following tables provide useful information on the external and internal LEDs.

External LEDs

Description	Information
MPB96 DS30 link LEDs (three green LEDs located on the card bracket and visible from the back of the server)	When these LEDs are on, all three DS30 connections are working properly and the cables are connected correctly. If one or more LEDs are off, one of the following conditions is present: ■ One or more connections to the switch are interrupted. Check each of the three branches of the DS30 cable for faults or replace the cable. ■ An MGate card in the switch is defective.
Blue LED at the back of the server	This LED is currently not used. The blue LED comes on only for a moment at server startup.
NIC LEDs	Each network interface card (NIC) has two LEDs: ■ The upper LED shows that the network cable is connected. ■ The lower LED blinks to indicate data transfer.

Internal LEDs

Description	Information
MPB96 board LEDs	The three red LEDs at the top of the MPB96 board are visible through the grill at the back of the server. ■ The PCI FPGA Done LED (the closest to the card I/O bracket) comes on at startup and turns off immediately. This indicates that the board works properly and was detected correctly by the system. If this LED stays on after the startup, the card is defective and must be replaced. ■ The DSP FPGA Done LED comes on at startup and stays on until the CallPilot drivers are loaded and the diagnostic screen is displayed. If the LED stays on after the operating system has started and the CallPilot diagnostic screen has appeared, then the MPB96 board is defective or the DSP and NTBus drivers do not function properly. ■ The CTbus FPGA Done LED (the farthest from the card I/O bracket) works in tandem with the DSP FPGA Done LED and turns on and off at the same time.

Description	Information
RAID controller LEDs	The RAID controller has one red LED and eight small LEDs at the back. When the card works properly, the red LED comes briefly on at startup; this indicates that the card was accessed for detection. At the same time, all eight LEDs at the back of the card come on and then half of them turn off and stay off. Four lit LEDs at the back of the card indicate that the card works properly. If all eight LEDs stay on after startup, the card was not detected or is defective.

BMC beep codes

The main board used in the 703t server includes a baseboard management controller (BMC) that provides monitoring, alerting and logging of critical system information obtained from sensors embedded on the board.

The BMC generates beep codes when it detects failure conditions.Each digit in the code represents a sequence of beeps.

Beep code	Reason
1	Front panel CMOS clear initiated
1-5-1-1	Fault resilient booting failure (processor failure)
1-5-2-1	No processor installed or empty processor socket 1
1-5-2-3	Processor configuration error (for example, mismatched voltage identifications and empty processor socket 1
1-5-2-4	Front-side bus select configuration error (for example, mismatched BSELs)
1-5-4-2	Power fault: dc power unexpectedly lost (for example, power good from the power supply was deasserted)
1-5-4-3	Chipset control failure
1-5-4-4	Power control failure (for example, power good from the power supply did not respond to power request)

System troubleshooting

Trouble	Action
The system does not boot and appears dead. The system does not emit any beeps. The fans do not turn.	Verify that the power cord is properly plugged in the power outlet. Check if other equipment plugged in the same power outlet works. **Note:** If the fans are turning, but the system emits no beeps verify that ■ the monitor is turned on ■ the power cord to the board (processor and main) is plugged correctly
The system does not start, but emits beeps.	Identify the type of beeps that your system emitted: system board beeps or RAID beeps. ■ The system board beeps are usually short; their pattern is identified in the *703t Server Maintenance and Diagnostics* guide. The system board beeps are usually not associated with information displayed on the screen. If the system does not display information on the screen but emits board beeps, then a main board condition is present. ■ The RAID beeps are high pitched and long. The RAID beeps emitted by the system during startup are associated with messages indicating that a system is in a critical state. Check the status LED at the front for a blinking or steady amber light, which indicates that ■ a critical temperature or voltage fault has occurred ■ the CPU was not installed or is not functioning Check the beep codes provided in the *703t Server Maintenance and Diagnostics* guide to identify the failure, and then replace the defective component or remedy the fault.
The system beeps, displays information on the screen, but the operating system does not start up.	This is a typical RAID beep. One of the following condition is present: ■ One cable or both cables from the hard drives are disconnected or improperly connected. ■ One or both drives are faulty. In special situations, this symptom indicates that the NVRAM contents and the drive configuration were lost. The data is still there, but the system beeps and shows that both drives are faulty. Perform a data recovery by configuring the drives as indicated in the *703t Server Maintenance and Diagnostics* document, without initializing the logical drives.

Trouble	Action
The system starts the operating system, but still beeps.	This symptom typically indicates a RAID trouble: one of the hard drives is in critical condition. Rebuild the drive as soon as you get to the operating system; refer to the *703t Server Maintenance and Diagnostics* guide. If the drive rebuilding does not work, then the drive is defective and must be replaced.
The system does not boot to CallPilot.	This symptom can indicate a multimedia card failure or a software failure. Check for multimedia card errors on the diagnostic screen that appears immediately after the system boots. If the multimedia card functions properly, then investigate the software area; check the Event Viewer for information on software failures.
The system starts, but displays the following error message: `PXE-E61 Media failure; please check cable`	This is a critical message that appears when the ELAN or CLAN cable is not plugged. Ensure that the ELAN and CLAN cables are properly plugged.
The system starts up and displays right after the video information string an error message such as the following: `PCI vendor ID does not match the Device ID`.	This is not a critical error message. In CallPilot 3.0, this trouble has been fixed by upgrading the BIOS. For previous CallPilot releases, ensure that the Ethernet controllers are enabled in the BIOS. The error message can appear, for example, when one of the Ethernet controllers is disabled in the BIOS.
The system board displays an error message in red and does not start up.	This is a Management Controller failure. This failure is serious and occurs because a board in the system was replaced, but the server was not shut down and unplugged. You must unplug the power cord when swapping boards to avoid causing server damage. When the error message appears, shut down the server, unplug the power cord, wait for a minute and, then plug the cord back in. If this action does not remedy the trouble, call Nortel Networks support.

SCSI troubleshooting

Trouble	Action
The system does not scan the Adaptec SCSI controller BIOS startup. No information on the SCSI controller is displayed during startup.	The SCSI controller is disabled in the BIOS. Open the BIOS and enable the Adaptec SCSI controller.

Trouble	Action
The tape drive is detected during startup, but not in the operating system. As a result, no backup can be performed.	The SCSI controller is configured as a RAID system. Press **Ctrl+A** at startup to open the SCSI main menu and proceed as follows depending on your CallPilot release: ■ CallPilot 3.0 (new systems): ensure that the HostRAID option is set to Disabled in the SCSI settings. ■ CallPilot 2.x: ensure that the HostRAID setting is set to ”Enable HostRAID.”

RAID troubleshooting

Trouble	Action
The system boots and generates beeps.	One or more logical drives are in critical mode (one of the drives is in FAIL condition). Rebuild the drives. If the drive rebuilding is unsuccessful, replace the drives.
The system does not detect the RAID card.	The RAID card can be defective. Check the LEDs on the back of the card. If more than four LEDs are on, the RAID card is defective or the incorrect RAID firmware is used. ■ Ensure that your system uses the correct RAID firmware release. ■ Replace the RAID card.
The system detects the RAID card, does not boot, and attempts to boot from the network.	The logical hard drive that has the booting partition is offline or both physical drives on the booting logical drive are faulty. ■ Press **Ctrl+M** at startup to open the MegaRAID BIOS Configuration utility. ■ Recreate the RAID pack without initialization. ■ Restart the server. If the drives were just offline, this action restores their functionality. If this solution does not remedy the trouble, replace the defective drives. **Note:** If you brought the hard drives offline deliberately or performed a RAID splitting operation, then you must not recreate the RAID pack without initialization.

Trouble	Action
The system does not rebuild a new drive with which you replaced a faulty drive.	When you replace a defective drive, the new drive must be larger than the original drive. In this case, the system rebuilds the new drive. However, if the new drive is smaller than the original drive, it must not be smaller by more than 1 Gbyte. If the new drive is smaller than the original drive by less than 1 Gbyte, the GBWay setting in the Adapter properties is disabled. Enable the GBWay setting and start a new RAID configuration. Since starting a new RAID configuration erases the existing data, back up the system before proceeding. The system does not rebuild a drive if an incorrect combination of operating system utility and RAID firmware is used on your system. Ensure that your system uses the following configuration: PCConsole 5.0 and LSI Elite 1600 111U firmware **Note:** Non supported combinations of operating system utility and RAID firmware can corrupt your system and prevent drives from rebuilding.
The system does not rebuild the drive automatically after you replaced a faulty drive.	The Automatic rebuild feature is disabled in the BIOS on the 703t platform. Initiate the rebuilding process manually in the Windows MegaRAID utility.

Windows and CallPilot hardware troubleshooting

Trouble symptom	Action
The system beeps, but seems to be running properly and taking calls.	This is a RAID card beep indicating that one of the drives does not function properly. Do not shut down the system. ■ Open the MegaRAID Client (CallPilot 2.x) or Power Console Plus (CallPilot 3.x) utility and check which drive is marked as Dead. ■ Rebuild the drive marked as Dead. If the rebuild is unsuccessful, ensure that the other drive is working, then shut down the system and replace the drive marked as Dead.
The system displays a blue screen with the following message: `Hardware Malfunction, please contact your H/W vendor`. The system does not take calls.	Check the release of the MPB96 board. The blue screen appears if the MPB96 board release is 5 or earlier, and the version of the system BIOS is other that P07, build 64. If the MPB96 board release is 6 or later, the system BIOS release is irrelevant. Update the MPB96 board to release 6 or later to solve this trouble.

Trouble symptom	Action
All DSP diagnostics fail at system startup.	Shut down the server and open the lid. Turn on the server and check if the PCI LED on the MPB96 board is still on after startup. If the LED is still on, then shut down the server, reseat the board, and then turn on the server again. ■ If the LED is still on, the board is defective and must be replaced. ■ If the LED goes on and then off, but the DSP and CTbus FPGA LEDs are still on after the system booted completely to the operating system, then check the HAL and ensure that all its components are working properly. If the HAL components function properly, then at least one of the ctbus.mcs or dsp.mcs files are corrupted. Replace these files and reboot the system. If the PCI LED still stays on, then the MPB96 board is defective and has to be replaced.
The system starts up, but attempts to boot to the operating system from the network.	Shut down the server and open the lid. Turn on the server and check the RAID controller LEDs. If more than four LEDs stay on after the startup, then the RAID controller is in trouble. ■ Shut down the system. ■ Reseat the RAID controller. ■ Reboot the system. If these actions do not resolve the trouble, then the RAID card is defective and must be replaced.
The system ELAN or CLAN are not working, even though they are detected and displayed in the operating system control panel.	Enable the NIC controllers in the BIOS.
The system displays an error message after CallPilot languages have been installed.	The version of the RAID controller firmware is not 111U or later. Upgrade the RAID firmware 111U or later.
The HAL does not detect the MPB96 board. All the DSPs report failures in the diagnostic window.	The MPB96 board is not installed in the correct slot. ■ Refer to the *703t Server Hardware Installation* guide for the correct number of the slot in which the MPB96 board must be installed. ■ Shut down the system. ■ Install the MPB96 board in the proper slot.
The system does not detect the MPB96 board after CallPilot has been migrated from an earlier platform.	■ Check if the system is detected correctly in the HAL; that is, if the platform information file matches your system information. ■ If the platform information and the system information do not match, then load the correct platform information file into the registry.

Trouble symptom	Action
The system detects the MPB96 board only partially and Configuration Wizard does not run.	The MPB96 board is configured incorrectly from the clocking point of view. Contact your Nortel Networks support representative for assistance.
The system detects the MPB96 board, but does not load correctly the DSP information at startup.	The cache.bin file in the D:\nortel\hardware\dsp\c52\ folder is corrupted. Rerun the Configuration Wizard to reflash the DSPs.

1002rp server

The LEDs indicate the state of your server and can help you troubleshoot startup problems. The following tables provide useful information on the external and internal LEDs.

External LEDs

Description	Information
Fan fault	Two LEDs at the front of the server indicating the status of the fans
Disk activity	Six LEDs at the front of the server indicating the status of the disk drives
Pwr spply	Indicates the status of the power supply
Fan	Indicates that the fan functions normally
Power on	Indicates that the server is on
Over temp	The temperature inside the server is above the safety threshold. This LED indicates that both fans are faulty.
Fault	Comes on when the Pwr spply, Over temp or Fan fault LED come on.
MPB96 DS30 link LEDs (three green LEDs located on the card bracket and visible from the back of the server)	When these LEDs are on, all three DS30 connections are working properly and the cables are connected correctly. If one or more LEDs are off, one of the following conditions is present: ■ One or more connections to the switch are interrupted. Check each of the three branches of the DS30 cable for faults or replace the cable. ■ An MGate card in the switch is defective.
Network interface card (NIC) LEDs	Each NIC has two LEDs: ■ the upper LED shows that the network cable is connected ■ the lower LED blinks to indicate data transfer

Internal LEDs

Description	Information
MPB16-4 board LED	The five LEDs at the top of the MPB16-4 board are visible through the grill at the back of the server. ■ The four DSP Power On LEDs come on when the CallPilot drivers are loaded, right before the diagnostic screen starts. If these LEDs are not on after the system has booted to the operating system and the diagnostic screen has started, then one of the following conditions can be present: ■ the board is faulty and must be replaced ■ the CallPilot DSP and the NTBus drivers do not function properly ■ the DSP card to which the LED belongs is faulty ■ The PCI FPGA Done LED (the farthest from the card bracket) comes on briefly at startup. If this LED stays on after system startup, then the MPB16-4 card is faulty and must be replaced.
MPB96 board LEDs	The three red LEDs at the top of the MPB96 board are visible through the grill at the back of the server. ■ The PCI FPGA Done LED (the closest to the card I/O bracket) comes on at startup and turns off immediately. This indicates that the board works properly and was detected correctly by the system. If this LED stays on after the startup, the card is defective and must be replaced. ■ The DSP FPGA Done LED comes on at startup and stays on until the CallPilot drivers are loaded and the diagnostic screen is displayed. If the LED stays on after the operating system has started and the CallPilot diagnostic screen has appeared, then the MPB96 board is defective or the DSP and NTBus drivers do not function properly. ■ The CTbus FPGA Done LED (the farthest from the card I/O bracket) works in tandem with the DSP FPGA Done LED and turns on and off at the same time.
RAID controller LEDs	The RAID card has one red LED and eight small LEDs on the back. When the card works properly, the red LED comes briefly on at startup; this indicates that the card was accessed for detection. At the same time, all eight LEDs at the back come on, and then half of them turn off and stay off. Four LEDs lit at the back of the card indicate that the card works properly. If all eight LEDs stay on after startup and boot, the card was not detected or is defective.

BIOS beep codes

During the power-on self test (POST) routines performed each time that the system is powered on, various errors can occur.

Error type	Description
Non-fatal error	In most cases, these error allow the system to continue the bootup process. Error messages normally appear on the screen.
Fatal error	These errors do not allow the system to continue the bootup process.

The following table describes the errors communicated by beeps.

Beep count	Message	Description
1	Refresh Failure	The memory refresh circuitry of the processor board is faulty
2	Parity error	A parity error was detected in the base memory (the first block of 64 kbytes of the system).
3	Base 64KB Memory Failure	A memory failure occurred in the first 64 kbytes of memory.
4	Timer Not Operational	A memory failure occurred in the first 64 kbytes of memory, or Timer #1 on the processor board failed to function properly
5	Processor Error	The CPU on the processor board generated an error.
6	8042 - Gate A20 Failure	The keyboard controller (8042) contains the Gate A20 switch, which allows the CPU to operate in protected mode. This error message means that the BIOS is not able to switch the CPU in the protected mode.
7	Processor Exception Interrupt Error	The CPU on the processor board generated an exception interrupt.
8	Display Memory Read/Write Error	The system video adapter is missing or its memory is faulty. **Note:** This error is not fatal.
9	ROM Checksum Error	The ROM checksum value does not match the value encoded in the BIOS.

System troubleshooting

Trouble symptom	Action
The system appears dead. ■ The server does not boot. ■ The server emits no beeps. ■ The fans do not turn.	■ Check if the power cord is properly plugged in the power outlet. If the system is a direct current (dc) version, the power cables can be reversed; ensure that the polarity of the cables is correct. ■ Ensure that the breaker corresponding to the cable is in the ON position. ■ Ensure that the correct type of cable is used, depending on the type of power supply (ac or dc). ■ Check if other equipment plugged in the same power outlet works. **Note:** If the fans are turning, but the system emits no beeps check if the monitor is turned on. Check if the two LEDs on the power supplies (at the back of the server) are on or red. ■ If the LEDs are not on, check the power supply fuse. ■ If the LEDs are on and red, one or both power supplies are not plugged or plugged incorrectly, or the connection pins on the power supplies are bent or missing.

Trouble symptom	Action
The system does not start, but emits beeps. No information is displayed on screen.	Identify the type of beeps that your system emitted. ■ The system board beeps are usually short; their pattern is identified in the *1002rp Server Maintenance and Diagnostics* guide. The system board beeps are usually not associated with information displayed on screen. ■ The RAID beeps emitted by the system at startup are associated with messages indicating that the system is in a critical state. The RAID beeps are high pitched and long. Press **Ctrl+M** at startup to open the MegaRAID BIOS Configuration utility and check for a faulty or disconnected drive. The system also emits RAID beeps when a RAID splitting procedure is performed. However, these beeps do not indicate a fault condition. ■ A continuous high-pitched beep indicates a chassis condition and is usually associated with a LED lit on the front of the chassis (power supply, fan or over temperature). If the power supply is the cause of the beep, look at the back of the server and identify the defective power supply (the LED is red or off). The power supply can be plugged incorrectly. Unplug the power cord, check the pins and plug the cord back. If the condition persists, replace the power supply. If a fan is defective, replace it. You can hot swap the fans. The over temperature condition appears when both fans are faulty. ■ Sets of 1 through 11 intermittent beeps indicate faults associated with the following hardware.
The system displays information on screen, emits long beeps separated by pauses, but does not boot to the operating system.	These are typical RAID beeps. If the system does not boot, one of the following conditions can be present: ■ one cable or both cables from the hard drives are disconnected or improperly connected ■ one or both drives are faulty In special situations, the NVRAM contents and drive configuration were lost. The data is still there, but the system beeps and shows that both drives are faulty. Perform a data recovery by configuring the drives as indicated in the *1002rp Server Maintenance and Diagnostics* document, without initializing the logical drives. Open the **Ctrl+M** utility at startup and ensure that the RAID setup matches the settings indicated in the *1002rp Server Maintenance and Diagnostics* guide.

Trouble symptom	Action
The system boots to the operating system and beeps intermittently.	**ATTENTION! Do not reboot your system!** This symptom typically indicates a RAID trouble: one of the hard drives is in critical condition. Rebuild the drives as soon as your system boots to the operating system. If the drive rebuilding does not work, then the drive is defective and must be replaced. Use the **Ctrl+M** or MegaRAID utility to remedy the trouble as indicated in the *1002rp Server Maintenance and Diagnostics* guide. Do not disable the alarm. You can silence the alarm in the utility instead.
The system display information on the screen, but does not boot to the operating system. The startup routine stops after the RAID status is displayed; the cursor blinks on the screen.	The system BIOS is configured incorrectly. The setting "Chipset\Allow card to trap INT19" is set to Yes. Reboot, open the BIOS and set the setting "Chipset\Allow card to trap INT19" to No. Ensure that all the BIOS settings are as indicated in the *1002rp Server Maintenance and Diagnostics* guide.
The system displays information on screen, but does not boot to the operating system and does not detect the RAID controller card.	One of the following conditions affects the system: ■ The RAID controller is defective—more than four LEDs at the back of the card are on. ■ The PCI bridge that drives the first four PCI slots on which the RAID card resides is defective or the bridge pins are disconnected or short-circuited. Replace the RAID card. If this action does not remedy the trouble, move the RAID card into the next set four PCI slots and reboot the system. ■ If the system boots correctly, consider replacing the PCI backplane since it is only partially functional. ■ If the system does not boot correctly, replace the PCI backplane. **Note:** Each set of four slots is controlled by a different PCI bridge. When you move the RAID card to the next set of four PCI slots, you try to determine if the PCI bridge that controls the set of four PCI slots in which the card was initially installed is defective.
The system boots, but the keyboard or the mouse or both are not functional.	The Y cable is connected incorrectly or is not the cable that Nortel Networks shipped with the system. The Y cable can also be plugged improperly.
The system does not boot to CallPilot.	This symptom can indicate a multimedia card failure or a software failure. Check for multimedia card errors on the diagnostic screen that appears immediately after the system is rebooted. If the multimedia card functions properly, then investigate the software area; check the Event Viewer for information on software failures.

Trouble symptom	Action
The RAID controller card displays SCSI IDs from 0 to 6 for the hard drives although they are configured on different channels.	The jumpers of the SCSI drive backplane are installed. Remove the jumpers. The displayed SCSI IDs must be from 0 to 2 on both channels.
The RAID controller displays the drives on the second section as being on channel 1 (the established channels are 1 and 2).	The SCSI cables that connect the RAID controller card and the SCSI drive backplane are inverted. Power down the system and reconnect the cables so that they match the channels as indicated in the *1002rp Server Maintenance and Diagnostics* guide. The RAID controller performs channel roaming without losing data.
The Ethernet controllers are enabled and detected, but the **ping** command fails when used to check network resources.	■ Open a DOS command prompt window. ■ Type **ipconfig /all**. The **ipconfig** command displays the MAC addresses. If the MAC addresses are missing or have the same value, then they are not programmed. Return the SBC card to the factory.
The software feature key adapter (dongle) is installed properly, but CallPilot cannot detect it.	■ Ensure that the software feature key adapter is plugged into the parallel port. The DS30 connector on the adjacent MPB16-4 board is similar to the parallel port and can be confused with it. ■ Ensure that all the flat cables inside the server have the red stripe towards the end of the chassis. Reinstall any cable whose red stripe is not in this position. ■ Check the parallel port settings in the BIOS. No IRQ must be assigned to the parallel port. If you performed all the preceding tasks and CallPilot still does not detect your software feature key adapter, return the board to the factory.

SCSI troubleshooting

Trouble	Action
The system BIOS does not scan the Adaptec SCSI controller at startup (no SCSI controller is referenced).	The SCSI controller is disabled in the system BIOS. Open the system BIOS at startup and enable the SCSI controller.
The tape drive driver is loaded, but is not detected and does not work.	The cause of this trouble can be one of the following: ■ The tape drive is disconnected. ■ The SCSI controller is disabled in the BIOS. ■ The tape drive SCSI ID is set to 7

RAID troubleshooting

Trouble	Action
The system boots, but emits beeps.	One or more logical drives are in critical mode (one of the drives is in FAIL condition). Rebuild the drives. If the drive rebuilding is unsuccessful, replace the drive.
The system does not detect the RAID card.	The RAID card can be defective. Check the LEDs on the back of the card. If more than four LEDs are lit, the RAID card or the PCI backplane is faulty.
The system detects the RAID card, but does not boot and attempts to boot from the network.	The logical hard drive that has the booting partition is offline or both physical drives on the booting logical drive are faulty. ■ Press **Ctrl+M** at startup to open the configuration utility. ■ Recreate the RAID pack without initialization. ■ Restart the server. If the drives were just offline, this action restores their functionality. If this solution does not remedy the trouble, replace the defective drives.

Trouble	Action
The system does not rebuild a new drive with which you replaced a faulty drive.	When you replace a defective drive, the new drive must be larger than the original drive. In this case, the system rebuilds the new drive. However, if the new drive is smaller than the original drive, it must not be smaller by more than 1 Gbyte. If the new drive is smaller than the original drive by less than 1 Gbyte, the GBWay setting in the Adapter properties is disabled. Enable the GBWay setting and start a new RAID configuration. Since starting a new RAID configuration erases the existing data, back up the system before proceeding. The system does not rebuild a drive if an incorrect combination of operating system utility and RAID firmware is used on your system. Ensure that your system uses the following configuration: PCConsole 5.0 and LSI Elite 1600 111U firmware **Note:** Non supported combinations of operating system utility and RAID firmware can corrupt your system and prevent drives from rebuilding.
The system does not rebuild a new drive (a little smaller than the original drive) with which you replaced a faulty drive.	The 1 Gbyte setting in the RAID Adapter properties is disabled. Enable the 1 Gbyte setting and start a new RAID configuration. Since starting a new RAID configuration erases the existing data, back up the system before proceeding.
The system does not rebuild the drive automatically after you replaced a faulty drive.	The system rebuilds a drive only if a change in the drive status is made (after a SCSI scan). You must access the drive to initiate a SCSI scan. The system does not start rebuilding the drive unless you access the drive. Initiate a drive rebuild manually using the MegaRAID utility.

Note 1: If a drive is defective, the RAID utility determines the drive condition and marks the drive as FAIL. Hot-swap the drive with a good one and then rebuild the drive. If you suspect that a drive is faulty, simply remove it and replace it with a good drive.

Note 2: New 1002rp systems do not rebuild automatically a drive that replaced a faulty drive marked as FAIL. You must rebuild the drive manually.

Note 3: On older 1002rp systems, the Autorebuild option is enabled by default in the RAID firmware. Check this option and disable it before proceeding with RAID operations.

Windows and CallPilot hardware troubleshooting

Trouble	Action
The system beeps, but otherwise seems to be running properly and taking calls.	This is a RAID card beep indicating that one of the drives does not function properly. Do not shut down the system. ■ Open the MegaRAID utility and check which drive is marked as Dead. ■ Rebuild the drive marked as Dead. ■ If the drive rebuild is not successful, ensure that the other drive is functioning correctly. ■ Power down the system and replace the drive marked as Dead.

Trouble	Action
Voice services from the Meridian 1 switch are not available after an upgrade.	■ Ensure that the MGate card PEC is NTRB18CA or later. ■ Ensure that the version of the MPB16-4 board is 05 or later.
The system stops taking calls after a powerful lightning storm.	The DS30 part of the system is affected. Replace the MGate card to which the MPB16-4 board is connected.
The system plays voice prompts, but does not record messages (T1/SMDI configurations only).	Ensure that your system has the latest version of the Ctbus.mcs file. This file is located in the D:\nortel\hardware\board\m96\ folder.
The system is affected by the following symptoms: frame slips, crackling voice, fax dots, and alarms (T1/SMDI configurations only).	Ensure that the MPB16-4 board is release 5 or later. Ensure that the cable used for the T1 connection is supplied by Nortel Networks and is not a category 4 or 5 cable. Ensure that the SCBus or CTBus cable is not defective.
All DSP diagnostics fail at system startup.	Ensure that the MPB16-4 boards are release 5 or later. Ensure that the PCI backplane does not have Intel PCI bridge chips. Shut down the server and open the lid. Power up the server and check if the PCI LED on the MPB16-4 board is still on after startup. If the LED still stays on, shut down the server and replace the board. If the PCI LED comes on at system startup and then turns off, but the other four green LEDs are still off after the system booted to the operating system, check the HAL and ensure that all its components are working properly. If the HAL components are working properly, one or more MPC8 cards can be defective. Replace the defective MPC8 cards. If your system has two MPB16-4 boards and both have the same symptoms, ensure that the correct driver is installed. If only one MPB16-4 board seems to be defective, swap the boards. If the presumed defective board works after the swapping, then the PCI backplane is defective and you must replace it. If the presumed defective board does not work, then you must replace it.
All the DSPs and DS30 links are reported as “All busy”, but the monitor shows that the resources are only partially busy (Option 11 Meridian 1 configurations only).	The switch and the CallPilot system do not have the same ground connection. Ensure that both systems are plugged into the same power outlet and connected to a single-point ground reference.

Trouble	Action
The system starts up, but attempts to boot to the operating system from the network.	The RAID packs are either not configured or degraded. The RAID system is not operational. Proceed as follows: ■ Power down the system, plug the RAID card into the next set of four PCI slots and then turn on the system. If the system boots correctly to the operating system, then the PCI backplane is defective and you must replace it. ■ Power down the system, open the server lid and turn on the system. If more than four lights remain on, the RAID controller is faulty. Power down the system, reseat the controller card and turn on the system. If this action does not remedy the trouble, then the RAID controller card is defective and you must replace it.
The system ELAN or CLAN are not working, even though they are detected and displayed in the operating system control panel.	Enable the NIC controllers in the BIOS, and ensure that the BIOS settings are correct. Open a DOS command prompt window and type **ipconfig /all**. The **ipconfig** command displays the MAC addresses. If the MAC addresses are missing or are the same, the MAC addresses are not programmed. Return the SBC card to the factory.
The hard drives have intermittent problems and media errors.	Provide the serial number to Nortel Networks support to check if your drive is still covered by the warranty. The serial number provides the history of the hard drive. Open the RAID utility and check the status of each drive by looking at the logical level and physical level. Ensure that no media or surface errors are present. Open the Checkdisk utility in the operating system and run it to detect other type of hard drive errors. Ensure that the firmware version of the LSI Elite 1600 controller is D170 or later.

Chapter 3

Network troubleshooting

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Check cabling

Ensure that the link LEDs at both ends of each Ethernet cable are on. If the link LEDs are not on, then ensure that the cross-over cables are not being used in error. Try different cables if the link LEDs do not come on. Use proper cables rated for at least 100 Mbit/s; for example, category 5 UTP cables.

Check end-to-end connectivity

Ensure that any intermediate hubs, switches, routers and firewalls are properly connected and configured.

Check network adapters and driver installation

1. Start the Windows Device Manager:
   a. Click Start → Settings → Control Panel.
   b. Double-click System.
   c. Click the Hardware tab.
   d. Click Device Manager.
2. Expand the Network Adapters tree by clicking the plus sign to the left of this device entry.

   Result: Two Ethernet adapters are displayed under Network Adapters.
3. Right-click the first network adapter, and then click Properties on the shortcut menu.

   Result: The network adapter Properties dialog box appears.
4. Depending on the information displayed in the Properties dialog box of the network adapter, proceed as follows:
   a. If the device is disabled, enable it.
   b. If the device is not working properly, try reinstalling the device driver.
   c. If you are unable to reinstall the device driver, a hardware problem can affect the adapter.
5. Perform steps 3 and 4 for the second network adapter.

Check TCP/IP configuration

The TCP/IP communication works only if the TCP/IP configuration is correct. Ensure that the subnet mask information is correct and that the default gateway address is on the same subnet.

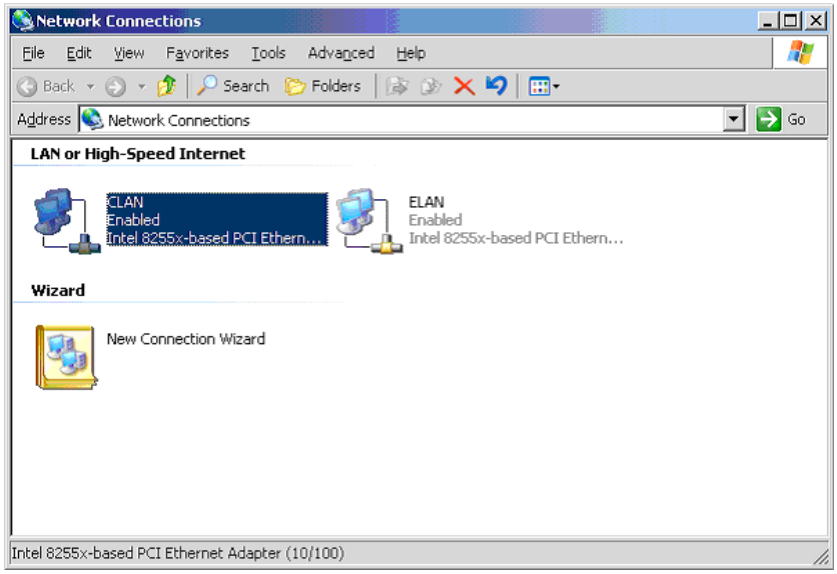
The following procedure outlines the steps necessary for troubleshooting TCP/IP configuration issues. Ensure that all settings, as well as the variables specific to your installation, are correct.

ATTENTION

Do not use the IP addresses and names shown in the illustrations. Use the values provided by your network administrator.

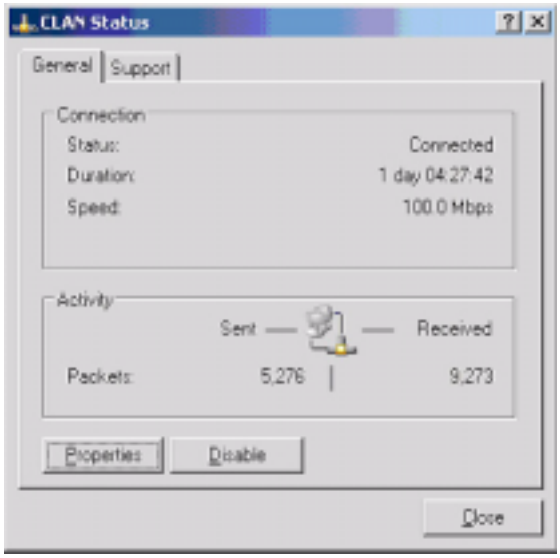
1 Click Start → Settings → Network and Dialup Connections.

Result: The Network Connections window appears.

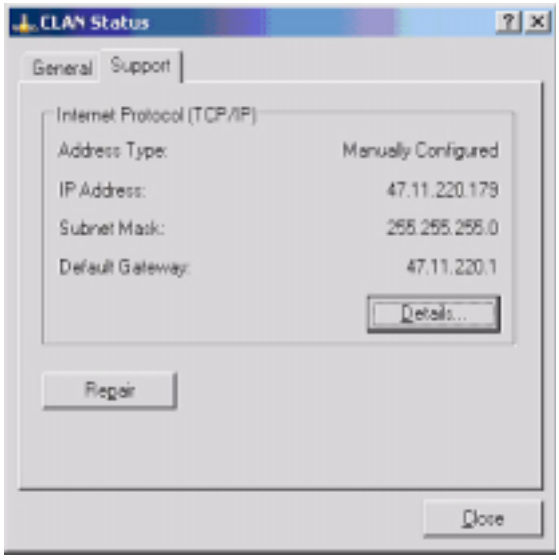


2 Right click CLAN, and then click Status on the shortcut menu.

Result: The following dialog box appears.

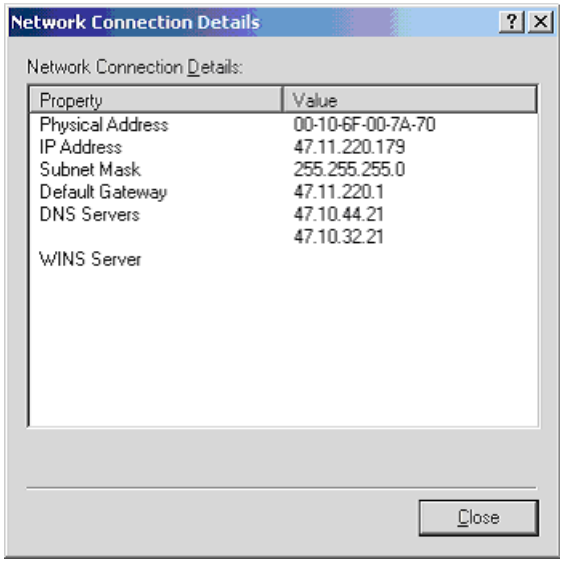


3 Click the Support tab.



4 Click Details.

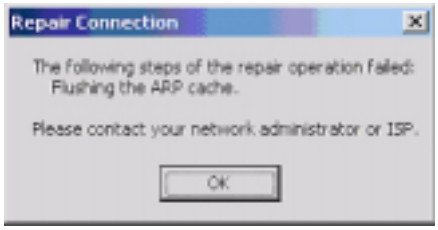
Result: The following box appears.



5 Click Close.

6 Click Repair on the network adapter status dialog box

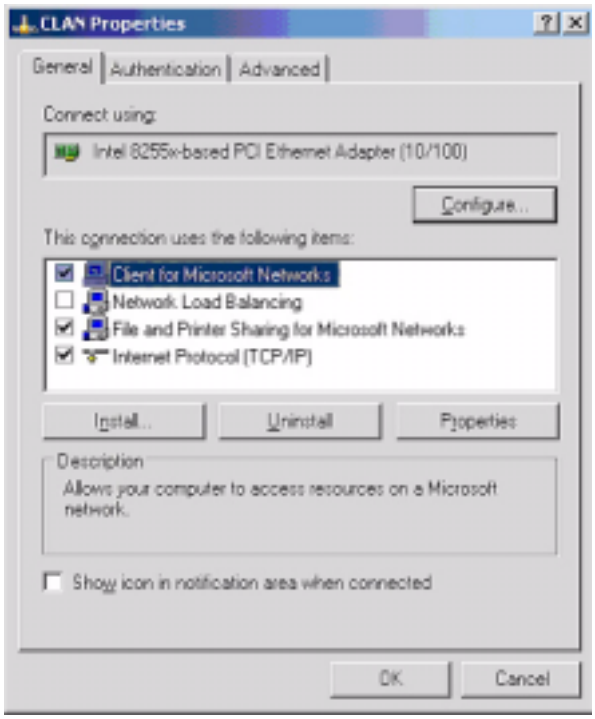
Result: The following dialog box appears.



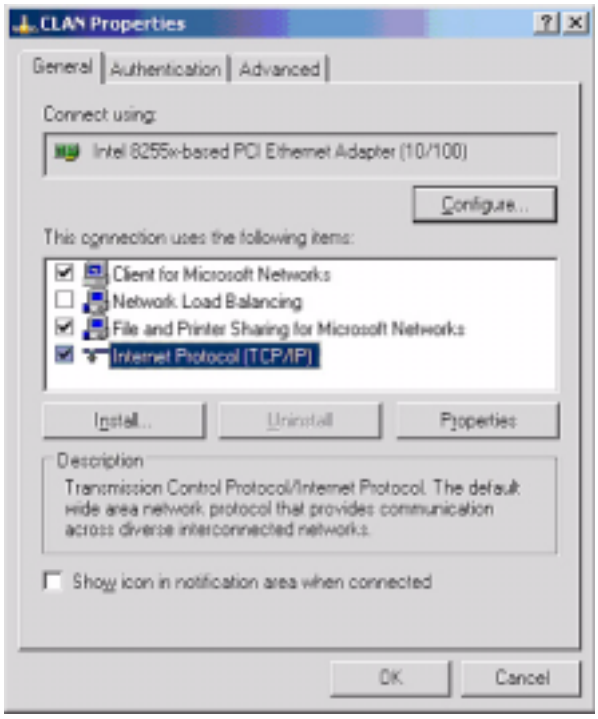
7 Click OK (this error is normal).

8 Click the General tab of the network adapter status dialog box, and then click Properties.

Result: The following dialog box appears.

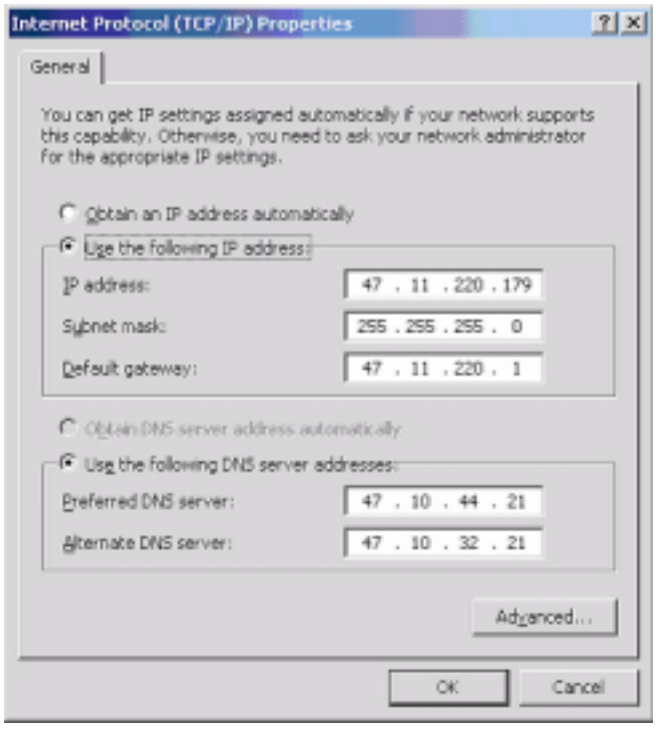


9 Click the Internet Protocol (TCP/IP) entry to select it.



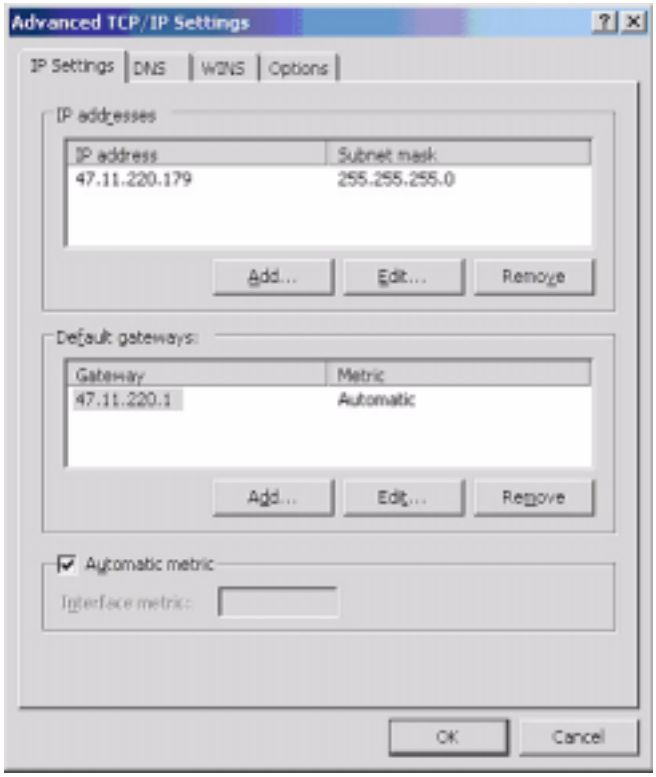
10 Click Properties.

Result: The following dialog box appears.

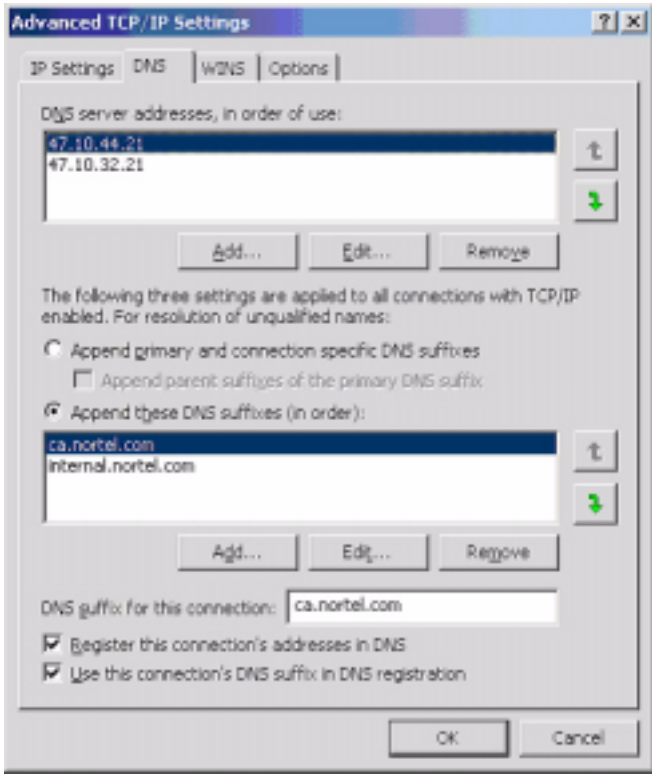


11 Click Advanced.

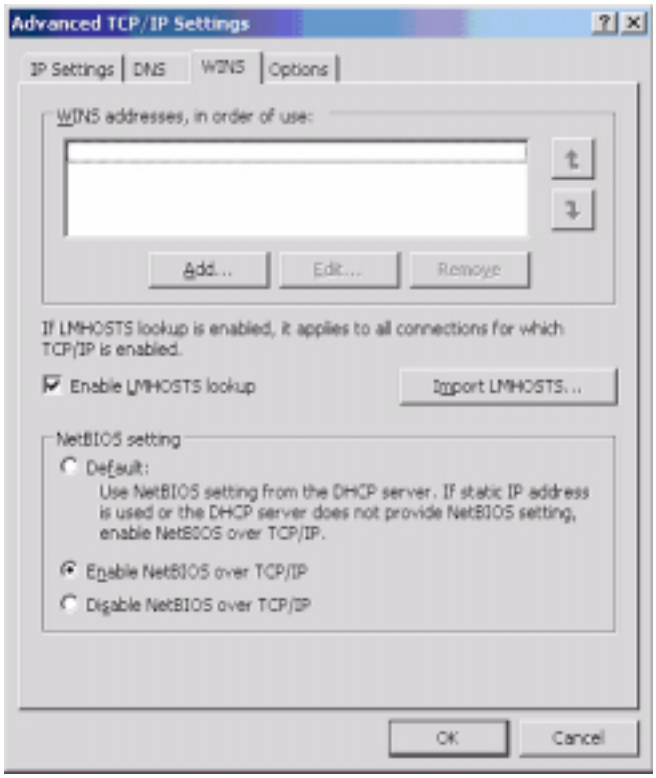
Result: The following dialog box appears.



12 Click the DNS tab.



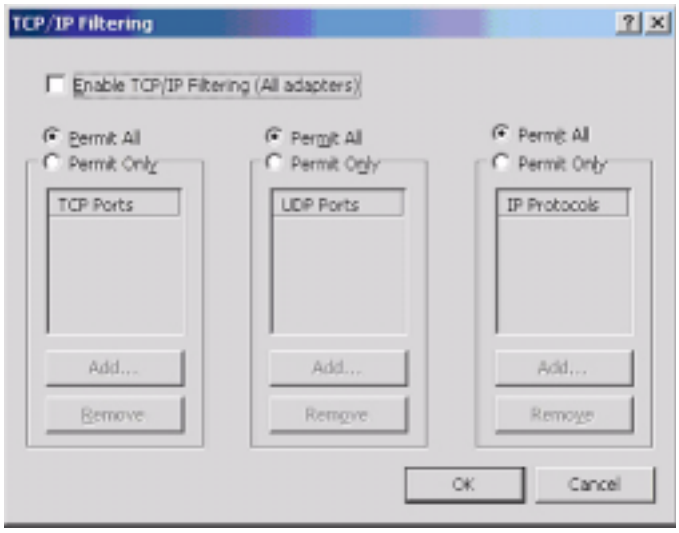
13 Click the WINS tab.



14 Click the Options tab.



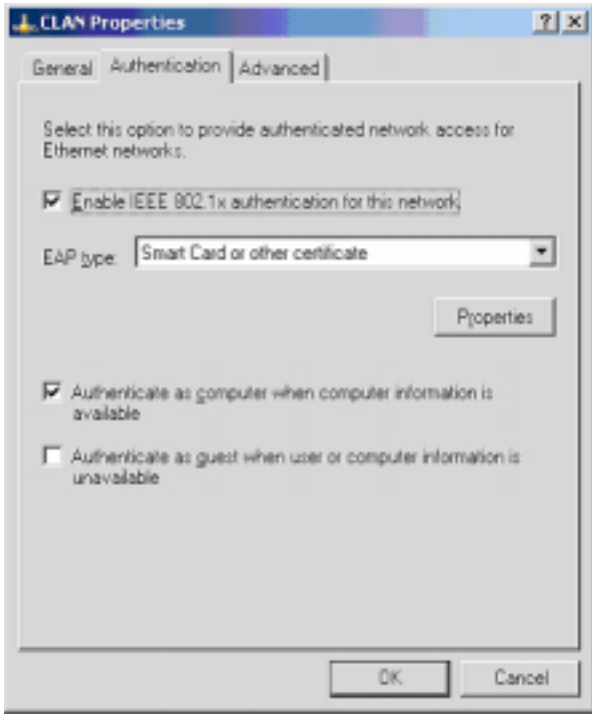
15 Click Properties on the Options tab to display information about TCP/IP filtering.



16 Click Cancel to close the TCP/IP filtering dialog box.

17 Click Cancel to close the Advanced TCP/IP Settings dialog box.

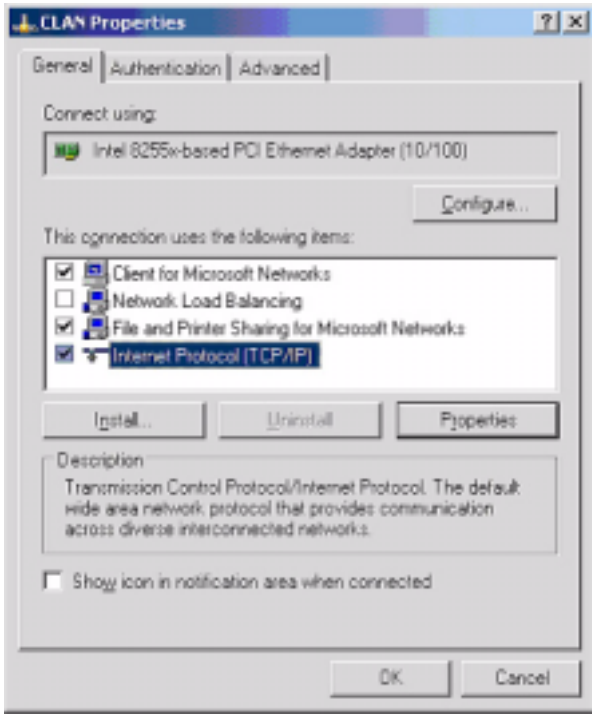
18 Click the Authentication tab in the CLAN Properties dialog box.



19 Click the Advanced tab in the CLAN Properties dialog box.

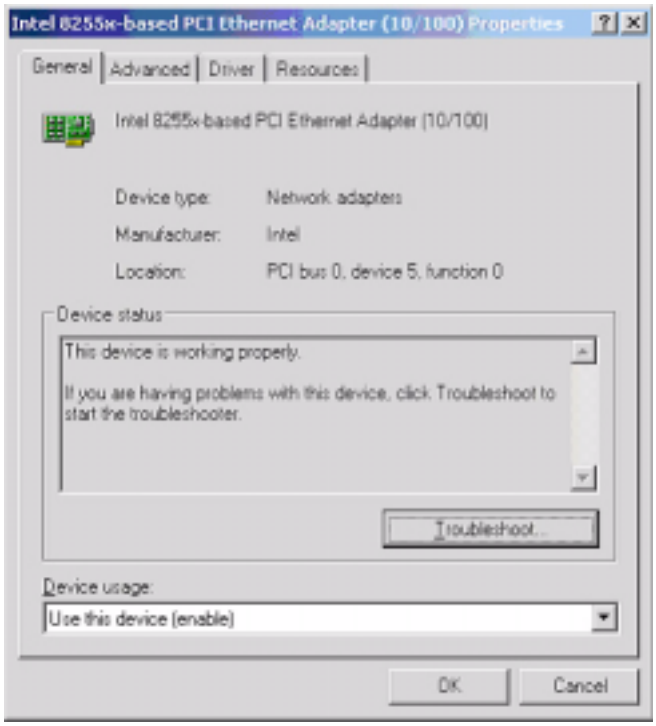


20 Click the General tab in the CLAN Properties dialog box.

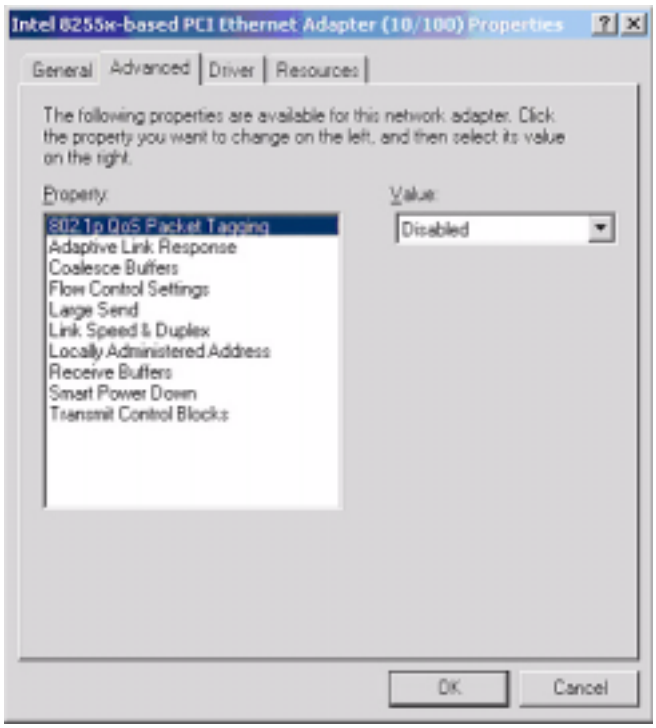


21 Click Configure.

Result: The Ethernet adapter Properties dialog box appears.



22 Click the Advanced tab.



The default property values in the Advanced tab differ according to the link and CallPilot platform used. The following tables provide the default values for different cases.

Note: Other values can work and can be acceptable under certain circumstances.

201i Intel 8255xER PCI adapter (CLAN and ELAN)—default advanced property values

Property	Value
Duplex	AutoDetect
IPv4* Priority Tag	Disabled
IPv4* VLAN Tag ID	0
Receive Buffers	16
Speed	AutoDetect
Transmit Control Blocks	8

703t Intel PRO/1000 MT network controller (CLAN)—default advanced property values

Property	Value
Fast Transmit Completion	On
Flow Control	Both on
Link Speed & Duplex	AutoDetect
Locally Administered Address	Not Present
Number of Coalesce Buffers	128
Number of Receive Buffers	256
Number of Transmit Descriptors	256
Offload Receive IP checksum	On
Offload Receive TSP checksum	On
Offload TCP Segmentation	On
Offload Transmit IP Checksum	On
Offload Transmit TCP Checksum	On

703t Intel 8255x-based PCI Ethernet adapter (10/100) [ELAN]—default advanced property values

Property	Value
802.1p QoS Packet Tagging	Disabled
Checksum	Enabled
Coalesce Buffers	8
Flow Control Settings	Off
IP Security	Enabled
Large Send	Enabled
Link Speed & Duplex	AutoDetect
Locally Administered Address	Not Present
Receive Buffers	48
Security Associations	64

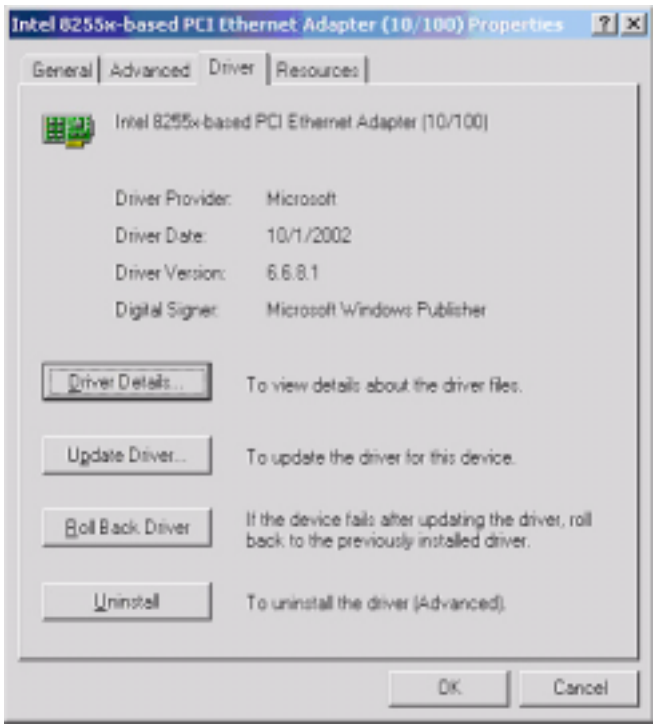
703t Intel 8255x-based PCI Ethernet adapter (10/100) [ELAN]—default advanced property values

Property	Value
Smart Power Down	Enabled
Transmit Control Blocks	16

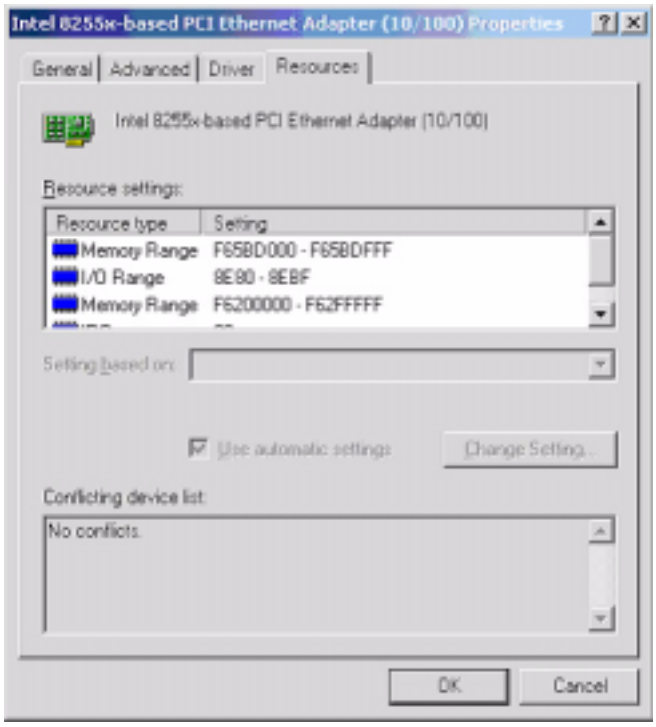
1002rp Intel 8255x-based PCI Ethernet adapter (10/100) [CLAN and ELAN]—default advanced property values

Property	Value
802.1p QoS Packet Tagging	Disabled
Adaptive Link Response	Off
Coalesce Buffers	8
Flow Control Settings	Off
Large Send	Enabled
Link Speed & Duplex	AutoDetect
Locally Administered Address	Not Present
Receive Buffers	48
Smart Power Down	Disabled
Transmit Control Blocks	16

23 Click the Driver tab.



24 Click the Resources tab.

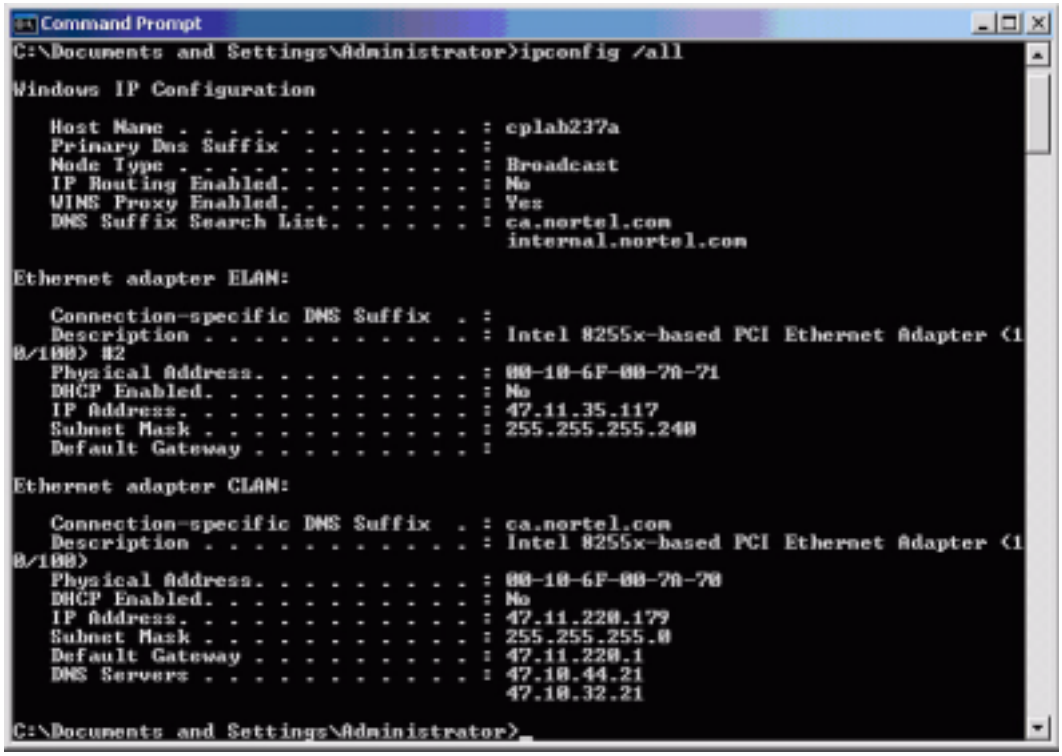


25 Perform steps 2 through 22 for the ELAN adapter.

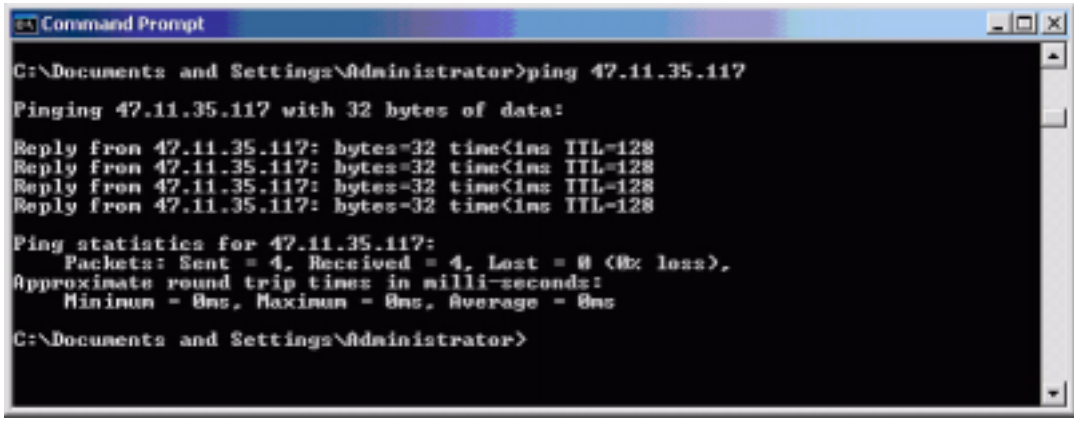
Test the TCP/IP

1 Open a Command Prompt window.

2 Type ipconfig/all to display the network settings.



3 Use the ping command to check if other IP addresses are reachable. For example, ping the IP address of the switch.



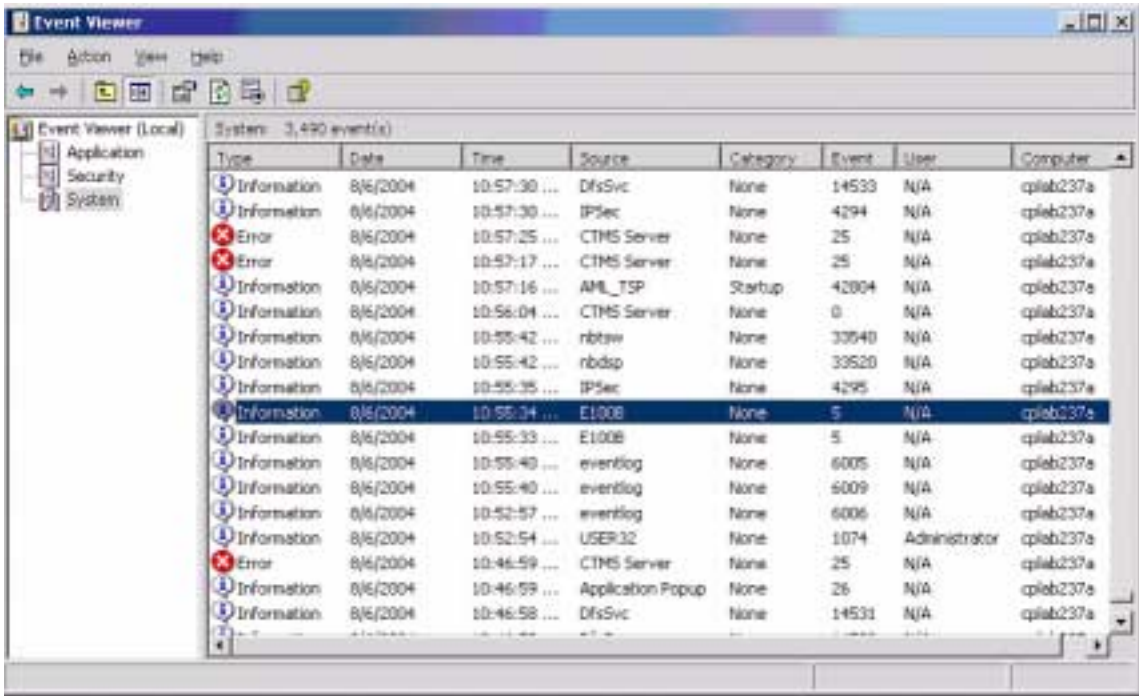
Note: Do not type the IP address shown in the preceding illustration. Use the IP address of your switch.

Check event logs

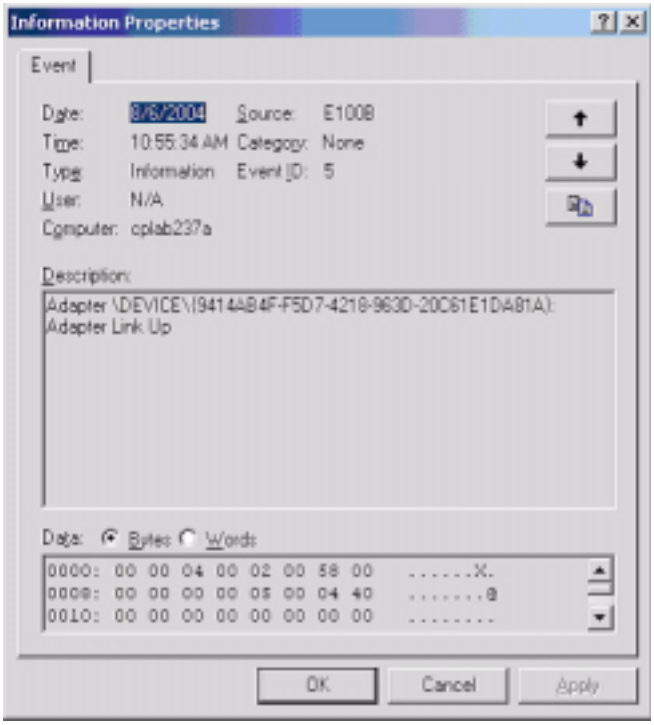
Check the system log for problems that occur when protocols are initialized after a reboot.

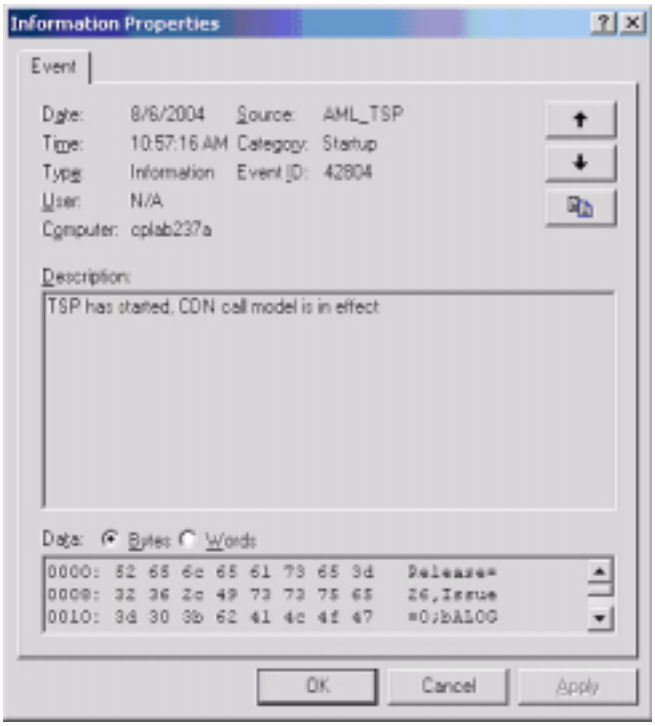
To access the event logs, click Start → Programs → Administrative Tools, and double-click Event Viewer.

Errors in the networking configuration can result in System log events shortly after the system boots up. Look for events with values in the Source column such as E100B (the Intel Pro 100 adapter) and Tcpip. For example, if a duplicate IP address or a duplicate computer name is present on the network, the system issues event logs and networking does not work properly. The following illustration shows the Event Viewer window.



Double-click an event to display the Information Properties dialog box. The following illustrations are examples of Information Properties dialog boxes.





Chapter 4

Routing and remote access troubleshooting

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Symantec pcAnywhere 67

General

Follow these general steps to connect remotely to a CallPilot server.

1. Use dial-up networking on a Windows client PC to dial into the CallPilot server and establish a TCP/IP connection over the dial-up modem link.
2. Start a Symantec pcAnywhere session over the established TCP/IP connection.

The remote connection functions properly only if the following components are correctly configured:

- the modem
- the Routing and Remote Access Service (RRAS) in Windows 2003
- the pcAnywhere host

Modem

The preliminary modem troubleshooting routine consists of ensuring that

- the modem is on
- the modem is properly connected to the COM1 serial port
- the modem is connected to an analog telephone line

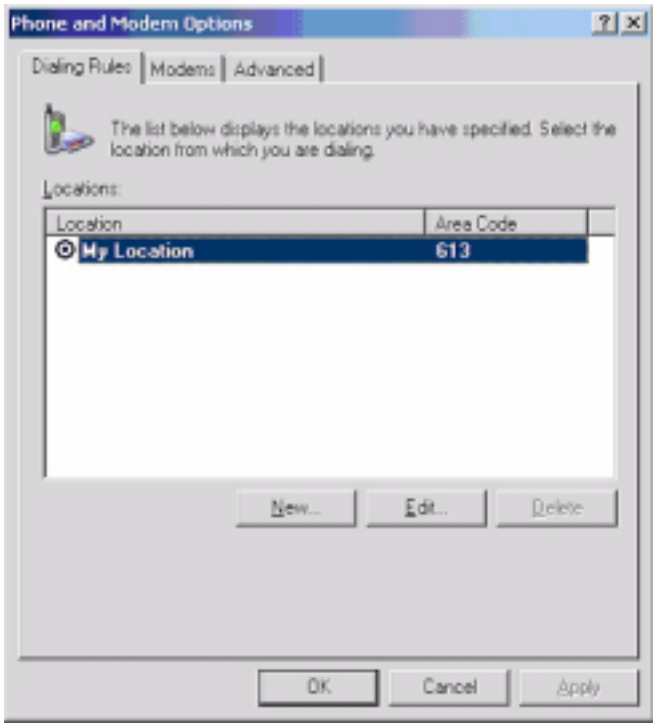
The following procedure outlines the steps necessary for troubleshooting modem configuration issues. Ensure that all settings, as well as the variables specific to your installation, are correct.

ATTENTION

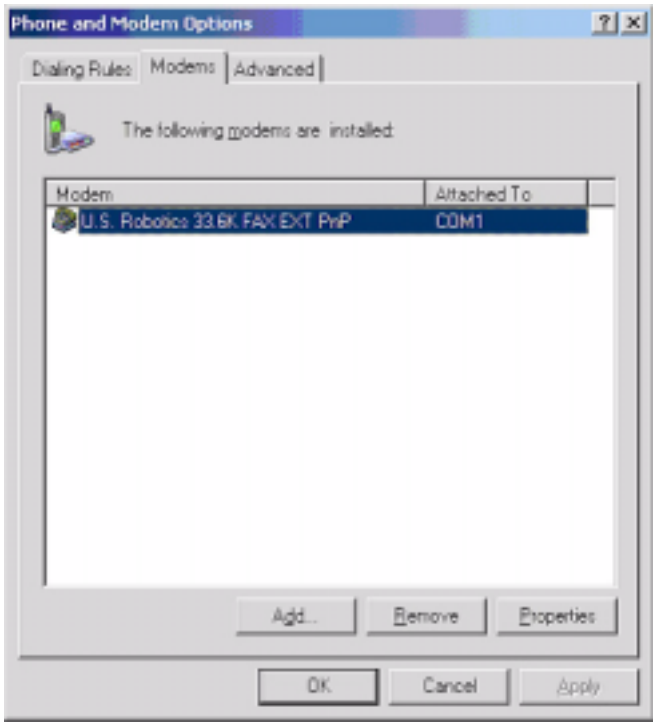
Do not use the exact information shown in the illustrations. Use the values provided by your network administrator.

1 Click Start → Settings → Control Panel, and then double-click Phone and Modem Options.

Result: The Phone and Modem Options dialog box appears.

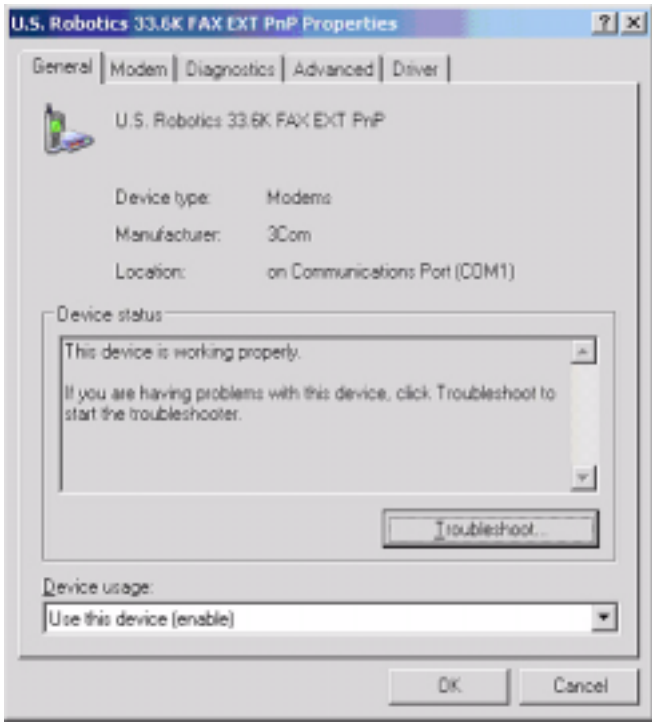


2 Click the Modems tab.

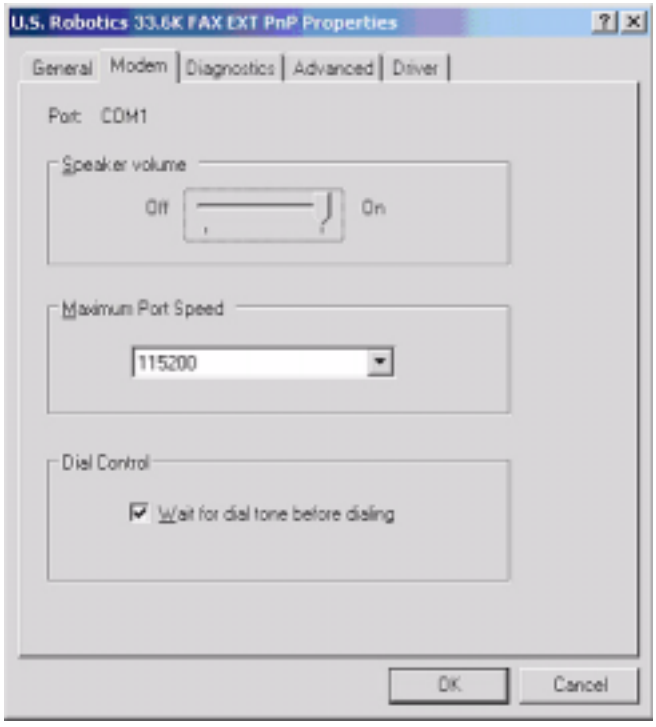


3 Click Properties.

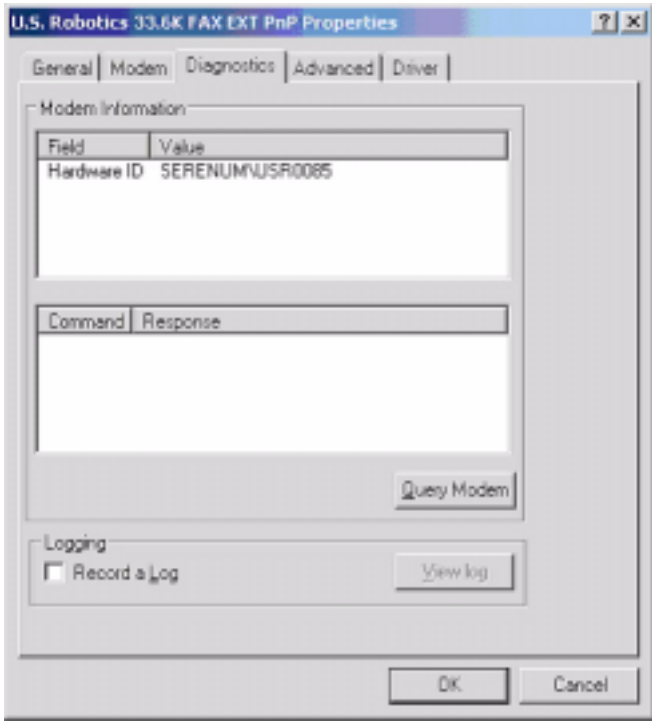
Result: The modem Properties dialog box appears.



4 Click the Modem tab.

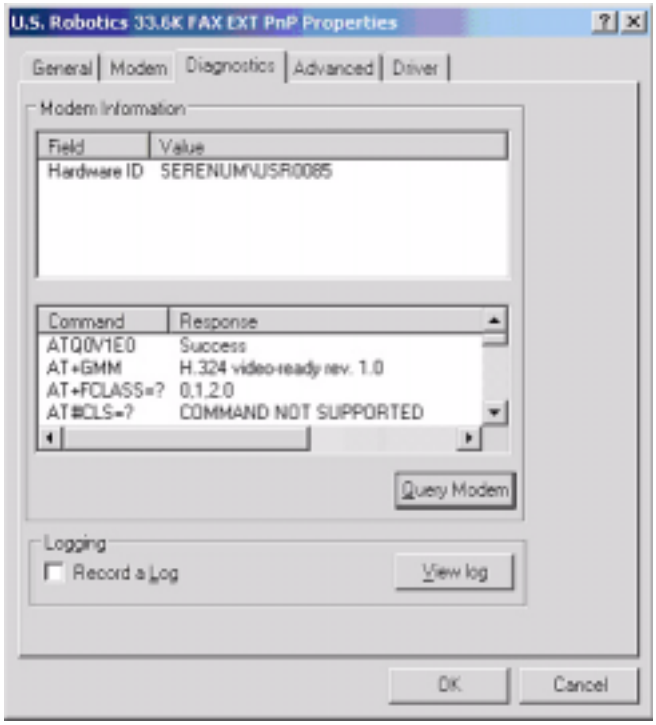


5 Click the Diagnostics tab.

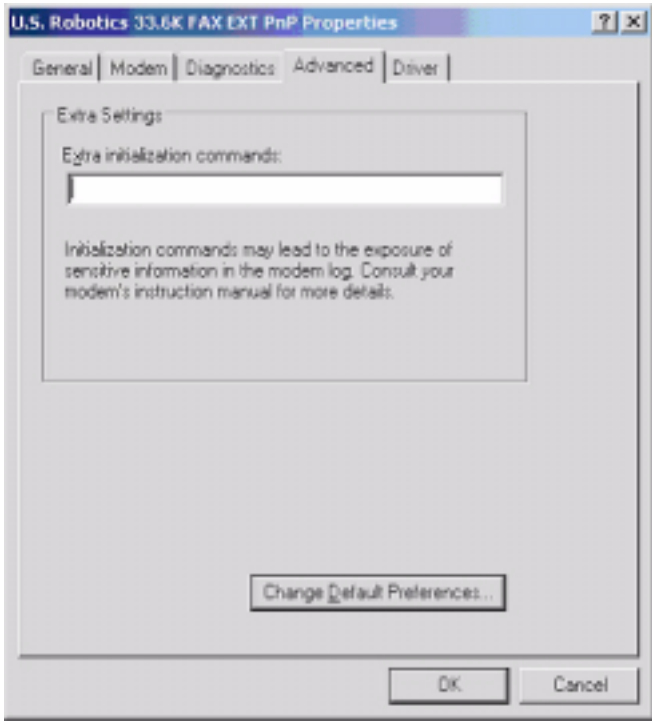


6 Click Query Modem.

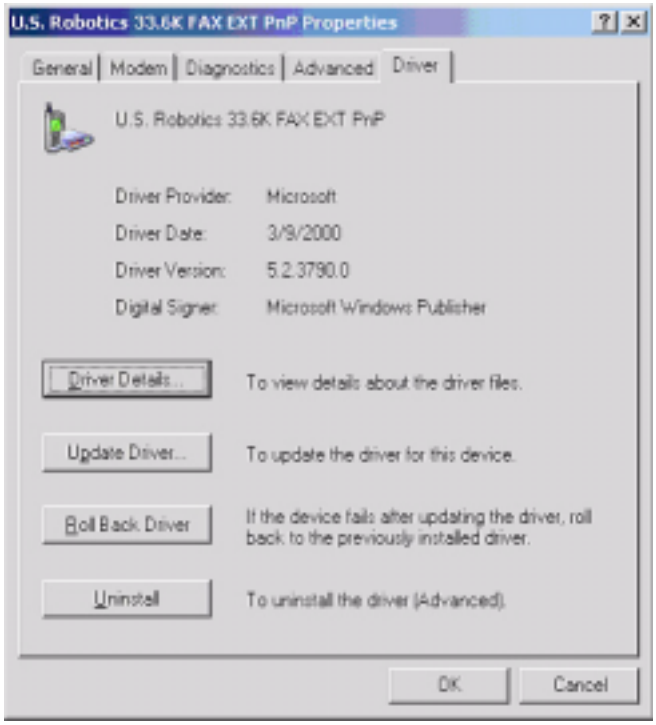
Result: After a delay of several seconds, the system displays the response from the modem. The following illustration indicates that the modem is working.



7 Click the Advanced tab.



8 Click the Driver tab.



9 Click Close, and then close the Phone and Modem Options dialog box.

Routing and Remote Access

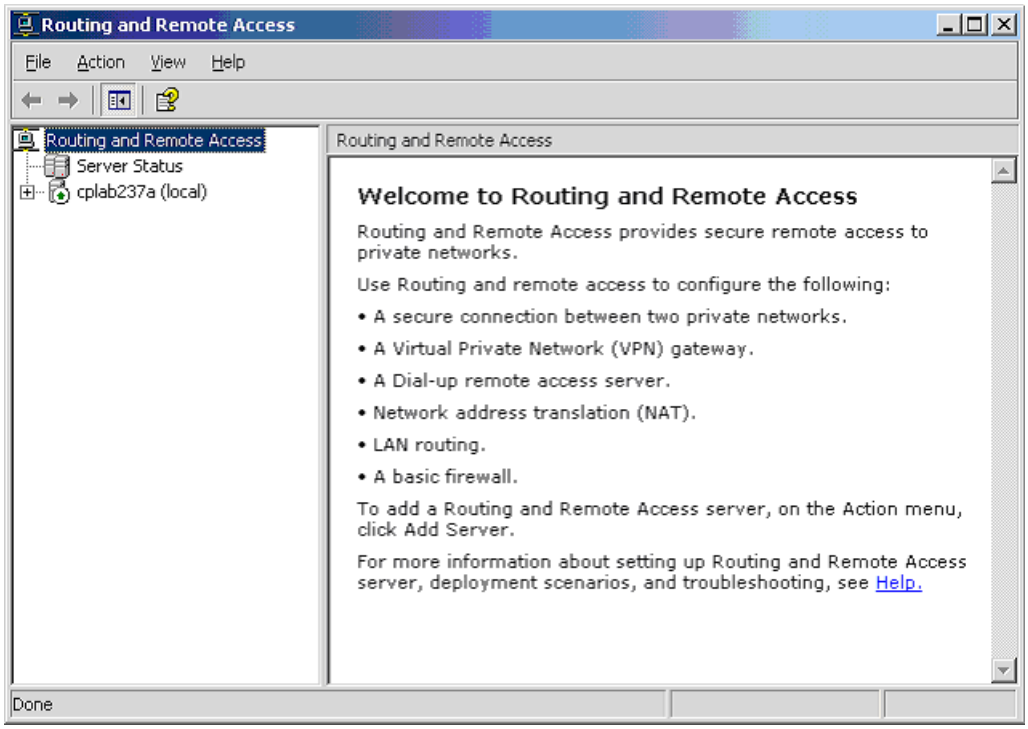
The following procedure walks you through the steps necessary for troubleshooting RRAS issues in Windows 2003. Ensure that all settings, as well as the variables specific to your installation (such as server names and IP addresses), are correct.

ATTENTION

The illustrations show the default RRAS configuration. Under some circumstances, other RRAS configurations can apply.

1 Start → Programs → Administrative Tools, and double-click Routing and Remote Access

Result: The Routing and Remote Access Window appears.

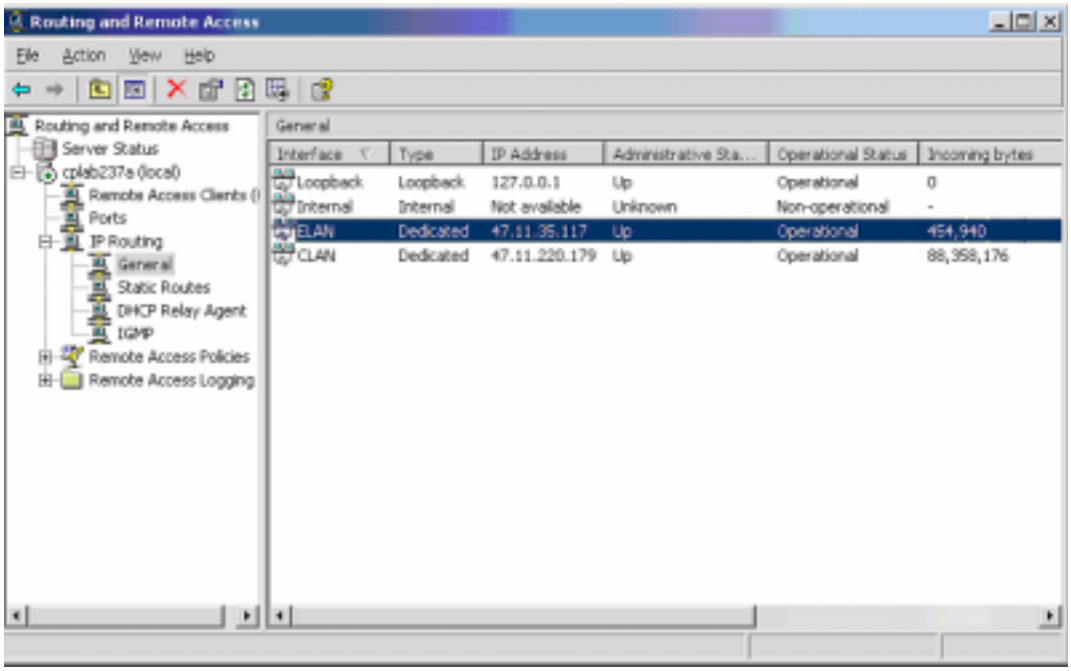


2 Click the plus sign to the left of the server name in the left pane to expand the tree.

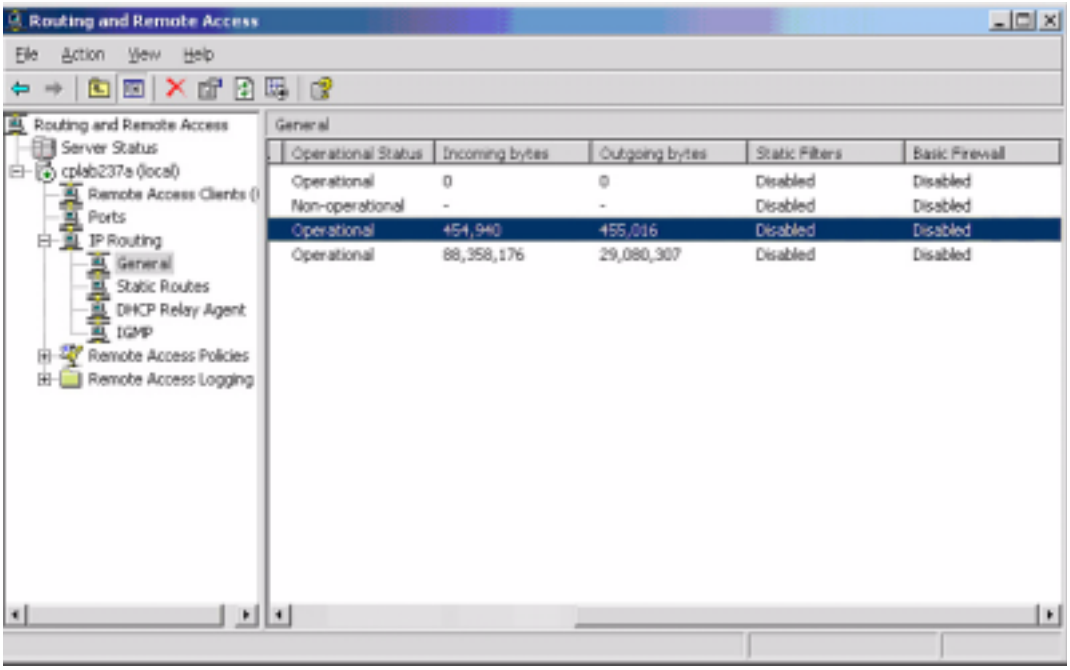
3 Click General under IP Routing.

Result: The system displays general information associated with IP Routing in the right pane.

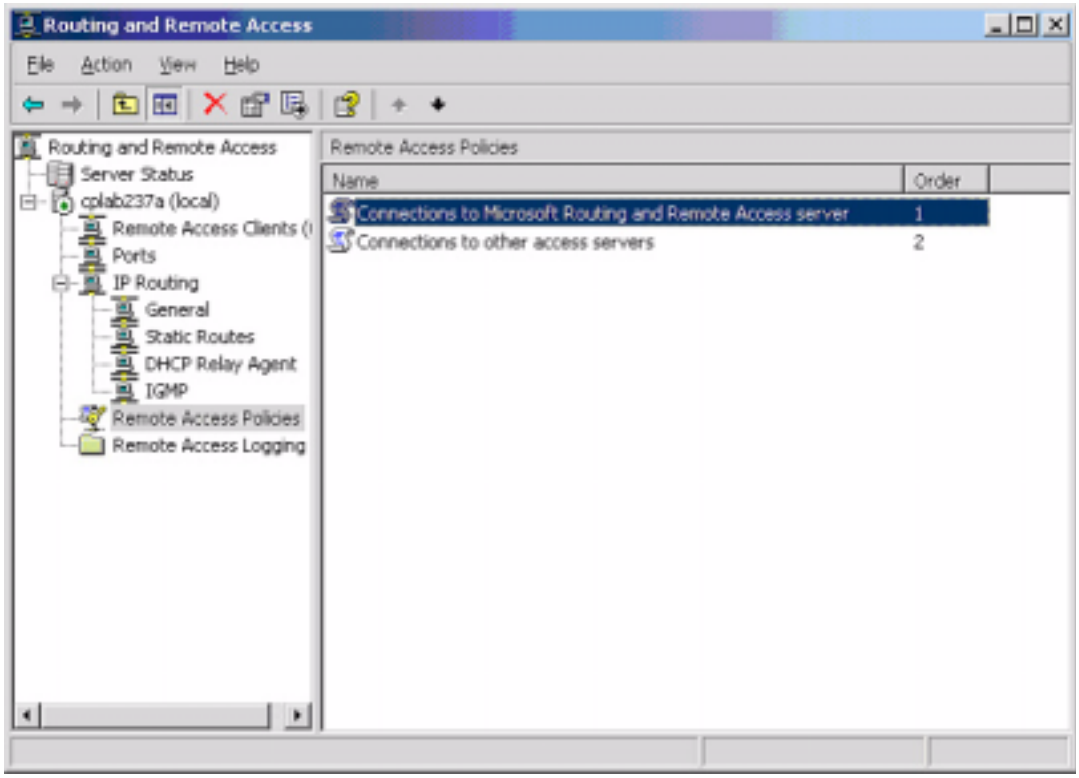
4 Click the ELAN entry to select it



5 Use the slide bar at the bottom of the window to scroll to the right and view the rest of the information.

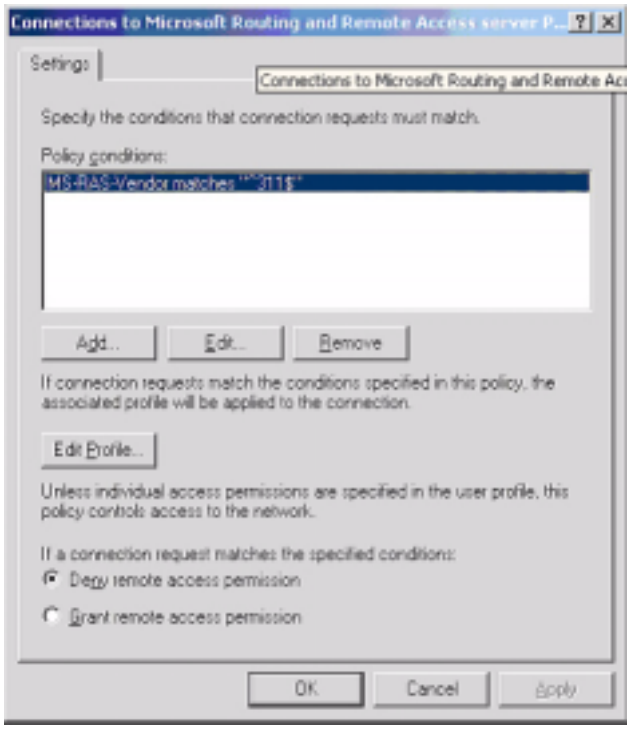


6 Click Remote Access Policies in the left pane.



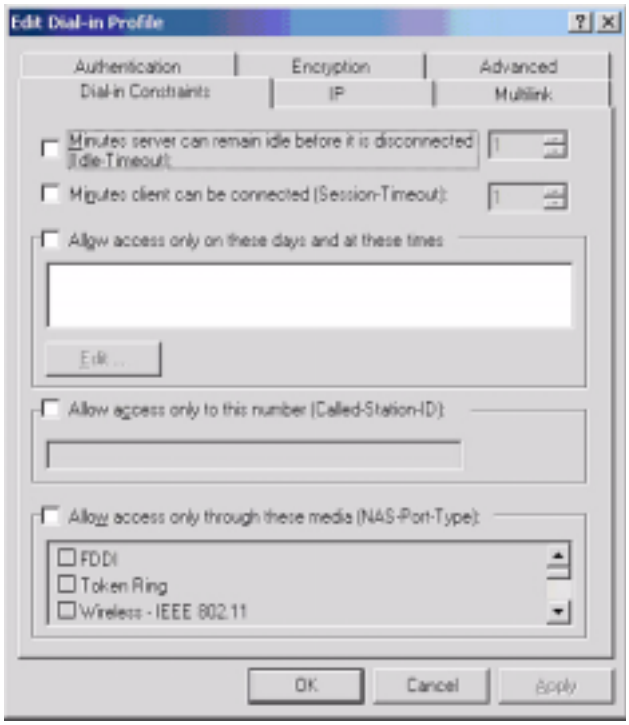
7 Right-click Connections to Microsoft Routing and Remote Access server, and then click Properties on the shortcut menu.

Result: The following dialog box appears.

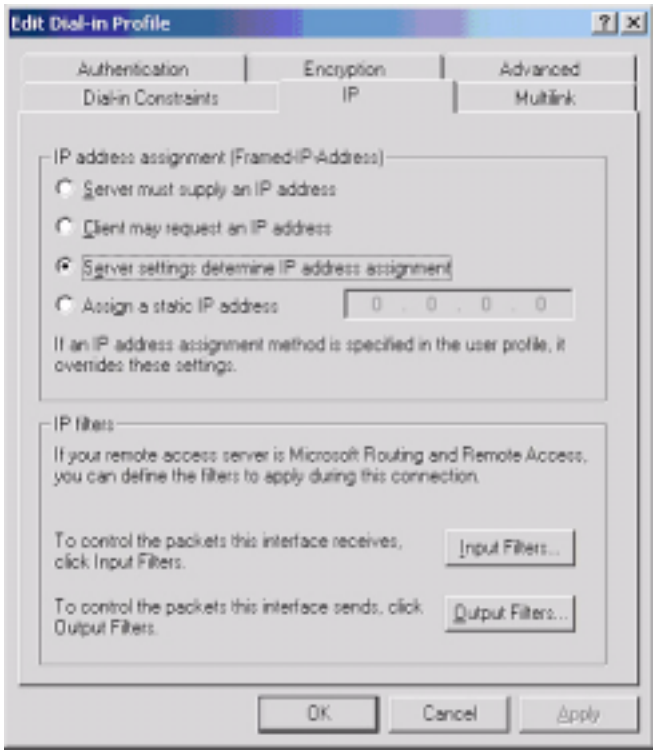


8 Click Edit Profile.

Result: The Edit Dial-in Profile dialog box appears.



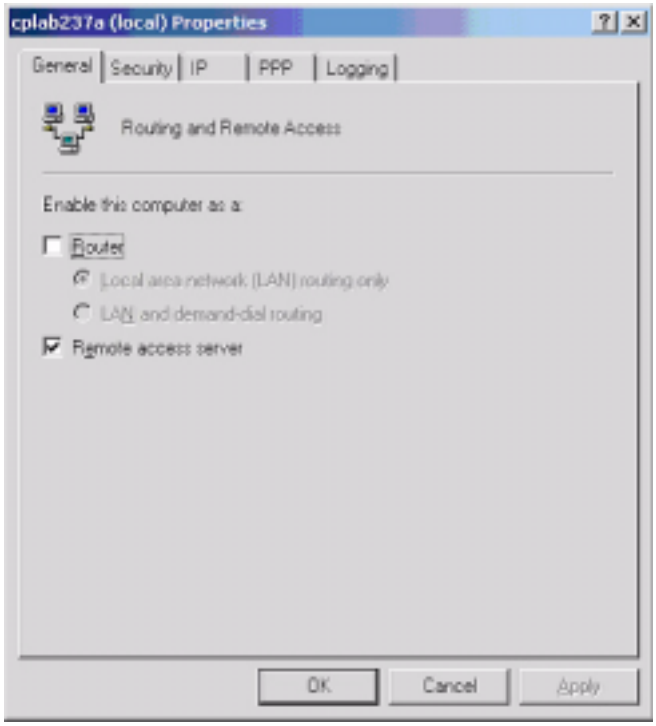
9 Click the IP tab.



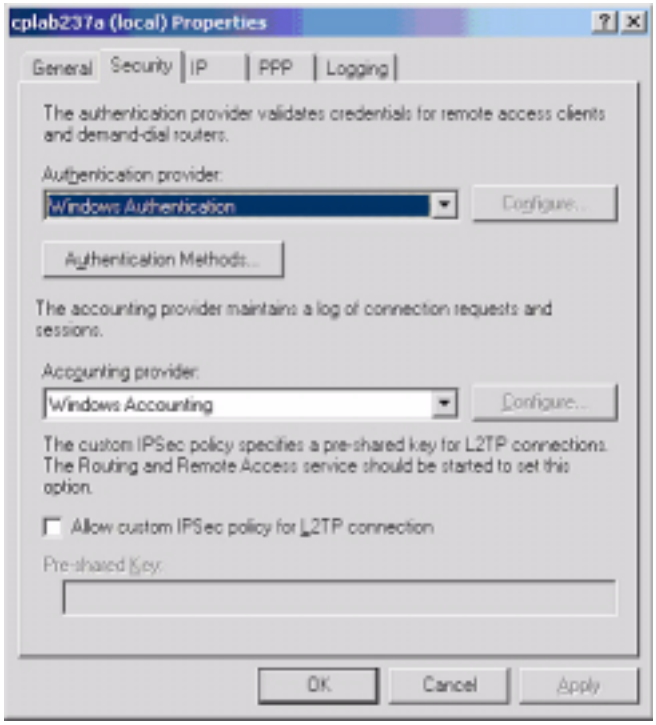
10 Click OK to close the Edit Dial-in Profile dialog box.

11 Right-click the server name (in this example, cplab237a) in the left pane of the Routing and Remote Access window, and then click Properties on the shortcut menu.

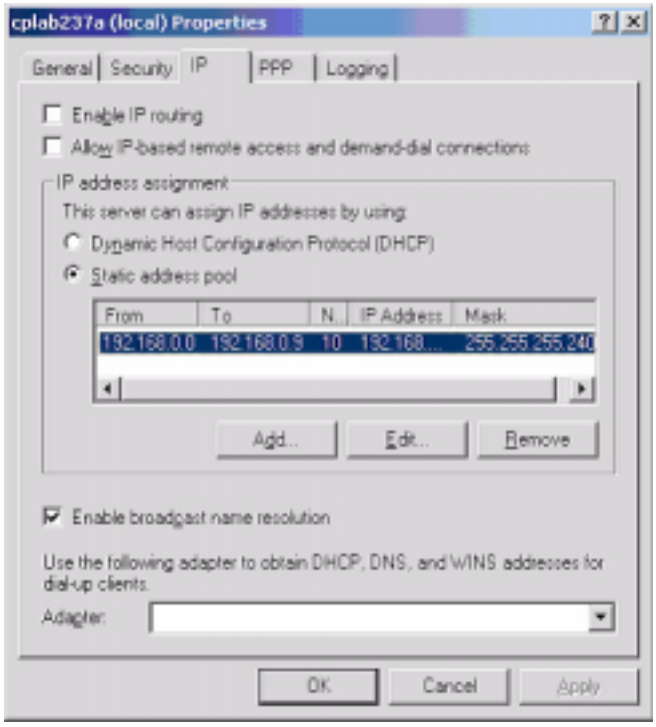
Result: The server properties dialog box appears.



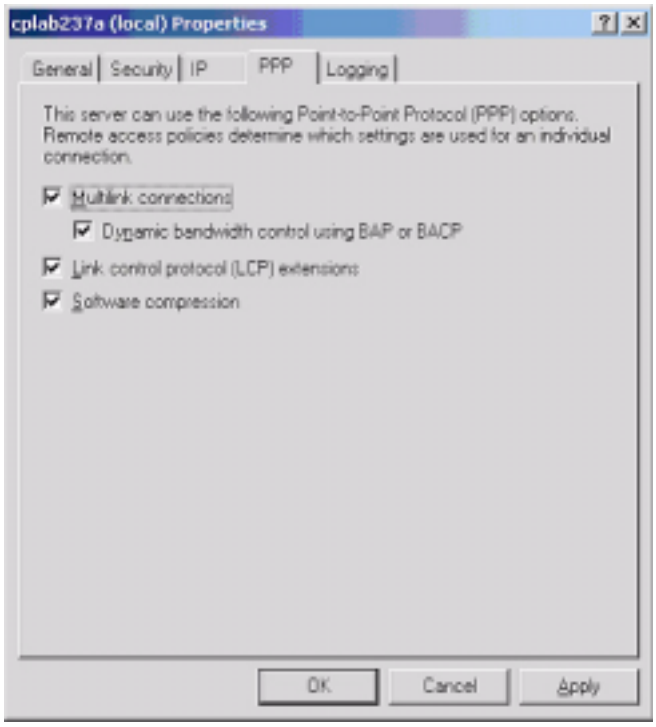
12 Click the Security tab.



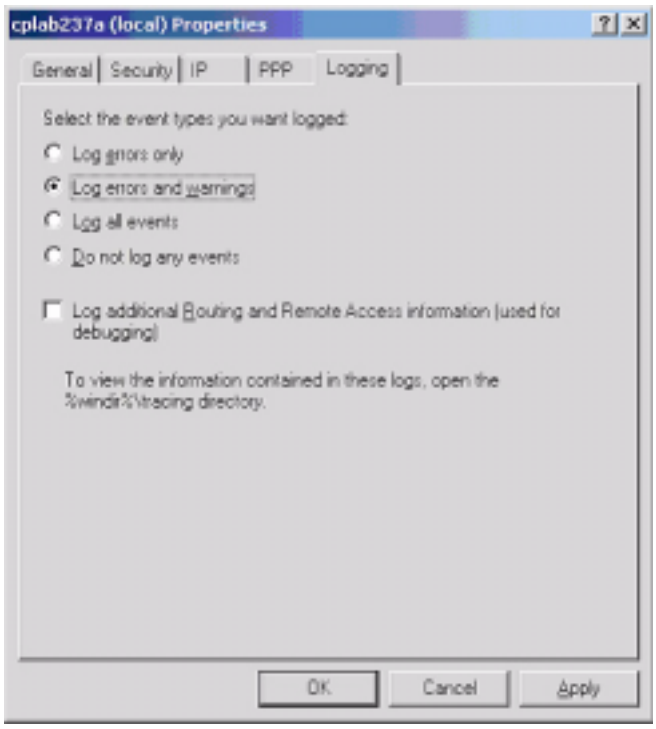
13 Click the IP tab.



14 Click the PPP tab.



15 Click the Logging tab.



16 Click OK to close the server properties dialog box, and then close the Routing and Remote Access window.

Symantec pcAnywhere

The Symantec pcAnywhere must be running so that the remote connection to a CallPilot server can be established. A blue-green square with a check mark at the bottom right of the CallPilot local console indicates that the pcAnywhere is running

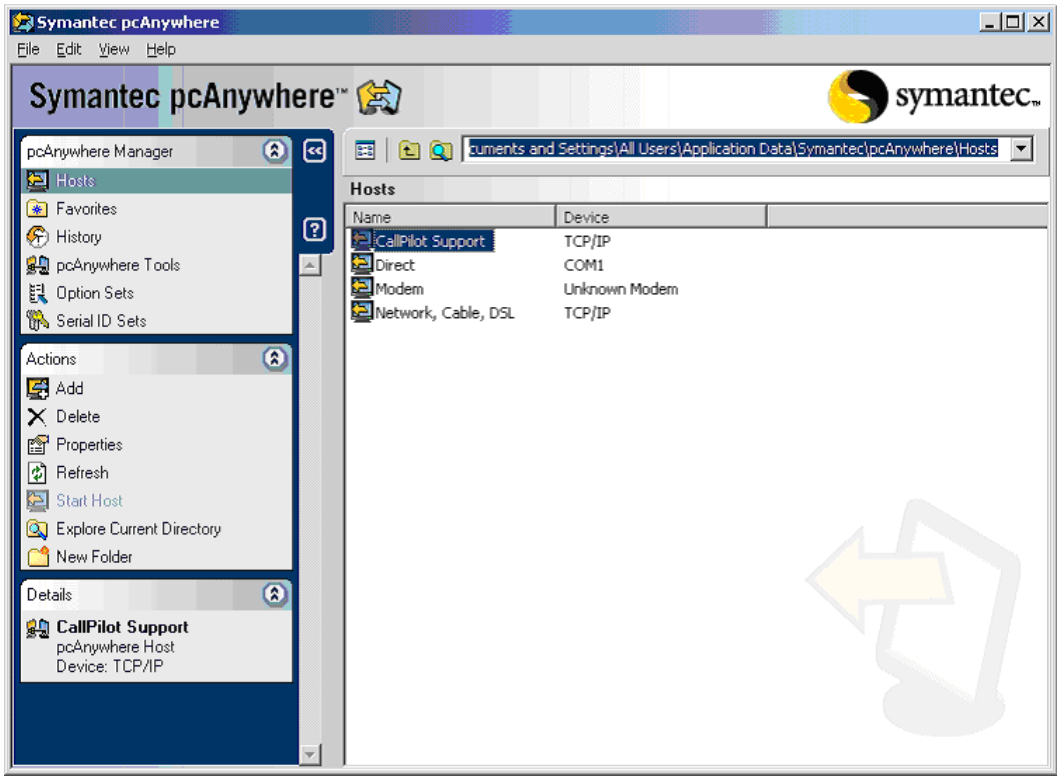
By default, CallPilot has a pcAnywhere host called CallPilot Support, predefined to start automatically every time that the system boots up. The following procedure presents the settings of the CallPilot Support pcAnywhere host. Ensure that all the settings are correct.

ATTENTION

The illustrations show the default Symantec pcAnywhere configuration. Under some circumstances, it can be useful to define the pcAnywhere host in other ways.

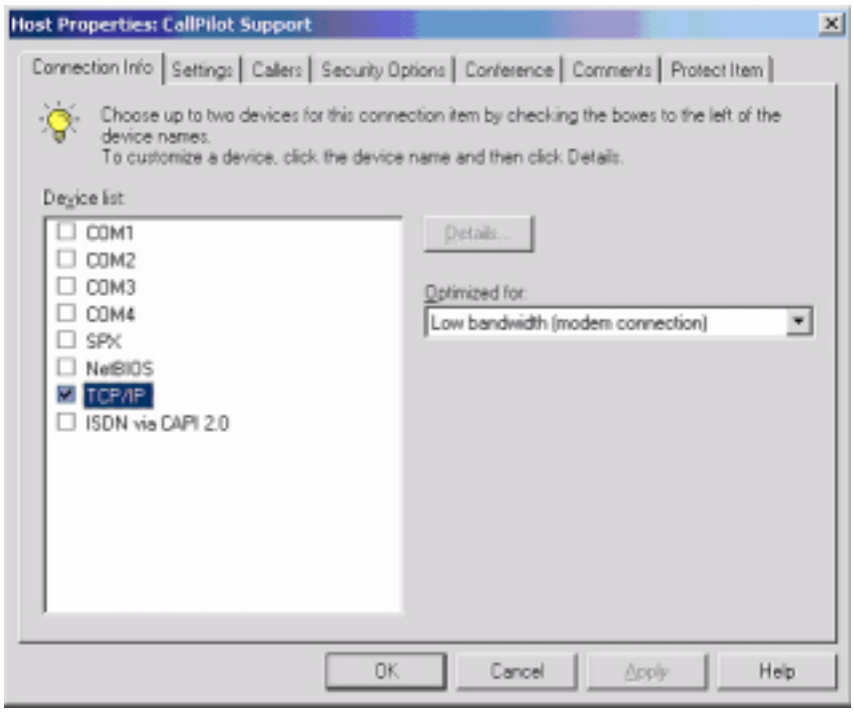
1 Click Start → Programs → Symantec pcAnywhere.

Result: The Symantec pcAnywhere window appears.

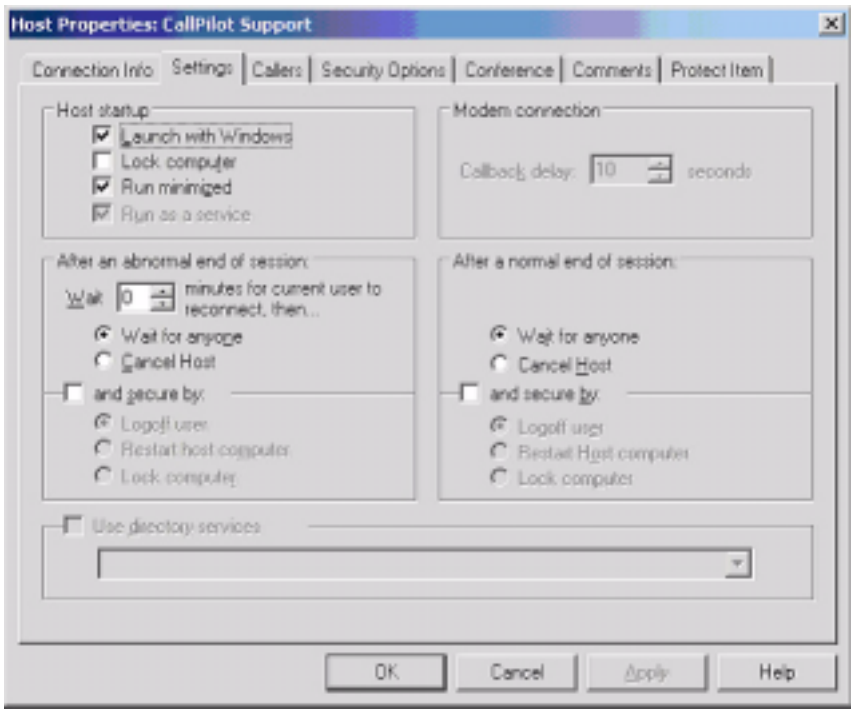


2 Right-click CallPilot Support, and then click Properties on the shortcut menu.

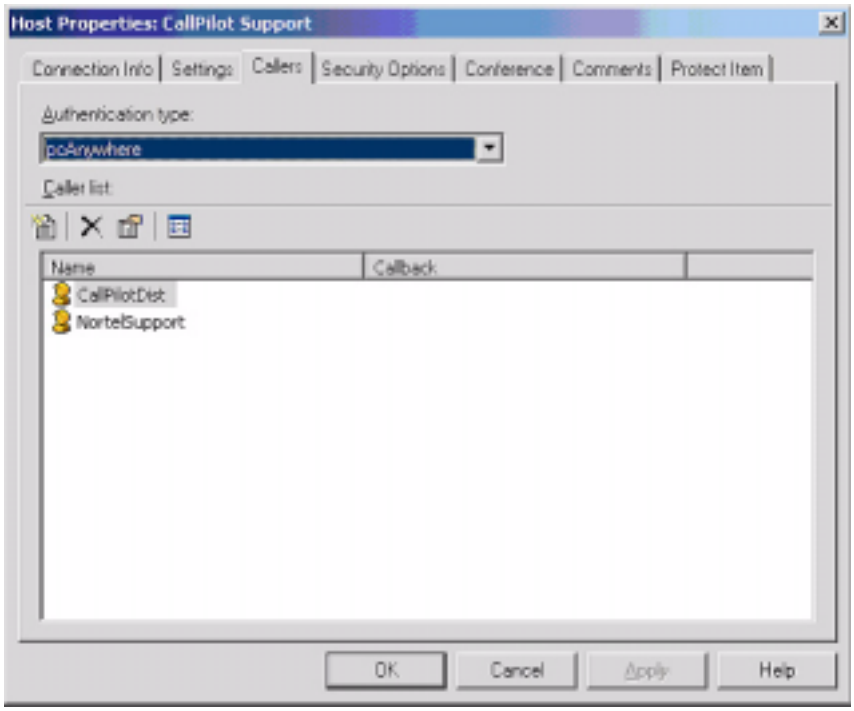
Result: The host properties dialog box appears.



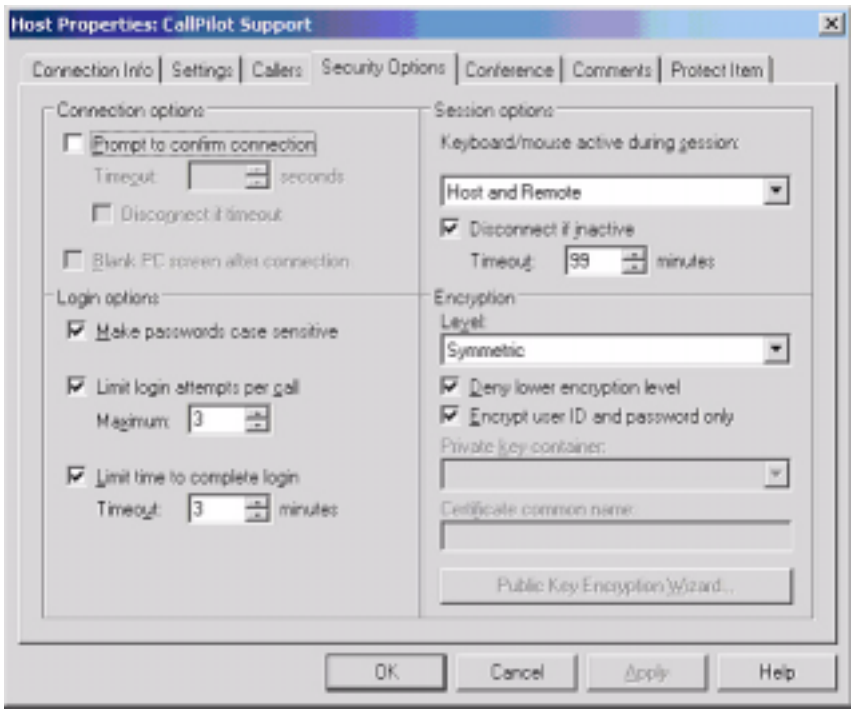
3 Click the Settings tab.



4 Click the Callers tab.



5 Click the Security Options tab.



6 Click Close, and then close the Symantec pcAnywhere window.

Chapter 5

Application troubleshooting

In this chapter

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Symptom 1: CallPilot answers calls, but voice services are not available

Diagnostic steps	Resolution
Perform basic checks. **1** Check the DS30X cable run to the MGate card on the switch. **2** Check the MGate card. **3** Check if CallPilot is configured with the correct TNs.	**A** Ensure that the DS30X cable is not defective, the MGate card operates properly, and CallPilot is configured with the correct TNs.
Check the DS0s and DSPs. **4** Check if the DS0s and DSPs are in service and accepting calls. Refer to the *Server Maintenance and Diagnostics* document that applies to your server type, section "System Monitor" in "Using CallPilot system utilities"	**B** If the DS0s and DSPs are not active, verify the switch configuration. **C** If the DS0s and DSPs are active, but voice services are not available, verify the prompt installation. Refer to the *Configuration and Testing Guide* that applies to your switch, the section on configuring the switch.
Verify the switch configuration. **5** In the switch administration console, load overlay 32 (LD 32) and verify that the status of the defined DS0 channels is either Idle or Login.	**D** If the channels were disabled, use overlay 32 (LD 32) to enable them. Ensure that the channels were not disabled because of a prior maintenance task.
Check the server IP address. **6** Check if the IP address of the CallPilot server has been changed since the last restart.	**E** If the IP address was changed, shut down and restart the CallPilot server.
Verify the MGate card version and placement. **7** If the system uses an MGate card on an Option 11 switch, verify that ■ the MGate card has the NTRB18CA part number. ■ the card is installed in the correct slot.	**F** If the MGate card has a different part number, replace it with an NTRB18CA card. **G** If the MGate card is not installed in the correct slot, then install it in a slot that is consistent with the switch programming requirements.

Diagnostic steps	Resolution
Verify the prompt installation. **8** Open the installation log file in the D:\nortel\sysops\MPCX\langprompts folder. **9** Check the last line of the log file. The last line must be "Prompt Installation completed successfully." If you cannot verify that the prompts were installed successfully, they were probably not. **Note:** The log file name has the format *xxxx*.log, where *xxxx* is the Nortel Networks Language ID; for example, 1033 for US English. The Nortel Networks Language ID is specified in the cdstruct.lng file, which is located in the root directory of the language CD.	**H** Reinstall the prompts. Refer to the *Software Administration and Maintenance Guide*, section "Reinstalling languages" in "Recovering from system failures".
Verify the new configuration. **10** In the D:\nortel\lang*XXXX*\voice\map folder, verify that the file sysmap.m*xxxx* exists, has the date and time of the prompt installation, and has a reasonable size (more than 5 kbytes). **11** Verify that all the .l files in the D:\nortel\lang*XXXX*\voice\template folder have the date and time of prompt installation. **12** Verify that the file imap_lng.txt exists in the D:\nortel\lang*XXXX*\desktop folder. **13** If the fax feature is installed, verify that the six .cptemp and .bmp files exist in the D:\nortel\lang*XXXX*\fax folder. **14** If the automatic speech recognition (ASR) language component was installed (or was planned to be installed), verify that the D:\nortel\lang*xxxx*\asr directory exists and contains three .ctx files, three .cfg files, and one .asr file.	**I** If any one of the verification steps fails, you must reinstall the language. **Note:** Even if all the checks are valid, it is still possible that the language was not installed correctly.

Diagnostic steps		Resolution	
Verify the new configuration (continued).			
15	If the ASR language component was installed, verify that the ASR load was flashed in the DSP. Verify that the names of the ASR load for a specific language are in the flashnames.dat file, which can be found in the root directory of the language CD.		
16	Verify that the MPB cables are not installed inverted on the tower and rackmount systems.	**J**	Install the cables correctly and then retest.
17	Does the problem still exist?	**K**	Contact your Nortel Networks technical support representative for assistance.

Symptom 2: A user cannot log in to the mailbox from an external phone

Diagnostic steps		Resolution	
Verify internal access.			
1	Check if the user can log in from an internal phone.	**A**	Log in to the CallPilot Manager and perform the following tasks: ■ Connect to the server. ■ Click User. ■ Click User search. ■ Enter the search criteria for the user. ■ Ensure that the Login status is enabled.
Verify user rights.			
2	Check if the user has external login rights.	**B**	Ensure that the external login for the user is enabled. Refer to the *CallPilot Administrator's Guide*, section "Configuring mailbox security" in "Security recommendations."
3	Does the problem still exist?	**C**	Contact your Nortel Networks technical support representative for assistance.

Symptom 3: Speech recognition does not work

Diagnostic steps	Resolution
Verify that speech recognition resources are assigned to the DN. **1** In CallPilot Manager, connect to the server and then click System → Service Directory Number. **2** View the Speech Recognition Service Directory Number. **3** Verify that the Media type is "Speech Rec."	**A** Change the DN media type to "Speech Rec."
Verify speech recognition on keycode. **4** If the "Speech Rec." option is not in the Media type list, then the server keycode does not enable the speech recognition feature. **Note:** The keycode must enable speech recognition languages and seats so that the speech recognition channels answer correctly.	**B** Perform a keycode expansion. Contact your Nortel Networks order management representative or sales representative for assistance.
Verify the prompt installation. **5** Check the language installation log file: D:\nortel\sysops\MPCX\ langprompts_*xxxx*.log. **6** Verify that the last line of the log file is "Prompt Installation completed successfully."	**C** Reinstall the language. Refer to the *Software Administration and Maintenance Guide*, section "Reinstalling languages" in "Recovering from system failures".
7 Does the problem still exist?	**D** Contact your Nortel Networks technical support representative for assistance.

Symptom 4: Users cannot print or receive faxes

Diagnostic steps	Resolution
Verify that fax resources are assigned to the fax messaging DN. **1** Log in to CallPilot Manager and proceed as follows: ■ Connect to the server. ■ Click System → Service Directory number. **2** View the Service Directory Number. **3** Verify that the Media type is Fax.	**A** Change the DN media type to Fax.
Verify that Fax option is on the keycode. **4** If the Fax option is not available on the Media type list, the server keycode does not enable fax features.	**B** Perform a keycode expansion. Contact your Nortel Networks order management representative or sales representative for assistance.
5 Does the problem still exist?	**C** Contact your Nortel Networks technical support representative for assistance.

Symptom 5: Symposium voice services do not work

The Event Browser displays a Meridian Link TSP or ACCESS link event. Mailbox owners notice that calls are not answered.

Diagnostic steps		Resolution
Verify that the voice port configuration is consistent across all subsystems.		
1	Verify the CallPilot server configuration.	On the CallPilot server, ensure that ■ the Symposium Call Center server IP address is properly configured. ■ the CDN for ACCESS channels is configured as Symposium Voice Services SDN. ■ the CDN for IVR channels is configured as Symposium Voice Services support announcement or voice menu SDN. ■ the Class ID configured in the Configuration Wizard is equal to the ACCESS port channel configured on the Symposium Call Center server.
2	Verify the Symposium Call Center server configuration.	On the Symposium Call Center server, ensure that ■ the CallPilot ELAN IP address is properly configured. ■ the value of the ACCESS voice port channel is equal to the Class ID on the CallPilot server. ■ the port number is configured as 10008.
3	Verify the switch configuration.	On the switch, ensure that ■ the CDN for ACCESS channels is configured as follows: IVR=YES and ALOG=YES. ■ the CDN for IVR channels is configured as follows: IVR=YES and ALOG=YES. ■ the ACCESS and IVR channels are configured as follows: AST=0, 1 and CLS=MMA, FLXA. ■ all CallPilot server ELAN VAS IDs are configured as follows: SECU=YES.
4	Does the problem still exist?	Contact your Nortel Networks technical support representative for assistance.

Symptom 6: Users cannot send messages to a telephone or a fax machine from Desktop Messaging or My CallPilot

To prevent toll fraud by Desktop Messaging and My CallPilot users, Nortel Networks recommends that you define access restrictions for unauthenticated SMTP users. If users report that they are unable to send a CallPilot message to a telephone or fax machine from their desktop, then they are connecting to CallPilot as unauthenticated SMTP users and the Delivery to Telephone or Fax option is not selected for unauthenticated desktop users.

Diagnostic steps		Resolution
Solution 1 (recommended)		
1	Select the required authentication options in Security Modes for SMTP Sessions.	■ Log in to CallPilot Manager. ■ Click Messaging → Message Delivery Configuration. ■ Scroll down to the SMTP/VPIM section and click the Security Modes for SMTP Sessions link. ■ Select the authentication options required for your users. ■ Click Save.
2	Ensure that users provide SMTP authentication from their e-mail clients.	If users connect from an e-mail client supported by Nortel Networks (such as Microsoft Outlook, Lotus Notes, GroupWise or My CallPilot), then the client-side SMTP authentication option is automatically used if the correct authentication options are selected in Security Modes for SMTP Sessions on the server side.
Solution 2		
1	Leave only the Unauthenticated option selected in Security Modes for SMTP Sessions, and select the correct option in Unauthenticated Access Restrictions. This solution is less secure, since CallPilot allows unauthenticated desktop users to send messages to external telephone and fax numbers	■ Log in to CallPilot Manager. ■ Click Messaging → Message Delivery Configuration. ■ Scroll down to the SMTP/VPIM section and click the Unauthenticated Access Restrictions link. ■ Select the Delivery to Telephone or Fax check box. ■ Click Save.

Symptom 7: Users cannot browse CallPilot Manager if the Encoding is set to Chinese Simplified (HZ) in Microsoft Internet Explorer (the Welcome to CallPilot page is blank)

Diagnostic steps		Resolution	
1	Open Internet Explorer and log in to CallPilot Manager. The Welcome to CallPilot Manager page is blank.	**A**	In Internet Explorer, click View → Encoding → Auto-Select. A check mark appears to the left of the Auto-Select option. When this option is selected, Internet Explorer can usually determine the appropriate language encoding.
2	Check the Encoding setting in Internet Explorer: click View → Encoding. The Chinese Simplified (HZ) option is selected. **Note:** The Chinese Simplified (GB2312) and Chinese Traditional options do not cause this problem.	**B**	To ensure that CallPilot Manager pages are displayed correctly, you must also select manually a different encoding option than Chinese Simplified (HZ): click View → Encoding → More, and then select a language encoding option from the list. **Note:** The system can prompt you to install a new language pack. You must have the operating system installation CD-ROM, or know the location of the required files on a network server, if applicable.
		C	Click Refresh on the Internet Explorer toolbar or log in to CallPilot Manager again.

Symptom 8: Users cannot access the CallPilot Manager login page from a standalone web server running Windows 2003 and Internet Information Services 5.0

Diagnostic steps	Resolution
Open the CallPilot Manager login page. **1** On the web server, open Internet Explorer. **2** Type http:*web_server_name*\cpmgr in the browser Address box, or click the bookmark to the CallPilot Manager login page. The following message appears: "HTTP 500—Internal server error." **Check the Event Viewer logs.** **3** On the web server, click Start → Programs → Administrative Tools. The Administrative Tools window opens. **4** Double-click Event Viewer. The Event Viewer window opens. **5** Check the System Log for the following events: ■ 36—The server failed to load application '/LM/w3svc/1/root/cpmgr'. The error was 'Server execution failed'. ■ 10010—The server {A62B60F6-4508-4E63-9C25-63102FF3E115} did not register with DCOM within the required time-out. These events indicate that the NT AUTHORITY/Authenticated Users or NT AUTHORITY\INTERACTIVE entry has been removed from the Users group. **Note:** Refer to the Microsoft bulletin Q327153 for more information.	**Add Authenticated Users and INTERACTIVE to the Users group for the web server.** **A** On the web server, click Start → Programs → Administrative Tools. The Administrative Tools window opens. **B** Double-click Computer Management. The Computer Management console opens. **C** In the left pane, click the plus sign to the left of Local Users and Groups to expand the folder tree. **D** Click the Groups folder. The contents of the Groups folder appear in the right pane. **E** In the right pane, right-click Users, and then click Properties on the shortcut menu. The Properties dialog box opens. **F** Click Add. The Select Users or Groups dialog box opens. **G** Click the name of the local computer in the Look in: drop-down list. The users and groups established on the local computer appear in the upper pane. **H** Click Authenticated Users in the upper pane, and then click Add. The Authenticated Users group moves to the lower pane. **I** Click INTERACTIVE, and then click Add. The INTERACTIVE entry moves to the lower pane. **J** Click OK. **K** Click Apply in the User Properties dialog box. **L** Click OK. The Properties dialog box for the Users groups closes.

Diagnostic steps		Resolution	
		Restart the Internet Information Service.	
		M	In the left pane of the Computer Management console, click the plus sign to the left of Services and Applications to expand the folder tree.
		N	Click Services. The available services appear in the right pane.
		O	In the right pane, right-click IIS Admin Services, and then click Restart on the shortcut menu. The Restart Other Services confirmation dialog box opens.
		P	Click Yes. The IIS Admin Service restarts.
6	Go to the CallPilot Manager login page.	**Q**	Contact your Nortel Networks technical support representative for assistance.
7	Does the problem still exists?		

Symptom 9: CallPilot Manager users cannot connect to the CallPilot server

Diagnostic steps	Resolution
1 When you try to log in to CallPilot Manager, the following message appears: “Failed to connect to the CallPilot server. Check server information and try again. If this problem persists, the server may be improperly configured.” **2** Verify the System event log and look for the following events: 3870, 7023, and 7001. **3** Verify the Application event log and look for the following events: 41504, 41550, and 41506.	The System and Application log events point to a problem related to the CallPilot server name. The name of your CallPilot server already exists on the network. To solve this problem, proceed as follows: **A** Remove the CallPilot server from the network. **B** Change the CallPilot server name using Configuration Wizard. **C** Reconnect the CallPilot server to the network.
4 Try to log in to CallPilot Manager. **5** Does the problem still exist?	Contact your Nortel Networks technical support representative for assistance.

Chapter 6

Meridian Mail to CallPilot migration troubleshooting

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General

This chapter provides troubleshooting information on issues that can affect the Meridian Mail to CallPilot migration process. For additional troubleshooting information, refer to the *Meridian Mail to CallPilot Migration Utility Guide*. This document describes common causes of migration errors and provides methods to solve these errors.

The *Meridian Mail to CallPilot Migration Utility Guide* also provides general information on the following topics:

- correcting pre-check inconsistencies
- troubleshooting tools
- Meridian Mail data collection error messages
- CallPilot migration error messages

Use both the *Meridian Mail to CallPilot Migration Utility Guide* and this chapter to troubleshoot migration issues.

Symptom 1: Error reading tape during data transfer or message migration

Diagnostic steps	Resolution
Verify the log file **1** Open the migration transaction log file. The migration transaction log file (MigTransaction.log) is located in the D:\nortel\MPCX\Migration folder on the CallPilot server. **2** Check the error description in the log file for more information.	**A** Correct the error according to the log information. If you cannot find a solution, go to the next step.
Verify the type of the tape. **3** Check if the type and size of the tape that you used to collect migration data are supported by CallPilot.	**B** Use the correct tape to collect again Meridian Mail data.
Verify the tape drive. **4** Check if the CallPilot tape drive supports the migration tape. **5** Check if the internal or external tape drive that you are using is properly installed and connected.	**C** Ensure that the tape drive supports the migration tape; connect the tape drive properly.
Verify the tape driver. **6** Open the Tape Devices box in Control Panel, and determine if the required devices and drivers are installed and loaded or started.	**D** If the device driver is missing, install it. If the device driver is not started, start it. If you cannot start the device driver, reinstall it and then restart the CallPilot server.
Rerun the tape on the same CallPilot server. **7** Type the same command in the command line window to start the migration.	**E** If the system still displays an error message, go to the next step.
Run another data or message tape on the same CallPilot server. **8** Ensure that the tape is good before using it. Type the correct command in the command line window to start the migration. If the situation does not allow you to do this, then skip this step.	**F** If the system does not display an error message, then the tape is the cause of the problem. Use another blank tape to collect data and then perform the migration again. **G** If the system still displays an error message, the problem is on the CallPilot server. Reboot the CallPilot server.

Diagnostic steps		Resolution	
Rerun the tape on a different CallPilot server.			
9	Type the correct command in the command line window to start the migration. If the situation does not allow you to do this, skip this step.	**H**	If the system does not display an error message, then the tape is good and the problem is on CallPilot server. Reboot the CallPilot server.
		I	If the system still displays an error message, then the tape is the cause of the problem. Use another blank tape to perform the data collection and then perform the migration again.
10	Does the problem still exist?	**J**	Contact your Nortel Networks technical support representative for assistance.

Symptom 2: All users cannot be migrated due to an invalid user-preferred language ID

Diagnostic steps		Resolution	
Verify the CallPilot version and the Meridian Mail migration utility tape version.		**A**	If you found error messages similar to the example provided in step 2, check the CallPilot server release. The error can occur if your CallPilot release is old, or the migration utility tape release used on Meridian Mail for data collection and the CallPilot release do not match. Upgrade the CallPilot server or use the old Meridian Mail migration tape for data collection according to the supported migration specification.
1	Open the migration transaction log file. The migration transaction log file (MigTransaction.log) is located in the D:\nortel\MPCX\Migration folder on the CallPilot server.	**B**	If you did not find error messages similar to the example provided in step 2, contact your Nortel Networks technical support representative for assistance.
2	Check for error messages similar to the following: `ERROR:(USRAPI):(55122):Invalid input USER PREFFERRED LANG ID:`		
3	Does the problem still exist?	**C**	Contact your Nortel Networks technical support representative for assistance.

Symptom 3: The system failed to create a map directory

Diagnostic steps	Resolution
Verify the log file. **1** Open the migration transaction log file. The migration transaction log file (MigTransaction.log) is located in the D:\nortel\MPCX\Migration folder on the CallPilot server. **2** Check for the following error message: `ERROR:(MAPFILE):(100): Map directory creation error:`	**A** If you found the error message provided in step 2, you probably changed the current directory at the command line. If necessary, change directory to D:\nortel\MPCX\Migration and start the migrate.exe program again. **Note:** You must always start the migration program from the directory D:\nortel\MPCX\Migration. **B** If you still have problems when you start the program from the correct directory, check the same directory to find a file named nmmgmap.dat. Restore this file if it was accidentally renamed or moved to another directory. Reinstall the CallPilot software if the nmmgmap.dat file is missing. **Note:** The nmmgmap.dat file must exist in the D:\nortel\MPCX\Migration directory. **C** If you did not find the error message provided in step 2, contact your Nortel Networks technical support representative for assistance.
3 Does the problem still exist?	**D** Contact your Nortel Networks technical support representative for assistance.

Symptom 4: The automatic log file backup failed

Diagnostic steps	Resolution
Verify the disk space. **1** Open the migration transaction log file. The migration transaction log file (MigTransaction.log) is located in the D:\nortel\MPCX\Migration folder on the CallPilot server. **2** Check for the following error message: `Could not backup the. transaction log file`	**A** If you found the error message provided in step 2, check the free space on the D drive (where the directory \nortel\MPCX\migration is located) on the CallPilot server. The system probably does not have enough disk space to back up the log files. Empty the Recycle Bin or move some log files to another disk drive. Back up the log file manually. **Note:** Older CallPilot releases do not support the automatic log file backup. Nortel Networks recommends that you back up the log file manually each time you finish a migration tape. **B** If you did not find the error message provided in step 2, contact your Nortel Networks technical support representative for assistance.
3 Does the problem still exist?	**C** Contact your Nortel Networks technical support representative for assistance.

Symptom 5: On a recently migrated system, a user cannot log in to the mailbox or CallPilot does not recognize a user receiving an incoming call

Diagnostic steps	Resolution
Check user's class of service **1** On Meridian Mail, determine if the user had a personal Class of Service (COS). You can also verify this by checking the migration transaction log file (MigTransaction.log) in the D:\nortel\MPCX\migration\ folder on the CallPilot server. **Note:** Before you migrate Meridian Mail users to CallPilot, you must reassign the personal COS to a dummy COS. Refer to the *Meridian Mail System Administration Guide* (555-7001-301) for information on adding and reassigning COSs. CallPilot does not migrate personal COSs and users with personal COSs.	**D** If the user does not have a personal COS, go to the next step. Otherwise, perform one of the following tasks: ■ Collect again the user data from Meridian Mail after reassigning the user COS. Perform the user migration again. ■ Use CallPilot Manager to add the non-migrated users to the CallPilot system. Refer to the *CallPilot Administrator's Guide*. **Note:** Before you recreate a user, ensure that the user's DN has not already been assigned to another user. CallPilot does not allow duplicate DNs.
Check user's mailbox number. **2** On Meridian Mail, check if the user has a mailbox number that is less than three digits in length. You can also check the migration transaction log file (MigTransaction.log) in the D:\nortel\MPCX\Migration\ folder on the CallPilot server. **Note:** CallPilot does not support mailbox numbers that are less than three digits in length.	**E** If the user has a mailbox number that is more than three digits in length, go to the next step. **F** If the user has a mailbox number that is less than three digits in length, perform one of the following tasks: ■ Change the user mailbox number to a three-digit number, and then collect again user data from Meridian Mail. Perform the user migration again. ■ Use CallPilot Manager to add non-migrated users to the CallPilot system. Refer to the *CallPilot Administrator's Guide.*

Diagnostic steps		Resolution	
Check the migration transaction log file.			
3	Check the migration transaction log file (MigTransaction.log) in the D:\nortel\MPCX\Migration\ folder on the CallPilot server to determine if the user was migrated successfully.	**G**	If the user was migrated successfully, check the CallPilot system sanity. If the user was not migrated, perform one of the following tasks: ■ Collect again user data from Meridian Mail after correcting the user property or any other errors depending on the CallPilot migration log information. Perform the user migration again. ■ Use CallPilot Manager to add non-migrated users to the CallPilot system. Refer to the *CallPilot Administrator's Guide*.
4	Does the problem still exist?	**H**	Contact your Nortel Networks technical support representative for assistance.

CallPilot

Troubleshooting Reference Guide

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