

How to Use Cisco IP SoftPhone over VPN

Document ID: 23573

Introduction

Prerequisites

Requirements

Components Used

Conventions

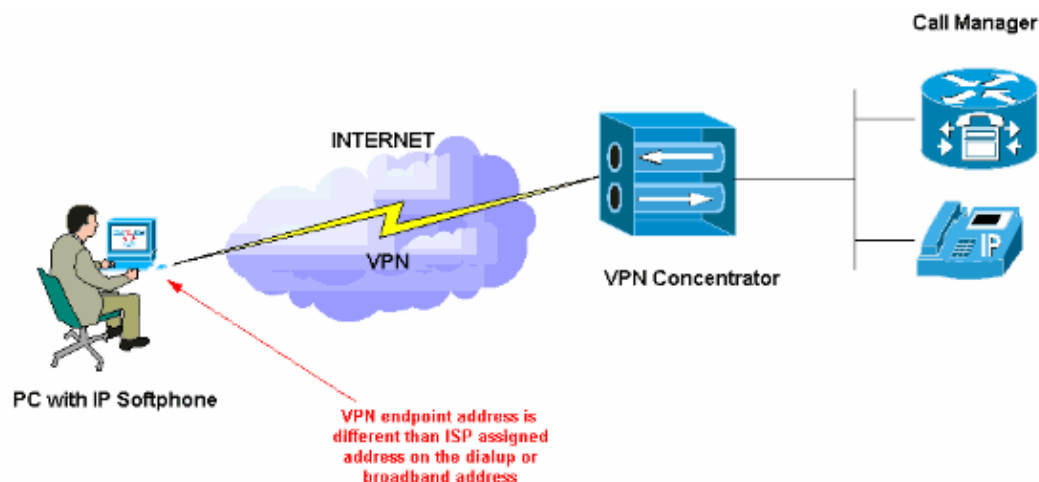
Set Cisco IP SoftPhone to Use a VPN Connection

One-way Audio on a VPN Connection from SoftPhone

Related Information

Introduction

Cisco IP SoftPhone is a PC based IP Telephony endpoint that offers the ability to make a PC work like a Cisco 7900 Series phone. Remote users who connect back to their company network through VPN need to configure some additional settings in order to avoid a one way voice problem. This is a result of the media stream having to know what the endpoint of the connection is. The normal topology for this situation looks something like this:



Since the PC uses the VPN tunnel that comes into the corporate network, all the traffic appears to come through the PC's end of the VPN tunnel, rather than the regular networking interface that gets its IP address from the ISP connection. Cisco IP SoftPhone uses the network address of the regular networking interface by default when it registers its location with Cisco CallManager. When Cisco IP SoftPhone sets up its media stream with the corporate end of the connection, the address the corporate end tries to send the voice data to is the regular (ISP assigned) IP address.

The device on the corporate end of the connection cannot tell its packets are being dropped, since this is all done with User Datagram Protocol (UDP). This document discusses how to set up Cisco IP SoftPhone to automatically set the correct address or allow the user to manually do so.

Prerequisites

Requirements

Readers of this document should have knowledge of these topics:

- Cisco IP SoftPhone
- VPN / IPSec
- Microsoft Windows

Components Used

The information in this document is based on Cisco IP SoftPhone Version 1.2 and 1.3.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.


Conventions

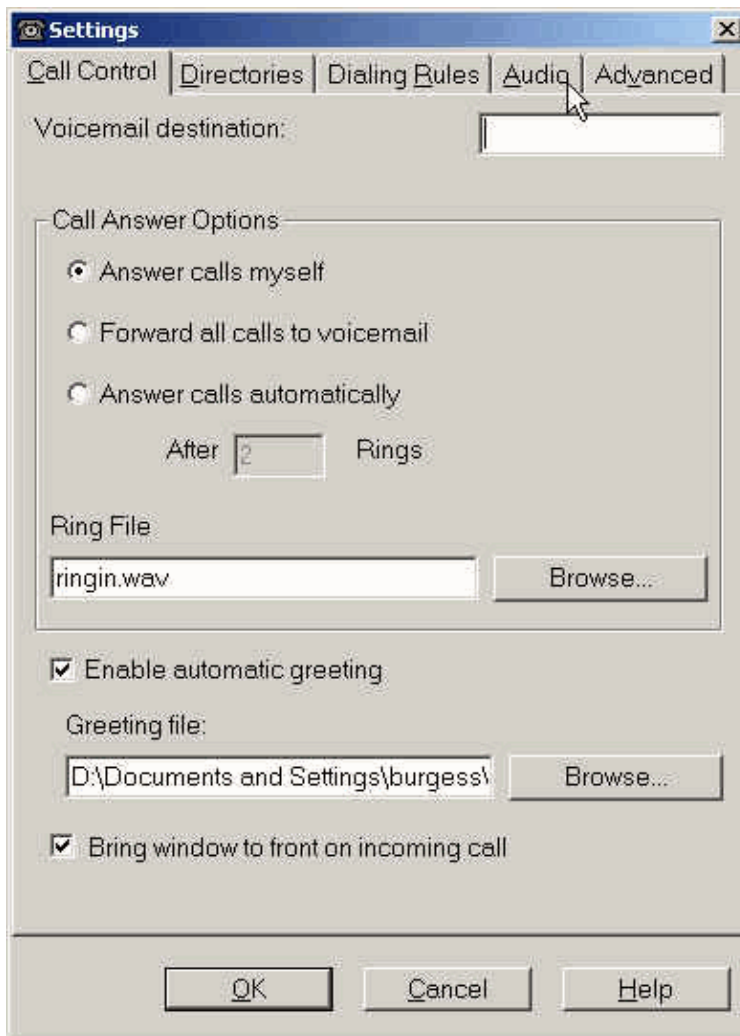
Refer to Cisco Technical Tips Conventions for more information on document conventions.

Set Cisco IP SoftPhone to Use a VPN Connection

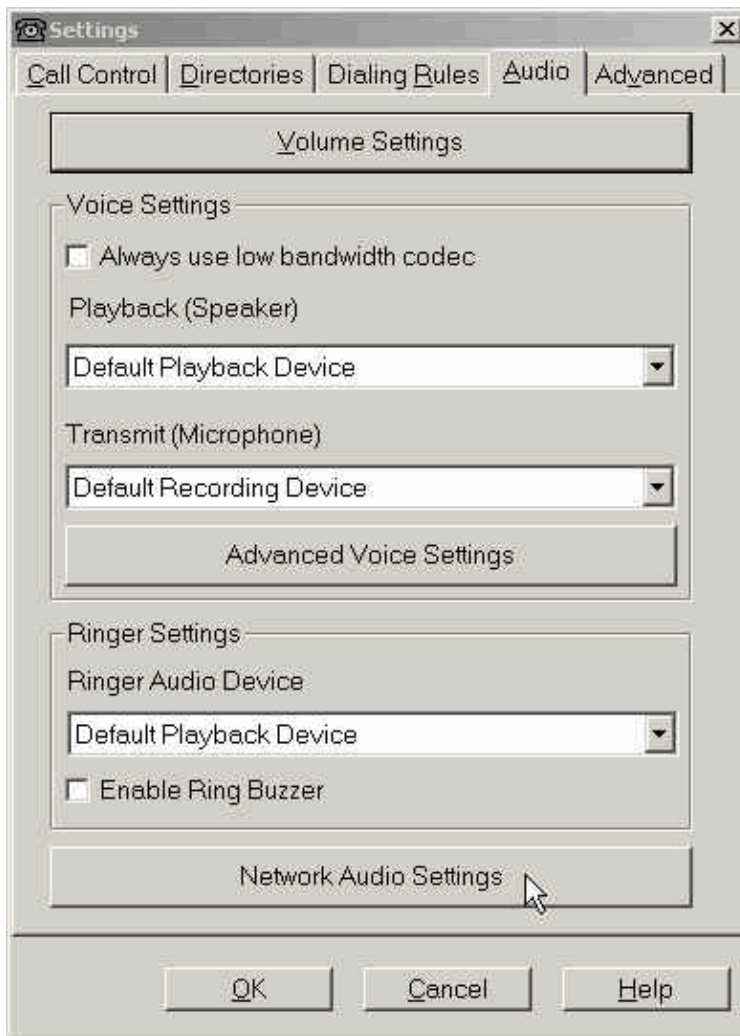
In order to get Cisco IP SoftPhone to have two-way audio when it uses NAT and utilizes VPN Client software, make sure that you have configured the VPN IP address, instead of the configured network adapter IP address under the "network audio settings".

Complete these steps:

1. Open Cisco IP SoftPhone and click the **Settings** icon  .
2. Select the **Audio** settings tab.

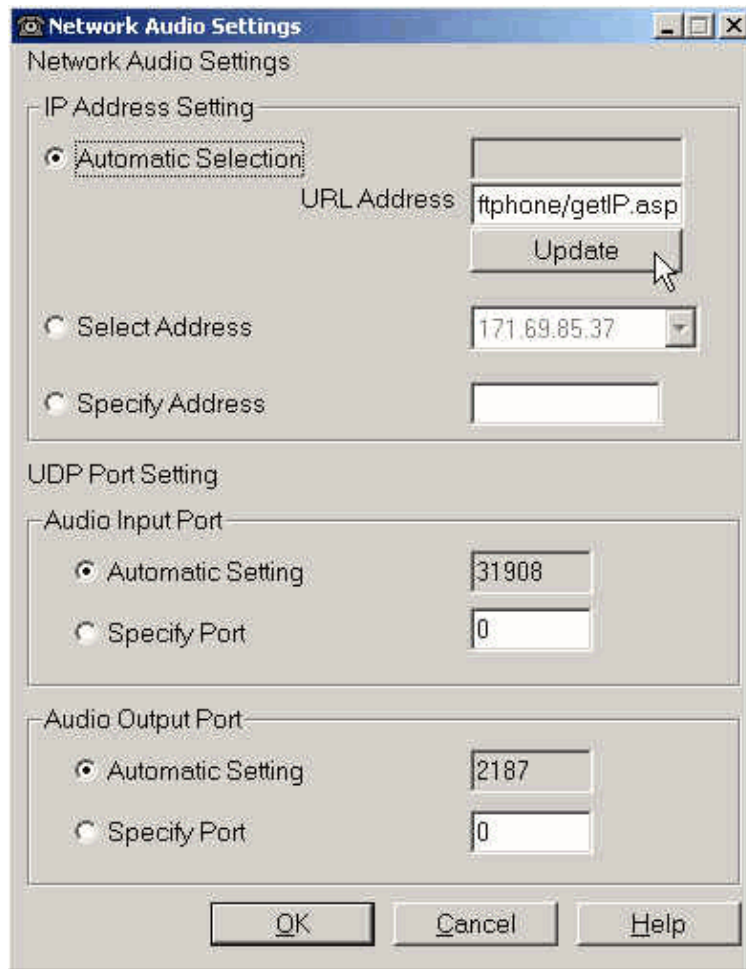


3. Click **Network Audio Settings**.



4. There are three ways to get the correct IP address advertised. Choose one of these three ways and click **OK** when finished.

◆ **Automatic Selection**



The Automatic Selection setting uses the file getIP.asp from the web server that you use to distribute the IP SoftPhone files to clients.

For example, if the IP address of your IP SoftPhone distribution web server is 10.21.15.10 and the IP SoftPhone distribution files are shared in a directory named "ipsp", the url to use on your PC to obtain its current IP address is <http://10.21.15.10/ipsp/getip.asp>

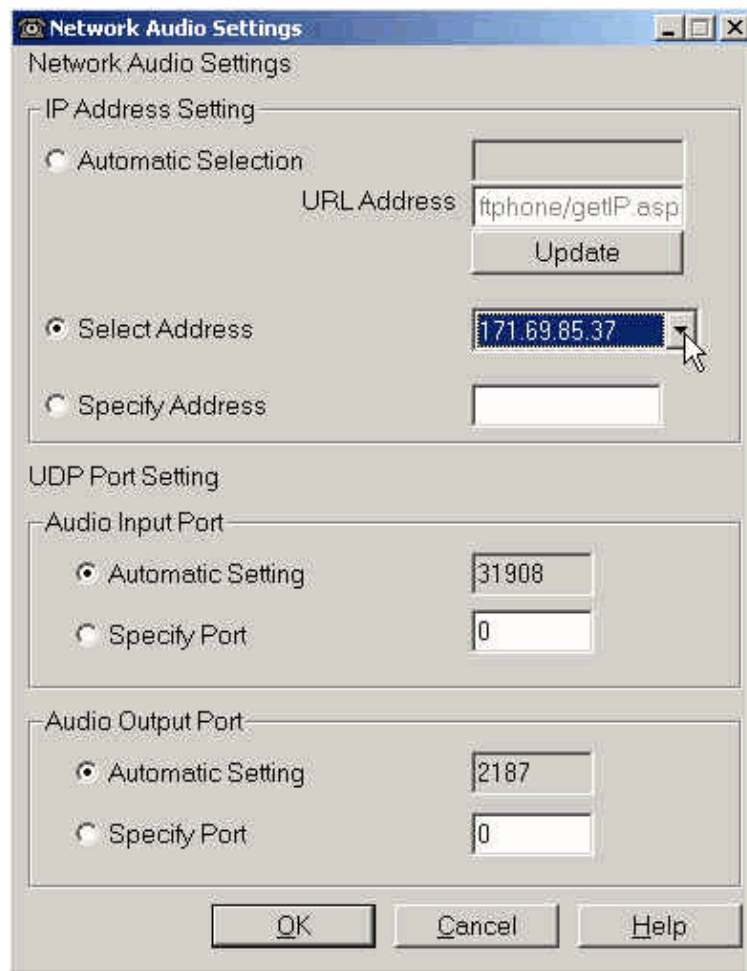
This web application provides this output when connected through a browser:

```
172.16.240.37 /* tapiaddress.java result = provider.syncTapiObject.
SetLineAudioReceiveAddress(deviceID[0],tapiHLine, extVersion[0],
t.getIPAddress(), t.getUDPPort(), t.usesLowBandwidthCodec()); */
```

The address at the beginning of the response is the IP address the request came from. In this case the PC's address is 172.16.240.37. This is the address Cisco IP SoftPhone then uses when it registers with the Cisco CallManager. By automating this, the need to manually enter the address every time a new one is assigned should be alleviated. Point the automatic selection to the getIP.asp page on the Web server. The page should be there by default when Web Administrator is installed and should be in the same folder.

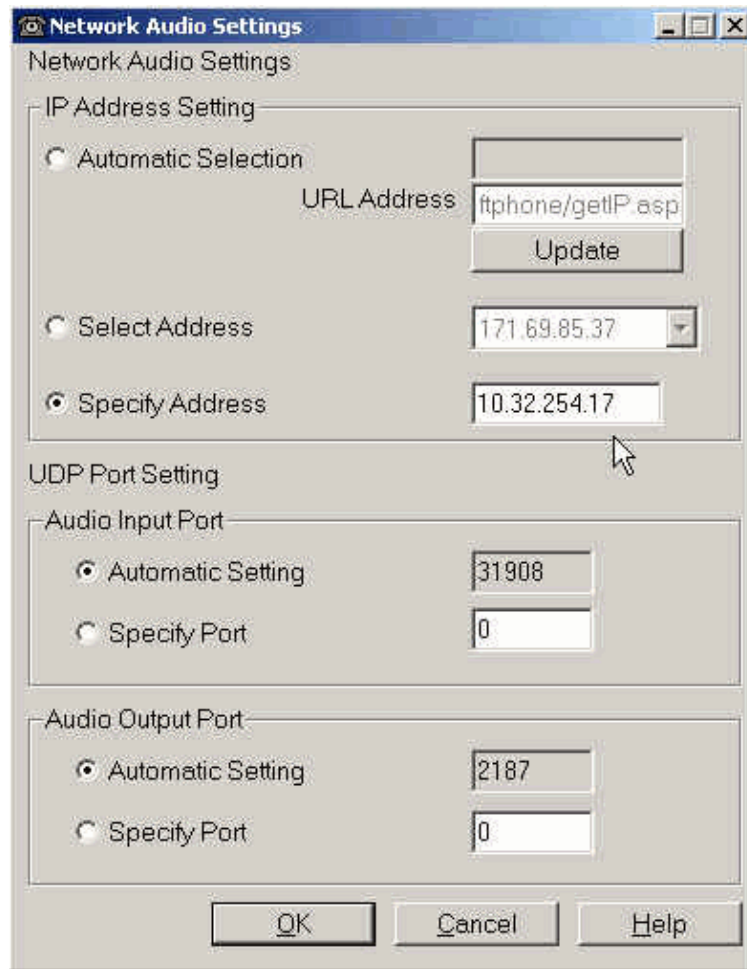
For more information on this option please refer to the *Using Automatic Selection for IP Address Setting* section of Setting Up Cisco IP SoftPhone Using the Customization Tool.

◆ **Select Address**



There is a pull-down menu of addresses on the local machine. Select the one that is most appropriate.

◆ **Specify Address**



The address to be advertised can be manually entered if needed. Cisco IP SoftPhone must be restarted for the changes to take effect.

Note: What Software VPN Clients are Supported?

Supported software VPN Clients include Cisco Systems VPN Client 3.x or 4.x, and the Microsoft PPTP client. Other third-party VPN Clients might be unsupported. A VPN solution is typically unsupported if it is not a Cisco product and does not function like a network interface card.

One-way Audio on a VPN Connection from SoftPhone

When you configure a SoftPhone to connect through a VPN, it is important for Cisco CallManager to receive correct information about the IP address the SoftPhone uses. By default, the Cisco IP SoftPhone uses its physical network address to register with Cisco CallManager rather than with the VPN address. Cisco CallManager instructs other IP phones to send to this address. The result is a one-way voice since the IP phones are able to reach the VPN address of the PC and not the physical interface of the PC.

Related Information

- [Voice Technology Support](#)
- [Voice and Unified Communications Support Resources](#)
- [Cisco IP SoftPhone User Guide \(1.3\)](#)
- [Cisco IP SoftPhone QuickStart Guide \(1.3\)](#)
- [Cisco IP SoftPhone Install and Upgrade Guides](#)
- [Cisco IP SoftPhone Troubleshoot and Alerts](#)

- **Recommended Reading: Troubleshooting Cisco IP Telephony**
 - **Technical Support – Cisco Systems**
-

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