

## **Avaya IP Softphone Overall Requirements**

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## **Configuration Requirements**

### **IMPORTANT**

Before downloading the Avaya IP Softphone R5.2 SP 1 software, make sure:

1. The Avaya Media Server is IP enabled. The Avaya Media Server must be running Avaya Communication Manager Software or Avaya Call Processing Software (R9.5 or higher).
2. You have purchased or upgraded your IP Softphone R5 license. Each station extension requires a license. (This does not apply if using the Control of Avaya IP Telephone (via the phone) feature. Only needed for Road Warrior, Telecommuter, and Control of Avaya Telephone (via the server) configurations.)
3. Each station is administered to support Avaya IP Softphone. (Does not apply if using the Control of Avaya IP Telephone (via the phone) feature. Only needed for Road Warrior, Telecommuter, and Control of Avaya Telephone (via the server) configurations.)
4. Your PC meets the minimum requirements listed below.

## **PC Requirements**

IBM PC-compatible equipment with the following:

- IBM PC or compatible PC with the Intel Pentium III 300 MHz (1 GHz recommended for Road Warrior) or compatible processor.
  - **NOTE:** Touch-screen systems have not been certified to work with Avaya IP Softphone.
- Hard disk with at least 50 MB of space available.
- RAM Requirements:

<b>Operating System</b>	<b>Road Warrior</b>	<b>Telecommuter, Shared Control</b>
Windows XP - 32-bit	256 MB	128 MB
Windows 2000	128 MB	64 MB

The minimum requirements specified assume that IP Softphone is the only application running on the PC. In reality, most PCs will be running one or more other applications concurrently with IP Softphone. If you have not yet purchased a PC on which to run IP Softphone, you should select a PC that exceeds the minimum requirements. How far your PC should exceed these requirements depends on how memory intensive the applications are that you typically use. If you frequently use multiple applications concurrently that are memory intensive (such as a web browser), you should select a PC that has a fast processor (that is, 800 MHz or faster) and 128 MB or more of RAM.

- For the option of ringing on the PC, a sound device.
- For Road Warrior configuration only, a sound device that supports full-duplex operation (both parties can talk and hear each other at the same time).
- For Road Warrior configuration only, a speaker/headset, and a microphone.
- For Telecommuter configuration only, an available telephone line.
- Network Interface Card (NIC) for local area network (LAN) connectivity and/or a modem (28.8 Kbps or faster) for dial-up networking.
- CD-ROM drive (if installing from CD).
- Microsoft Internet Explorer 5.5 or higher to view the online help and to support the ability to dial numbers from web pages.
- One of the following operating systems:
  - Microsoft Windows XP Home or Professional with Service Pack 1 or Service Pack 2
  - Microsoft Windows 2000 Professional with Service Pack 3 or higher

### **PC Configuration Notes**

- Avaya IP Softphone will not work if Internet Connection Firewall (ICF) is enabled on the Windows XP machine.
- Windows 95, Windows 98, Windows Millennium Edition, Windows NT, Windows 2000 Advanced Server, Windows 2000 Datacenter Server, Windows XP Server, Windows XP Advanced Server, Windows XP Datacenter Server, IBM OS/2, Apple MAC OS, Linux and UNIX are NOT supported. Any operating system that is not listed in the PC requirements above is also NOT supported.
- Virus Scans of IP Softphone event logs and contacts database files may cause voice quality issues in Road Warrior (Voice over IP) mode. Turn off on access scanning of IP Softphone files and put the application in the Safe list for you virus scan.

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### **Performance Optimization**

As with any application, the performance of IP Softphone is affected by the other applications you are running concurrently. For example, if you frequently use a

memory-intensive application such as a web browser, the performance of IP Softphone and other applications you are using will be affected. In this case, you will need a faster processor and more RAM than the minimum specified.

Voice over IP (VoIP) uses real-time processing on your PC to transmit voice communication. Nearly all other processes on a PC use sequential processing, meaning that requests for system resources are processed as they become available. If resources are not available to process VoIP actions, the quality of the communication degrades.

Network bandwidth availability can also have an impact on VoIP communications. The codecs used for VoIP encoding can vary from using small packets for dial-up connections with reduced voice quality to using larger packets providing higher voice quality over broadband and high-speed connections.

The PC Requirements listed above for IP Softphone are the absolute minimum needed for operation. If you experience problems with VoIP beyond configuration problems, most can be solved by a system upgrade, or by using one with higher specifications.

When using IP Softphone in the Road Warrior configuration (that is, VoIP), it is important for you to use a PC that exceeds the minimum requirements. In this configuration, IP Softphone uses the same IP connection for the call control functions (for example, dialing a telephone number, answering a ringing call, and placing a call on hold) and your phone conversation. This configuration strains the resources of your PC. If you experience a delay when performing call-handling functions, you should increase the processor speed and/or RAM of your PC. If you are unable to increase processor speed or RAM, your only recourse is to not run memory-intensive applications concurrently with IP Softphone.

## **PC Systems Guidelines**

The following system descriptions are meant as a guideline for determining if higher system requirements are necessary for VoIP communications. If your system more closely resembles the moderate-demand or high-demand systems, an upgrade is recommended.

Specific requirements for each type of system cannot be given as RAM, processor speed, system bus speed, L2 cache, sound cards, network bandwidth, and applications are all variables that can range greatly in their impact.

### **High-Demand**

A high-demand system is a PC that uses processor-intensive applications.

The following list presents some examples of activities and applications that are used in a high-demand system:

- Multiple, CPU-intensive applications running simultaneously
- Database queries/hosting
- Multimedia applications

- Computer-Assisted Drafting (CAD) applications
- Compilers
- Streaming media

### **Moderate-Demand**

A moderate-demand system is a PC that sometimes uses applications normally found in an office environment.

The following list presents some examples of activities and applications that are used in a moderate-demand system:

- Word processors
- Spreadsheets
- Web browsing
- Data entry
- General e-mail

### **Low-demand**

A low-demand system is a PC that rarely uses any applications apart from IP Softphone

The following list presents some example of activities and applications that are used in a low-demand system:

- Text e-mail
- Simple web browsing (no streaming media)
- Minimal data entry

## **Troubleshooting VoIP Quality**

The speed of a processor is a consideration when you are troubleshooting VoIP difficulties. However, architecture must also be considered. Both Intel<sup>®</sup> and AMD<sup>®</sup> have produced economical processors for small business and home users that, while rated at comparable speeds to the higher-priced models, have a reduced L2 cache. This affects real-time processing, which in turn, affects VoIP communications. Additionally, some chip sets have been created that include specialized instruction sets that optimize specific types of applications and processes. These include speech processing.

If you are experiencing problems with VoIP communications with IP Softphone, using a system with higher specifications for the items listed below are recommended.

- Processor speed
  - L2 Cache
  - System Bus speed
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## Supported Terminals

Terminal	Call Bar View	Picture of Phone View	<a href="#">Control of an Avaya Telephone</a>	<a href="#">Control of an IP Telephone</a>
2402	Yes	No	Yes	N/A
2410	Yes	Yes	Yes	N/A
2420	Yes	Yes	Yes	N/A
2420 with an expansion module	Yes	Yes	Yes	N/A
4601	Yes	No	Yes	No
4602/4602SW	Yes	No	Yes	No
4606	Yes	No	Yes	Yes
4610SW	Yes	Yes	Yes	Yes
4612	Yes	Yes	Yes	Yes
4620/4620SW	Yes	Yes	Yes	Yes
4620/4620SW with an expansion module	Yes	Yes	Yes	Yes
4624	Yes	Yes	Yes	Yes
4630/4630SW	Yes	No	Yes	Yes
6402D	Yes	No	Yes	N/A
6408D/6408D+	Yes	Yes	Yes	N/A
6416D+	Yes	Yes	Yes	N/A
6416D+ with an expansion module	Yes	Yes	Yes	N/A
6424D+	Yes	Yes	Yes	N/A
6424D+ with an expansion module	Yes	Yes	Yes	N/A
8405D/8405D+	Yes	Yes	No	N/A
8410D	Yes	Yes	No	N/A
8411D (see <a href="#">analog module note below</a> )	Yes	Yes	No	N/A
8434D	Yes	Yes	No	N/A
8434D with an expansion module	Yes	No	No	N/A

**NOTE:** The only module that is supported for the above terminals is an expansion module. Other data modules (such as an analog module) is not supported by the Avaya server and IP Softphone.

**Release dependency for shared control modes:**

- Control of an Avaya Telephone (via the server)
  - Requires connectivity to an Avaya Communication Manager 2.0 (or higher) server to control the telephones listed above other than the 46xx telephones
  - Requires connectivity to an Avaya Communication Manager 2.1 (or higher) server to control the 46xx telephones
  - Requires connectivity to an Avaya Communication Manager 2.2 (or higher) server to control 4601 telephones.
- Control of an Avaya IP Telephone (via the Phone)
  - Requires connectivity to an IP Telephone running the 1.7 (or higher) software