

**VIA3 Guides**  
**IT Departments**

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Rev A

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## ***Introduction:***

### **Web Camera (optional):**

If you intend for your users of VIA3 in webinars\meetings to be seen and to see others, then your users will need a properly installed web camera; this camera is not necessary to see others in webinars\meetings. We recommend Logitech Web Cameras, and one of the best Logitech cameras is the Logitech Pro 9000.

### **Microphone:**

- If you intend for your users of VIA3 to be heard in webinars\meetings, then your users will need a microphone installed so that others in the webinar\meeting can hear them. We do not recommend using the microphone in a Web Camera due to limitations in USB capabilities no matter how fast the processor. For an external microphone, we recommend the Labtec 333 microphone (a small, flat, silver microphone). While almost any microphone will work with VIA3, we strongly advocate against a USB microphone.

### **Computer Speakers:**

- If you plan to have users who will attend webinars\meetings as Audience members only, then these users will need speakers on their computers in order to hear during the webinar\meeting. Most computers already have speakers properly attached (or are internal as in the case of laptop computers), and if you are able to hear the special "Windows Sounds" when your computer boots up or shuts down, then you should be able to hear in the webinar\meeting.

### **System Requirements for VIA3:**

- Windows Vista or Windows XP (Service Pack 2 or later) or Windows 7
- 512 MB RAM
- Intel or AMD Processor 1.5GHz (Minimum) - (2.0 GHz or higher recommended)
- 60 MB free disk space
- Headset or microphone and speakers (see above for discussion)
- (Optional) Webcam
- High Speed Internet Connection, 256kbps (DSL or better) to use Video; 384kbps to use Share Desktop.

Note: 64-bit Operating Systems (Windows XP, Vista & Windows 7 are supported)

### ***Installing VIA3 (per user install):***

If you install VIA3 from VIACK's web site, then VIA3 installs to this location on the hard drive (this is a *per user* install):

<USERPROFILE>\Local Settings\Application Data\VIACK (XP Operating System)  
<USERPROFILE>\AppData\Local\VIACK (Vista/Win7 Operating System)

Installing VIA3 does not require a user to be an administrator on the machine. VIA3 is installed by visiting the VIACK web site (<http://www.via3.com/>), and clicking on the link to "Download VIA3"; if VIA3 was already installed from our web site, then the current client on the computer will be upgraded to the most current version.

### ***Unattended Installation (per machine install):***

If you chose to install VIA3 for all users of a machine, then you would utilize this type of installation, and VIA3 will install to the Program Files Folder; this is a *per machine* install.

- Download the VIA3 MSI installer file from the VIACK web site; save the MSI file to a location on your server so that your scripts will have proper access.
- The install line should read:  
msiexec.exe /i <FILE PATH>\v3setupvia3.msi ALLUSERS=1
  - ALLUSERS=1 switch causes the install to locate under Program Files;
  - If you do not wish to have VIA3 automatically start every time a user boots the computer, then also include the switch STARTUPICON=0, which will prevent VIA3 from loading an icon into the Startup Group for All Users;
  - We also recommend the MSIExec switches /qn to allow a silent install and auto-reboot if necessary.
- If any of your users have the *per user* version of VIA3 installed, we recommend that you have this version uninstalled by the user before you install the *per machine* version of VIA3.
- Future upgrades to VIA3 will require you to push the new client in this same way, and you will be notified in advance of changes to VIA3.

### ***Bulk Import of VIA3 Users:***

VIA3 users can be imported into your account en masse. This is accomplished by providing an Excel spreadsheet to VIACK's Client Services group; this spreadsheet needs to have the following for each user (each item should be in a separate column):

- Username requested (minimum 6 {six} characters; if the requested name is in use, another name must be used; this is usually done by adding a number to the end of the username);
- User's first name;
- User's last name;
- User's email address;
- Temporary password (the user will be required to change this password upon first log into VIA3);

Importing users can usually be accomplished within 24 hours of your request, depending upon the numbers involved.

## ***VIA3 Network Requirements:***

### **Communication Ports and Protocols:**

VIA3 uses standard communication protocols, however all data content is encrypted from end-to-end, making the payload of the network packets opaque to any network monitoring. The VIA3 client makes only outbound requests to the VIA3 servers; no inbound connection requests are made. For those environments requiring outbound access control, VIA3 resides in subnet(s): 174.36.122.255/24 and 67.228.64.255/24

### **Protocols:**

VIA3 uses SIP (Session Initiation Protocol) for much of the communication between the clients and servers. VIA3 uses User Datagram Protocol (UDP) or Transmission Control Protocol (TCP) for real-time data streams (audio, video, etc) where the loss of a data packet is not critical and retransmission of the missing data would cause unacceptable latency. For data transfers where loss of a data packet is unacceptable (file transfers, IM, Chat, etc), TCP is used.

### **Ports:**

VIA3 software is designed to use standard ports and protocols. In the event that some of the ports or protocols are blocked, the software will attempt to utilize other standard ports. VIA3 makes outbound connections to port 5061 (for login, presence and availability status messages, Instant Messaging (IM), meeting invitations; port 5004 is used for real-time data streams (audio, video, mouse pointer, etc), and port 443 and 80 for other traffic. As mentioned above, if the port or protocol is blocked, VIA3 will fall back to another port or protocol. For example, when a real-time audio stream is opened, the VIA3 client attempts to connect to the server using UDP over port 5004. If the UDP connection attempt fails, the client tries TCP over the same port. If the TCP connection fails over that port, the system will connect over port 80 and 443.

VIA3 uses the following ports (TCP 443 and 80 will be used if these are not available):

- TCP port 5061—SIP/SSL traffic
- UDP port 5004—Audio/video traffic
- TCP port 5004—Live View connections
- TCP port 80—SOAP traffic

### **Proxy Authentication:**

VIA3 queries the Internet Explorer connections settings to determine the network path to the Web Proxy server. VIA3 is compatible with NTLM, Basic, and Digest authentication requests.

### **Issues to Consider:**

If users report poor audio or video, you have several options to try to determine wherein the problem occurs. The first is to verify that bandwidth is not an issue.

- Have the user or users pause the video during a meeting; if the audio quality improves, then this issue *may* be related to bandwidth.
- The time of day of the VIA3 meeting may actually contribute to bandwidth issues, especially if VIA3 meetings are scheduled for a time when many users are beginning the day, and many are logging in and connecting to the Internet.
- Have a user actually test upload/download speeds here: <http://www.speakeasy.net/speedtest/>; Java needs to be enabled, but this will test both upload and download speeds.
  - Upload needs to be at least 256 kbps; 384 kbps if this user is planning on utilizing Share Desktop.
  - Download needs to be 256 kbps for each user in a VIA3 meeting, excluding one as no user needs to download his/her own video; so for a five person meeting that is using Share Desktop, each user would need 1536 down (4\*384) and 384 up. If these numbers are being met, then you know bandwidth is not the issue.
- If audio or video is still not the expected quality, then start a VIA3 meeting, and select “View” (menu item) > “Meeting Connection Data”; if the “Connection type” shows TCP, the meeting is probably utilizing port 443 as ports 5004 & 5061 are blocked; TCP can be used by VIA3; however, TCP requests retransmission on dropped/lost packets, and these packets can be large, especially with streaming video; this can cause network congestion; opening ports 5004 & 5061 for outbound only should cause the “Connection type” to show UDP, which does not request retransmission on dropped packets; this may be enough to correct any audio/video issues.
- Is Internet traffic structured to pass through a proxy server?
  - A proxy server can handle internet pages easily with less of a system than is required for VIA3 usage; however, the video & audio of a VIA3 meeting can quickly strain a proxy server.
    - Is it possible to direct VIA3 users to a lesser used proxy server?
    - Is it possible to direct VIA3 users to bypass the proxy server?
      - We’d recommend testing this second option in order to verify that it is the proxy server that may be causing a slow down in video/audio.

### **Technical Support:**

If you still continue to experience audio/video issues with VIA3, please contact Technical Support:

Phone: (Toll Free) 1-866-265-8060

Email: [support@viack.com](mailto:support@viack.com)