

# VidyoConferencing™ Network Administrators Guide

Windows 7, XP, Vista and Apple Mac OS - updated 10/1/2011

## Introduction

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The Attend Anywhere management platform is a cloud based management, facilitation and integration solution that enables video conferencing as a natural extension an organisations capability.

It exists separately from the underlying technologies, providing a common user interface and bringing all the components together for patients or peers to attend a secure video appointment via a service provider's web site using whatever VC technology makes sense.

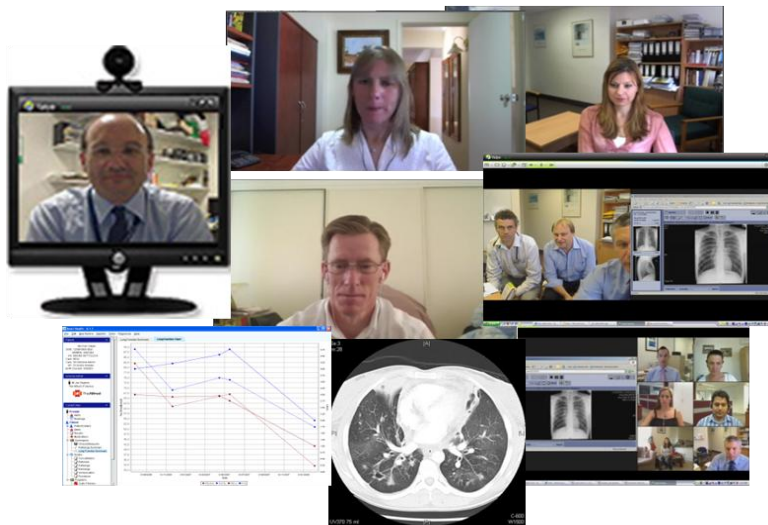
### About VidyoConferencing™ software

Vidyo is one of the business grade video conference technologies people can use via the Attend Anywhere management platform. Vidyo works especially well over the internet just using a computer.

The Vidyo software will automatically download when you go to make your first call. It can be set up in seconds, doesn't require expensive equipment and can securely connect multiple locations simultaneously, including standard video conference systems.

With high definition video and no delays people get a natural experience and easily forget about the technology. They can also share documents or anything open on their computer.

Basic computer literacy is required and there ARE some things you need to focus on that have a serious impact. **Please read "Instructions for Attending via VidyoConference™"**.



### More about Vidyo:

- Single click to connect
- No multipoint bookings or MCU required
- HD 720p 30fps quality with a \$100 webcam and a modern laptop
- Connects to existing standards based video conference systems (sip or h.323)
- Get your own server or use a hosted service
- Software based so experiences improve with computer performance
- Used in peoples own environment (rooms, office, home, on the move etc.)

# System Description

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## Design

A unique feature of the Vidyo system is its ability to scale the bandwidth used to provide video streams using a new ITU standard, H.264 SVC (scalable video coding). This is achieved by providing several channels starting with a base layer and then incremental channels of progressively increasing signal quality.

Each client negotiates to scale up to the highest quality available for its hardware and Internet connection capability. The presence of this additional information also allows much better error tolerance than traditional IP based video technology and is therefore significantly more tolerant of the inevitable fluctuations in Internet bandwidth availability.

The solution employs a system similar to many new social communications tools such as MSN or Skype by using a central web based system to setup point to point or multipoint video calls. The system provides instructions for the actual video signals to be directed to participants over IP networks by a centrally hosted Vidyo™ application server and router.

Combined with the use of incremental channels, intelligent bandwidth utilization and higher fault tolerance Vidyo™ technology delivers far greater quality access and functionality than has previously been possible.

## Security

The Vidyo™ system, whilst providing high resolution content presentation is NOT a file sharing or chat client that can be used to move information into or out of organisational networks, outside of normal controlled channels.

Vidyo uses industry standard 128bit encryption.

# System Requirements

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## Conference Quality

There are several technical factors that contribute to a successful high quality conference experience. These include the camera, audio devices, PC performance and available bandwidth.

## Audio / Video

*The right choice of audio and camera peripherals makes a big difference.*

You WILL cause a poor experience for everyone in the meeting if you do not use either earphones, a USB headset or an echo cancelling speakerphone.

## Video

For the best performance the HD (720p) Logitech c910 web cams makes a big difference, especially for groups.

For individuals, in-built cameras are getting better especially MAC ones but the c910 delivers much higher definition and better light handling. Auto – focus is highly recommended.

## Suitable Audio for the Size of Local Audience

To avoid audio problems it is essential that you use earphones, USB headset (not analogue) or an echo cancelling speaker phone connected to your PC.

For small groups (up to 8 people) the Clear One Chat 50 speakerphone (A\$379) works well.

For larger groups a single or daisy chained Phoenix Audio Quattro speakerphone is a good solution. This has the added advantage of being able combine phone and video conference participants.

Large conference rooms and auditorium need specifying on a case by case basis.

## Computer requirements

See wizard at [www.attendanywhere.com/setupvideo](http://www.attendanywhere.com/setupvideo)

## Operating System

- Windows 7, XP with service pack 2, Vista with service pack 1
- Apple Macintosh 10.5 (Leopard) on Intel
- Hard disk: 10 MB free (40MB recommended)

## Supporting Software

The following software should be installed before attempting to connect to the Vidyo™ system:

- A recent web browser: Web Browser: Internet Explorer 8/9, Chrome or Firefox 2.0 on Windows Safari, Firefox 2.0 or Camino on Mac OS X 10.5
- Web Cam drivers and supporting software, such as Logitech Quick Cam
- Audio hardware drivers – USB echo-cancelling microphone recommended

## Quality guideline

Equipment		Basic	High
<b>Video Camera</b>			
<b>Interface</b>	In-built camera, older web cam	USB 2.0 (e.g. Logitech c910)	
<b>Resolution</b>	320 x 240, 640x480	720p	
<b>Frame Rate</b>	7-15 fps	15-30 fps	
<b>Audio</b>			
<b>Speaker</b>	Personal headphones	USB headset / Echo-cancelling speaker box / mic	
<b>Microphone</b>	Built in PC mic	720p Camera mic	
<b>Performance</b>			
<b>CPU</b>	> Intel 3.0 GHz Dual Core	> Intel 2.3 GHz i7	
<b>RAM</b>	2 GB	3 GB	
<b>Bandwidth</b>			
<b>Down</b>	Show single site (one talking)	700 kbps	1.1 Mbps
	Show multiple sites simultaneously	1.5Mbps	2.4Mbps
<b>Up</b>		600 Kbps	1.1 Mbps

# Vidyo™ Desktop Client Automatic Installation/Upgrade

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## Process Flow

1. Click on “Setup and test” wherever you are testing and follow instructions. NB this work flow will be the same if you decide to go straight to ‘Join Room or Join Appointment’
2. In step 4, if Vidyo 2.x is not installed or running it will prompt to either start Vidyo 2.x (if installed) or install and RUN Vidyo 2.x. NB this stage requires that you have access to a valid video room.
3. If it is the first time install then the browser will prompt you to confirm that you wish to install and run the software. If provided, tick the box to confirm that you always trust this source of software
4. If the software is already installed, but requires an upgrade to match the Vidyo router, the software will be updated silently if the user has previously decided to trust the software source. If not they will be prompted again to permit it
5. If the software is already installed and up to date then the Vidyo Desktop software will launch automatically when joining the video room.
6. On successful installation, the Vidyo Desktop software will be enabled for running at Windows start up by inclusion in a system Run registry key

## Alternative installation process

If users are blocked from downloading executable files then the Desktop Client installation file and instructions can be provided for manual or scripted installation.

## Administrator or “Power User” access to the PC

In order to successfully install or upgrade the software on a Windows PC the user logged on must have sufficient access to create files in the “Program Files” directory and to create/modify system registry keys.

In other cases this is only allowed by users with Administrators or Power User equivalent security privileges.

# Firewall Traversal

Access to the following ports on the Vidyo router is required for the system to function correctly. Depending on your organisation's network design this may mean a modification to local PC based firewall rules and/or a change to your organisations' Internet firewall.

You must support the Mandatory and at least one of Option1 or 2, preferably Option 1, ideally both.

## IPVisuals Hosted Vidyo™ system

Port	Host	Protocol	Use
<b>Mandatory</b>			
80	www.attendanywhere.com	TCP	Meeting initiation
80	IPVportal.vidyo.attendanywhere.com	TCP	Client Installation
443	IPVportal.vidyo.attendanywhere.com	TCP	Application Server connection
<b>Option 1: Optimal Quality (UDP) Connection)</b>			
50000	router1.vidyo.attendanywhere.com	TCP	Media Connection
50000 to 51000	router1.vidyo.attendanywhere.com	UDP	Negotiated Media Ports
<b>Option 2: Alternative proxy connection (potential quality impact)</b>			
443	router1.vidyo.attendanywhere.com	TCP	Media Connection

If you are using a different private or shared Vidyo™ system you will need to add to the above server addresses with the appropriate alternate addresses for your system as per the RACP below.

## The Royal Australasian College of Physicians (RACP) Vidyo™ system

Port	Host	Protocol	Use
<b>Mandatory</b>			
80	www.attendanywhere.com	TCP	Meeting initiation
80	vportal.racp.edu.au	TCP	Client Installation
443	vportal.racp.edu.au	TCP	Application Server connection
<b>Option 1: Optimal Quality (UDP) Connection)</b>			
50000	vrouter.racp.edu.au	TCP	Media Connection
50000 to 51000	vrouter.racp.edu.au	UDP	Negotiated Media Ports
<b>Option 2: Alternative proxy connection (potential quality impact)</b>			
443	vrouter.racp.edu.au	TCP	Media Connection

## **Alternate Firewall Traversal Options**

There is a mechanism in the Vidyo software to determine that the media ports are unreachable and then revert to a Vidyo<sup>™</sup> proxy TLS connection via port 443, which is almost always available.

This style of connection is convenient and will allow participation without any special firewall configuration. In the configuration dialogue under Status a message will appear indicating that you are in proxy mode.

Relying on this fall back, however, may degrade the quality of the video conference for the user. Effort should still be made to enable your network to provide the best quality conferencing experience as enhanced communication and training provision will contribute to quality outcomes.

If necessary it is possible to force the use of the Vidyo<sup>™</sup> proxy in the Vidyo<sup>™</sup> client network settings.