PERSONAL COMPUTER USERS: TROUBLESHOOTING

✓ I cannot join the teleconference. It seems like the application is loading but the connection progress bar does not appear.

After clicking on the participation link included in the teleconference invitation email, you will be redirected to the following web page (Figure 1) where a bar informs you of the connection progress.

![Figure 1: Teleconference connection progress bar](image)

In case the progress bar does not appear while the application seems to being loaded (Figure 2) and you have not joined the teleconference, it is highly probable that Java or Java plugin is disabled in your computer.

✓ Check that there is an updated version of Java installed in your computer.

✓ Check that no multiple versions of Java are running in your computer at the same time.

✓ Check that Java is activated in your operating system.
  o In order to activate Java in Windows:
    ▪ Go to ControlPanel, open Java Control Panel in ‘Programs’
    ▪ Select ‘View’ within Java tab.
    ▪ Check the ‘Enable’ option for the appropriate version of JRE (Java Runtime Environment)
  o In order to activate Java in Macintosh having Java 6:
    ▪ Go to ‘Applications’, ‘Utilities’ and select JavaPreferences.app
    ▪ Enable the option ‘Enable Java applet and Web Start applications’
  o In order to activate Java in Macintosh having Java 7:
    ▪ Go to ‘System Preferences’
    ▪ Select the Java icon (Java Control Panel), then the Java tab and click on ‘View’
    ▪ Select the most appropriate version of JRE and check ‘Enable’

In both Windows and Macintosh, select enabling Java in Java Control Panel also for the browsers through the ‘Security’ tab.
In order to activate Java in Linux (reference operating system: Ubuntu 12.04):

- Within a terminal run the “java–version” command
In case no java is found, you will have to install it along with the necessary plugin (icedtea6 or icedtea7) for your browser. You will find the necessary files and instructions in help.ubuntu.com/community/java. Try the OpenJDK and you will be prompted to install the icedtea plugin in the Software Center.

**Check that Java is enabled in your browser.**

- Check for notifications in your browser when the application is being loaded.
  - In case of Firefox click on the red icon that appears on the address bar to enable Java for the ongoing or/and the upcoming sessions regarding the specific application (Figure 3).
- In order to enable the Java plugin in Internet Explorer
  - Click ‘Tools’ and then ‘Internet Options’
  - Select the ‘Security’ tab and select the ‘Custom Level’ button
  - Scroll down to ‘Scripting of Java applets’ and make sure the ‘Enable’ button is checked
- In order to enable the Java plugin in Mozilla Firefox
  - Select the ‘Firefox’ button (or ‘Tools’ menu in Windows XP), then ‘Add-ons’
  - In the ‘Add-ons’ manager tab and select ‘Plugins’
  - Click Java Platform plugin to select it, and click on the ‘Enable’ button (if the button says ‘Disable’, Java is already enabled)

Sometimes, there may be some add-ons that affect the performance of Java. If it is necessary, deactivate them and restart.

In case of Ubuntu, you need to install the icedtea6 or the icedtea7 plugin.

- In order to enable the Java plugin in Google Chrome
  - Select the wrench icon in the up-right corner
  - Select ‘Settings’
  - Scan for Java in the search field
  - Select ‘Content Settings’
  - Scroll down to ‘Plug-ins’ and select ‘Disable individual plug-ins’
  - Find Java and click on the ‘Enable’ button if not already enabled

In case of Chromium (Ubuntu): ‘Settings’ → ‘Privacy’ → ‘Content Settings’ → ‘JavaScript’ και ‘Plug-ins’, enabling both the add-on and Java. However, it is suggested that Firefox is used as it seems like the icedtea plugin works better.

- In order to enable the Java plugin in Safari
  - Select ‘Preferences’
  - Click on the ‘Security’ tab
  - Select ‘Enable Java’ & ‘Enable plug-ins’ if not already checked

**In case there is Java installed in your PC but it is not working make sure that you have administration rights.**

**Copy and paste the teleconference participation link on another browser (InternetExplorer, MozillaFirefox, GoogleChrome, Safari).**

- If 64-bit Java is installed try to use 64-bit (not 32-bit) Internet Explorer.

**In case Java is updated but still no connection can be established, restart your PC.**

**In case of an old PC make sure that it meets the minimum technical requirements specified by the application.**

Specifically, if the graphics card cannot support the minimum defined requirements the application will not be loaded. If the processor is outdated you may experience, in the best case, long delay till the connection is established.

**I cannot enter to the conference room (the connection progress bar disappears before entering) or I enter to the conference room but get disconnected soon after.**
Either your PC’s or your router’s/provider’s firewall is blocking the ports required by the application. Bad network conditions may also result in connectivity failures.

✔ Check your local firewall and enable the functioning of the VidyoDesktop software. If the problem persists disable your local firewall for as long as the teleconference takes place.

Notice that in Windows 7 & 8 the firewall is disabled through Control Panel :: System and Security :: Windows Firewall; firewall should be disabled in all three profiles (private, public, domain) (Figure 4).

✔ Check for any running application that may interfere with the VidyoDesktop normal operation, like VPN software, and disable them for as long as the teleconference takes place.

Using VPN software (like OpenVPN) a virtual connection with another networking structure (compared to the physical location of the user) is established. Under these circumstances, several communication ports may be blocked (as imposed by the rules of the other networking structure) and no connection be allowed.

✔ The router’s/provider’s firewall should allow the communication through the ports used by the application.

The communication with the application’s server requires that all TCP ports 22, 80, 443, 17990, 17992 and UDP ports 50000 – 65535 are open.

If you are not an experienced user or have no access to changing your router’s configuration settings select the “Always use VidyoProxy” option in Network settings of VidyoDesktop software.

This way, the TCP port 22 is used (in most cases, this port is not blocked by the administrator/provider) while the UDP protocol is not applied.

In Windows right click on the VidyoDesktop icon on your down-right side of your desktop and select “Configuration”. Similarly, in Apple Mac OS press the trackpad button on the VidyoDesktop icon on your bottom side of your desktop (running applications) until the selections menu pops up and select “Configuration” (Figure 5). In the case of Linux (for example Ubuntu 12.04) right click on the corresponding icon shown on the up-right side of your desktop.
Selecting the “Configuration” option will lead you to the Configuration and Status tab. In “Network” section activate the choice “Always use VidyoProxy” that seems inactive and then press “Apply” (Figure 6).

Select the option “Use the following settings” within the Network tab under the subsection of Web Proxy.

This choice refers to the existence of a Proxy server that manages all traffic in the Internet and, thus, is used by our browser. The Proxy server is used for several purposes like: ensuring the anonymity of the end user (security), increasing communication speeds (through web caching), applying web-locations access rules, or checking for malicious content.

Try the participation link on another browser if needed.

My connection is not satisfactory, I can hear other participants or others hear me with interruptions.

It is highly probable that your connection conditions are not sufficient.

Prefer using an Ethernet cable (and not your wireless card) to connect your PC to the Internet.

Select the “Video” tab and check on the “Limited Bandwidth” option through the Configuration and Status menu if your connection is still bad (Figure 7).
This way, the quality of the video being sent is limited to CIF resolution – reducing the required uplink bandwidth. Moreover, the number of video streams received is initially limited but may be gradually changed depending on the available downlink bandwidth.

The settings tab pops up by either clicking on the “gear” icon on the up-right corner of the VidyoDesktop software (see corresponding section in User's Manual) or selecting the “Configuration” option on the application’s icon that appears on the taskbar (on the desktop).

- Make sure that the suggested by the application devices are used.
- Make sure that you use wired devices (sound, video) instead of wireless.
- Try having your laptop continuously connected to power.
  
  Low battery could affect your system’s performance.
- Select “HighPerformance” in the Power Plan options, if any, in your PC.
  
  This way, more processing power is available for the running applications.
- Make sure that the technical specifications of your PC meet the ones defined by the application.

The other participants complain that they repeatedly hear themselves.

If speakers are used, the sound that you receive from other participants will be captured again by your microphone and forwarded again back to the others causing the disturbing effect of echo (people hearing their voice within a delay), while you will not experience any problem. If any other participant is also using speakers then the echo effect is increased making the communication unbearable.

- You would better use one of the suggested speakerphones with embedded echo cancelation software/hardware. Alternatively, use a pair of headsets.
  
  To avoid the echo effects, these devices have appropriate digital circuits (digital signal processor) or appropriate software. First, the reappearance of the initially transmitted signal is identified and it is then taken off of the transmission/reception signal.
  
  This way, the received by the teleconference sound is isolated and not forwarded back to it again. The rest of the participants should act accordingly so that the communication is best served.
If none of the above can be done then in the Configuration and Status tab select the section “Devices” and activate the “Echo cancelation” option.

This way (Figure 8) echo problems are eliminated but the transmitted sound will be half duplex, meaning that when you will be talking you will not be able to hear others; this is why this option is not recommended in the general case.

Other problems

- Error 500.
  More specifically: “error 500: error registering installation with server”. This message appears at the first time a user tries to connect to the service and install the VidyoDesktop software. It is most probable that a firewall blocks the communication. Make sure that it is disabled (for all the profiles concerning Windows 7 and 8)

- Not all video streams are visible.
  Select “Limited Bandwidth” option (which allows the transmission of only one video stream to save resources) within the section of “Video”. Try a better quality for your connection.

- Sound problems.
  - I hear nothing (or the sound is too low)
    Check the section speaker of VidyoDesktop software. Get your sound device off your PC and back again (speakers). Check the intensity of the sound in your PC. Restart your PC if needed.
  - They do not hear me (or the sound is too low)
    Check the section speaker of VidyoDesktop software. Get your sound device off your PC and back again (microphone). Check the intensity of the sound the VidyoDesktop application. Restart your PC if needed.

- Video problems.
  - I can see the others but cannot be seen
    If you can see yourself through the application, check for the camera option (icon) in the VidyoDesktop software. Check whether you can be seen if you are talking. Make sure that the PC’s processor meets the minimum requirements defined by the application. Make sure that there is available bandwidth for your video to be transmitted.
    If you cannot see yourself through the application, check that the appropriate camera has been selected by the software. Check whether your camera is connected to your PC and plug it in again if it is needed. Close any other applications that may use the camera at that time.
    If your camera can run under other applications but not with the VidyoDesktop one, update its software and try again.
  - I can only see a black window (or DirectX error)
Make sure that in the case of an old PC (technically not conforming to the minimum requirements of the application) your hardware has been set to function in its maximum performance. Install or update DirectX software and make sure that the graphics card meets the minimum technical requirements.

Incidents that the moderator needs to take care of
- Clicking on the participation link does not connect me in the conference room.
  Make sure that every user of the service has received the unique email, which contains his participation link to the teleconference. This email should not be forwarded to him by another user (but sent only by the application itself). In case the participation link does not work, delete the record of the expectant participant and add him again so that a new link is produced (and sent to him).
- Problems referring to the authentication process of the user's institutional account.
  Check if the user belongs to an Organization of GRNET Federation (http://aai.grnet.gr/participants/). Check if the email account defined for the user belongs to such an Institution or is just a third-party one. If none of the above provides a solution, define the user as external and inform him to try to connect again.
- A user is kicked out of the conference room when another is entering.
  Check if the same participation link is used by more than one user (through forwarding emails for instance).

H.323 USERS: TROUBLESHOOTING

✓ I answer the incoming call but my terminal is almost immediately disconnected.
Most probably, you have selected the “Encryption” option (see Figure 9) whereas your terminal does not support the H.235 protocol or is not configured to support encrypted calls.

✓ I am connected but I only hear sound while seeing a black screen.
Probably you have selected the “Encryption” option while your terminal does not support the H.235 protocol.

✓ I am connected but I only hear sound while receiving no video.
Probably your terminal is old and it does not support the H.264 protocol. Try connecting again after selecting the “Compatibility setting” option. If you still fail, then probably your terminal does not meet the minimum requirement of supporting the H.263 protocol.

✓ Connection problems despite the fact that there is an incoming call and the terminal’s IP address is not blocked in the firewall.
Select the “Compatibility setting” option. This option allows for old H.323 terminals to connect to the service.

✓ The call/settings page does not pop up and error 200 appears (the user id does not exist).
Delete the corresponding record and send a new invitation email.

✓ Calling problems.
Check your network (a firewall may block the ports that the application uses). Alternatively, examine whether H.323 calls are not supported; in this case, try calling again after selecting the “SIP” option. Finally, restart your terminal.
Figure 9: H.323 terminal – Connection