

I) VIRTUAL CLASSROOM REQUIREMENTS

- + **No installation is required**, everything works from the internet browser.
- + Our virtual classroom works with most web browsers but some may require the installation of a plug-in to support WebRTC technology. We therefore recommend using **Google Chrome** browser, which doesn't require a plugin.

You can download it free here:

Google Chrome : <https://www.google.fr/chrome>

Google Chrome

If you decide to use another web browser, please refer to your browser's support page to install the WebRTC plug-in.

- + We recommend that any **pop-up blockers** be disabled as in some cases it will prevent the launch of the virtual classroom.
- + If further help is needed please refer to **Part IV** of this document.
- + We recommend using a headset, a microphone and a webcam.

For the best experience we recommend connecting to a high-speed Ethernet network. A **high-speed WiFi connection** should also ensure a similar experience.



- + **Before the first class**, check your connectivity and equipment with this test here:

<https://visiagora.live-online-classes.com/en/troubleshooter>




- + **Before the first class**, you can log into the demo interface to test the features of the virtual classroom here:

https://visiagora.live-online-classes.com/class_demo/

- + If your Internet connection is too slow, the video will automatically be turned off to optimise the audio.

The virtual classrooms will automatically detect the speed of the teacher's and student's internet connection and optimise the class to ensure the best experience. The Internet connection speed is checked on entering the classroom.

The Internet speed is also shown on the participants' video in the lower right corner:

 GOOD/FAST CONNECTION With a good connection, participants have excellent quality video and sound.	 MEDIUM/SLOW CONNECTION On slow connections, video quality is reduced to optimise audio.	 VERY SLOW CONNECTION With a very slow connection, the video is automatically turned off to optimise the audio.
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Teachers and students can also manually turn off the video to improve performance by clicking the green video icon.

II) SECURITY REQUIREMENTS – FIREWALL AND PORTS

A connectivity problem can potentially result from firewalls and closed ports, which can prevent inbound and outbound connections. To ensure the best experience consider opening the following ports:

Minimum Requirement: TCP port 443 must be open to connect to our virtual classroom. Some firewall/proxy rules only allow SSL traffic on port 443. Ensure that non-web traffic can also pass through this port.

Recommended Experience: In addition to the minimum requirement, it is recommended that UDP port 3478 be open.

Optimum Experience: For the best possible experience, ensure that UDP ports 1025 - 65535 be open.

If you experience any issues regarding Port opening, please refer to Part V of this document: a step-by-step tutorial to open the required ports.


III) SUPPORT

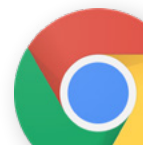
If you continue to experience connection problems, please approach the VISIAGORA support team by emailing support@visiagora.com.

In your email, please detail the nature of your problem and include screenshots (Shift + Cmd + 3 on Mac / Print Screen on Windows) as this will allow us to help you most efficiently.

IV) POP-UP BLOCKER DEACTIVATION TUTORIAL


On Chrome :

1. On your computer, open Chrome.
2. At the top-right corner, click  and then **Settings**.
3. Then, at the bottom, click **Advanced**.
4. In the section "Privacy and security", click on **Content Settings**.
5. Click on **Popups**.
6. Click on Add next to the parameter **Allow**.
7. Under "Add a site" type the site <https://visiagora.live-online-classes.com> then click **Add**.




V) FIREWALL PORT OPENING TUTORIAL

Method 1: Open Ports on WINDOWS



1. Open the menu **Start** (). Click on the Windows logo in the lower-left corner of the screen..
2. In this menu, type **Windows Defender Firewall with Advanced Security**. You will then see the link to the firewall settings program.
If prompted, enter the administrator password. Indeed, to be able to open a port, you must have permission as the security of your computer is at stake.
3. Click on the Action tab at the top and then **New Rule**.
4. Check the option **Port**, and then click **Next**. Here you can type the numbers of the ports you want to open.
5. Select **TCP** or **UDP**.
For more details on choosing the protocol, read your program documentation.
6. Enter a range of ports. Click the **Specific local ports** button and in the field to the right, type the desired port. If you open multiple ports, separate them with commas. If it's an entire range of ports, type the number of the first port, a dash, and then the number of the last port.
So, to open port 8830, you'll type 8830, to open both 8830 and 8824 ports, enter 8830, 8824 and to open all ports from 8830 to 8835, enter 8830-8835.
7. Click on **Next**.
8. Make sure the button **Allow the connection** is activated. If it's not enabled, click on it, then click **Next**.
9. Check that the three boxes on the page **Profile** are checked. These three boxes are called **Domain**, **Private** and **Public**.
10. Click on **Next**.
11. Give a name to your rule. Then click on **Finish**. Your settings will be saved.

Method 2: Disable Firewall on Mac OS X

The firewall of a Mac is disabled by default. Therefore, if you have not activated your firewall, you have nothing special to do.

1. Click on the menu **Apple** (). It is the menu at the extreme top-left hand corner of your screen..
2. Click on **System Preferences**. This is the second option in the drop-down menu.
3. Click on **Security and Confidentiality**. This house-shaped icon is on the first line.
4. Click on the tab **Firewall**. It is in third position on the row of tabs.
5. **Unlock access to the firewall menu**. Click on the padlock in the lower left, then enter the administrator password and click **Unlock**.
6. Click on **Disable Firewall**.
7. Quit the **System Preferences**. Your changes have been saved.

Method 3: Open the Router Ports

1. **Find the IP address of your router**. It is necessary for you to access the configuration page of your router.
WINDOWS : open the menu **Start** (), click **Settings** (gear symbol) and then on **Network and Internet**. Then click on **View your network properties** and get the address listed next to **Default gateway**.
MAC : open the **Apple** menu (), click **System Preferences**, and then **Network**. Then click on **Advanced**, then on **TCP/IP** and note the number to the right of **Router**.
2. **Go to the configuration page of your router**. Open an Internet browser, and then type the IP address of your router in the address bar.
3. **Enter the username and password**. If your router is already protected, enter the username and password. If this is not the case, consult the router's user manual (booklet or Internet) and find the default username and password. If you lost your login information, reset your router.
4. Find the section **Port forwarding**. Each router has its own configuration page, even if they are similar. Locate the different headings with variable names:
 - + Port forwarding
 - + Applications
 - + Games
 - + Virtual servers
 - + Firewall
 - + Protection protocol
 - + If you want to see more parameters, go to the section **Advanced settings**.
5. **Open the chosen port**. The procedure varies from router to router, even though the information requested is exactly the same.
 - + **Name of the service or description**: Enter the name of the application or a descriptive name.
 - + **Type or Protocol**: the choice is made between TCP, UDP or both. If you do not know, click on **TCP/UDP**.
 - + **Incoming traffic or start port**: type the port number here. For a range of ports, type the number of the smallest port.
 - + **Outgoing or end port**: Enter the port number again. For a range of ports, type the number of the largest port.
6. **Enter the private IP address of your computer**. Type it in the field labeled IP address. To find the one on your computer, read [this article if you have a PC](#) or [this one if you have a Mac](#).
7. **Save your settings**. Click on **Save** or **Apply**. Restart the router for the changes to take effect. On the port forwarding line, you will need to, if not by default, check the box **Active**.