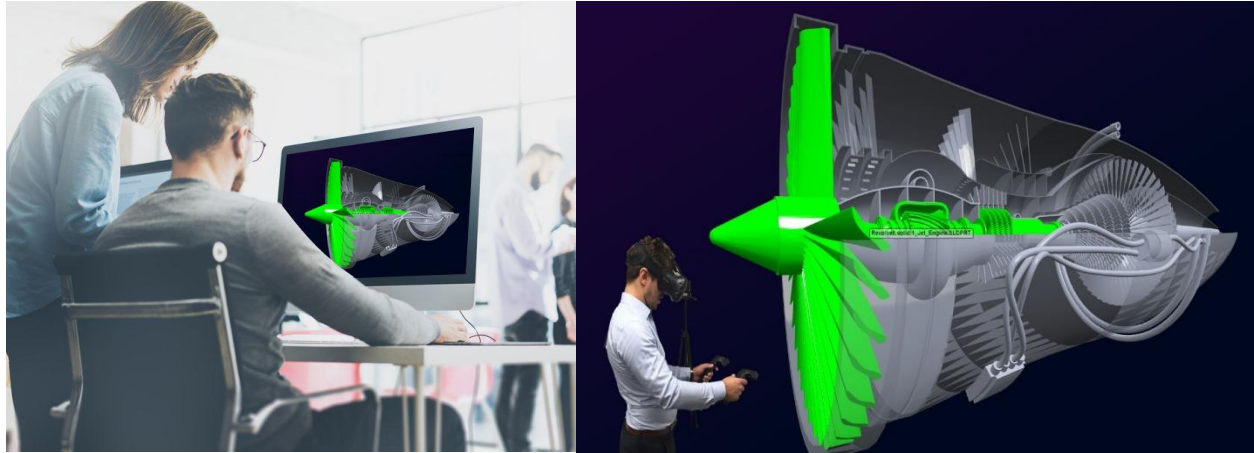




Web Browser Compatibility and XR Device Setup



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iQ3Connect Virtual Reality Platform

Introduction

The iQ3Connect XR and Collaboration Platform is a web browser-based solution for 3D model visualization and interaction and can support multiple simultaneous users. The iQ3 Workspace is accessed via a web browser and supports both XR and non-XR users.

The following document details the web browsers compatible with the iQ3Connect XR and Collaboration Platform. The listed browsers are compatible for both XR and Desktop-XR mode (no XR device required). Other browsers which are not listed may work in Desktop-XR mode, but full compatibility and performance is not guaranteed.

The compatible browsers will work out of the box (without additional setup) in Desktop-XR mode, so if not using a XR device, you can stop reading here and go explore an iQ3Connect Workspace! However, if using an XR device there may be some configuration necessary to ensure its proper functioning. Details on the proper configuration are provided below.

How to Use this Guide

First, check out the web browser and XR compatibility sections to ensure your XR device, XR software, and web browser are compatible. Next, follow the instructions in the **Test Your XR Device Setup** to verify if your setup is good to go. For most setups, it is. However, if not, there are a few simple steps which should get you up and running. Follow the instructions for configuring your XR device software and preferred web browser. If you have a computer with dual graphics cards, you may want to jump to the **Managing Dual Graphics Cards** section. For the unlucky few who still have not found success, the **Manually Setting the OpenXR Runtime** section should be the final step to getting your setup running!

In the unlikely event that your XR device is still not working after following this Guide, please contact your iQ3Connect Representative or email us at support@iq3connect.com



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iQ3Connect Compatibility with XR Devices




iQ3Connect is compatible with the following virtual reality headsets and software combinations:

- Oculus (version 19+) – Rift, Rift S, Quest, Quest 2
- SteamVR (version 1.13+) – HTC Vive, Valve Index, HTC VIVE Cosmos, Windows Mixed Reality headsets, Oculus devices, other SteamVR supported devices
- Windows Mixed Reality Portal (Windows 10 May 2019 Update (1903) or later) – Windows Mixed Reality headsets

Earlier versions of the above software may also be supported in specific situations. Check with your iQ3Connect Representative or send us an email at support@iq3connect.com

Compatible Web Browsers with XR Devices

Note: for the Oculus Quest and Quest 2, the native Quest Browser is supported.

	 Mozilla Firefox	 Google Chrome	 Microsoft Edge
Version	<i>77 or newer (64-bit ONLY)</i>	<i>85 or newer (64-bit ONLY)</i>	<i>85 or newer (64-bit ONLY)</i>
Download	https://www.mozilla.org/en-US/firefox/new/	https://www.google.com/chrome/	https://www.microsoft.com/en-us/edge
Notes	Requires some minor flag configuration for XR compatibility Compatible with Oculus and SteamVR and all XR devices listed above. Windows Mixed Reality devices must use SteamVR	Typically, no flag configuration required for XR compatibility Compatible with all XR devices/software listed above	Typically, no flag configuration required for XR compatibility Compatible with all XR devices/software listed above
How to check browser version	Open Firefox Menu <i>(upper right corner)</i> Click Help Click About Firefox	Copy the following into Chrome chrome://version	Copy the following into Edge edge://version



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Web Browsers with Limited Compatibility for XR Devices


Earlier versions of the above web browsers may work in certain situations. Please contact your iQ3Connect Representative or send us an email at support@iq3connect.com if using one of the below web browsers for XR and can not upgrade to a newer version.

- Mozilla Firefox versions 74 -76
- Google Chrome versions 79 – 84
- Microsoft Edge versions 79 - 84

Testing Your XR Device Setup

Generally, compatible XR devices should work with the web browsers out of the box. However, some computers, especially in IT-managed environments, may require some additional setup.

To test your XR device:

1. Plug in your XR device and launch the appropriate XR software (Oculus, SteamVR, Windows Mixed Reality) to verify the XR device is working properly.
2. Using a compatible web browser (see above), navigate to: <https://iq3connect.com/test>
3. Click the “Enter XR”  button in the top left of the screen and then put on your headset to verify that the scene is visible through the headset (it will not be visible in the browser)

If no button is present, or the button reads “WebXR Not Supported” or “VR Not Found”, please check the troubleshooting steps below for the appropriate XR device **AND** web browser.

Most Common Solutions

1. Ensure a compatible version of a 64-bit web browser is being used
2. Ensure the OpenXR runtime is properly set



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XR Software Configuration

Oculus Configuration

1. In the Oculus Application, navigate to the **Settings**
2. Select **General**
3. Ensure that **Unknown Sources** are allowed (the switch will be blue if allowed)
4. Select **Beta**
5. Check the **OpenXR Runtime** and that Oculus is set as the active OpenXR Runtime. If not, click the button **Set Oculus as active**

Once completed, check the configuration section for your web browser before testing again. If these steps do not correct the issue, then check the [Computer Configuration](#) section.

SteamVR Configuration

1. In the SteamVR Application, click the Menu button in the upper left corner, then select **Settings**
2. Click on **Show** Advanced Settings in the lower left then click on the **Developer** tab
3. Ensure that the **Current OpenXR Runtime** is set to **SteamVR**
4. If not, click the **Set SteamVR as OpenXR Runtime** button.
5. If this does NOT change the **Current OpenXR Runtime** to SteamVR then see the [Manually Setting the OpenXR Runtime](#) section (below)

Once completed, check the configuration section for your web browser before testing again. If these steps do not correct the issue, then check the [Computer Configuration](#) section.



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Windows Mixed Reality Configuration

Reminder: if using a Windows Mixed Reality device with Firefox, be sure to install SteamVR and follow the prompts for enabling Windows Mixed Reality devices

1. After launching the Windows Mixed Reality Portal (with the headset plugged in), if the OpenXR runtime is not properly set, a pop-up banner should appear at the top of the screen with the button **Fix It**
2. Click **Fix It** to set Windows Mixed Reality as the OpenXR runtime
3. If the pop-up does not appear, close and reopen the Windows Mixed Reality Portal (ensuring your headset is properly connected). If the pop-up does not appear after this then see the [Manually Setting the OpenXR Runtime](#) section (below)

Once completed, check the configuration section for your web browser before testing again. If these steps do not correct the issue, then check the [Computer Configuration](#) section.



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Web Browser Configuration for XR

Mozilla Firefox Configuration

Reminder: if using a Windows Mixed Reality device with Firefox, be sure to install SteamVR and follow the prompts for enabling Windows Mixed Reality devices

1. Open Firefox and type **about:config** into the URL bar to access the flags
2. If a “Proceed with Caution” warning appears, click “Accept the risk and continue”
3. Type “XR” into the Search Preferences bar
4. Ensure the following flags are set to **True**
 - a. **dom.vr.enabled**
 - b. **dom.vr.webxr.enabled**
 - c. **dom.vr.oculus.enabled** (if using Oculus)

Once completed, check the configuration section for your XR device before testing again. If these steps do not correct the issue, then check the [Computer Configuration](#) section.

Google Chrome Configuration

1. Open Chrome and type **chrome://flags** into the URL bar to access the flags
2. Type “XR” into the Search Preferences bar
3. In the dropdown for the **Force WebXr Runtime** flag select **OpenXR**
Note: this applies even if using a Windows Mixed Reality headset

Once completed, check the configuration section for your XR device before testing again. If these steps do not correct the issue, then check the [Computer Configuration](#) section.

Microsoft Edge Configuration

1. Open Chrome and type **edge://flags** into the URL bar to access the flags
2. Type “XR” into the Search Preferences bar
3. In the dropdown for the **Force WebXr Runtime** flag select **OpenXR**
Note: this applies even if using a Windows Mixed Reality headset

Once completed, check the configuration section for your XR device before testing again. If these steps do not correct the issue, then check the [Computer Configuration](#) section.



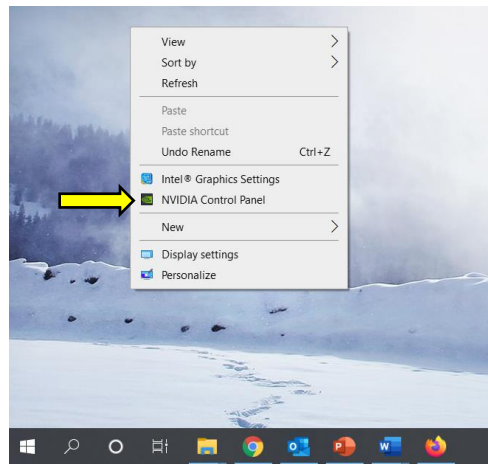
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Computer Configuration

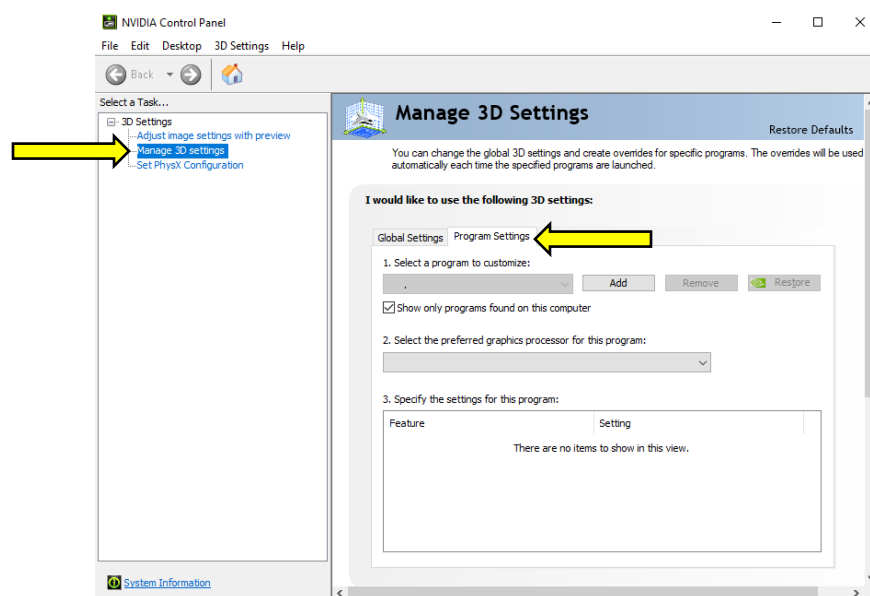
Managing Dual Graphics Cards

For machines with dual graphics cards, follow the below steps to ensure that the web browsers are using the high-performance processor. This is necessary for the web browsers to successfully display content in XR devices. If you are not sure if you have dual graphics cards follow the below steps anyway if none of the other solutions above have worked.

1. Right-click on the desktop and select NVIDIA Control Panel



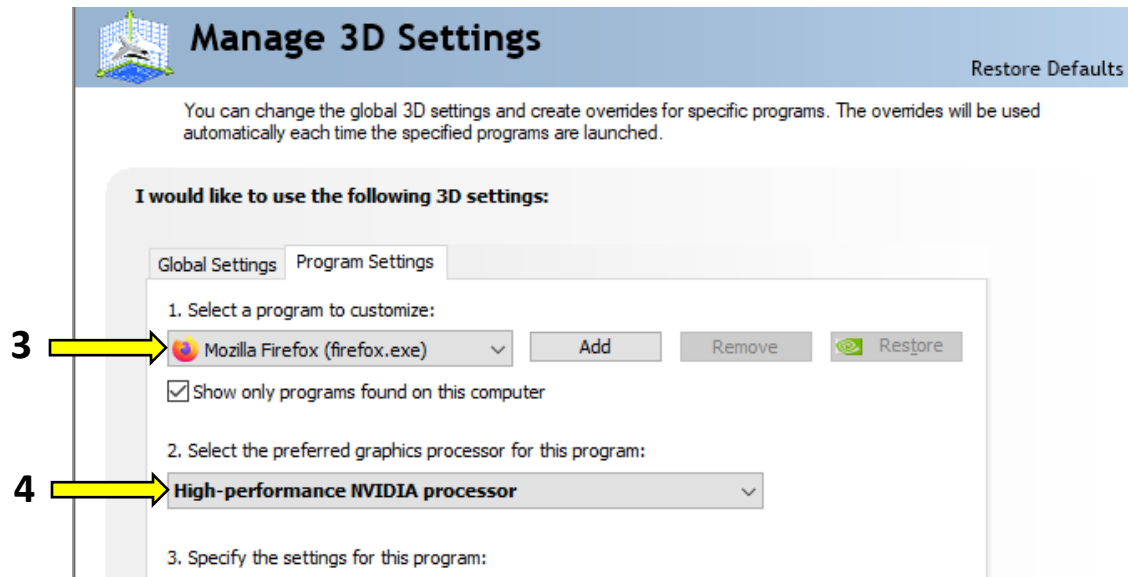
2. Click on **Manage 3D setting** on the left panel, then click **Program Settings** in the middle panel





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3. Under **1. Select a program to customize**: use the dropdown menu to select the desired web browser
4. Under **2. Select the preferred graphics processor for this program**: use the dropdown to select the **High-performance NVIDIA processor**
*Note: If section 2 does not exist, or does not provide an option to select the preferred graphics processor, then skip ahead to the next section **An Alternative to Managing Dual Graphics Cards***



5. Click **Apply** in the lower right corner of the Control Panel
6. Repeat Steps 3-5 for any other web browser to be used for VR, then close the Control Panel and retest your setup

If no button is present, or the button reads “WebXR Not Supported” or “VR Not Found”, continue to the next section.

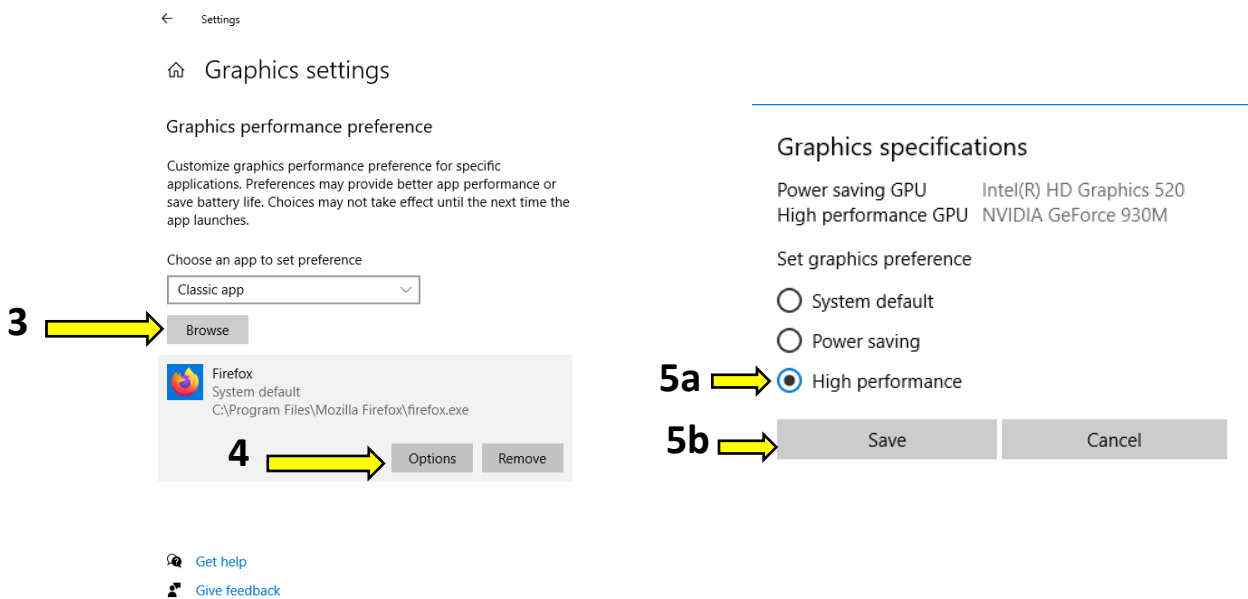


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An Alternative to Managing Dual Graphics Cards

In rare instances, the NVIDIA Control Panel does not recognize the other graphics card. In this case, the Windows settings need to be used to force the web browsers to use the high-performance graphics card. To do so, please follow the below instructions:

1. Type “Graphics Settings” into the Windows Search Bar and select the Graphics Settings (also found in the Systems Settings).
2. A separate Graphics Settings window should appear (similar to the below).
3. Click the **Browse** button under “Choose an app to set preference” and navigate to and select the executable of the web browser you would like to use
4. Once selected, click the Options button to open up the Graphics specifications
5. Select the **High performance** option then click save



If your XR device is still not working after following these steps, you may continue on to the next section.



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Manually Setting the OpenXR Runtime

Only proceed to these instructions if all else has failed. In rare instances, it may be necessary to manually choose the OpenXR runtime in order for the web browsers to properly interact with the XR device. This is especially common when more than one XR software is being used (ex. Oculus and SteamVR) on the same machine. Both SteamVR and Windows Mixed Reality provide an easy way to select the appropriate OpenXR runtime (see the relevant Configuration sections above), but Oculus currently does not. Additionally, SteamVR and Windows Mixed Reality may not always be able to select the appropriate OpenXR runtime due to permission issues. In any case, the OpenXR runtime can be manually selected by the following method:

1. Open the Registry Editor (you can type **regedit** into the Windows Search Bar)
2. Navigate to HKEY_LOCAL_MACHINE\SOFTWARE\Khronos\OpenXR\1
Note: you may need to create this directory if it doesn't already exist. In this case, also create a new string value in this folder called "ActiveRuntime"
3. Right click on **ActiveRuntime** and Modify
4. In the **Value data** field enter the full path to and filename of the OpenXR .json file of the appropriate software. The default installation path is shown below but may be different
 - a. For Oculus: C:\Program Files\Oculus\Support\oculus-runtime\oculus_openxr_64.json
 - b. For SteamVR: C:\Program Files (x86)\Steam\steamapps\common\SteamVR\steamxr_win64.json
 - c. For Windows Mixed Reality: C:\Windows\system32\MixedRealityRuntime.json

If your XR device is still not working after following this Guide, please contact your iQ3Connect Representative or email us at support@iq3connect.com