

## IT ADMINISTRATOR'S GUIDE

Nearly all remote training tools fail to meet one critical need – **hands on interaction** for Responders. **NCIER Campus solves that problem** and more!

NCIER Campus is a 3D immersive virtual reality experience on a desktop. Responders see a photo-realistic environment and interact naturally (audio is positional). Instructors lead real-time scenarios with Responders controlling resources, talking face-to-face, and communicating by radio (6 channels built-in).



## Install NCIER Campus

### Windows 10 SETUP.EXE Installer (Digitally Signed and Secured)

**NCIER Campus** is developed by **C3 Pathways**, a DHS contractor providing training to America's First Responders since 2004. The client is built on the Unity game engine used by millions world-wide. The installer **setup.exe** is digitally signed by C3. Minimum PC requirements are Intel i5 (or AMD equiv), 4 GB RAM, Windows 10, and 1 GB of space. Bandwidth is typically 1 Mbps up and 2.5 Mbps down (per client). **Ethernet or 802.11 Wi-Fi are acceptable**, but not cellular or satellite due to bandwidth and latency limitations. **Headsets with microphone are PROVIDED** to participants by C3 (USB 2.0 connector).

## Firewalls

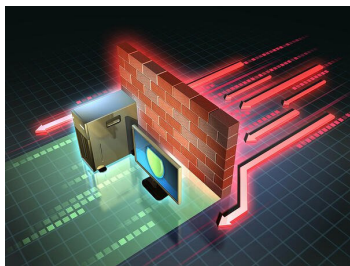
### FIREWALL CHANGES may be necessary

NCIER Campus connects to our multi-player synchronization server and audio/video servers. While multiple ports are used, all connections are initiated client-side to the servers. Windows Defender Firewall and several leading antivirus firewalls generally do not require rules to enable proper functioning. However, it is impossible to test all configurations and antivirus solutions. If connections fail, authorizing (registering) the application with the local machine's firewall may be necessary. **Network firewalls blocking outbound connections may require whitelisting addresses and opening ports (see page 2) for proper functioning.**

## Default Audio

### Headsets are REQUIRED to insure ALL users have a good experience

C3 will ship a headset/microphone with a USB 2.0 connector to each participant prior to the class. When a user plugs in a headset, **most** Windows 10 PCs set the headset and microphone as the **default audio device**, but **not always**. If a user's audio is not working after login, the ESC key will open a Pause menu. The [SOUND] button there will open Windows Sound Panel, where the user can change the defaults, close the panel, and rejoin the session. Note the headset/microphone has a volume control behind the left ear (up is full volume).

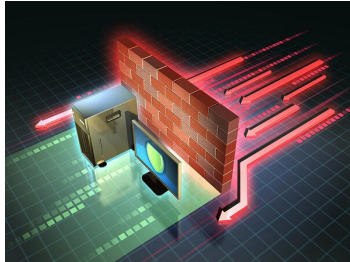


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## DETAILED FIREWALL INFORMATION



### Two (2) Server Connections

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NCIER Campus connects to two (2) different servers simultaneously: (1) Multiplayer Synchronization and (2) Real-Time Media server. The connections are initiated client-side as outbound requests via ports as noted below.

**Connections to both servers are required for NCIER Campus to work.**

**Please do not hesitate to call us at (407) 490-1300.** We are happy to help, answer questions (including technical), and help you test!

### Server 1: Multiplayer Synchronization

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23.254.165.246 [campus.ncier.org]

**TCP:** 80, 443, 8080, 9933

**UDP:** 9933

### Server 2: Real-Time Media Server (Conversational Audio, 2-way Radio, and Video)

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NCIER Campus will first attempt connection to unlisted dynamically provisioned edge servers to minimize latency. If blocked, NCIER Campus will attempt connection via one or more Proxy servers listed below. Using Proxy adds latency to the user experience.

#### Proxy Servers

| IP              | DNS              | TCP | UDP                  |
|-----------------|------------------|-----|----------------------|
| 69.28.51.142    | [sig1.ncier.org] | 443 | 8443                 |
| 107.155.14.132  | [sig2.ncier.org] | 443 | 8443                 |
| 148.153.37.52   | [m1.ncier.org]   | 443 | 4590-4600, 8001-8010 |
| 148.153.37.54   | [m2.ncier.org]   | 443 | 4590-4600, 8001-8010 |
| 148.153.37.55   | [m3.ncier.org]   | 443 | 4590-4600, 8001-8010 |
| 148.153.37.57   | [m4.ncier.org]   | 443 | 4590-4600, 8001-8010 |
| 148.153.37.58   | [m5.ncier.org]   | 443 | 4590-4600, 8001-8010 |
| 148.153.53.98   | [m6.ncier.org]   | 443 | 4590-4600, 8001-8010 |
| 148.153.53.99   | [m7.ncier.org]   | 443 | 4590-4600, 8001-8010 |
| 148.153.158.150 | [m8.ncier.org]   | 443 | 4590-4600, 8001-8010 |
| 148.153.158.151 | [m9.ncier.org]   | 443 | 4590-4600, 8001-8010 |
| 148.153.158.154 | [m10.ncier.org]  | 443 | 4590-4600, 8001-8010 |
| 148.153.54.202  | [m11.ncier.org]  | 443 | 4590-4600, 8001-8010 |
| 148.153.54.203  | [m12.ncier.org]  | 443 | 4590-4600, 8001-8010 |
| 148.153.54.209  | [m13.ncier.org]  | 443 | 4590-4600, 8001-8010 |
| 148.153.54.247  | [m14.ncier.org]  | 443 | 4590-4600, 8001-8010 |
| 148.153.53.105  | [m15.ncier.org]  | 443 | 4590-4600, 8001-8010 |
| 148.153.53.106  | [m16.ncier.org]  | 443 | 4590-4600, 8001-8010 |

\*Note the IP addresses must be whitelisted; the application calls directly to the IP address and not the server domain name. DNS is provided for reverse lookup validation only.

## APPLICATION WHITELIST



### Antivirus Application Whitelist

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NCIER Campus works well with most leading Antivirus solutions without any changes. However, in some cases Antivirus solutions with aggressive built-in firewalls can require application whitelisting (e.g. McAfee, Kaspersky).

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### Install Path and Executables

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The Windows 10 default install path is:

C:\Users\**YourUserNameHere**\AppData\Local\Programs\NCIER Campus\

#### Whitelist

...\NCIER Campus\**NCIER.exe**

...\NCIER Campus\**UnityCrashHandler64.exe**

...\NCIER Campus\NCIER\_Data\Plugins\**ZFGameBrowser.exe**

If 32-bit:

...\NCIER Campus\**UnityCrashHandler32.exe**