

Pearson VUE Browser Lock Client proctored advanced technical requirements

These advanced technical requirements apply to any Internet Based Testing (IBT) tests delivered using the Pearson VUE Browser Lock (PVBL) product in the Client proctored delivery mode.

This document describes a full set of technical requirements and configuration settings necessary for the **Pearson VUE Browser Lock** product. The configuration settings and technical requirements described are targeted at an audience of mid to higher level technical skill. This is a full set of technical requirements that can assist the user in troubleshooting problems associated with test delivery.

These configuration settings and requirements should only be implemented if you are confident you understand and can implement these settings and configuration changes. If you do not understand these configuration settings and requirements **DO NOT make changes without first consulting with the local Technology Professional.**

Delivering a test in a virtual environment of any form is strictly prohibited!

Most test delivery scenarios will not require any of the listed configuration changes and in most cases, it will not be necessary to make all the configuration changes in this document.

Note



The following items are known to disrupt IBT test delivery:

- ❖ Proxy Servers
- ❖ Network Packet Inspection / Filtering
- ❖ Strict Network Security Configurations

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Testing workstation

Pearson strongly recommends using equipment that meets or exceeds the Recommended Specifications. The minimum requirements will change periodically based on the needs of our test sponsors.


	Recommended Specifications
Operating System	Window 10 (32-bit and 64-bit) <i>Live Tiles disabled</i> Mac 10.13
Windows Operating System Languages	Pearson VUE Browser Lock is supported on a variety of Windows OS languages and continues to expand its offering. Installation has been certified for English, German and Japanese Windows OS.
RAM	4 GB of RAM or more
Display	Minimum Resolution: 1024 x 768 in 16-bit color . Recommended Resolution: 1920 x 1080 or higher in 32-bit color .
Internet Browser	Internet Explorer 11 , latest version of Edge, Chrome, Firefox , and Safari + two versions back
Internet Connection	Broadband (DSL, cable, or LAN/WAN). 40 Mbps down / up
	For each simultaneous test delivery beyond the first, an additional 256 Kbps down/up is required. If audio/video or large files are included in test content, 1 Mbps down is required.
Firewalls	Corporate firewalls (including VPNs) often cause this delivery method to fail. Please take your test in a setting without a corporate firewall.

Internet Based Testing (IBT) configuration

The following technical requirements and configuration settings may be necessary to ensure successful delivery of **IBT tests using the Pearson VUE Browser Lock Secure Browser** product. Test takers may experience decreased test delivery performance if these requirements are not met. You may be asked to make changes to the testing workstation and the local network configuration to comply with these requirements as part of problem resolution.

Internet connection

A base connection speed of **40 Mbps down/up** is required. For optimal delivery of IBT tests, **50 Mbps is strongly recommended**.

 **Warning** If more than one test is being delivered simultaneously, then an additional **256 Kbps down/up** is required for each simultaneous test delivery beyond the first.

Before beginning a test

Proctors must run a **Connection Check** at the Client proctored testing event prior to testing. This ensures your site can connect to the servers and identifies the approximate number of tests that may be delivered at your event. The connection check performs two tasks. A **speed test** determines the upload and download speeds of your internet connection.

The **connection test** verifies connectivity to the internet to deliver a test. The site must successfully pass both the speed test and the connection test to deliver a test. The Connection Check application can be accessed via the **Pearson VUE Navigator portal**. ***Only proctors or client administrators can logon to the Navigator portal.***

1. Open an Internet browser and logon to the **Navigator** portal at <https://navigator.pearsonvue.com/Navigator/authenticate/login>.
2. Select **Connection Check** in the menu.
3. Click **Run test**.

Local testing workstation configuration settings

This section describes configuration settings necessary on the IBT testing workstation. A moderate level of technical skill may be necessary to comply with these settings.

- **Save** any **open files** and **close all open windows** before opening the Pearson VUE Browser Lock product.
- Ensure any security software will not block the execution of **JavaScripts**.
- You may want to install a printer so that test takers may print their score report upon completion of the test.
- Please be aware of the following keyboard shortcuts:
 - **Ctrl+R** refreshes the *Browser Lock*
 - **Alt+P** takes you to the *Previous* Item
 - **Alt+N** takes you to the *Next* Item
- The following URLs may need to be added as trusted sites under Internet Settings. This can be done by going to the **Control Panel | Internet Options | Security** tab. Select **Trusted Sites**. Click the **Sites** button and add the following items to the list of websites. You may need to deselect the **Require server verification (https:) for all sites in this zone** option.
 - http://*.pearson.com & https://*.pearson.com
 - http://*.pearsonvue.com & https://*.pearsonvue.com
 - 159.182.0.**0/16**

Note: If your system does not accept the IP Range '**0/16**', then try using just '**0**' at the end.

Network & domain level configuration settings

This section describes the configuration settings necessary on the LAN / WAN used for IBT test delivery. A moderate to high level of technical skill may be necessary to comply with these settings.

LAN

The following LAN settings are known to cause disruptions to test delivery, both individually and in combination. Adhering to these configuration changes drastically reduces the chances of test delivery disruption during event testing. **Pearson strongly recommends the following configuration settings:**

- Use a **wired network** rather than a wireless network, as it provides better test delivery performance.
- Avoid network configurations involving **Proxy Servers, Advanced Firewall Security Configurations**, and other network security measures such as but not limited to **Packet Filtering or Packet Inspection**. These advanced security configurations are known to cause moderate to severe degradation in test delivery performance.
- Ensure **DHCP** is set to **lease IP Addresses** for a minimum of **2 days**.
- Ensure all testing workstations are on a single dedicated VLAN.
- Ensure all other critical Networking services are in order: DNS, TCP/IP, etc.

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WAN / Internet Connection

- Do not use IP pool for NAT, use single Public IP only.
- For **Pearson IBT tests** Port **80** (HTTP) and Port **443** (HTTPS) must have sustained continuous connections. It is **strongly recommended** that traffic on these ports is completely unrestricted.
- Ensure WAN / Internet traffic is not subject to limits or allocation caps, such as a Cellular Wireless Hotspot or network enforced bandwidth limitations.
- The following settings can be very resource intensive if not turned off, as it decrypts and encrypts every packet. These settings are usually turned on by default with most firewalls, so it is important to check before testing.
 - **Ensure HTTPS Inspection is turned OFF.**
 - **Ensure any form of Web Filtering is turned OFF.**
- For testing traffic traversing WAN segments, use VPN connection or tunneling across the Internet. Pearson has realized performance enhancements of testing traffic by setting IP MTU to 1400 bytes, and TCP Max Segment Size to 1360 bytes. This is not a requirement but does have the effect of limiting packet fragmentation and potential reassembly issues in transmission.

Troubleshooting Tips

- If you are having performance issues or your exam will not launch, do the following:
 - Stop active Anti-virus scanning while taking an exam. Some anti-virus software can cause performance issues.
– or –
 - Contact your program manager to discuss having an exception made to your Pearson VUE Browser Lock process action list to allow your internet security or antivirus software used by your organization and/or candidates

Prohibited

Caution  If it is not found on the requirements below or in the Advanced Requirements list, then it should be considered '**Not Supported**'.

	Strictly Not Supported
Portable Computing devices	<p>Touch Screen Laptops, Tablets and Smartphones are strictly prohibited.</p> <p>Note: Examples of prohibited portable computing devices include, but are not limited to: <i>Chromebooks, Android and iOS phones, and tablets.</i></p>
Processor	Devices running Ultra Mobile Processors are strictly prohibited. This includes but is not limited to ARM CPUs.
RAM	Less than the OS specified Minimum RAM.
Operating System	<ul style="list-style-type: none"> • Windows 8, 7, XP and Windows Vista are strictly prohibited • Windows Server Operating System strictly prohibited on the testing workstations • Virtual environments are strictly prohibited for test delivery • All Linux/Unix based Operating Systems are strictly prohibited
Display	<p>Touch Screen monitors are not supported.</p> <p>Display resolution less than 1024 x 768 in 16-bit color is strictly prohibited.</p>
Network Connection	<p>Pearson Strongly Recommends avoiding networks configurations that involve Proxy Servers, Advanced Firewall Security Configurations, and other network security measures such as but not limited to Packet Filtering or Packet Inspection.</p>
Internet Connection	<p>VPN connections are strongly discouraged and may result in disruption to test delivery.</p> <p>SSL VPNs are strictly prohibited (e.g., Hotspot Shield).</p> <p>Dial-Up Internet Connections are not supported.</p>