

Client proctored – no appointment required advanced technical requirements - ITS test driver

These advanced technical requirements apply to any Internet Based Testing (IBT) tests delivered using the **Pearson VUE Browser Lock** product with the **ITS test driver** for the Client proctored – no appointment required delivery model.

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 that 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 is strictly prohibited!



Note

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.

The following items are known to disrupt Pearson IBT exam delivery:

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

Testing workstation

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

REQUIREMENT	RECOMMENDED SPECIFICATIONS
Operating System	Windows 11 & 10 Mac 10.15
RAM	4 GB of RAM or more
Display	<u>Minimum Resolution:</u> 1024 x 768 in 16-bit color <u>Recommended Resolution:</u> 1920 x 1080 or higher in 32-bit color
Internet connection	Broadband (DSL, cable, or LAN/WAN) <u>Required:</u> Run System Test to ensure you have adequate bandwidth to conduct test delivery for the expected number of test takers.
Internet browsers	Latest versions of Edge, Chrome, Firefox, and Safari + two versions back
Browser settings	Internet Cookies must be enabled for delivery on Mac. This is not necessary for delivery on Windows machines but accepting them provides a better user experience.
Firewalls	Corporate firewalls (including VPNs) can 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 ITS test driver**. 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/before beginning a test

To determine whether the site has adequate bandwidth, we recommend that the proctor/administrator run a system check in the room, as well as on all testing workstations prior to the event. This identifies the number of tests that can safely be delivered. This ensures your internet and computer are configured correctly to deliver a test.

- Proctor's [System Check](#)
- Test taker's [System Check](#)



Warning

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

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.

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 launching Pearson VUE Browser Lock.
- 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 the **Previous** item.
 - **Alt+N** takes you the **Next** item.

- **Cookies**—Apple's Safari does not distinguish between session and persistent cookies. Proctor and administrator workstations must be configured to support session cookies. Internet Explorer permits you to allow session cookies while blocking all other cookies. No configuration is required for test delivery on Microsoft Windows.

The privacy of test takers, their personal information, and the test materials are extremely important. Session cookies are used to track the current test run by each test taker. A session cookie is a special type of cookie that is only stored in memory and is automatically deleted when the user closes the browser. Session cookies are used to track a user's current state during their visit and require that session cookies are enabled to use the site. These cookies are automatically removed when the browser is closed. We do not use or support cookies that in any way track an individual's Internet usage outside of our own web site.

- Ensure any security software will not block the execution of **JavaScript**

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- Ensure the following IP Addresses do not have communication restrictions due to any security software:
 - 64.27.100.27
 - 64.27.64.232
 - 64.106.193.0
 - 64.106.220.0
 - 206.188.17.0
 - 13.89.111.144/28
(13.89.111.144 - 13.89.111.159)
 - 52.177.91.16/28
(52.177.91.16 - 52.177.91.31)
- The following URL's 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.
 - https://*.pearson.com
 - https://*.pearsonvue.com
 - 13.89.111.144/28 (13.89.111.144 - 13.89.111.159)
 - 52.177.91.16/28 (52.177.91.16 - 52.177.91.31)
 - https://*.pvue1.com
 - https://*.pvue2.com
 - https://*.programworkshop.com
 - https://*.programworkshop2.com
 - https://*.starttest.com
 - https://*.starttest2.com
 - https://*.startpractice.com
 - https://*.getttesting.com
 - https://*.verifyreadiness.com



Note

Sometimes it works better on certain systems if you add them in one of these fashions:

1. http://starttest.com
2. *.starttest.com*
3. *.programworkshop.com*

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.
- Rather than allowlisting our specific IP address ranges, **we are asking that you use DNS allowlisting**. This allows ITS to handle future IP address changes, including changes in cloud infrastructure and scaling to manage load, without the need for configuration updates. Use this link <https://testconnection.starttest.com> to check the DNS automatically for you.

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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**'.

REQUIREMENT	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: Surface Pro, Chromebooks, Android and iOS phones, and tablets.</p>
Processor	<p>Devices running Ultra Mobile Processors are strictly prohibited. This includes, but is not limited to Intel Atom, AMD NEO CPU lines, and ARM CPUs.</p>
RAM	<p>Less than the OS specified Minimum RAM.</p>
Operating System	<ul style="list-style-type: none"> • Windows 8.1, 7, XP & 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 strictly prohibited for test delivery. 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 will result in disruption to test delivery.</p>