Client proctored – appointment required Advanced Technical Requirements for A—BE test driver

These advanced technical requirements apply to any Internet Based Testing (IBT) exams delivered using the Pearson VUE Browser Lock (PVBL) secure browser with the Athena—Browser Edition (A—BE) test driver in the Client proctored – appointment required delivery mode.

> ### 📝 Note
>
> **Most candidates will not be required to make any changes to successfully take exams using Pearson VUE Browser Lock.**

This document describes a full set of technical requirements and configuration settings necessary for the **Pearson VUE Browser Lock** secure browser. 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 exam 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 an exam in a virtual environment of any form is strictly prohibited!

> 📝
>
> # Note
>
> Most exam 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

Exam delivery machine

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

Operating System

Window 11 & 10 (64-bit)   Live Tiles disabled

Mac 10.15

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. More will be coming soon.

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**

Mouse and keyboard

- English QWERTY Keyboard
- 2-button Wheel Mouse

USB ports

2 available USB 2.0 ports for:

- Keyboard
- Mouse

Network connection

Strongly Recommended:

Use a wired network rather than a wireless network as it provides better exam delivery performance.

Internet Browser

The newest versions of Microsoft **Edge**, **Safari**, **Chrome**, and **Firefox**, for web registrations or downloading the secure browser.

Client proctored - appt required A-BE Adv Tech Requirements

Internet connection

Broadband (DSL, cable, or LAN/WAN).
40 Mbps down / up

Note:

With 1 Mbps down/up it will take approximately 2 minutes to launch Pearson VUE Browser Lock (150 MB application). Incremental Mbps launches PVBL faster.

Firewall

Corporate firewalls (including VPNs) often cause this delivery method to fail. Please take your exam in a setting without a corporate firewall.

Internet Based Testing (IBT) Configuration

> ⚠️ **Caution**
>
> Pearson VUE does not support the following:
>
> - **Virtual machines** in any form are prohibited.

Effective **October 1, 2024**, the following technical requirements and configuration settings may be necessary to ensure successful delivery of **IBT Exams using the Pearson VUE Browser Lock** product. Test takers may experience decreased exam delivery performance if these requirements are not met. You may be asked to make changes to the exam delivery workstations and the local network configuration to comply with these requirements as part of problem resolution.

Internet bandwidth

Exam deliveries require an internet connection. For Internet Based Tests (IBT) see the information below for details.

**BASE NETWORK BANDWIDTH + 256 Kbps
FOR EACH EXAM DELIVERY WORKSTATION**

1 – 15 delivery workstations

5.0 Mbps down/ **3.0 Mbps up** base and **256 Kbps** for each workstation.

16 – 50 delivery workstations

10.0 Mbps down / **5.0 Mbps up** base and **256 Kbps** for each workstation.

51 – 100 delivery workstations

20.0 Mbps down / **10.0 Mbps up** base and **256 Kbps** for each workstation.

All workstations

For IBT exam deliveries, latency should not exceed **150 ms**.

Internet connection

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

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

Before beginning an exam

Proctors must run a **Connection Check** at the Client Test Center event prior to exam testing for any exam delivered using the **Pearson VUE Browser Lock** secure browser. This test ensures your site can connect to the Internet and successfully deliver exams for the number or candidates testing 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 servers that are used to deliver an exam. The site must successfully pass both the speed test and the connection test to deliver an exam. The Connection Check application can be accessed via the **Pearson VUE Connect portal**. **Only proctors can logon to the Connect portal.**

1. Open an Internet browser and logon to the **Connect** portal at https://connect.pearsonvue.com/Connect/.
2. Select **Connection Check** in the menu.
3. Click **Run test**.

Local delivery machine configuration settings

This section describes configuration settings necessary on the IBT exam delivery workstation. A moderate level of technical skill may be necessary to comply with these settings. **DO NOT make any changes that you do not understand** without first consulting a Technology Professional.

- **Required: Save** any **open files** and **close all open windows** before opening the Pearson VUE Browser Lock product.

- **Recommended:** Ensure any security software will not block the execution of **JavaScripts**.

- You may want to install a printer so that candidates may print their score report upon completion of the exam.

- 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 to any internet security software.
  - 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

Network & domain level configuration settings

This section describes the configuration settings necessary on the LAN / WAN used for IBT exam delivery. A moderate to high level of technical skill may be necessary to comply with these settings. **DO NOT make any changes that you do not understand** without first consulting a Technology Professional.

LAN

The following LAN settings are known to cause disruptions to exam testing both individually and in combination. Adhering to these configuration changes drastically reduces the chances of exam 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 exam 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 exam delivery performance.

- Ensure **DHCP** is set to **lease IP Addresses** for a minimum of **2 days**.

- Ensure all exam delivery machines are on a single dedicated VLAN.

- Ensure all other critical Networking services are in order: DNS, TCP\IP, etc.

WAN / Internet connection

- Do not use IP pool for NAT, use single Public IP only.

- For **Pearson IBT Exams** 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 **Pearson IBT Exams** Port **443** (HTTPS) must have sustained continuous connections. It is **strongly recommended** that traffic on these ports is completely unrestricted.

- The following URL's **may require** unrestricted communication, or they must be added as trusted sites under Internet Settings.

  - https://*.pearson.com

  - https://*.pearsonvue.com

  - https://*.pvue1.com

  - https://*.pvue2.com

- For exam traffic traversing WAN segments, use VPN connection or tunneling across the Internet. Pearson has realized performance enhancements of exam 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'**.

Exam delivery workstations must adhere to the following restrictions:

Portable computing devices

Touch screen laptops, **tablets** and **smartphones** are strictly prohibited.

📝 **Note:**

Examples of prohibited portable computing devices include, but are not limited to:
Chromebooks, Android and iOS phones, and tablets.

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

- **Windows 8.1, 8, 7, XP** & **Vista** are strictly prohibited.
- **Windows Server Operating System** strictly prohibited on the exam delivery workstations.
- **Virtual environments** are strictly prohibited for exam delivery.
- **All Linux/Unix** based Operating Systems are strictly prohibited.

Display

Touch screen monitors are strictly prohibited for exam delivery.

Display resolution **less than 1024 x 768** in **16-bit color** is strictly prohibited.

Network connection

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**.

Internet connection

VPN connections are strongly discouraged and will result in disruption to exam delivery.

SSL VPNs are strictly prohibited (e.g., Hotspot Shield).

Administration workstation (Proctor)

The Administration (proctor) workstation must adhere to the following requirements:

Operating System

    Window 10 (**32-bit** and **64-bit**)   Live Tiles disabled

Processor

Minimum Required:

    Intel: **i5** Generation **4** or higher

    AMD: **Ryzen 3** Generation **5** or higher

Recommended Specifications:

    Intel: **i7** Generation **2** or higher

    AMD: **Ryzen 5** or higher

RAM

Minimum required: **4 GB** of RAM or more

Recommended Specifications: **8 GB** of RAM or more

Display

Recommended Resolution: **1920 x 1080** or higher in **32-bit color**

Mouse and keyboard

- English QWERTY Keyboard
- 2-Button Wheel Mouse

USB ports

2 available USB 2.0 ports for:

- English QWERTY Keyboard
- 2-Button Wheel Mouse

Network connection

Strongly Recommended:

Use a wired network rather than a wireless network as it provides better exam delivery performance.

Internet connection

See Internet bandwidth requirement above.

Internet browser

Latest versions of **Microsoft Edge**, **Chrome**, **Firefox**, and **Safari**.

Browser settings

Internet Cookies must be enabled.

All **Pop-Up blockers** must be **disabled**.

Firewall

Corporate firewalls (including VPNs) often cause this delivery method to fail. Please take your exam in a setting without a corporate firewall.