



# Operating System Support Plan for Test Delivery System 2023–2024

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*Prepared by Cambium Assessment, Inc.*



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## Introduction

A supported operating system is one for which Cambium Assessment, Inc. (CAI) provides updates to the Secure Browser for that operating system. CAI actively tests the Secure Browser with supported operating systems to ensure compatibility and provides Secure Browser updates as needed when the supported operating systems are updated or as bugs in the Secure Browser are detected and fixed.

This document describes CAI’s plan for supporting operating systems during the upcoming test administration. This plan helps districts and schools manage operating system deployments based on the support timelines.

# Support Plan for Operating Systems

Table 1 lists supported operating systems and devices.

Table 1. Supported Operating Systems and Devices

Minimum Supported Operating System	Supported Devices
<b>ChromeOS<sup>e</sup></b> 114 LTC 108 LTS 113 Stable	<p>For a full list of supported Chromebooks, see <a href="https://support.google.com/chrome/a/answer/6220366">https://support.google.com/chrome/a/answer/6220366</a>.</p> <p>Chromebooks must have an Enterprise or Education license and be attached to a management domain. The devices are required to be attached to the management console to run in kiosk mode, which is required to run the Secure Browser for testing.</p> <p>In 2022, Google introduced the Long-Term Support Candidate (LTC) and Long-Term Support (LTS) channels for ChromeOS. CAI strongly recommends the use of these channels. For more information, see <a href="https://support.google.com/chrome/a/answer/11333726">https://support.google.com/chrome/a/answer/11333726</a>.</p>
<b>Windows<sup>e</sup></b> 10 23H1 10 in S Mode 23H1 11 23H1 12 <sup>a</sup> Server 2016 R2	<p>Desktops/laptops with the following minimum hardware specifications:</p> <ul style="list-style-type: none"> <li>• 1.4 GHZ 64-bit Intel/AMD/ARM<sup>b</sup> Processor</li> <li>• 2 or more GB RAM</li> <li>• 20 or more GB hard drive space</li> </ul> <p>CAI supports any tablet running Windows 10 but has done extensive testing only on Surface Pro, Surface Pro 3, Asus Transformer, and Dell Venue.</p>
<b>macOS<sup>e</sup></b> 11.6 12.6 13.3 14 <sup>a</sup>	<p>Desktops/laptops with the following minimum hardware specifications:</p> <ul style="list-style-type: none"> <li>• 1.4 GHZ 64-bit Intel/Apple Silicon<sup>c</sup></li> <li>• 2 or more GB RAM</li> <li>• 20 or more GB hard drive space</li> </ul>
<b>iPadOS</b> 15.7 16.4 17 <sup>a</sup>	<p>All 9.7" or larger iPads running a supported version of iPadOS.</p>

Minimum Supported Operating System	Supported Devices
<p><b>Linux<sup>d f</sup></b> Fedora 35-36 LTS (Gnome) Ubuntu 20-22 LTS (Gnome)</p>	<p>Desktops/laptops with the following minimum hardware specifications:</p> <ul style="list-style-type: none"> <li>• 1.4 GHZ 64-bit Intel/AMD processor</li> <li>• 2 or more GB RAM</li> <li>• 20 or more GB hard drive space</li> </ul> <p>Required libraries/packages:</p> <ul style="list-style-type: none"> <li>• GTK+ 3.14 or higher</li> <li>• X.Org 1.0 or higher (1.7+ recommended)</li> <li>• libstdc++ 4.8.1 or higher</li> <li>• glibc 2.17 or higher</li> </ul> <p>Recommended libraries/packages:</p> <ul style="list-style-type: none"> <li>• NetworkManager 0.7 or higher</li> <li>• DBus 1.0 or higher</li> <li>• GNOME 2.16 or higher</li> <li>• PulseAudio</li> </ul>

- a. Support for this version is anticipated upon the completion of testing following its release.
- b. ARM devices require x64 emulation.
- c. Apple silicon devices require Rosetta 2.
- d. Raspberry Pi and other similar single-board computers are not supported for testing.
- e. If Microsoft or Apple ends support for an operating system sooner than six years after its release, then CAI will stop supporting that system one full school year after support ends.
- f. For Linux distributions, CAI will end support at the end of a full school year after the official distributor’s announced end-of-life support date.
- g. CAI will support any device that Google actively supports for auto-update. CAI will not support any device that Google does not support for auto-update. Information on Google’s auto-update policy, including currently supported devices, can be found at <https://support.google.com/chrome/a/answer/6220366>.

Our system supports thin clients, including any that support Windows 2016 terminal servers; NComputing vSpace Pro 10 with L300, L350, and firmware version 1.13.xx terminal clients; and CloudReady Neverware.

Table 2 provides a list of supported NComputing solutions for Windows.

Table 2. Supported NComputing Solutions for Windows

Minimum Supported Server Host	Supported Server Software	Supported Terminal
Windows Server 2016 R2 Windows 10	vSpace PRO 10	L350, firmware version 1.13.xx
Windows 11	vSpace PRO 12	L350, firmware version 1.13.xx

Table 3 provides a list of supported terminal servers for Windows.

Table 3. Supported Terminal Servers for Windows

Minimum Supported Terminal Server	Supported Thin Client
Windows Server 2016 R2	<p>Any thin client that supports a Windows server. Thin clients allow access only to the program running on the host machine. Zero clients, which allow access to other programs on the client machine, are not supported.</p> <p>Please note that using a terminal services or remote desktop connection to access a Windows Server or workstation that has the Secure Browser installed is typically not a secure test environment.</p>

Note: Devices running ChromeOS Flex are also supported. For information on supported devices and installation instructions, please visit <https://chromeenterprise.google/os/chromeosflex/?sjid=3749381295652566277-NA>.

All supported computers, laptops, tablets, and approved testing devices must meet the requirements noted in

Table 4. Testing Device Requirements

Testing Device	Requirement
Screen Dimensions	Screen dimensions must be 10" or larger (iPads with a 9.7" display are included).
Monitors and Displays	<p>All devices must meet the minimum resolution of 1024 x 768. Larger resolutions can be applied as appropriate for the monitor or screen being used.</p> <p>For the best experience, your device's display scale should be set to 100% to keep the amount of usable screen real estate within the 1024 x 768 minimum resolution for TDS.</p> <p>A secure testing environment can only be guaranteed when using a single display. A multi-monitor configuration is not supported.</p>
Keyboards	<p>For the best possible testing experience, the use of external keyboards is highly recommended for tablets that will be used for testing. On-screen keyboards take screen area away from the test and may make typing responses more difficult.</p> <p>For iPads, the following are examples of external keyboards:</p> <ul style="list-style-type: none"> <li>• iPad Eighth Generation: Logitech Rugged Combo or Logitech Combo Touch</li> <li>• iPad Air Third Generation: Apple Magic Keyboard or Apple Smart Folio Keyboard</li> <li>• iPad Pro: Air Keyboard</li> </ul>
Mice	Wired two- or three-button mice can be used on desktops or laptops. Mice with browser-back buttons should not be used.
Headphones & Headsets	Wired headphones or headsets with a 3.5 mm or USB connector, and Bluetooth devices are supported.