

# TECHNOLOGY COORDINATOR BROCHURE

This brochure provides a quick overview of the basic system and software requirements needed to administer the online assessments for the Vermont Comprehensive Assessment Program. Technology coordinators should consult the *Technical Specifications Manual for Online Testing* and the *System Requirements for Online Testing* for more detailed information.

## SECURE BROWSERS

A secure browser must be downloaded and installed on each computer and device used for student testing. For explicit instructions on downloading and installing the secure browsers, refer to the *Secure Browser Installation Manual*.

Supported Operating Systems	Supported Secure Browser
<b>Windows</b> 7 SP1 (Professional & Enterprise) 8 (Professional & Enterprise) 8.1 (Professional & Enterprise) 10 (Educational, Professional, & Enterprise) (Versions 1507-1803, 1809 <sup>a</sup> ) Server 2008 R2, 2012 R2, 2016 R2 (thin client) 10, 10 in S mode (Educational, Professional, & Enterprise) (Versions 1507-1803, 1809 <sup>a</sup> )	10.4  Take a Test app
<b>Mac</b> 10.9–10.14 <sup>a</sup>	10.4
<b>Linux</b> Fedora 27-28 LTS (Gnome) Ubuntu 14.04, 16.04, 18.04 LTS (Gnome)	10.4
<b>iOS (iPads)</b> 10.3 11.4 12 <sup>a</sup>	AIRSecureTest Mobile Secure Browser 5
<b>Android</b> 7.1 8.1 9 <sup>a</sup>	AIRSecureTest Mobile Secure Browser 5
<b>Chrome OS</b> 67+	AIRSecureTest kiosk application 5

<sup>a</sup> Support for this version is anticipated upon the completion of testing following its release.

## BASIC HARDWARE REQUIREMENTS

Desktops		
Supported Operating Systems	Minimum Requirements <sup>b</sup>	Recommended Specifications
<b>Windows</b> 7 SP1 (Professional & Enterprise) 8 (Professional & Enterprise) 8.1 (Professional & Enterprise) 10, 10 in S mode (Educational, Professional, & Enterprise) (Versions 1507-1803, 1809 <sup>a</sup> ) Server 2008 R2, 2012 R2, 2016 R2 (thin client)	1 GHZ Processor 1 GB RAM (32-bit) 2 GB RAM (64-bit) 16 GB hard drive (32-bit) 20 GB hard drive (64-bit)	1.4 GHZ Processor 2 or more GB RAM 20 or more GB hard drive space
<b>Mac</b> 10.9–10.14 <sup>a</sup>	1 GHZ Processor 1 GB RAM (32-bit) 2 GB RAM (64-bit) 16 GB hard drive (32-bit) 20 GB hard drive (64-bit)	1.4 GHZ Processor 2 or more GB RAM 20 or more GB hard drive space
<b>Linux (64-bit or 32-bit)</b> Fedora 27-28 LTS (Gnome) Ubuntu 14.04, 16.04 LTS (Gnome)	1 GHZ Processor 1 GB RAM (32-bit) 2 GB RAM (64-bit) 16 GB hard drive (32-bit) 20 GB hard drive (64-bit)  Required libraries/packages: <ul style="list-style-type: none"> <li>• GTK+ 2.18 or higher</li> <li>• GLib 2.22 or higher</li> <li>• Pango 1.14 or higher</li> <li>• X.Org 1.0 or higher (1.7+ recommended)</li> <li>• libstdc++ 4.3 or higher</li> <li>• ibreadline6:i386 (required for Ubuntu only)</li> <li>• GNOME 2.16 or higher</li> </ul>	1.4 GHZ Processor 2 or more GB RAM 20 or more GB hard drive space  In addition to the required libraries listed under minimum requirements, the following should be installed: <ul style="list-style-type: none"> <li>• NetworkManager 0.7 or higher</li> <li>• DBus 1.0 or higher</li> <li>• HAL 0.5.8 or higher</li> </ul>
<b>Linux (64-bit only)</b> Ubuntu 18.04 LTS (Gnome)	1 GHZ Processor 2 GB RAM 20 GB hard drive  In addition to all libraries and packages listed above, Ubuntu 18.04 LTS (Gnome) also requires the following libraries: <ul style="list-style-type: none"> <li>• Sox</li> <li>• Net-tools</li> </ul>	1.4 GHZ Processor 2 or more GB RAM 20 or more GB hard drive space

<sup>a</sup> Support for this version is anticipated upon the completion of testing following its release.

<sup>b</sup> ARM-powered devices such as the Raspberry Pi are not supported for online testing.

Tablets and Chromebooks		
Supported Operating Systems	Supported Tablets	Related Requirements
<b>iOS (iPads)</b> 10.3 11.4 12 <sup>a</sup>	4th Generation (Retina Display) iPad Air iPad Air 2 5th Generation (Retina Display) iPad Pro 6th Generation (Retina Display)	See the <i>Technical Specifications Manual for Online Testing</i> for information about configuring iOS for online testing.
<b>Android<sup>b</sup></b> 7.1 8.1 9 <sup>a</sup>	Lenovo Yoga Tab 3 10 Samsung Galaxy Tab S3 Asus ZenPad Z10	See the <i>Technical Specifications Manual for Online Testing</i> for information about configuring devices for online testing.
<b>Windows</b> 8 (Professional & Enterprise) 8.1 (Professional & Enterprise) 10 (Professional, Educational, & Enterprise)	AIR supports any tablet running these versions of Windows, but has done extensive testing only on Surface Pro, Surface Pro 3, Asus Transformer, and Dell Venue.	See the <i>Technical Specifications Manual for Online Testing</i> for information about configuring devices for online testing.
<b>Chrome OS</b> 67+	Any device that Google actively supports for auto-update is also supported by AIR. However, AIR 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 <a href="https://support.google.com/edu/android/answer/6220366">https://support.google.com/edu/android/answer/6220366</a>	See the <i>Secure Browser Installation Manual</i> for information about installing the secure browser in kiosk mode, a requirement for online testing.

<sup>a</sup> Support for this version is anticipated upon the completion of testing following its release.

<sup>b</sup> Amazon Fire tablets are not supported for online testing.

## REQUIREMENTS FOR PERIPHERAL EQUIPMENT

All supported computers, laptops, tablets, and approved testing devices must meet the requirements outlined below. Please see *System Requirements for Online Testing* for more information.

### **Screen Dimensions**

Screens must be 10” or larger; however, iPads with a 9.7” display may be used for testing.

### **Screen Resolution**

All devices must meet the minimum resolution. Larger resolutions can be applied as appropriate for the monitor or screen being used.

Desktops, laptops, and tablets: 1024 x 768

### **Keyboards**

External keyboards are strongly recommended for tablets used for testing. Wireless or Bluetooth keyboards are not supported. Some external keyboards have additional “shortcut” buttons that can create security issues. These buttons may allow students to open another application or the tablet’s default on-screen keyboard. AIR strongly cautions against using keyboards that have these shortcut buttons.

### **Headphones and Headsets**

For a full list of approved Headphone and Headset models, see the *System Requirements for Online Testing*.

### **Mice**

Mice on mobile devices are not supported. Wired two- or three-buttoned mice that are compatible with the operating system on desktops and laptops are supported. Wireless or Bluetooth mice are not supported.

Contact the Vermont Comprehensive Assessment Program Help Desk for additional guidance.

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