

System Requirements for Online Testing 2017–2018

Overview

This document was developed by the American Institutes for Research (AIR) and the Florida Department of Education (FDOE) and contains technology requirements to help Florida districts and schools prepare for online testing using AIR’s Test Delivery System. In the 2017–18 school year, the following Florida Standards Assessments (FSA) will be delivered online using AIR’s systems:

- **ELA Writing:** Grades 8–10 & Retake
- **ELA Reading:** Grades 4–10 & Retake
- **Mathematics:** Grades 3–8, Algebra 1 Retake, Algebra 1 EOC, and Geometry EOC

This document includes the following sections:

- [Supported Operating Systems and Devices](#)
- [Supported Web Browsers for Online Systems](#)
- [Secure Browsers for Online Testing](#)
- [Requirements for Peripheral Equipment](#)

Supported Operating Systems and Devices

This section lists the system requirements for administering computer-based assessments. Please refer to the [Secure Browser page](#) on the FSA Portal for the most up-to-date supported operating systems and devices.



Warning: Support for New Desktop Operating Systems

Operating systems that become available but do not appear on the portal or in the following tables are not supported. Do not upgrade to new operating systems on computers that will be used to administer online assessments without ensuring the updates meet the required specifications.

Desktops, Laptops, and Netbooks

Computers used for testing must meet the specifications for each supported operating system as shown in the table below. To ensure optimal student experiences for online testing, any computer that takes a noticeably long time (for example, 10 seconds or more) to start and run applications should be avoided for use with online testing.

Supported Operating Systems	Minimum Requirements for Current Computers
Windows 7 (Professional and Enterprise) 8 (Professional and Enterprise) 8.1 (Professional and Enterprise) 8 RT 10 (Professional, Educational, and Enterprise)	1.1 GHZ Processor 1 GB RAM or greater memory 200 MB hard drive space
Mac OS X (Intel) 10.9–10.12	Intel x86 processor 1 GB RAM or greater memory 200 MB hard drive space
Linux* Fedora 25, 26 Red Hat Enterprise 6.5 Ubuntu (LTS) 14.04, 16.04	1.1 GHZ Processor 512 MB of RAM 200 MB hard drive space Required Libraries/Packages: <ul style="list-style-type: none"> • GTK+ 2.18 or higher • GLib 2.22 or higher • Pango 1.14 or higher • X.Org 1.0 or higher (1.7+ recommended) • libstdc++ 4.3 or higher • libreadline6:i386 (Ubuntu only) • GNOME 2.16 or higher

* Text-to-speech (TTS) tracking does not function correctly on Linux OS. If students require the use of this accommodation (TTS with tracking), they must use a different operating system.

Tablets

While the specifications for computers, laptops, and netbooks are more general, only supported tablets running a supported operating system are permitted. These supported tablets have been tested for use with AIR's Test Delivery System and may be used for student testing.

Supported Operating Systems	Supported Tablets	Related Requirements
iOS (iPads) 9.2, 9.3 10.2, 10.3	iPad 2 iPad 3 Fourth generation (Retina Display) Fifth generation (Retina Display) iPad Air iPad Air 2	With iOS 9 and later, the AIRSecureTest app supports Autonomous Single App Mode (ASAM) and Single App Mode (SAM). For more information, refer to the <i>Technical Specifications Manual</i> .
Android 5.0, 5.1, 6.0, 7.0	Google Nexus 10 Asus Transformer Pad Asus Memo Pad Dell Venue 10 HP Pro Slate 10 Samsung Galaxy Tab 4 Education LearnPad Quarto	The secure browser keyboard must be enabled after installation of the mobile secure browser. For more information, refer to the <i>Secure Browser Installation Manual</i> .
Windows 8, 8.1, 10	AIR supports any tablet running these versions of Windows (Educational and Professional) but has done extensive testing only on Surface Pro, Surface Pro 3, Asus Transformer, and Dell Venue.	N/A

Chromebooks

All Chromebooks running a supported Chrome OS may be used for student testing. AIR will support any device that Google actively supports for auto-update. 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 <https://support.google.com/edu/android/answer/6220366>.



Note: For Chrome OS and automatic updates, AIR recommends turning off or delaying automatic updates of the Chrome operating system. Doing so will allow AIR to review changes from Google and address any updates that pose a potential risk to student testing.

Automatic update settings are configured in Google's admin console.

Supported Operating Systems	Supported Devices	Related Requirements
Chrome OS 59	All Chromebooks	Kiosk mode must be enabled. For more information, refer to the <i>Secure Browser Installation Manual</i> .

Thin Clients: NComputing for Windows

The following table lists the supported hardware and software for NComputing solutions.

Supported Server Host	Supported Server Software	Supported Terminals
Windows Server 2008 R2	vSpace Server 8.4	L300, firmware version 1.11.xx
Windows Server 2012 R2	vSpace PRO 10	
Windows Server 2016 R2		
Windows 10		

Supported Web Browsers for Online Systems

This section lists the supported web browsers for 2017–2018. It also provides information regarding AIR’s secure browsers for student testing. Frequent browser updates occur throughout the year.

Supported Web Browsers by Operating System

The table below lists the supported operating systems and corresponding web browsers for each AIR application. AIR recommends using recent versions of supported web browsers. Each application requires disabling pop-up blocking software and enabling JavaScript. Be sure to use the correct combination of operating system and web browser. For example, Windows 10 requires Internet Explorer 11 or Edge.

Supported Operating Systems	Supported Devices	Supported Browsers	TA Sites	Student Practice Test	AVA	TIDE	FSA-R
Windows							
7 (Professional and Enterprise)	Desktops, laptops	Chrome 59	✓	✓	✓	✓	✓
		Firefox 52–54	✓	✓	✓	✓	✓
		Internet Explorer 11	✓	✓	✓	✓	✓

System Requirements for Online Testing

Supported Operating Systems	Supported Devices	Supported Browsers	TA Sites	Student Practice Test	AVA	TIDE	FSA-R
Windows							
8 (Professional and Enterprise) 8.1 (Professional and Enterprise)	Desktops, laptops	Chrome 59	✓	✓	✓	✓	✓
		Firefox 52–54	✓	✓	✓	✓	✓
		Internet Explorer 11	✓	✓	✓	✓	✓
8 RT	Surface Pro Surface Pro 3 Asus Transformer Dell Venue	Internet Explorer 11	✓	✓	✓		✓
10 (Professional, Educational, and Enterprise)	Desktops, laptops	Chrome 59	✓	✓	✓	✓	✓
		Firefox 52–54	✓	✓	✓	✓	✓
		Internet Explorer 11, Edge	✓	✓		✓	✓
Mac OS X							
10.9–10.12	Desktops, laptops	Chrome 59	✓	✓	✓	✓	✓
		Firefox 52–54	✓	✓	✓	✓	✓
		Safari 7-9	✓	✓		✓	✓
Linux							
Fedora 25, 26	Desktops, laptops	Chrome 59	✓	✓	✓	✓	✓
		Firefox 52–54	✓	✓	✓	✓	✓
Red Hat Enterprise 6.5	Desktops, laptops	Chrome 59	✓	✓	✓	✓	✓
		Firefox 52–54	✓	✓	✓	✓	✓
Ubuntu (LTS) 14.04, 16.04	Desktops, laptops	Chrome 59	✓	✓	✓	✓	✓
		Firefox 52–54	✓	✓	✓	✓	✓
iOS							
9.2, 9.3	Supported iPads	Safari 9	✓	✓	✓		✓
10.2, 10.3	Supported iPads	Safari 10	✓	✓	✓		✓
Android							
5.0, 5.1, 6.0, 7.0	Supported tablets	Chrome 59	✓	✓	✓		

Supported Operating Systems	Supported Devices	Supported Browsers	TA Sites	Student Practice Test	AVA	TIDE	FSA-R
Chrome OS							
59	Chromebooks	Chrome 59	✓	✓	✓		✓

* AIR supports any tablet running Windows 8 and 8.1 Pro, and Windows 10 (Educational and Professional) but has done extensive testing only on Surface Pro, Surface Pro 3, Asus Transformer, and Dell Venue.

Delaying Firefox Updates

AIR conducts quality assurance on the most recent Firefox versions for each system except the student testing site (which requires the secure browser). AIR recommends you delay installation of new versions of Firefox that could impact system performance. Postponing updates allows AIR time to review changes and verify that each system works correctly with the new version.

To learn how to disable automatic updates for Firefox, see <https://support.mozilla.org/en-US/kb/forum-response-turning-auto-update>. You may need to disable automatic updates again after installing a newer version of Firefox.

Secure Browsers for Online Testing

The secure browser must be downloaded and installed on all computers that will be used for student testing. All secure browsers can be downloaded from the FSA Portal (www.FSAssessments.org).

Supported Operating Systems	Supported Devices	Supported Secure Browser
Windows 7 (Professional and Enterprise) 8 (Professional and Enterprise) 8.1 (Professional and Enterprise) 8 RT 10 (Professional, Educational, and Enterprise)	Desktops/Laptops/Netbooks	10.0
Mac OS X 10.9–10.12	Desktops/Laptops	10.0
Linux^a Fedora 25, 26 Red Hat Enterprise 6.5 Ubuntu (LTS), 14.04, 16.04	Desktops/Laptops/Netbooks	10.0

Supported Operating Systems	Supported Devices	Supported Secure Browser
iOS (iPads) 9.2, 9.3 10.2, 10.3	iPad 2 iPad 3 Fourth generation (Retina Display) Fifth generation (Retina Display) iPad Air iPad Air 2	AIRSecureTest Mobile Secure Browser
Android 5.0, 5.1, 6.0, 7.0	Google Nexus 10 Asus Transformer Pad Asus Memo Pad Dell Venue 10 HP Pro Slate 10 Samsung Galaxy Tab 4 Education LearnPad Quarto	AIRSecureTest Mobile Secure Browser
Chrome OS 59	Chromebooks	AIRSecureTest kiosk application

^aText-to-speech (TTS) tracking does not function correctly on Linux OS. If students require the use of this accommodation (TTS with tracking), they must use a different operating system.

Requirements for Peripheral Equipment

Monitors and Screen Display Requirements

All supported computers, laptops, netbooks, and tablets must meet the following requirements.

Screen Dimensions

Screen dimensions must be 10" or larger (with the exception of iPads with a 9.7" display, which are included). This means the following devices are **not** supported:

- Apple iPad Mini
- Google Nexus 7 and similar-sized Android tablets
- Netbooks with screen dimensions smaller than 10"

Screen Resolution

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

- Desktops, laptops, and tablets: 1024 × 768
- Netbooks: 1024 × 600

Depending on the screen size, students may need to use vertical or horizontal scroll bars to view all test-related information. Students may also use the Zoom tool in the online test to enlarge the content on the screen.

Headphones/Earbuds

Students may need headphones/earbuds to listen to audio during the test.

- Students with the text-to-speech accommodation on computer based assessments require headphones/earbuds.
- All ELA Reading assessments require headphones for listening and/or animation items.

School assessment coordinators should determine how many students will need headphones/earbuds prior to testing to ensure that there is an adequate supply on hand.

The following headphones/earbuds are supported:

- Wired headphones/earbuds with a 3.5 mm connector.
- USB headphones/earbuds with a wired or wireless connection.
- The following Bluetooth headphones: Logitech H800, SoundBot SB270, and ECO Sound ECO-V300.

Wired headphones/earbuds with a 3.5 mm connector or USB headphones/earbuds (wired or wireless) are recommended over Bluetooth, as they provide better clarity and accuracy.

Mice

Mice on mobile devices are not supported. Wireless or wired mice on desktops and laptops that are compatible with the operating system are supported.

Keyboards

External keyboards are strongly recommended for tablets used for testing. Students may use mechanical, manual, or Bluetooth-based keyboards. 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.

Keyboards with the Android Operating System

Testing on an Android mobile device requires installation of the secure browser keyboard to disable predictive text. Any external keyboard that has a shortcut button to open the tablet's default keyboard is not permitted as the default keyboard will override the mobile secure browser keyboard.

AIR has determined that the EZOWare Slim Full Size Keyboard contains a shortcut button that opens the default keyboard and should NOT be used with Android tablets.

Change Log

Location	Change	Date