

**PRIVATE SCHOOL APPLICATION TO ADMINISTER
FLORIDA STATEWIDE ASSESSMENTS IN 2015-16**

**Attachment J: Minimum Specifications for the Computer-
Based Assessments**

- See question #25 in the application.

System Requirements for Online Testing

Updated 11/26/2014

Overview

This document was developed by the American Institutes for Research (AIR) and the Florida Department of Education and contains technology requirements to help Florida districts and schools prepare for online testing using AIR's Test Delivery System. In the 2014–15 school year, the following Florida Standards Assessments (FSA) will be delivered using AIR's system:

- Grades 5–11 ELA
- Grades 5–8 Mathematics
- Algebra 1 EOC
- Geometry EOC
- Algebra 2 EOC

This document includes the following sections:

- [Supported Operating Systems and Devices](#)
- [Secure Browsers for Online Testing](#)
- [Supported Web Browsers for Training Tests](#)
- [Requirements for Appropriate Display](#)
- [Additional Requirements](#)

Supported Operating Systems and Devices

This section lists the system requirements for running online tests.



Warning: Support for New Desktop Operating Systems

Operating systems that become available but do not appear 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.



Note: About the Minimum Requirements for Current Computers

AIR's secure browser for desktops is based on the open-source Mozilla Firefox web browser. The current requirements align with the minimum recommendations for running Mozilla Firefox on supported operating systems ([Mozilla System Requirements](#)).

The recommended specifications are AIR's guidelines for optimal performance. If your district or school is contemplating purchasing new computers, we suggest that you consider the recommended specifications. These specifications will ensure that your computers work effectively with the online testing system and provide additional functionality and longevity.

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	Requirements for Current Computers	Recommended Specifications for Future Purchases
Windows 7, 8.0, 8.1	1 GHz or faster processor 1 GB RAM or greater memory	Pentium 4 GHz processor 2 GB RAM 80 GB hard drive
Mac OS X (Intel) 10.7, 10.8, 10.9	1 GHz or faster processor 1 GB RAM or greater memory	Pentium 4 GHz processor 2 GB RAM 80 GB hard drive
Linux* Fedora 16, 17, 18, 19, 20 openSUSE 13.1 Red Hat 6.5 Ubuntu 10, 12, 14 (LTS)	1 GHz or faster processor 1 GB RAM or greater memory	Pentium 4 GHz processor 2 GB RAM 80 GB hard drive

* For additional Linux information, including required libraries, refer to the *Technical Specifications Manual for Online Testing*.

Tablets

While the specifications for computers, laptops, and netbooks are more general, only supported tablets also 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) 6.0, 6.1 7.0, 7.1	iPad 2 iPad 3 Fourth-generation (Retina Display) iPad Air	Guided Access must be enabled. For more information, refer to the <i>Secure Browser Installation Manual</i> .
Android 4.0.4 through 4.4	Google Nexus 10 Motorola Xoom Samsung Galaxy Note (10.1) Samsung Galaxy Tab 2 (10.1)	The secure browser keyboard must be enabled after installing the mobile secure browser. For more information, refer to the <i>Secure Browser Installation Manual</i> .
Windows 8.0, 8.1	Surface Pro Asus Transformer Dell Venue	N/A

Chromebooks

All Chromebooks running a supported Chrome OS may be used for student testing.



About 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. The recommended period for delaying automatic updates is two weeks.

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

Supported Operating Systems	Supported Devices	Related Requirements
Chrome OS 31+	All Chromebooks	Kiosk mode must be enabled. For more information, refer to the <i>Secure Browser Installation Manual</i> .

Thin Clients: NComputing for Windows

NComputing solutions can be used for online testing when used with supported operating systems, server software, and terminals. For an optimal online testing experience, AIR strongly recommends using Windows 7.

Table 1. Supported NComputing Information

Supported Server Host	Supported Server Software	Supported Terminals
Windows 7	vSpace Server 6.6.2.3	L230 L300



About NComputing Terminals

AIR conducts quality testing with L230 and L300 terminals. Other terminals should work provided the server host is a supported client Windows operating system.

Secure Browsers for Online Testing

The secure browsers 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).

Operating Systems	Supported Devices	Secure Browser
Windows	Desktops, laptops, netbooks, tablets	Windows Secure Browser
Mac OS X	Desktops, laptops, netbooks	Mac Secure Browser
Linux	Desktops, laptops, netbooks	Linux Secure Browser
iOS	Supported tablets	Mobile Secure Browser (AIRSecureTest app)
Android	Supported tablets	Mobile Secure Browser (AIRSecureTest app)
Chrome OS	Chromebooks	Mobile Secure Browser (AIRSecureTest kiosk app)

Supported Web Browsers for Training Tests

The following web browsers are supported for the training tests. Please note that the supported web browser version depends on the operating system being used (e.g., newer versions of Mac OS X do not support earlier versions of Safari.)

Operating Systems	Web Browsers
Windows	Internet Explorer 10 and 11 Google Chrome 31+ Mozilla Firefox 10–33
Mac OS X	Google Chrome 31+ Mozilla Firefox 10–33 Safari 4–7*
Linux	Google Chrome 31+ Mozilla Firefox 10–33
iOS	Safari 6 and 7
Android	Google Chrome 31+
Chrome OS	Google Chrome 31+

* While Safari is a supported web browser, it does not render all math symbols well. For this reason, AIR recommends using Firefox or Chrome on computers running a supported Mac OS X system.

Requirements for Appropriate Display

- Screen Dimensions: 10" class or larger (iPads with a 9.5" display are included in this class).
- The minimum required resolution for desktops, laptops, and tablets is 1024 × 768.
- The minimum required resolution for netbooks is 1024 × 600.

Depending on the screen size, students may need to use vertical and/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.

Note about brightness/contrast:

Some test items include images that are shaded. Because monitors and screens vary widely, we cannot guarantee that the “default” settings on monitors are optimal. Monitor settings may need to be adjusted if a student says test items with shaded images (e.g., pie charts) are very light or cannot be seen.

Additional Requirements

Keyboards

The use of external keyboards is strongly recommended for tablets that will be used for testing.

Students may use mechanical, manual, and 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.

For Android and Surface tablet users:

The Android and Surface mobile secure browser requires the secure browser keyboard to be used because the default tablet keyboard includes a row for predictive text. Therefore, any external keyboard that has a shortcut button to open the tablet’s default keyboard is not permitted, as this default keyboard will override the mobile secure browser keyboard.

AIR has determined that the following external keyboard contains a shortcut button that opens the default keyboard and should NOT be used with Android or Surface tablets:

- EZOWare Slim Full Size Keyboard

Headphones

Some students will need headphones to listen to audio in online assessments.

- Some assessments contain several items that have recorded audio.
- Students with a text-to-speech accommodation can listen to stimuli or test items being read aloud.
- Students with a braille accommodation can use the Job Access with Speech (JAWS[®]) screen reading software.

School Assessment Coordinators should determine how many students will need headphones prior to testing to ensure that there is an adequate supply on hand.



Note: Text-to-speech requires the use of the secure browser. Students who require text-to-speech for the practice tests should use the secure browser.

Two types of headphones are supported: USB and Bluetooth.

- USB headphones are recommended over Bluetooth. These headphones provide reliable performance regarding clarity and accuracy.
- The following Bluetooth headphones are supported: Logitech H800, SoundBot SB270, and ECO Sound ECO-V300.

Florida TestNav 8.0.4 Hardware and Software Requirements

Updated 6/27/2014

Overview

This document was developed by Pearson and the Florida Department of Education and contains technology requirements to help Florida districts and schools prepare for online testing using Pearson’s TestNav 8 platform. In the 2014–15 school year, the following Next Generation Sunshine State Standards (NGSSS) assessments will be delivered using Pearson’s system:

- Biology 1 EOC
- Civics EOC
- U.S. History EOC
- Algebra 1 EOC (retake)
- Geometry EOC (retake)
- FCAT 2.0 Reading Retake
- FCAT Mathematics Retake (SSS)

This document includes the following sections:

- [Recommended Hardware Requirements](#)
- [Recommended Software Requirements](#)
- [Browser Dependencies](#)
- [Firewall/Proxy Servers/Content Filtering](#)

Recommended Hardware Requirements

Hardware Requirements	Windows	Macintosh	iPad	Chromebook
Processor	1 GHz or faster	Only Intel-based™ Macs are supported	any	any
Memory	1 GB RAM	1 GB RAM	any	any
Screen size	any	any	9.7 inch	any
Screen resolution	1024 x 768	1024 x 768	any	any

Note: Please do not make any technology changes during an online testing administration, including applying software patches. We know that some dependency updates, like recent Java versions that were pushed by Oracle, are forced and that you may be unable to delay them. While these updates are beyond the control of Pearson, we will make updates to our software as soon as possible if a forced dependency update causes problems in our software.



Specific thin client and virtualization vendors have gone through the TestNav Qualification program to qualify their products to work with TestNav. For more information on the qualified products, go to <http://www.testnavqualified.com>. Other thin client and desktop and tablet virtualization solutions of any kind are not qualified for online testing.

As a general rule of thumb regarding 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.

Recommended Software Requirements

You may use any combination that is marked with a ✓. A blank entry in the table means the option is not available or not supported.

Windows	IE 9.0	IE 10.0	IE 11.0	Chrome ¹	Firefox ²
7	✓	✓	✓	✓	✓
8.0 ³		✓		✓	✓
8.1 ³			✓	✓	✓

Mac OS X	Safari 5.1	Safari 6.x	Safari 7.0	Firefox ²
10.7		✓		✓
10.8		✓		✓
10.9			✓	✓

Tablet/Other OS	TestNav App
iOS 6	✓
iOS 7	✓
Chromebook Must be running Chrome OS 33	✓

¹The Chrome browser must be version 31 or higher.

²The Firefox browser must be version 25 or higher on all supported platforms and version 25 to 28 on Mac OS X 10.7, 10.8, and 10.9.

³ Windows RT is not supported. Intel-based tablets with Windows 8.0 and 8.1 must be used with an external keyboard and mouse and must have a 10 inch class screen.

Additional Requirements

Keyboards

The use of external keyboards is strongly recommended for iPads that will be used for testing. External keyboards are required for Windows tablets.

Students may use mechanical, manual, and 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. It is strongly recommended that students do not use keyboards that have these shortcut buttons.

Browser Dependencies

Java

Java is required on Mac and Windows platforms. The version which is compatible with your system depends on your browser, operating system, and security settings. These tables show the versions of Java that TestNav 8 supports. These are the same tables used by System Check.

TestNav 8/Mac OS X	
Browser	Java Versions
Safari 5.1	1.6.0.65
Safari 6	1.6, 1.7
Safari 6.1	1.6, 1.7
Safari 7	1.6, 1.7
Firefox	1.6.30, 1.7

TestNav 8/Windows	
Browser	Java Versions
IE 9	1.5, 1.6, 1.7
IE 10	1.6, 1.7
IE 11	1.7
Chrome	1.6, 1.7
Firefox	1.6.30, 1.7

Other Dependencies

- Enable javaw.exe exception created in Windows Firewall.
- Enable pop-ups for Pearson sites.
- Enable Local File access to home directory.
- Disable all accelerators for Internet Explorer.
- Disable Skype plugins in Window 7 and Firefox.

Firewall/Proxy Servers/Content Filtering

When using Proctor Caching, the following must be opened in any firewalls, proxy servers, or software that is used for internet content filtering:

URL:Port ⁴
Your test delivery URL, for example: *.testnav.com:80 *.testnav.com:443
s3.amazonaws.com

⁴ TestNav content is dynamically hosted in the cloud. No static IP addresses or ranges can be provided.

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SIGNATURE PAGE

I hereby confirm that I have read and will abide by Attachment J: Minimum Specifications for the Computer-Based Assessments.

Signature

Name – Please Print

Position

Date