



Welcome!



Working Together for Student Success



Indiana: Building a System of Assessments

- Indiana revisited assessments beginning in 2016 with the ISTEP+ panel.
- Legislation (2017) prescribed new requirements for assessment beginning in 2018-2019.
- IDOE solicited vendor proposals to deliver ILEARN, I AM and IREAD-3.
- AIR was the vendor selected through the process with IDOA.





Change is Coming!

- IDOE intentionally evaluated areas for systematic improvement to support technology implementation.
 - No caching server required
 - No secondary save required
 - Test Administrator restarts paused assessments
 - Test tickets not required
- Greater use of technology allows us to deliver and support the assessment delivery to maintain security, offer dynamic assessments and expedite reporting





Your Feedback!

- This is our opportunity to deliver a new assessment in Indiana.
- It is not ISTEP+ 2.0.
- There may be challenges, issues and hiccups. It may not be PERFECT.
 - We rely on your communication with us to improve, communicate and resolve these instances as quickly as possible.
 - If there are process improvements for IDOE and/or the vendor, please reach out!





Technology Requirements for Online Testing

Training Module



Objectives

By the end of this presentation, you should be able to:

- Prepare for online tests at your school by completing the four steps to set up technology for online testing;
- Install the Secure Browser; and
- Troubleshoot technical problems during the tests.



Topics Covered in This Module

To set up online testing technology in your schools, complete these four steps:

- Step 1: Set up Test Administrator (TA) workstations
- Step 2: Set up student workstations
- Step 3: Configure your network
- Step 4: Configure assistive technologies

Test Delivery System Overview

AIR's Test Delivery System (TDS) has two components:

- 1. Test Administrator (TA) Interface**

- 2. Student Interface**

- Test administrators (examiners) use the TA Interface to create and manage test sessions from any web browser.
- Students access and complete their tests through the Student Interface via the Secure Browser.

Setting up the Test Administrator Workstation

- Nearly any modern device, including mobile devices like tablets, with any modern browser can be used to access the TA site and administer a testing session.
- The TA Interface is a website. Any device you already use to check your email and access the Internet should be capable of administering tests.
- To be able to print, TA workstations must be connected to a printer.
- If your school uses a firewall or other networking equipment that blocks access to public websites, you may need to whitelist AIR websites.

Setting Up Student Workstations

- Each student workstation needs AIR's Secure Browser installed on it.
- The Secure Browser is AIR's customized web browser designed to keep tests secure by locking down the student desktop and preventing the student from accessing anything except their test.
- The Secure Browser displays the student application in full-screen mode with no user interface to the browser itself. It has no back button, next button, refresh button, or URL bar.

System Requirements

To get started setting up your student workstations, you should first make sure your devices are supported.



System Requirements: Desktops and Laptops

Supported Operating Systems	Minimum Requirements	Recommended Specifications
Windows 7 SP1 (Professional & Enterprise) 8, 8.1 (Professional & Enterprise) 10, 10 in S mode (Educational, Professional & Enterprise) (Versions 1507-1803, 1809 ^a) 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+ GB RAM 20+ GB hard drive space
macOS X 10.9-10.14 ^a	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+ GB RAM 20+ GB hard drive space

^a Support for this version is anticipated upon the completion of testing following its release.

System Requirements: Desktops and Laptops

Supported Operating Systems	Minimum Requirements	Recommended Specifications
Linux (64-bit or 32-bit) 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: 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 (required for Ubuntu only) GNOME 2.16 or higher	1.4 GHZ Processor 2 or more GB RAM 20 or more GB hard drive space Recommended libraries/packages: In addition to the required libraries listed under minimum requirements, the following should be installed: NetworkManager 0.7 or higher DBus 1.0 or higher HAL 0.5.8 or higher
Linux (64-bit only) Ubuntu 18.04 LTS (Gnome)	1 GHZ Processor 2 GB RAM 20 GB hard drive Ubuntu 18.04 LTS (Gnome) also requires the following libraries: Sox Net-tools	1.4 GHZ Processor 2 or more GB RAM 20 or more GB hard drive space

Supported Mobile Devices: Android and iOS

Operating System	Supported Devices
Android 7.1, 8.1, 9 ^a	Lenovo Yoga Tab 3 10 Samsung Galaxy Tab S3 Asus ZenPad Z10
iOS (iPads) 10.3, 11.4, 12 ^a	4 th Generation (Retina Display) 5 th Generation (Retina Display) 6 th Generation (Retina Display) iPad Air iPad Air 2 iPad Pro

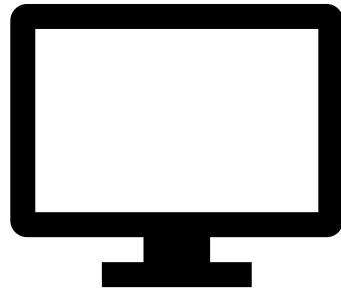
^a Support for this version is anticipated upon the completion of testing following its release.

Supported Mobile Devices: Windows and Chrome

Operating System	Supported Devices
Windows 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.
Chrome OS 67+	See https://support.google.com/edu/android/answer/6220366 for a full list of supported Chromebooks.

Appropriate Monitor Displays

- Monitor settings may need to be adjusted if test items with shaded images are very light or cannot be seen.
- The larger the monitor, the more “real estate” students have.
- Minimum resolution for desktops, laptops, and tablets: 1024 x 768 or better



Where can I download the Secure Browser?

- Download the Secure Browser from the Indiana Assessment Portal: <https://indiana.portal.airast.org>
- Basic installation instructions for each Secure Browser can be found on the Portal.

System Requirements: Secure Browser	
Computer/Device	Secure Browser Location
Windows, Mac, and Linux computers	http://indiana.portal.airast.org
Android tablets	Google Play Store
iPad tablets	Apple App Store
Chromebooks	Chrome Web Store



Secure Browser Installation Methods

1. Download the Secure Browser from the Portal and install it.
2. Download and save the Secure Browser onto a media device (such as a flash drive), and copy and install the files on each computer.

Installing the Secure Browser

- If you manage a large number of machines across your school or corporation, you can likely use the same tools you are already familiar with to push the Secure Browser out to all of your machines at scale.
 - For example, the Secure Browser ships as a MSI package which enables use of MSIEXEC.
- If you are from a small school, you can follow the basic installation instructions on the Indiana Assessment Portal to install the Secure Browser.
- The Secure Browser is installed the same way as most other software.



Secure Browser Installation: Windows

MSI file type enables deployment using a number of tools:

- Active Directory Group Policy
- Microsoft SMS
- Microsoft SCCM
- Microsoft WSUS
- Windows NT Batch



Secure Browser Installation: Mac and Linux

MacOS

DMG file type enables deployment using Apple Remote Desktop.

- Munki
- Filewave

Linux

TAR file type enables deployment using a number of tools including the following:

- Shell scripts
- Puppet

Installing the Mobile Secure Browser

For iPads, Android tablets, and Chromebooks, the AIRSecureTest app is AIR's mobile version of the Secure Browser.

- AIRSecureTest is available in each app store to download and install.
- The first time you open this app, it will ask you to choose your state and assessment program. Your choice is saved and from then on, the Mobile Secure Browser works just like the desktop version, allowing you to access operational tests, practice tests, and the network diagnostic tool.
- You can also use any mobile device management utility to install the Secure Browser on multiple managed devices and configure those devices.





Additional Installation Instructions

For schools and districts seeking advanced installation instructions for Windows, Mac, or Chrome OS, including instructions on how to install the Secure Browser on multiple devices, see the following document for your operating system:

- *Additional Configurations and Troubleshooting Guide for Windows*
- *Additional Configurations and Troubleshooting Guide for Mac*
- *Additional Configurations and Troubleshooting Guide for Chrome OS*

Configuring Student Workstations

Operating System	Additional Configuration
Windows	Disable Fast User Switching
Mac	Disable Mission Control, Look-up Gesture, and Siri
Linux	Disable On-screen Keyboard
Android	Enable Secure Browser Keyboard
Chrome OS	Manage Chrome OS Auto Updates
iOS	No further configuration is necessary for devices running iOS. A feature in iOS called Automatic Assessment Configuration works with AIR's Secure Browser to prepare an iPad for online testing



Configuring Student Workstations

Ensure that all scheduled tasks take place outside of testing hours:

- Virus Scans
- Software Updates
- Operating System Updates, such as Windows Updates



Configuring your Network: Performance Factors

Performance Factors in Online Testing

The response time of systems used for online testing depends on a number of factors, including:

- Network bandwidth
- Number of students simultaneously testing
- Wireless networking configuration
- Secure Browser



Configuring your Network: Network Bandwidth

- At least 20 Kbps bandwidth per student being tested
- Affected by both Local Area Network (LAN) traffic and Internet traffic from the router
- LAN should always be analyzed to determine potential traffic bottlenecks



Number of Students Simultaneously Testing

- Network performance may slow when large numbers of students are testing at one time.
- Multiply the number of students being tested by 20 Kbps to get an estimate of bandwidth needed, and compare that estimate with the network speed test.
- Perform network analyses at different times to ensure adequate capacity.

Diagnostic Tool

Please Sign In

Guest User

Toggle to sign in as yourself

Guest Session

Toggle to join an active session

 Run Diagnostics

Browser: Chrome v68



Diagnostic Screen

This page allows you to check the **current** bandwidth of your network. Select a test from the drop-down list and enter the maximum number of students likely to test at one time, then click [Run Network Diagnostics Tests].

Your Operating System:

Windows 10

Your Browser Version:

Chrome v68

Secure Browser:

false

Network Diagnostics:

Select Test:

Enter the total number of students you would like to test at one time:

Run Network Diagnostics Tests

Download Results:

724.034 Mbps download.

Upload Results:

79.208 Mbps upload.

Bandwidth Summary:

Given the current load on your system, you should be able to test the requested number of students at this location. (Please note: The throughput estimates include the encryption/decryption overhead for data transfer. Throughput estimates change as the network conditions change and can vary from run to run.)

Return to Login

TTS Check



Configuring Your Network: Proxy Servers

- Session timeouts on proxy servers and other devices should be set to values greater than the typically scheduled testing time. For example, if test sessions are scheduled for 60 minutes, consider session timeouts of 65–70 minutes.
- Web proxy servers must be configured to NOT cache data received from servers.
- For any device that performs traffic shaping, packet prioritization, or quality of service, the URLs to be used for testing should be given a high priority to ensure the best performance.

Configuring your Network: Network Requirements

System	URL to Whitelist	
Non-Testing Sites Portal and Secure Browser Installation Files Single Sign-On System Test Information Distribution Engine Online Reporting System	https://indiana.portal.airast.org/ *Will be available at a later time *Will be available at a later time *Will be available at a later time	
TA and Student Testing Sites Assessment Viewing Application (if applicable)	*.airast.org *.tds.airast.org *.cloud1.tds.airast.org *.cloud2.tds.airast.org	
Online Dictionary and Thesaurus	Domain: media.merriam-webster.com www.dictionaryapi.com	IP Address: 64.124.231.250 64.124.231.250

Wireless Network Configuration

Wireless traffic must use encryption.

- Wi-Fi Protected Access II (WPA2)
- Advanced Encryption Standard (AES)

Wireless access points have limits on total bandwidth and number of simultaneous devices in use.

To ensure sufficient capacity, all computers to be used for testing should be turned on and connected to the wireless access point simultaneously.

Configuring your Network: Network Performance

Testing Device	Ratio of Devices to 802.11g WAP	Ratio of Devices to 802.11n WAP
802.11g	20	40
802.11n	20	40
Mix of 802.11g and 802.11n	20	40–50 (depending on the mix of wireless cards used)



Configuring Assistive Technologies

- AIR's Test Delivery System is a website visible through a customized web browser.
- Students who use assistive technologies with a standard web browser should be able to use those same technologies with the Test Delivery System.
- The best way to test compatibility with assistive technologies is by taking a practice test with those technologies turned on.



Text-to-Speech

- Voice technology must be available and functioning for students who require this accommodation.
- For Windows and Mac operating systems, default voice packs are generally pre-installed.
- Linux users will find a voice pack included with the Linux Secure Browser installation file.



Text-to-Speech on Mobile Devices

- iPad users can adjust volume, pitch, and speaking rate.
- Chromebook users can adjust volume and speaking rate.
- These settings are also adjustable in the test.

Text-to-Speech Check

Text-to-Speech Sound Check

Make sure text-to-speech is working.



Press the speaker button. You should hear a voice speak the following sentence: "This text is being read aloud."

Sound Settings

Current Voice Pack:

Use the sliders to adjust the available text-to-speech settings.

Volume +

Pitch +

Rate +

10

10

10

Next Step:

If you heard the voice clearly, choose I heard the voice. If not, choose I did not hear the voice. To continue testing without checking text-to-speech, choose Skip TTS Check.

I heard the voice

I did not hear the voice

Skip TTS Check



Braille

Text-to-speech allows students to read text displayed on a screen with a braille display.

- Required software for TA workstation:
 - Duxbury Braille Translation is required for TA workstations.
 - TAs need this software to emboss braille test content. Other screen readers may also work and should be tested in a practice test.



Speech-to-Text

Speech-to-Text allows a student to speak into a headset and have their speech converted into text that becomes the response that is entered into the Test Delivery System.

- Available for Windows and Mac through Dragon Naturally Speaking or other similar software.
- Unavailable for Linux, iOS, Android, or Chrome OS.



Thank You!

Contact the Indiana Assessment Help Desk for any additional assistance.

- Email: airindianahelpdesk@air.org
- Phone: 1.866.298.4256
- Chat: <https://indiana.portal.airast.org/chat.shtml>