Technology Requirements for Online Testing

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Topics

- Terminology
- Test the System Day
- Site Readiness
- Secure Browser Installation
- Network Diagnostics and Configuration
- Hardware and Software Requirements
- Network Requirements

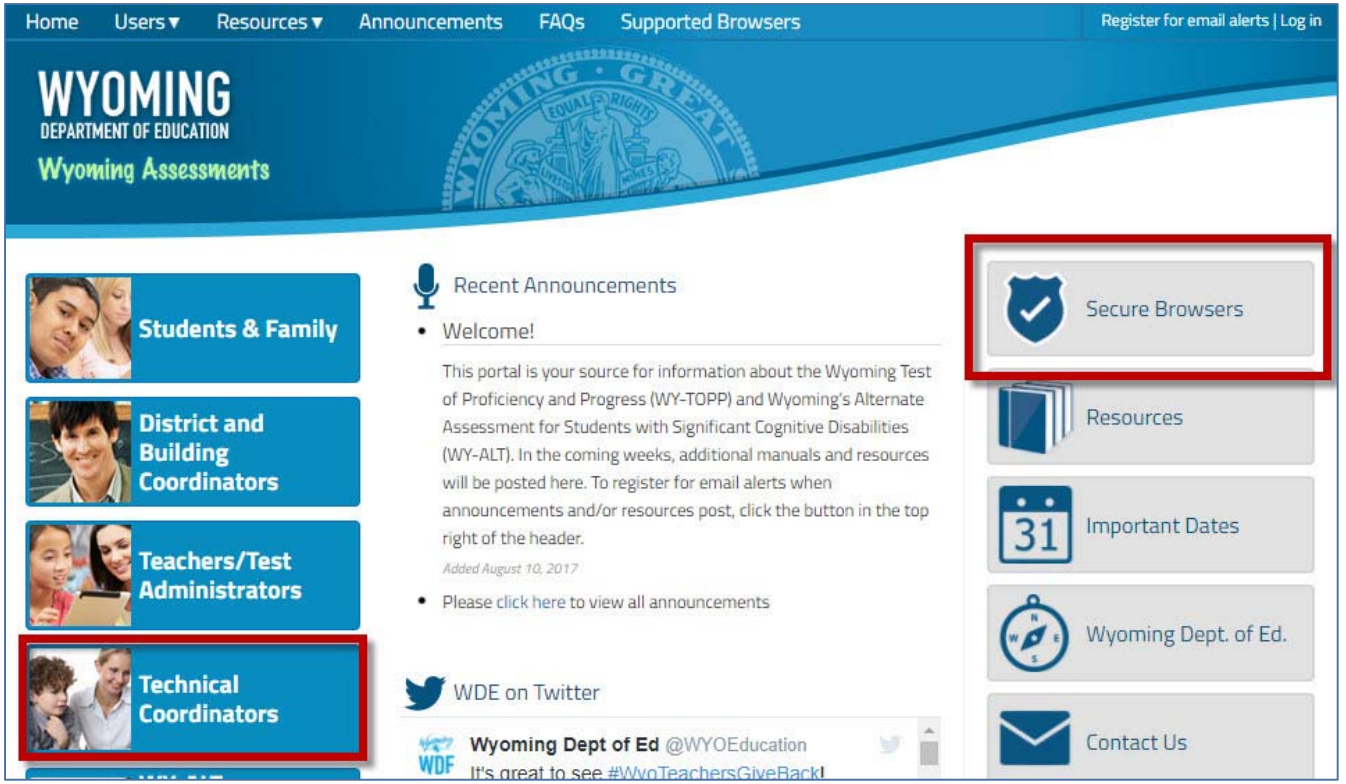
Terminology

- User Roles
  - District Coordinator
  - District Data Reviewer
  - Building Coordinator
  - Test Administrator
  - Proctor
  - Alt Roles
- TIDE
  - Test Information Distribution Engine: User and Student Registration/Administrative tasks
- TDS
  - Test Delivery System: What the teacher and student interacts with when giving or taking a test

Test the System Day

- Goals
  - Make sure your school/district computers and infrastructure are prepared
  - Increase user's comfort with the system
- Needs
  - Recommended to install the Secure Browser, but not required
  - Supported Web Browser
  - Internet connection

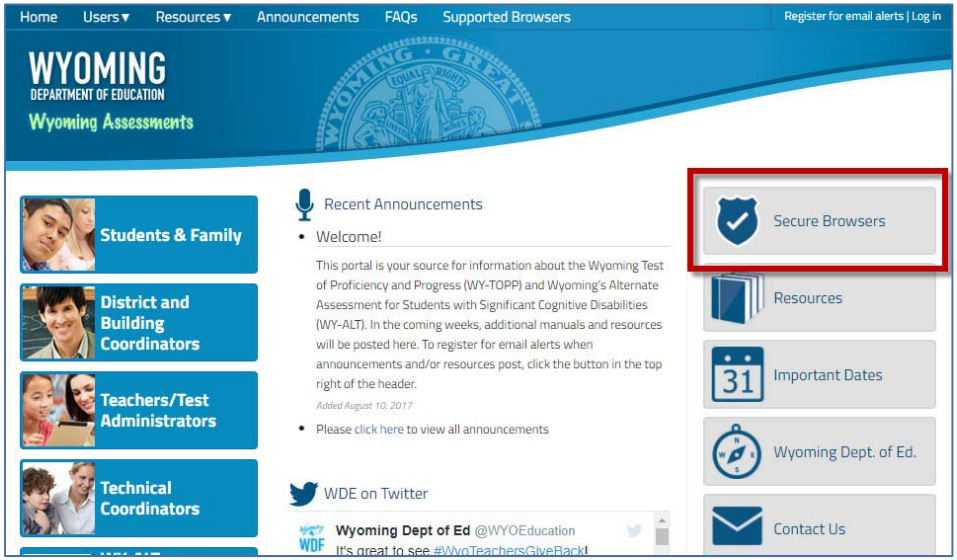
wyoassessment.org – the portal

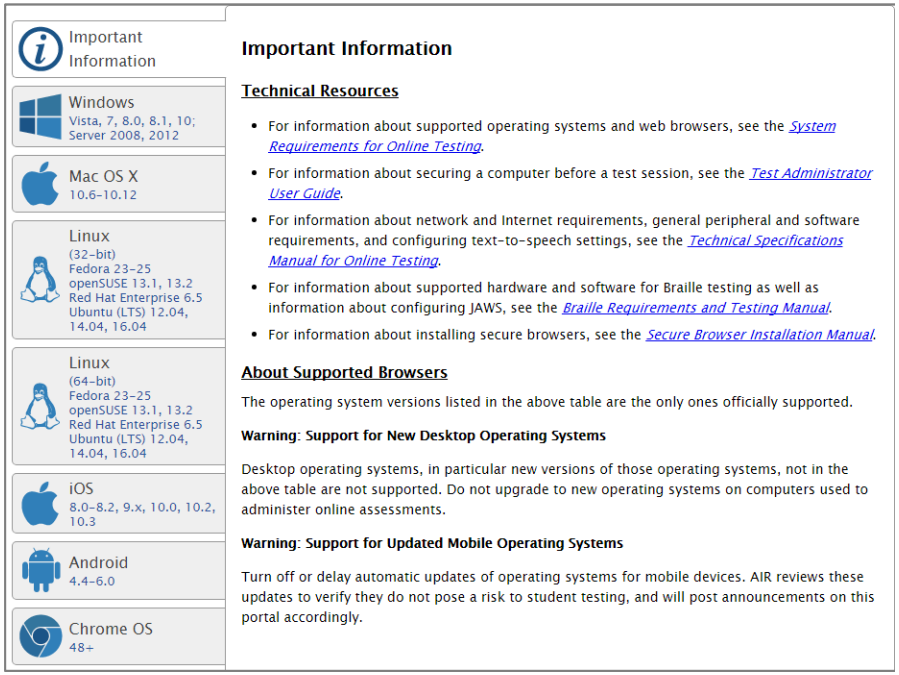


Secure Browser

- Required for students to access the Student Testing Site
- Should be downloaded and installed on all devices used for student testing
- Prevents students from accessing other applications during testing
- Can be used to access training tests, as well as with supported web browsers

Secure Browser Installation





Secure Browser Installation Methods

- Download the secure browser from your portal and install
- Download and save the secure browser onto a media device, such as a flash drive, and copy and install the files on each computer.
- Download and save the secure browser to a network folder, and copy and install the files on each computer.
- Running the Secure Browser application from a shared network location is strongly discouraged.

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: Windows 10 Take a Test App

Windows 10 includes Microsoft's **Take a Test** app, which provides a secure testing environment.

Must be used on 10S, can be used on 10

Secure Browser Installation: Mac and Linux

Mac

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

Disabling OS X Features

- Disable Exposé or Spaces
- Disable application launches from function keys
- Disable updates to third party apps
- Disable updates to iTunes
- Disable dictation and Siri

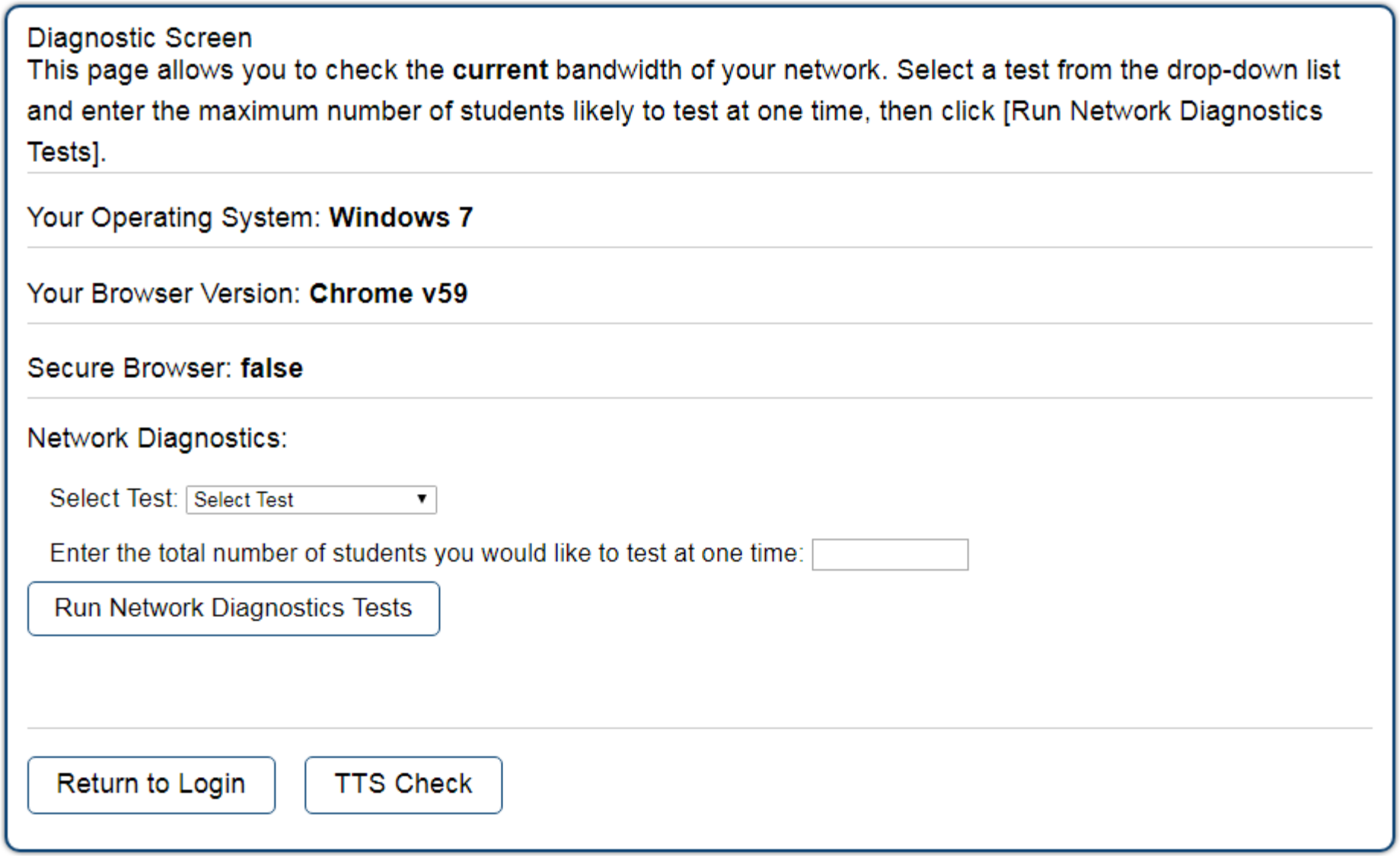
Scheduling Automated Tasks

Ensure all scheduled tasks take place outside of testing hours:

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

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


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 7**
Your Browser Version: **Chrome v59**
Secure Browser: **false**
Network Diagnostics:
Select Test: Select Test
Enter the total number of students you would like to test at one time:
Run Network Diagnostics Tests
Return to Login
TTS Check

System Requirements

- Desktops and Laptops
- Monitor Display
- Mobile Devices

System Requirements: Desktops and Laptops

Supported Operating Systems	Minimum Requirements	Recommended Specifications
Windows 7 (Professional & Enterprise) 8.0 (Professional & Enterprise) 8.1 (Professional & Enterprise) 10 (Professional, Educational, & Enterprise) Server 2008, 2012, 2016 (thin client)	1.1 GHZ Processor 512 MB of RAM 200 MB hard drive space	1.4 GHZ Processor 2+ GB RAM 16+ GB hard drive space
Mac OS X 10.7–10.12[a] 10.13[b]	1.1 GHZ Processor 512 MB of RAM 200 MB hard drive space	1.4 GHZ Processor 2+ GB RAM 16+ GB hard drive space

[a] Support for this version will begin upon its release.

[b] Support for this version is anticipated upon the completion of testing following its release.

System Requirements: Desktops and Laptops, cont.

Supported Operating Systems	Minimum Requirements	Recommended Specifications
Linux Fedora 25–26[a] LTS (Gnome) Ubuntu 14.04, 16.04 LTS (Gnome)	1.1 GHZ Processor 512 MB of RAM 200 MB hard drive space 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+ GB RAM 16+ 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

[a] Support for thi version will begin upon its release.

Supported Mobile Devices: Android and iOS

Operating System	Supported Tablets	Browsers for TA Sites	TA Site	Practice Test Site	TIDE, ORS
Android[b] 5.0, 5.1 6.0 7.0 (Nougat)	Google Nexus 10 Asus Transformer Pad Asus Memo Pad Dell Venue 10 HP Pro Slate 10 Samsung Galaxy Tab 4 Education	Chrome 60+[a]	✓	✓	
iOS (iPads) 9.2, 9.3 10 11[a]	iPad 2 iPad 3 4th-generation (Retina Display) 5th-generation (Retina Display) iPad Air iPad Air 2	Safari 8 Safari 9 Safari 10	✓	✓	

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[a] Support for this version is anticipated upon the completion of testing following its release.
[B] For a complete list of supported tablets, go to https://support.google.com/chrome/a/answer/6220366?hl=en

Supported Mobile Devices: Windows and Chrome

Operating System	Supported Tablets	Browsers for TA Sites	TA Site	Practice Test Site	TIDE, ORS
Windows 8.0 (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 60+ Firefox 52+ Internet Explorer 11 Edge	✓	✓	✓
Chrome OS 50+[a]	Chromebook	Chrome 60+[a]	✓	✓	

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Pop-ups

Configure Internet browsers on Test Administrator devices to allow pop-ups from your testing websites.

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.

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)

Performance Factors

- Network bandwidth
- Number of students simultaneously testing
- Network configuration

Network Configuration

- 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.

Whitelisting

Content filters, firewalls, and proxy servers should be configured to allow the URLs for testing sites and applicable non-testing sites.

*.airast.org

*.tds.airast.org

*.cloud1.tds.airast.org

*.cloud2.tds.airast.org

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.
- Customized voice packs will be available for Windows computers under **General Resources** in the TIDE banner.
- 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.
- Currently, these features are not available on Android devices.

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."

Next Step:

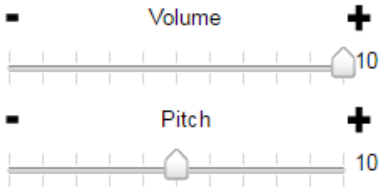
If you heard the voice clearly, choose **I heard the voice**. If not, choose **I did not hear the voice**. To continue testing without checking text-to-speech, choose **Skip TTS Check**.

I heard the voice | I did not hear the voice | Skip TTS Check

Sound Settings

Current Voice Pack: eng

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



Thank You!

Further Information

- **Wyoming Help Desk**
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- Fax 877-218-7663
- wyohelpdesk@air.org