WYOMING
DEPARTMENT OF EDUCATION

Secure Browser Installation Manual

For Technology Coordinators

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Table of Contents

Section I. Introduction to the Secure Browser Manual 1
Scope 1
System Requirements 1
Manual Content 1
Intended Audience 2
Document Conventions 2
Other Resources 2
Section II. Installing the Secure Browser on Desktops and Laptops 4
Installing the Secure Browser on Windows 4
Installing the Secure Browser on an Individual Computer 4
Installing the Secure Browser via Windows 4
Installing the Secure Browser via the Command Line 6
Sharing the Secure Browser over a Network 7
Copying the Secure Browser Installation Directory to Testing Computers 8
Installing the Secure Browser for Use with an NComputing Terminal 9
Installing the Secure Browser on a Terminal Server or Windows Server 10
Installing the Secure Browser Without Administrator Rights 12
Uninstalling the Secure Browser on Windows 12
Uninstalling via the User Interface 12
Uninstalling via the Command Line 12
Microsoft Take a Test App 13
Creating a Dedicated Test Account for Non-permissive Mode Users 13
Creating Desktop Shortcuts for Permissive Mode Users 14
Installing the Secure Browser on Mac 15
Installing the Secure Browser on an Individual Mac 15
Cloning the Secure Browser Installation to Other Macs 16
Uninstalling the Secure Browser on Mac 16
Installing the Secure Browser on Linux 16
Installing the Secure Browser on 32- or 64-Bit Distributions 17
Extracting the Secure Browser TAR File 18
Creating a Shortcut to Secure Browser 10 18
Uninstalling the Secure Browser on Linux 19
Section III. Installing the Secure Browser on Mobile Devices 20
Installing the Secure Browser on iOS 20
Guidance on iOS Classroom App and Summative Testing 21

Using MDM to Disable Classroom Observation 21
Installing AIRSecureTest on Android 22
Installing AirSecureTest on Chrome OS 23
Installing AIRSecureTest as a Kiosk App on Standalone Chromebooks 23
Installing AIRSecureTest as a Kiosk App on Managed Chromebooks 27
Configuring Your State and Assessment Program on Mobile Devices 29
Installing the Secure Browser on Windows Mobile Devices 29
Section IV. Proxy Settings for Desktop Secure Browsers 30
Specifying a Proxy Server to Use with the Secure Browser 30
Appendix A. Creating Group Policy Objects 33
Appendix B. Resetting Secure Browser Profiles 36
Resetting Secure Browser Profiles on Windows 36
Resetting Secure Browser Profiles on Mac 37
Resetting Secure Browser Profiles on Linux 38
Appendix C. User Support 39

Table of Figures

Figure 1. Contents of XXSecureBrowser-OSX.dmg 15
Figure 2. AIRSecureTest Download Page on the Apple Store 20
Figure 3. AIRSecureTest Download Page on Google Play 22
Figure 4. Chrome OS Missing Message 24
Figure 5. Turn OS Verification Off Message 24
Figure 6. OS Verification Off Message 24
Figure 7. Preparing for Developer Mode Message 25
Figure 8. Welcome Screen 25
Figure 9. Join WiFi Network Screen 25
Figure 10. Sign in Screen 26
Figure 11. Automatic Kiosk Mode Message 26
Figure 12. Extensions Screen 26
Figure 13. Manage Kiosk Applications Screen 27
Figure 14. Kiosk Apps Window 28
Figure 15. AIRSecureTest Launchpad 29
Figure 16. Local Group Policy Editor 33
Figure 17. Logon Properties Dialog Box 34
Figure 18. Add a Script Dialog Box 34
Figure 19. Cleaning Secure Browser on Mac 37

Table of Tables

Table 1. Document conventions 2
Table 2. Specifying proxy settings using the command line 31

Section I. Introduction to the Secure Browser Manual

The Secure Browser is a web browser for taking online assessments. The Secure Browser prevents students from accessing other computer or Internet applications and from copying test information. It also occupies the entire computer screen.

Scope

This manual provides instructions for installing the Secure Browser on computers and devices used for online assessments.

System Requirements

For the Secure Browser to work correctly, the computer on which it is installed must have a supported operating system. For a list of supported operating systems, see the *System Requirements for Online Testing* available from the Wyoming Test of Proficiency and Progress portal at http://wyoassessment.org.

Manual Content

This manual is organized as follows:

- Section I, Introduction to the Secure Browser Manual (this section), describes this guide.
- Section II, Installing the Secure Browser on Desktops and Laptops, includes instructions for installing the Secure Browser onto supported Windows, Mac, and Linux platforms.
- Section III, Installing the Secure Browser on Mobile Devices, includes instructions for installing the mobile Secure Browser onto supported iOS, Android, and Chrome OS platforms.
- Section IV, Proxy Settings for Desktop Secure Browsers, provides commands for specifying proxy servers that the Secure Browser should use.
- Appendix A, Creating Group Policy Objects, describes how to create scripts that launch when a user logs into a Windows computer.
- Appendix B, Resetting Secure Browser Profiles, provides instructions for resetting Secure Browser profiles.
- Appendix C, User Support, provides Help Desk information.

Intended Audience

This installation guide is intended for the following audiences:

- Technology coordinators familiar with downloading installation packages from the Internet or from a network location and installing software onto Windows, Mac, or Linux operating systems or Chromebook, iPad, or Android devices.
- Network administrators familiar with mapping or mounting network drives, and creating and running scripts at the user and host level.
- If you install and run the Secure Browser from an NComputing server, you should be familiar with operating that software and related hardware.

Document Conventions

Table 1 lists typographical conventions and key symbols.

Table 1. Document conventions

Element	Description
	Warning: This symbol accompanies important information regarding actions that may cause fatal errors.
	Alert: This symbol accompanies important information regarding a task that may cause minor errors.
	Tip: This symbol accompanies useful information on how to perform a task.
`filename`	Monospaced text indicates a directory, filename, or something you enter in a field.
text	Bold text indicates a link or button that is clickable.

Other Resources

- For information about supported operating systems and web browsers, see the *System Requirements for Online Testing*.
- For information about securing a computer before a test session, see the *Test Administrator User Guide*.
- For information about network and Internet requirements, general peripheral and software requirements, and configuring text-to-speech settings, see the *Technical Specifications Manual for Online Testing*.

- For information about supported hardware and software for Braille testing as well as information about configuring JAWS, see the *Braille Requirements and Testing Manual.*

These documents are available at http://wyoassessment.org.

Section II. Installing the Secure Browser on Desktops and Laptops

This section contains installation instructions for Windows, Mac, and Linux under a variety of deployment scenarios. Some scenarios describe installing the Secure Browser on a shared network drive, from which students would run the Browser. However, there are significant drawbacks in this method. Running the Secure Browser from a shared network drive creates contention among the students' client machines for two resources: LAN bandwidth and shared drive I/O. This performance impact can be avoided by installing the Secure Browser locally on each machine. **AIR strongly discourages the use of network shared drive installation for the Secure Browser, as this setup can compromise the stability and performance of the browser, especially during peak testing times.**

Installing the Secure Browser on Windows

This section provides instructions for installing the Secure Browser on computers running supported versions of Windows.

The instructions in this section assume machines are running a 64-bit version of Windows and that the Secure Browser will be installed to `C:\Program Files (x86)\`. If you are running a 32-bit version of Windows, adjust the installation path to `C:\Program Files\`.

TIP. If you are testing on Windows 10, consider using the Take a Test app. See the section "Microsoft Take a Test App" for details.

Installing the Secure Browser on an Individual Computer

This section contains instructions for installing the Secure Browser on individual computers.

Installing the Secure Browser via Windows

In this scenario, a user with administrator rights installs the Secure Browser using standard Windows. (If you do not have administrator rights, refer to the section Installing the Secure Browser Without Administrator Rights.)

1. If you installed a previous version of the Secure Browser by copying its directory from one computer to another, manually uninstall the Secure Browser by deleting the installation folder and the desktop shortcut. (If you installed the Secure Browser using the Windows installation program, the installation package automatically removes it.) See the instructions in the section Uninstalling the Secure Browser on Windows.

2. Navigate to the **Secure Browsers** page of the Wyoming Assessment Portal at http://wyoassessment.org. Click the **Windows** tab, then click **Download Browser**. A dialog window opens.

3. Do one of the following (this step may vary depending on the browser you are using):
   - If presented with a choice to **Run** or **Save** the file, click **Run**. This opens the Secure Browser Setup wizard.
   - If presented only with the option to **Save**, save the file to a convenient location. After saving the file, double-click the installation file `WYSecureBrowser -Win.msi` to open the setup wizard.
4. Follow the instructions in the setup wizard. When prompted for setup type, click **Install**.
5. Click **Finish** to exit the setup wizard. The following items are installed:
   - The Secure Browser to the default location `C:\Program Files (x86)\WYSecureBrowser\` (64-bit) or `C:\Program Files)\WYSecureBrowser\` (32-bit).
   - A shortcut `WYSecureBrowser` to the desktop.
6. Ensure all background jobs, such as virus scans or software updates, are scheduled outside of test windows. For example, if your testing takes place between 8:00 a.m. and 3:00 p.m., schedule background jobs outside of these hours.
7. *Optional:* Apply proxy settings by doing the following:
   a. Right-click the shortcut `WYSecureBrowser` on the desktop, and select **Properties**.
   b. Under the **Shortcut** tab, in the **Target** field, modify the command to specify the proxy. See Table 2 for available forms of this command.
   c. Click **OK** to close the Properties dialog box.

   For more information about proxy settings, see Section IV, Proxy Settings for Desktop Secure Browsers.
8. Run the browser by double-clicking the `WYSecureBrowser` shortcut on the desktop. The Secure Browser opens displaying the student login screen. The browser fills the entire screen and hides the task bar.
9. To exit the browser, click **CLOSE SECURE BROWSER** in the upper-right corner of the screen.

Installing the Secure Browser via the Command Line

In this scenario, a user with administrator rights installs the Secure Browser from the command line. If you do not have administrator rights, refer to the section Installing the Secure Browser Without Administrator Rights.

1. If you are not signed on to the computer as an administrator, obtain the administrator password.

2. If you installed a previous version of the Secure Browser by copying its directory from one computer to another, manually uninstall the Secure Browser by deleting the installation folder and the desktop shortcut. (If you installed the Secure Browser using the Windows installation program, the installation package automatically removes it.) See the instructions in the section Uninstalling the Secure Browser on Windows.

3. Navigate to the **Secure Browsers** page of the Wyoming Assessment Portal at http://wyoassessment.org. Click the **Windows** tab, then click **Download Browser**. A dialog window opens.

4. Save the file on the computer (this step may vary depending on the browser you are using):

   - If presented with a choice to **Run** or **Save** the file, click **Save**, and save the file to a convenient location.

   - If presented only with the option to **Save**, save the file to a convenient location.

5. Note the full path and filename of the downloaded file, such as `c:\temp\WYSecureBrowser-Win.msi`.

6. Open a command prompt as the administrator by doing the following:

   a. Click **Start**, and locate the Command Prompt application. (In some versions of Windows the application is under **All Programs > Accessories > Command Prompt**.)

   b. Right-click **Command Prompt**, and select **Run as Administrator**.

   c. As necessary, type the administrator password for the computer. The command prompt opens.

   (You need to do step 6 only once for the current login. The next time you open the command prompt, Windows retains the administrator role.)

7. Run the command `msiexec /I <Source> [/quiet] [INSTALLDIR=<Target>]`

   <Source> Path to the installation file, such as `C:\temp\WYSecureBrowser-Win.msi`.

   `<Target>` Path to the location where you want to install the Secure Browser. If absent, installs to the directory described in step 9. The installation program creates the directory if it does not exist.

   `/I` Perform an install.

   `[/quiet]` Quiet mode, no interaction.

   For example, the command

   ```
   msiexec /I c:\temp\WYSecureBrowser-Win.msi /quiet
   INSTALLDIR=C:\AssessmentTesting\BrowserInstallDirectory
   ```

   installs the Secure Browser from the installation package at `C:\temp\WYSecureBrowser-Win.msi` into the directory `C:\AssessmentTesting\BrowserInstallDirectory` using quiet mode.

8. Follow the instructions in the setup wizard. When prompted for setup type, click **Install**.

9. Click **Finish** to exit the setup wizard. The following items are installed:

   - The Secure Browser to the default location `C:\Program Files (x86)\WYSecureBrowser\` (64-bit) or `C:\Program Files\WYSecureBrowser\` (32-bit).

   - A shortcut `WYSecureBrowser` to the desktop.

10. Ensure all background jobs, such as virus scans or software updates, are scheduled outside of test windows. For example, if your testing takes place between 8:00 a.m. and 3:00 p.m., schedule background jobs outside of these hours.

11. Run the browser by double-clicking the `WYSecureBrowser` shortcut on the desktop. The Secure Browser opens displaying the student login screen. The browser fills the entire screen and hides the task bar.

12. To exit the browser, click **CLOSE SECURE BROWSER** in the upper-right corner of the screen.

Sharing the Secure Browser over a Network

In this scenario, you install the Secure Browser on a server's shared drive, and you also create a shortcut to the Secure Browser's executable on each testing computer's desktop. This assumes that all testing computers have access to the shared drive. As stated above, **AIR strongly discourages the use of network shared drive installation for the Secure Browser, as this setup**

can compromise the stability and performance of the browser, especially during peak testing times.

1. On the remote computer from which the students run the Secure Browser, install the Secure Browser following the directions in the section Installing the Secure Browser on an Individual Computer.

2. On each testing machine, sign in and do the following:

   a. Ensure all background jobs, such as virus scans or software updates, are scheduled outside of test windows. For example, if your testing takes place between 8:00 a.m. and 3:00 p.m., schedule background jobs outside of these hours.

   b. Copy the desktop shortcut `WYSecureBrowser` from the remote machine to the directory `C:\Users\Public\Public Desktop`.

   c. Run the browser by double-clicking the `WYSecureBrowser` shortcut on the desktop. The Secure Browser opens displaying the student login screen. The browser fills the entire screen and hides the task bar.

   d. To exit the browser, click **CLOSE SECURE BROWSER** in the upper-right corner of the screen.

Copying the Secure Browser Installation Directory to Testing Computers

In this scenario, a network administrator installs the Secure Browser on one machine, and copies the entire installation directory to testing computers.

1. On the computer from which you will copy the installation directory, install the Secure Browser following the directions in the section Installing the Secure Browser on an Individual Computer. Note the path of the installation directory, such as `C:\Program Files (x86)\WYSecureBrowser`.

2. Identify the directory on local testing computers to which you will copy the browser file (It should be the same directory on all computers.). For example, you may want to copy the directory to `c:\AssesssmentTesting\`. Ensure you select a directory in which the students can run executables.

3. On each local testing computer, do the following:

   a. Ensure all background jobs, such as virus scans or software updates, are scheduled outside of test windows. For example, if your testing takes place between 8:00 a.m. and 3:00 p.m., schedule background jobs outside of these hours.

b. Copy the installation directory used in step 1 from the remote machine to the directory you selected in step 2. For example, if the target directory is `c:\AssesssmentTesting\`, you are creating a new folder `c:\AssesssmentTesting\WYSecureBrowser`.

c. Copy the shortcut `c:\AssesssmentTesting\WYSecureBrowser\WYSecureBrowser.exe - Shortcut.lnk` to the desktop.

d. Run the browser by double-clicking the `WYSecureBrowser` shortcut on the desktop. The Secure Browser opens displaying the student login screen. The browser fills the entire screen and hides the task bar.

e. To exit the browser, click **CLOSE SECURE BROWSER** in the upper-right corner of the screen.

Installing the Secure Browser for Use with an NComputing Terminal

In this scenario, a network administrator installs the Secure Browser on a Windows server accessed through an NComputing terminal. Prior to testing day, the testing coordinator connects consoles to the NComputing terminal, logs in from each to the Windows server, and starts the Secure Browser so that it is ready for the students.

This procedure assumes that you already have a working NComputing topology with consoles able to reach the Windows server.

For a listing of supported terminals and servers for this scenario, see *System Requirements for Online Testing*, available from the Wyoming Test of Proficiency and Progress portal (http://wyoassessment.org).

1. Log in to the machine running the Windows server.

2. Install the Secure Browser following the directions in the section Installing the Secure Browser on an Individual Computer.

3. Open Notepad and type the following command (no line breaks):

   ```
   "C:\Program Files (x86)\WYSecureBrowser\WYSecureBrowser.exe" -CreateProfile
   %SESSIONNAME%
   ```

   If you used a different installation path on the Windows server, use that in the above command.

4. Save the file to the desktop as `logon.bat`.

5. Create a group policy object that runs the file `logon.bat` each time a user logs in. For details, see Appendix A, Creating Group Policy Objects.

6. On each NComputing console, create a new `WYSecureBrowser` desktop shortcut by doing the following (this step is necessary because the default shortcut created by the installation program has an incorrect target):

   a. Connect to the NComputing terminal.

   b. Log in to the Windows server with administrator privileges.

   c. Delete the Secure Browser's shortcut appearing on the desktop.

   d. Navigate to the Secure Browser's installation directory, usually `C:\Program Files (x86)\WYSecureBrowser\`.

   e. Right-click the file `WYSecureBrowserSecureBrowser.exe` and select **Send To > Desktop (create shortcut)**.

   f. On the desktop, right-click the new shortcut and select **Properties**. The Shortcut Properties dialog box appears.

   g. Under the **Shortcut** tab, in the **Target** field, type the following command:

      ```
      "C:\Program Files(X86)\WYSecureBrowser\WYSecureBrowser.exe" -P%SESSIONNAME%
      ```

      If you used a different installation path on the Windows server, use that in the above command.

   h. Click **OK** to close the Properties dialog box.

7. Verify the installation by double-clicking the shortcut to start the Secure Browser.

Installing the Secure Browser on a Terminal Server or Windows Server

In this scenario, a network administrator installs the Secure Browser on a server—either a terminal server or a Windows server. Testing machines then connect to the server's desktop and run the Secure Browser remotely. This scenario is supported on Windows Server 2008 R2, 2012 R2, and 2016 R2.

CAUTION: Testing Quality with Servers Launching a Secure Browser from a terminal or Windows server is typically not a secure test environment, because students can use their local machines to search for answers. Therefore, AIR does not recommend this installation scenario for testing.

1. Log in to the server, and install the Secure Browser by following the directions in the section Installing the Secure Browser on an Individual Computer. Note the path of the installation directory.

2. Copy and paste the line below into Notepad (no line breaks):

   ```
   "C:\Program Files (x86)\WYSecureBrowser\WYSecureBrowser" -CreateProfile
   %SESSIONNAME%
   ```

   If you used a different installation path, use that in the above command.

3. Save the file to the desktop as `logon.bat`.

4. Create a group policy object that runs the file `logon.bat` each time a user connects to the server's desktop. For details, see Appendix A, Creating Group Policy Objects.

5. On each client, create a new `WYSecureBrowser`desktop shortcut by doing the following (this step is necessary because the default shortcut created by the installation program has an incorrect target):

   a. Connect from the client to the server.

   b. On the desktop provided by the server, delete the Secure Browser's shortcut.

   c. Navigate to the Secure Browser's installation directory, usually `C:\Program Files (x86)\WYSecureBrowser\`.

   d. Right-click the file `WYSecureBrowserSecureBrowser.exe` and select **Send To > Desktop (create shortcut)**.

   e. On the desktop, right-click the new shortcut and select **Properties**. The Shortcut Properties dialog box appears.

   f. Under the **Shortcut** tab, in the **Target** field, type the following command:

      ```
      "C:\Program Files(X86)\WYSecureBrowser\WYSecureBrowser.exe" -P%SESSIONNAME%
      ```

      If you used a different installation path on the server, use that in the above command.

   g. Click **OK** to close the Properties dialog box.

6. Verify the installation by double-clicking the shortcut to start the Secure Browser.

Installing the Secure Browser Without Administrator Rights

In this scenario, you copy the Secure Browser from one machine where it is installed onto another machine on which you do not have administrator rights.

1. Log on to a machine on which the Secure Browser is installed.
2. Copy the entire folder where the browser was installed (usually `C:\Program Files (x86)\WYSecureBrowser`) to a removable drive or shared network location.
3. Copy the entire directory from the shared location or removable drive to any directory on the target computer.
4. In the folder where you copied the Secure Browser, right-click `WYSecureBrowserSecureBrowser.exe` and select **Send To > Desktop (create shortcut)**.
5. Ensure all background jobs, such as virus scans or software updates, are scheduled outside of test windows. For example, if your testing takes place between 8:00 a.m. and 3:00 p.m., schedule background jobs outside of these hours.
6. Double-click the desktop shortcut to run the Secure Browser.

Uninstalling the Secure Browser on Windows

The following sections describe how to uninstall the Secure Browser from Windows or from the command line.

Uninstalling via the User Interface

The following instructions may vary depending on your version of Windows.

1. Navigate to **Settings > System > Apps & features** (Windows 10) or **Control Panel > Add or Remove Programs** or **Uninstall a Program** (previous versions of Windows).
2. Select the Secure Browser program `WYSecureBrowser` and click **Remove** or **Uninstall**.
3. Follow the instructions in the uninstall wizard.

Uninstalling via the Command Line

1. Open a command prompt.
2. Run the command `msiexec /X <Source> /quiet`

<Source>	Path to the executable file, such as `C:\MSI\XXSecureBrowser.exe`.
`/X`	Perform an uninstall.
`[/quiet]`	Quiet mode, no interaction.

For example, the command

```
msiexec /X C:\AssessmentTesting\WYSecureBrowser.exe /quiet
```

uninstalls the Secure Browser installed at `C:\AssessmentTesting\` using quiet mode.

Microsoft Take a Test App

Windows 10 comes with Microsoft's Take a Test app, which enforces a locked-down, secure testing environment identical to AIR's Secure Browser. Users of the Take a Test app do not need to install the AIR Secure Browser on the testing machine. For more information about configuring Take a Test, see https://docs.microsoft.com/en-us/education/windows/take-tests-in-windows-10. (ELPA21 does not support the Take a Test app. If you are administering ELPA21 tests, you must install the AIR Secure Browser on testing machines.)

Creating a Dedicated Test Account for Non-permissive Mode Users

Non-permissive mode users should create a dedicated test account for the Take a Test app. Permissive mode features will not available when using this method. To access permissive mode features, please see Creating Desktop Shortcuts for Permissive Mode Users.

Note: The Take a Test app will detect some forbidden apps running in the background during assessment administration, even if users don't start these apps. This will cause the Take a Test app to log a user out of their account. (For more information, see https://support.microsoft.com/en-us/help/4338725/k-12-assessment-unexpected-reports-apps-running-background-windows-10) Because of this, AIR has disabled the forbidden app check when using the Take a Test app through a dedicated test account, which blocks access to these apps by default.

To create a dedicated test account:

1. Sign into the device with an administrator account.
2. Go to **Settings > Accounts > Work or School Access > Set up an account for taking tests**.
3. Select an existing account to use as the dedicated testing account.

Note: If you don't have an account on the device, you can create a new account. To do this, go to **Settings** > **Accounts** > **Family & Other Users** > **Add someone else to this PC** > **I don't have this person's sign-in information** > **Add a user without a Microsoft account**.

4. In the *Enter the test's web address* field, enter https://wy.tds.airast.org/student
5. Click **Save**.

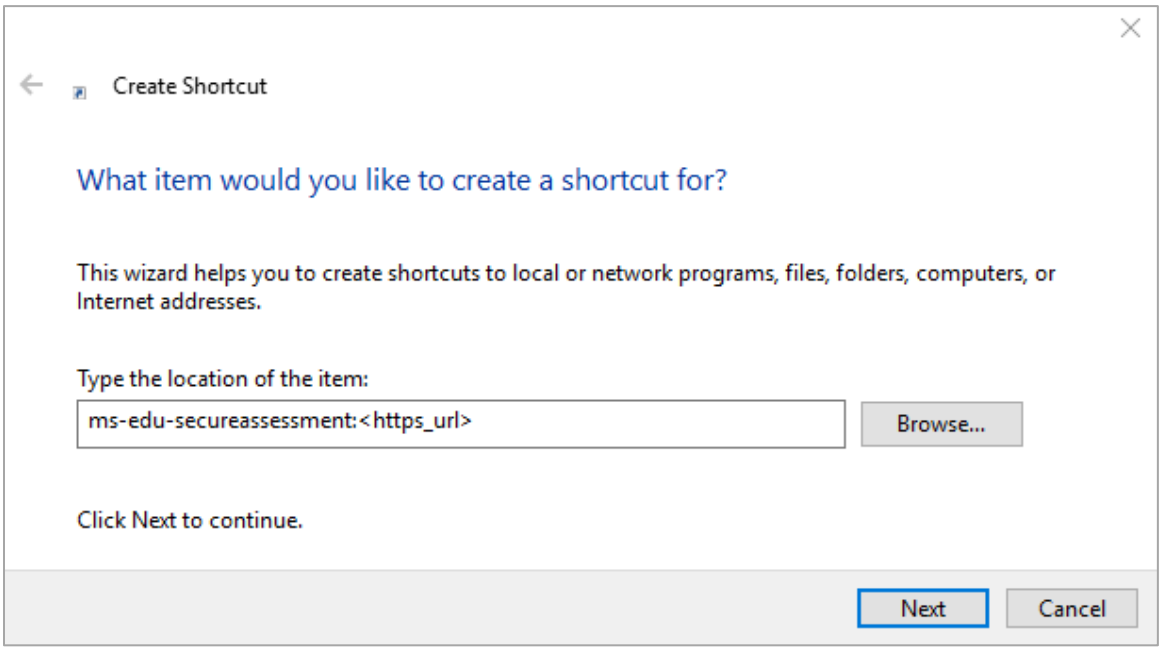
The student can now sign in to the dedicated account to take the specified test.

Creating Desktop Shortcuts for Permissive Mode Users

Permissive mode users should create a desktop shortcut for the Take a Test app.

To create a desktop shortcut for Take a Test:

1. Log in to Windows as the user taking a test.
2. Right-click on the desktop and select **New > Shortcut**. The Create Shortcut dialog box appears.



3. In the *Type the location of the item* field, enter

   `ms-edu-secureassessment:https://wy.tds.airast.org/`student

4. Click **Next**.
5. In the next dialog box, type a name for the shortcut.
6. Click **Finish**.

The shortcut appears on the desktop. To run the Take a Test app, double-click the shortcut. To exit the Take a Test app, press **Ctrl+Atl+Del**.

Installing the Secure Browser on Mac

This section provides instructions for installing the secure browsers on Mac desktop and laptop computers.

Installing the Secure Browser on an Individual Mac

In this scenario, a user installs the Secure Browser on desktop or laptop computers running Mac OS. The steps in this procedure may vary depending on your version of Mac OS and your web browser.

1. Remove any previous versions of the Secure Browser by dragging its folder to the Trash.

2. Navigate to the **Secure Browser** page of the Wyoming Test of Proficiency and Progress portal at http://wyoassessment.org. Click the **Mac** tab, then click **Download Browser**. If prompted for a download location, select your downloads folder.

3. Open Downloads from the Dock, and click `WYSecureBrowser-OSX.dmg` to display its contents (see Figure 1).

Figure 1. Contents of WYSecureBrowser-OSX.dmg

4. Drag the `WYSecureBrowser` icon to the folder. This installs the Secure Browser into Applications.

5. Ensure all background jobs, such as virus scans or software updates, are scheduled outside of test windows. For example, if your testing takes place between 8:00 a.m. and 3:00 p.m., schedule background jobs outside of these hours.

6. Disable Mission Control/Spaces. Instructions for disabling Spaces are in the *Technical Specifications Manual for Online Testing*, available from the Wyoming Test of Proficiency and Progress portal (http://wyoassessment.org).

7. In Finder, navigate to **Go > Applications**, and double-click **WYSecureBrowser** to launch the Secure Browser. (You must launch the Secure Browser to complete the installation.) The Secure Browser opens displaying the student login screen. The browser fills the entire screen and hides the dock.

8. To exit the browser, click **CLOSE SECURE BROWSER** in the upper-right corner of the screen.

9. Create a desktop shortcut; from the **Applications** folder, drag `WYSecureBrowser` to the desktop.

Cloning the Secure Browser Installation to Other Macs

Depending on your networking and permissions, it may be faster to install the Secure Browser onto a single Mac, take an image of the disk, and copy the image to other Macs.

To clone the Secure Browser installation to other computers:

1. On the computer from which you will clone the installation, do the following:

    a. Install the Secure Browser following the directions in the section Installing the Secure Browser on an Individual Mac. Be sure to run and then close the Secure Browser after the installation.

    b. In Finder, display the **Library** folder.

    c. Open the **Application Support** folder. See Figure 19.

    d. Delete the folder containing the Secure Browser.

    e. Delete the `Mozilla` folder.

2. Create a shell script that creates a new Secure Browser profile when a user logs in. The basic command to create a profile is `<install_directory>/Contents/MacOS/WYSecureBrowser --CreateProfile profile_name`, where `profile_name` is unique among all testing computers.

3. Clone the image.

4. Deploy the image to the target Macs.

Uninstalling the Secure Browser on Mac

To uninstall a Mac Secure Browser, drag its folder to the Trash.

Installing the Secure Browser on Linux

This section provides instructions for installing the Secure Browser on computers running a supported Linux distribution. For more information about Linux requirements, refer to the

Technical Specifications Manual for Online Testing, available from the Wyoming Test of Proficiency and Progress portal (http://wyoassessment.org).

Installing the Secure Browser on 32- or 64-Bit Distributions

There are two versions of the Secure Browser: one for 32-bits and another for 64-bits. These installation instructions may vary for your individual Linux distribution.

1. Uninstall any previous version of the Secure Browser by deleting the directory containing it.

2. Obtain the root or super-user password for the computer on which you are installing the Secure Browser.

3. Navigate to the **Secure Browser** page of the Wyoming Test of Proficiency and Progress portal at http://wyoassessment.org. Click the **Linux** tab for your distribution (32-bit or 64-bit), then click **Download Browser**. Save the file to the desktop.

4. Right-click the downloaded file `WYSecureBrowserX.X-YYYY-MM-DD-i686.tar.bz2` (32-bit) or `WYSecureBrowserX.X-YYYY-MM-DD-x86_64.tar.bz2` (64-bit), and select **Extract Here** to expand the file. This creates the `WYSecureBrowser` folder on the desktop.

5. In a file manager, open the `WYSecureBrowser` folder.

6. For Ubuntu, disable automatic running of scripts by doing the following (otherwise skip to step 7)

    a. From the menu bar, select **Edit > Preferences**. On the **Behavior** tab, mark the **Ask each time** radio button.

    b. Click **Close**.

7. Change the installation script to executable by doing the following:

    a. Right-click the file `install-icon.sh`, and select **Properties**.

    b. On the **Permissions** tab, mark the **Allow executing file as a program** checkbox.

    c. Click **Close**.

8. Double-click the file `install-icon.sh`. In the next dialog box, click **Run in Terminal**. The installation script prompts you for the root or super-user password you obtained in step 2.

9. Enter the password. The script installs all dependent libraries and supported voice packs, and creates a `WYSecureBrowser` icon on the desktop.

10. Ensure all background jobs, such as virus scans or software updates, are scheduled outside of test windows. For example, if your testing takes place between 8:00 a.m. and 3:00 p.m., schedule background jobs outside of these hours.

11. If text-to-speech testing is performed on this computer, reboot it.

12. From the desktop, double-click the `WYSecureBrowser` icon to launch the browser. An **Untrusted App Launcher** error message appears.

13. Click **Trust and Launch**. The student login screen appears. The browser fills the entire screen and hides any panels or launchers.

14. To exit the browser, click **CLOSE SECURE BROWSER** in the upper-right corner of the screen.

Extracting the Secure Browser TAR File

Users attempting to install the Secure Browser on Fedora 27-28 or Ubuntu 18.04 have been encountering an issue where the Secure Browser extracts to the **Home** folder and not the **Desktop** folder. This is a feature in these operating systems. This is not an error in the Secure Browser. The following procedure explains how to extract the Secure Browser TAR file manually using terminal commands.

To extract the Secure Browser manually using terminal commands:

1. Launch **Terminal**.

2. Type **tar xfjv [Secure Browser File Name].tar.bz2**.

3. Press **Enter**.

Creating a Shortcut to Secure Browser 10

Installation of Secure Browser 10 on machines running Fedora or Ubuntu Linux will not automatically install a shortcut to the browser. Users must manually create a shortcut. The following procedure explains how to complete this process.

To manually create a shortcut to the Secure Browser in Fedora or Ubuntu Linux:

1. Open **Terminal**.

2. Type **cd /location of Secure Browser/**

3. Type **./install-icon.sh**

4. Press **Enter**.

5. Close **Terminal**.

6. Open Secure Browser folder.

7. Click **install-icon.sh**.

Note*:* A window displaying “Do you want to run install-icon.sh or display its contents?” will appear.

8. Click **Run**.

Uninstalling the Secure Browser on Linux

To uninstall a Secure Browser, delete the directory containing it.

Section III. Installing the Secure Browser on Mobile Devices

This section contains information about installing AIRSecureTest, the Secure Browser app for iOS, Android, and Chrome OS. For information about configuring supported tablets and Chromebooks to work with the Secure Browser, refer to the *Technical Specifications Manual for Online Testing*, available from the Wyoming Test of Proficiency and Progress portal (http://wyoassessment.org).

Installing the Secure Browser on iOS

This section contains instructions for downloading and installing AIRSecureTest and selecting your state and assessment program. The process for installing the Secure Browser is the same as for any other iOS application. (To install the Secure Browser on many iOS devices simultaneously, consider using Autonomous Single App Mode. For details, see the section "Configuring Using Autonomous Single App Mode" in *Technical Specifications Manual for Online Testing*.) (To run the Secure Browser or classroom app in iOS, you must first disable Speech to Text.)

1. On your iPad, navigate to the **Secure Browser** page of the Wyoming Test of Proficiency and Progress portal at http://wyoassessment.org, and click the iOS tab. Click **Download on the App Store**. (You can also search for `AIRSecureTest` in the App Store to find the Secure Browser app.) The AIRSecureTest download page opens (see Figure 2).

Figure 2. AIRSecureTest Download Page on the Apple Store

2. Tap . The iPad downloads and installs the Secure Browser, and the button changes to **Open**. After installation, an AIRSecureTest icon appears on the iPad's home screen.

3. Configure the test administration by following the procedure in the section Configuring Your State and Assessment Program on Mobile Devices.

Guidance on iOS Classroom App and Summative Testing

The iOS Classroom App allows a teacher or proctor to remotely view and monitor a student's iPad. This feature can be disabled via mobile device management (MDM), by un-installing the Classroom app, or by turning off Bluetooth on the teacher iPad during testing windows.

Using MDM to Disable Classroom Observation

You can use the following key value to disable access to the Classroom observation feature on student devices. This key is defined as part of the Restrictions profile payload and is documented in the Configuration Profile Reference.

allowScreenShot	Boolean	If set to false, users can’t save a screenshot of the display and are prevented from capturing a screen recording; it also prevents the Classroom app from observing remote screens. Defaults to true.

Installing AIRSecureTest on Android

You can download AIRSecureTest from the Wyoming Assessment Portal or from the Google Play store. The process for installing the Secure Browser is the same as for any other Android application.

This section contains instructions for downloading and installing AIRSecureTest, setting up a restricted profile, and selecting your state and assessment program.

1. On your Android tablet, navigate to the **Secure Browser** page of the Wyoming Assessment Portal at http://wyoassessment.org and tap the Android tab. Tap **Get it on Google play**. (You can also search for `AIRSecureTest` in the Google Play store to find the Secure Browser app.) The AIRSecureTest download page appears.

Figure 3. AIRSecureTest Download Page on Google Play

2. Tap **Install**, and then tap **Accept**. The tablet downloads and installs the Secure Browser.
3. Open **Settings**.
4. Tap **Cloud and accounts**.
5. Tap **Users**.
6. Tap **Add user or profile**.
7. Tap **Restricted profile**. The new profile opens with a list.
8. Tap **New profile**, enter a name, and tap **OK**.
9. Enable **AIRSecureBrowser** from the list. Users will only have access to the **AIRSecureBrowser** in the restricted profile. All other apps will be disabled.
10. Tap **Back**.
11. Swipe down from the top of the tablet with two fingers. **Quick Settings** will open.
12. Tap **Switch user**.

13. Tap the newly named restricted profile.

14. Tap **AIRSecureBrowser**.

15. Configure the test administration by following the procedure in the section Configuring Your State and Assessment Program on Mobile Devices.

Android Secure Browser Keyboard

If the Secure Browser keyboard has not been selected via device settings on Android tablets, it will need to be selected upon opening the AIRSecureTest app.

For more information about the Android Secure Browser keyboard, including instructions for enabling it, refer to the *Technical Specifications Manual for Online Testing*, available from the Wyoming Test of Proficiency and Progress portal (http://wyoassessment.org), Download Secure Browsers page.

Installing AirSecureTest on Chrome OS

This section contains instructions for installing AIRSecureTest, the Secure Browser app for Chrome OS, as a kiosk application.

Chromebooks Manufactured in 2017 or later

Due to recent changes by Google, users with Chromebooks manufactured in 2017 or later who do not have an Enterprise or Education license **will not** be able to use those machines for assessments. Google no longer allows users without these licenses to set up kiosk mode, which is necessary to run the AIR Secure Browser.

This change restricting kiosk mode does not affect the Chrome operating system. You can still use any version of Chrome OS on hardware manufactured in 2016 or earlier.

Installing AIRSecureTest as a Kiosk App on Standalone Chromebooks

These instructions are for installing the AIRSecureTest Secure Browser as a kiosk app on standalone Chromebook devices.

Warning Step 5 of this procedure erases all data on the Chromebook. Before wiping, be sure to back up any data.

1. From your network administrator, obtain the following:
   - The wireless network to which the Chromebook connects. This typically includes the network's SSID, password, and other access credentials.
   - An email and password for logging in to Gmail.
2. Power off, then power on your Chromebook.
3. If the `OS verification is Off` message appears (similar to Figure 6), do the following (otherwise skip to step 4):

a. Press **Space**. In the confirmation screen, press **Enter**. The Chromebook reboots.

b. In the Welcome screen (see Figure 8), select your language, keyboard, and enter the network name and password you obtained in step 1. Back in the Welcome screen, click **Continue**.

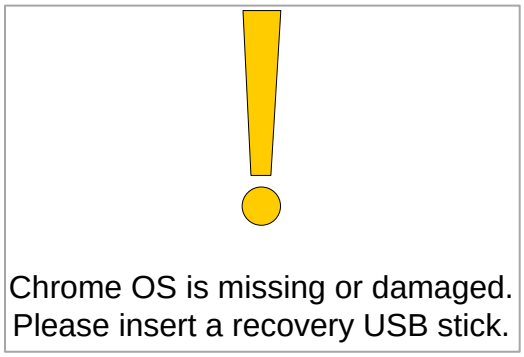
c. In the Google Chrome OS Terms screen, click **Accept and continue**. The Sign in screen appears.

4. If this Chromebook was already wiped and configured for a wireless network, skip to step 10; otherwise, continue with step 5.

5. In the Sign in screen, wipe the Chromebook by doing the following:

a. Press **Esc** + ↻ + ⏻. A yellow exclamation mark appears similar to that in Figure 4.

Figure 4. Chrome OS Missing Message



b. Press **Ctrl + D**. The message in Figure 5 appears.

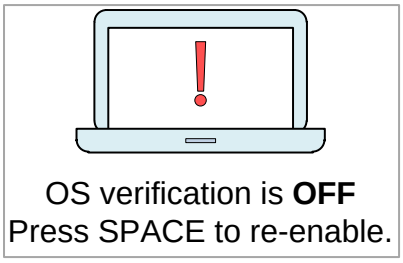
Figure 5. Turn OS Verification Off Message

To turn OS verification OFF, press Enter.
Your system will reboot and local data will be cleared.

To go back, press ESC.

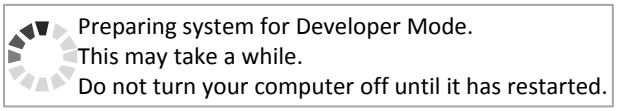
c. Press **Enter**. A message similar to that in Figure 6 appears.

Figure 6. OS Verification Off Message



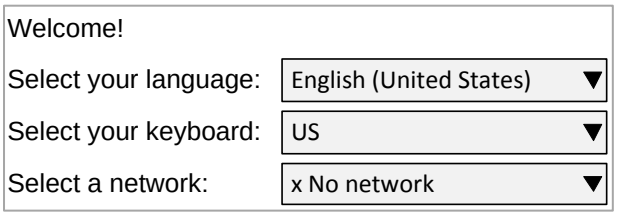
d. Press **Ctrl + D**. The Chromebook indicates it is transitioning to developer mode (see Figure 7). The transition takes approximately 10 minutes, after which the Chromebook reboots.

Figure 7. Preparing for Developer Mode Message



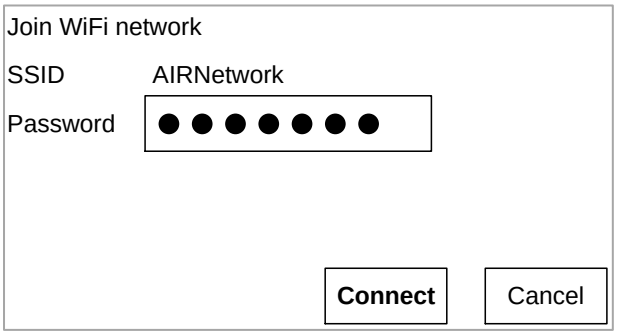
e. After the Chromebook reboots, the `OS verification is Off` message appears again (see Figure 6). Press **Space**, then press **Enter**. The Chromebook reboots, and the Welcome screen appears (see Figure 8).

Figure 8. Welcome Screen



6. In the Welcome screen, select your language, keyboard, and network. The Join WiFi network screen appears (see Figure 9).

Figure 9. Join WiFi Network Screen

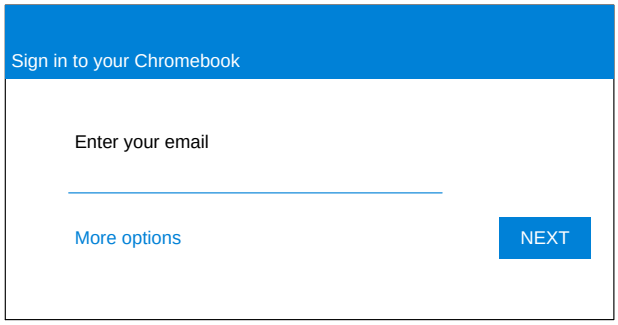


7. Enter the network's password you obtained in step 1.

8. Click **Connect**, and back in the Welcome screen click **Continue**.

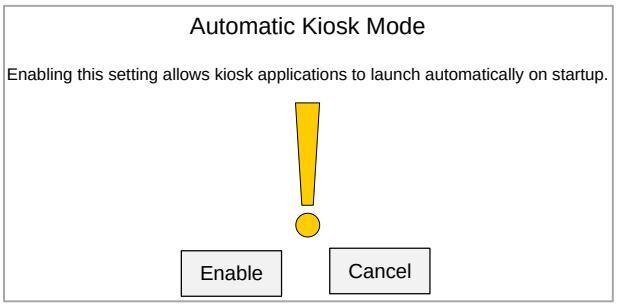
9. In the Google Chrome OS Terms screen, click **Accept and continue**. The Sign in screen appears (see Figure 10).

Figure 10. Sign in Screen



10. In the Sign in screen, press **Ctrl** + **Alt** + **K**. The Automatic Kiosk Mode screen appears (see Figure 11).

Figure 11. Automatic Kiosk Mode Message



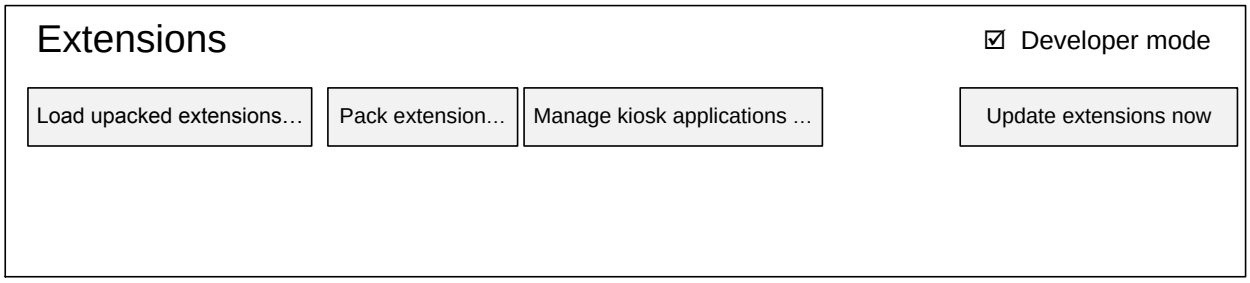
11. Click **Enable**, then click **OK**. The Sign in screen appears (see Figure 10).

12. In the Sign in screen, enter the Gmail address you obtained in step 1, click **Next**, enter the password, and click **Next** again.

13. When you get to the desktop, click the Chrome icon ( ) to open Chrome.

14. In the URL bar, enter `chrome://extensions`. The Extensions screen appears (see Figure 12).

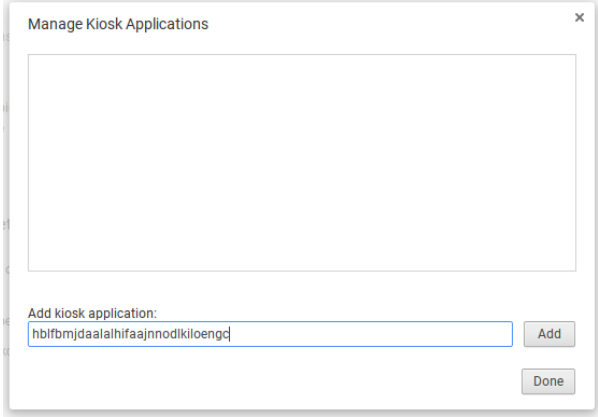
Figure 12. Extensions Screen



15. Mark the checkbox for **Developer Mode**.

16. Click **Manage kiosk applications** located at the top of the screen. The Manage Kiosk Applications screen appears (see Figure 13).

Figure 13. Manage Kiosk Applications Screen



17. Do the following in the Manage Kiosk Applications screen:

    a. Enter the following into the **Add kiosk application** field: `hblfbmjdaalalhifaajnnodlkiloengc`

    b. Click **Add**. The `AIRSecureTest` application appears in the Manage Kiosk Applications list.

    c. Click **Done**.

18. Click your avatar in the lower-right corner, and then click **Sign Out**.

19. Back at the desktop, click **Apps** at the bottom of the screen, then click **AIRSecureTest**. The Secure Browser launches.

20. If you receive the following error message, then the Secure Browser is not configured to run in kiosk mode.

    ```
    The AIRSecureTest application requires kiosk mode to be enabled.
    ```

    You need to re-install the app in kiosk mode by restarting this procedure.

21. Configure the test administration by following the procedure in the section Configuring Your State and Assessment Program on Mobile Devices.

Installing AIRSecureTest as a Kiosk App on Managed Chromebooks

These instructions are for installing the AIRSecureTest Secure Browser as a kiosk app on domain-managed Chromebook devices. The steps in this procedure assume that your Chromebooks are already managed through the admin console.

AIRSecureTest is not compatible with public sessions.

1. As the Chromebook administrator, log in to your admin console (https://admin.google.com).

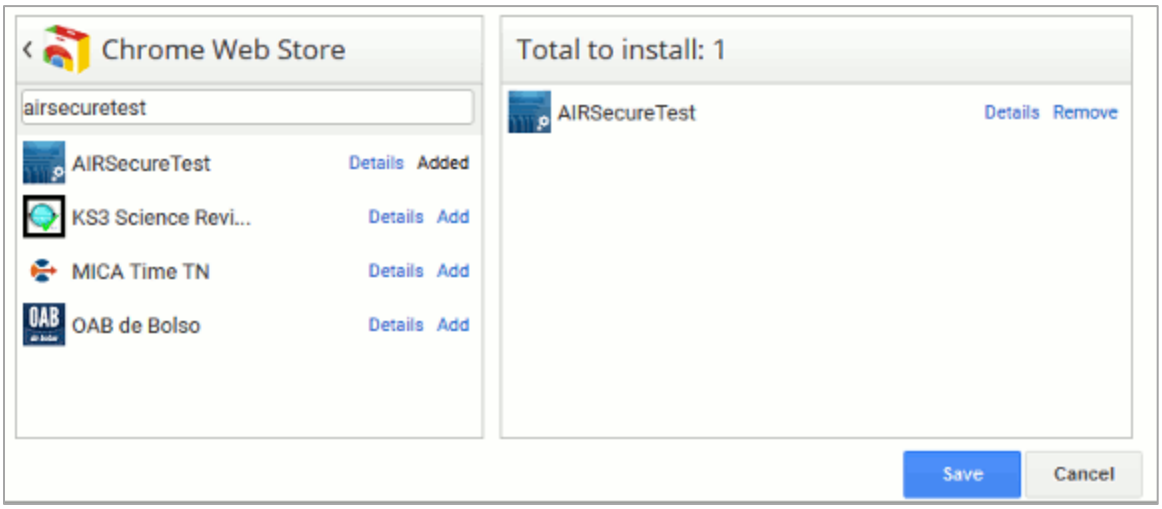
2. Click **Device management**. The Device management page appears.

3. In the left side of the page, click **Chrome management**, and in the next page click **Device settings**.

4. In the ***Device settings*** page, scroll down to the *Kiosk Settings* section.

5. Click **Manage Kiosk Applications**. The ***Kiosk Apps*** window appears (see Figure 14).

Figure 14. Kiosk Apps Window



6. If any AIRSecureTest apps appear in the right column, remove them by clicking **Remove**.

7. Add the AIRSecureTest app by doing the following:

   a. Click **Manage Kiosk Applications**. The ***Kiosk Apps*** window appears.

   b. Click **Chrome Web Store**.

   c. In the search box, enter `AIRSecureTest` and press **Enter**. The AIRSecureTest app appears.

   d. Click **Add**. The app appears in the *Total to install* section.

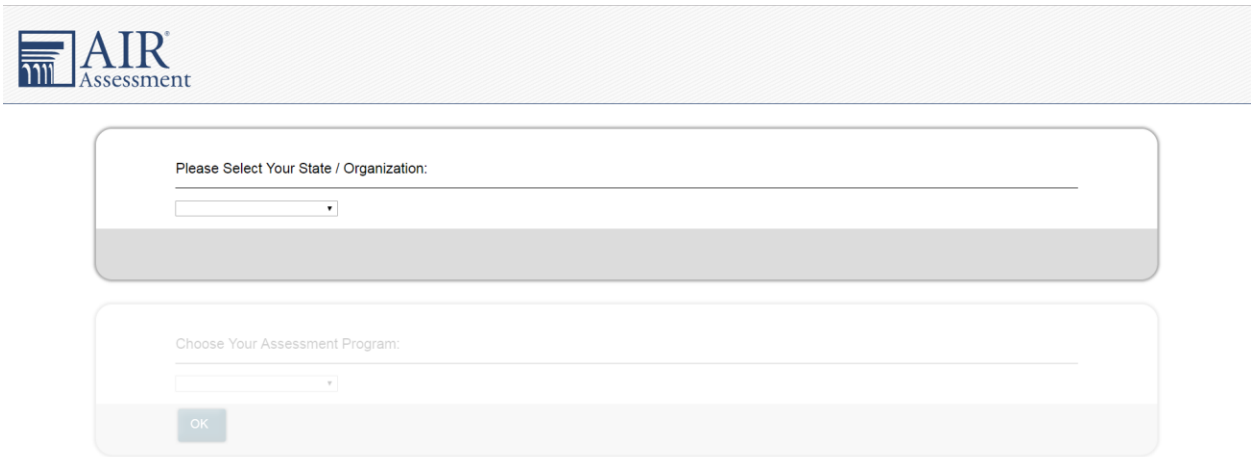
   e. Click **Save**. The AIRSecureTest application appears on all managed Chromebook devices.

Configuring Your State and Assessment Program on Mobile Devices

The first time you open the AIRSecureTest app, a launchpad appears. This launchpad establishes the test administration to which your students will log in.

1. Under **Please Select Your State**, select **Wyoming** from the drop-down list (see Figure 15).

Figure 15. AIRSecureTest Launchpad



2. Under **Choose Your Assessment Program**, Wyoming Assessment should already be selected.

3. Tap or select **OK**. The student login page will load. The Secure Browser is now ready for students to use.

The launchpad appears only once. The student login page appears the next time the Secure Browser is launched.

Installing the Secure Browser on Windows Mobile Devices

The procedure for installing the Secure Browser on Windows mobile devices is the same for installing it on desktops. See the section Installing the Secure Browser via Windows for details.

Section IV. Proxy Settings for Desktop Secure Browsers

This section describes the commands for passing proxy settings to the Secure Browser, as well as how to implement those commands on the desktop computer.

Specifying a Proxy Server to Use with the Secure Browser

By default, the Secure Browser attempts to detect the settings for your network's web proxy server. However, users of web proxies should execute a proxy command once from the command prompt. This command does not need to be added to the Secure Browser shortcut. Table 2 lists the form of the command for different settings and operating systems. To execute these commands from the command line, change to the directory containing the Secure Browser's executable file.

Note: Domain names in commands The commands in Table 2 use the domains foo.com and proxy.com. When configuring for a proxy server, use your actual testing domain names as listed in the section "URLs for Testing Sites" in the *Technical Specifications Manual for Online Testing*.

Table 2. Specifying proxy settings using the command line

Description	System	Command
Use the browser without any proxy	Windows	`WYSecureBrowser.exe -proxy 0 aHR0cHM6Ly93eS50ZHMuYWlyYXN0Lm9yZy9zdHVkZW50Lw0K`
	Mac	`./WYSecureBrowser -proxy 0 aHR0cHM6Ly93eS50ZHMuYWlyYXN0Lm9yZy9zdHVkZW50Lw0K`
	Linux	`./WYSecureBrowser.sh -proxy 0 aHR0cHM6Ly93eS50ZHMuYWlyYXN0Lm9yZy9zdHVkZW50Lw0K`
Set the proxy for HTTP requests only	Windows	`WYSecureBrowser.exe -proxy 1:http:foo.com:80 aHR0cHM6Ly93eS50ZHMuYWlyYXN0Lm9yZy9zdHVkZW50Lw0K`
	Mac	`./WYSecureBrowser -proxy 1:http:foo.com:80 aHR0cHM6Ly93eS50ZHMuYWlyYXN0Lm9yZy9zdHVkZW50Lw0K`
	Linux	`./WYSecureBrowser.sh -proxy 1:http:foo.com:80 aHR0cHM6Ly93eS50ZHMuYWlyYXN0Lm9yZy9zdHVkZW50Lw0K`
Set the proxy for all protocols to mimic the “Use this proxy server for all protocols” of Firefox	Windows	`WYSecureBrowser.exe -proxy 1:*:foo.com:80 aHR0cHM6Ly93eS50ZHMuYWlyYXN0Lm9yZy9zdHVkZW50Lw0K`
	Mac	`./WYSecureBrowser -proxy 1:*:foo.com:80 aHR0cHM6Ly93eS50ZHMuYWlyYXN0Lm9yZy9zdHVkZW50Lw0K`
	Linux	`./WYSecureBrowser.sh -proxy 1:*:foo.com:80 aHR0cHM6Ly93eS50ZHMuYWlyYXN0Lm9yZy9zdHVkZW50Lw0K`
Specify the URL of the PAC file	Windows	`WYSecureBrowser.exe -proxy 2:proxy.com aHR0cHM6Ly93eS50ZHMuYWlyYXN0Lm9yZy9zdHVkZW50Lw0K`
	Mac	`./WYSecureBrowser -proxy 2:proxy.com aHR0cHM6Ly93eS50ZHMuYWlyYXN0Lm9yZy9zdHVkZW50Lw0K`
	Linux	`./WYSecureBrowser.sh -proxy 2:proxy.com aHR0cHM6Ly93eS50ZHMuYWlyYXN0Lm9yZy9zdHVkZW50Lw0K`

Description	System	Command
Auto-detect proxy settings	Windows	`WYSecureBrowser.exe -proxy 4 aHR0cHM6Ly93eS50ZHMuYWlyYXN0Lm9yZy9zdHVkZW50Lw0K`
	Mac	`./WYSecureBrowser -proxy 4 aHR0cHM6Ly93eS50ZHMuYWlyYXN0Lm9yZy9zdHVkZW50Lw0K`
	Linux	`./WYSecureBrowser.sh -proxy 4 aHR0cHM6Ly93eS50ZHMuYWlyYXN0Lm9yZy9zdHVkZW50Lw0K`
Use the system proxy setting (default)	Windows	`WYSecureBrowser.exe -proxy 5 aHR0cHM6Ly93eS50ZHMuYWlyYXN0Lm9yZy9zdHVkZW50Lw0K`
	Mac	`./WYSecureBrowser -proxy 5 aHR0cHM6Ly93eS50ZHMuYWlyYXN0Lm9yZy9zdHVkZW50Lw0K`
	Linux	`./WYSecureBrowser.sh -proxy 5 aHR0cHM6Ly93eS50ZHMuYWlyYXN0Lm9yZy9zdHVkZW50Lw0K`

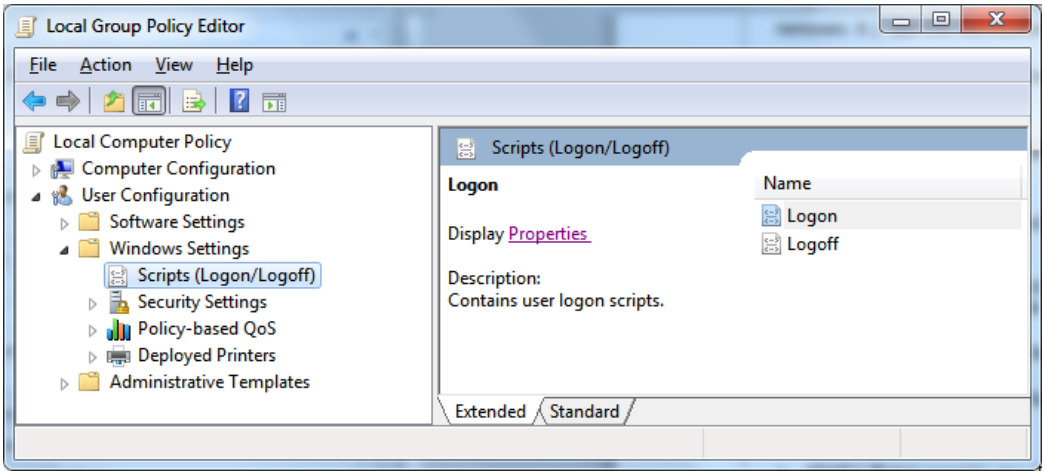
Appendix A. Creating Group Policy Objects

Many of the procedures in the section Installing the Secure Browser on Windows refer to creating a group policy object. These are objects that Windows executes upon certain events. The following procedure explains how to create a group policy object that runs a script when a user logs in. The script itself is saved in a file `logon.bat`.

For additional information about creating group policy objects, see https://technet.microsoft.com/en-us/library/cc754740(v=ws.11).aspx.

1. In the task bar (Windows 10), or in **Start > Run** (previous versions of Windows), enter `gpedit.msc`. The Local Group Policy Editor appears (see Figure 16).

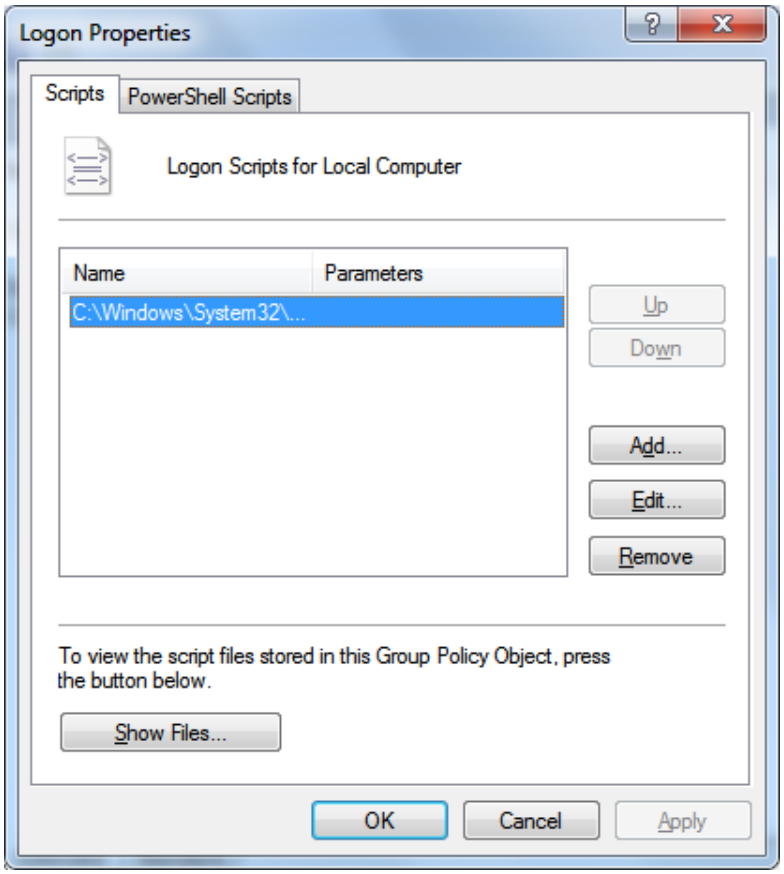
Figure 16. Local Group Policy Editor



2. Expand **Local Computer Policy > User Configuration > Windows Settings > Scripts (Logon/Logoff)**.

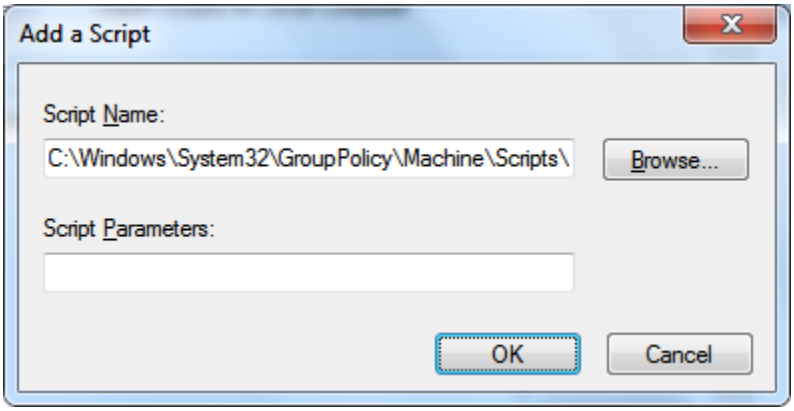
3. Select **Logon** and click **Properties**. The Logon Properties dialog box appears (see Figure 17).

Figure 17. Logon Properties Dialog Box



4. Click **Add**. The Add a Script dialog box appears (Figure 18).

Figure 18. Add a Script Dialog Box



5. Click **Browse…**, and navigate to the `logon.bat` you want to run.

6. Click **OK**. You return to the Logon Properties dialog box.

7. Click **OK**. You return to the Local Group Policy Editor.

8. Close the Local Group Policy Editor.

Appendix B. Resetting Secure Browser Profiles

If the Help Desk advises you to reset the Secure Browser profile, use the instructions in this section.

Resetting Secure Browser Profiles on Windows

The following procedure applies to Windows 7 and later.

1. Log on as an admin user or as the user who installed the Secure Browser, and close any open Secure Browsers.

2. Delete the contents of the following folders:

   - `C:\Users\username\AppData\Local\AIR\`

   - `C:\Users\username\AppData\Roaming\AIR\`

   where `username` is the Windows user account where the Secure Browser is installed. (Keep the `AIR\` folders, just delete their contents.)

3. Start the Secure Browser.

Resetting Secure Browser Profiles on Mac

1. Log on as an admin user or as the user who installed the Secure Browser, and close any open Secure Browsers.

2. Start Finder.

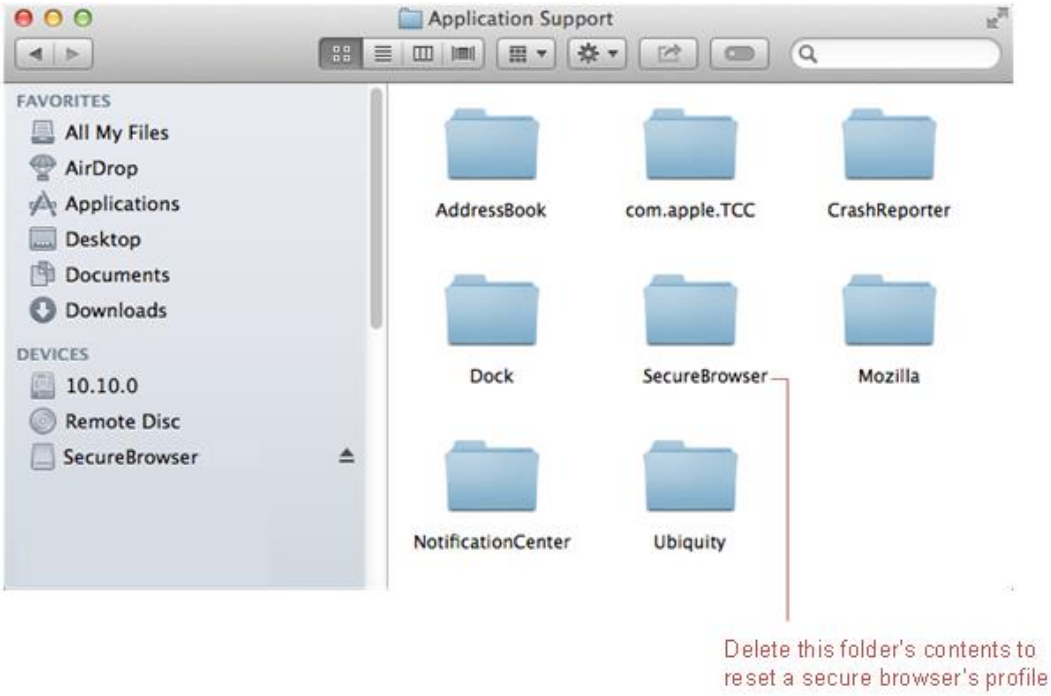
3. While pressing **Option**, select **Go > Library**. The contents of the Library folder appear. See Figure 19.

4. Open the **Application Support** folder, and delete the folder containing the Secure Browser.

5. Returning to the Library, open the **Caches** folder, and delete the Secure Browser's folder.

6. Restart the Secure Browser.

Figure 19. Cleaning Secure Browser on Mac



Resetting Secure Browser Profiles on Linux

1. Log on as a superuser or as the user who installed the Secure Browser, and close any open Secure Browsers.

2. Open a terminal, and delete the contents of the following directories:

   - `/home/username/.air`

   - `/home/username/.cache/air`

   where `username` is the user account where the Secure Browser is installed. (Keep the directories, just delete their contents.)

3. Restart the Secure Browser.

Appendix C. User Support

If this document does not answer your questions, please contact the Wyoming Assessment Help Desk.

The Help Desk is open Monday - Friday from 7:00 a.m. to 7:00 p.m. MT (except holidays).

Wyoming Assessment Help Desk

Toll-Free Phone Support: 888-897-8024

Email Support: wyohelpdesk@air.org

If you contact the Help Desk, you will be asked to provide as much detail as possible about the issues you encountered.

Include the following information:

- Test Administrator name and IT/network contact person and contact information
- WISER IDs of affected students
- Results ID for the affected student tests
- Operating system and browser version information
- Any error messages and codes that appeared, if applicable
- Information about your network configuration:
    - Secure Browser installation (to individual machines or network)
    - Wired or wireless Internet network setup