

# **Configurations, Troubleshooting, and Advanced Secure Browser Installation Guide for Mac**

For Technology Coordinators

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*Prepared by Cambium Assessment, Inc.*



Descriptions of the operation of the Test Information Distribution Engine, Test Delivery System, and related systems are property of Cambium Assessment, Inc. (CAI) and are used with the permission of CAI.

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# Configurations, Troubleshooting, and Advanced Secure Browser Installation for Mac

This document contains configurations, troubleshooting, and advanced Secure Browser installation instructions for your network and Mac workstations.

## How to Configure Networks for Online Testing

This section contains additional configurations for your network.

### Which Resources to Add to you Allowlist for Online Testing

This section presents information about the URLs that Cambium Assessment, Inc. (CAI) provides. Ensure your network’s firewalls are open for these URLs. If your testing network includes devices that perform traffic shaping, packet prioritization, or Quality of Service, ensure these URLs have high priority.

### Which URLs for Non-Testing Sites to Add to you Allowlist

[Table 1](#) lists URLs for non-testing sites, such as Test Information Distribution Engine (TIDE) and Online Reporting System (ORS).

Table 1. CAI URLs for Non-Testing Sites

System	URL
Indiana Assessment Portal and Secure Browser installation files	https://indiana.portal.cambiumast.com
Single Sign-On System	https://sso1.cambiumast.com/auth/realms/indiana/account
Test Information Distribution Engine	https://in.tide.cambiumast.com/
Online Reporting System	https://in.reports.cambiumast.com/

### Which URLs for TA and Student Testing Sites to Add to your Allowlist

Testing servers and satellites may be added or modified during the school year to ensure an optimal testing experience. As a result, CAI strongly encourages you to add these URLs to your allowlist at the root level. This requires using a wildcard.

Table 2. CAI and AIR URLs for Testing Sites

System	URL
TA and Student Testing Sites Assessment Viewing Application	*.cambiumast.com *.tds.cambiumast.com *.cloud1.tds.cambiumast.com
For 2020-2021, users should add both CAI and AIR URLs listed in this table to their allowlist.	*.cloud2.tds.cambiumast.com *.airast.org *.tds.airast.org *.cloud1.tds.airast.org

	*.cloud2.tds.airast.org
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### Which URLs for Online Dictionary and Thesaurus to Add to your Allowlist

Some online assessments contain an embedded dictionary and thesaurus provided by Merriam-Webster. The Merriam-Webster URLs listed in [Table 3](#) should be added to your allowlist to ensure that students can use them during testing.

Table 3. CAI URLs for Online Dictionaries and Thesauruses

Domain Name	IP Address
media.merriam-webster.com	64.124.231.250
www.dictionaryapi.com	64.124.231.250

### Which Ports and Protocols are Required for Online Testing

[Table 4](#) lists the ports and protocols used by the Test Delivery System. Ensure that all content filters, firewalls, and proxy servers are open accordingly.

Table 4. Ports and Protocols for Test Delivery System

Port/Protocol	Purpose
80/TCP	HTTP (initial connection only)
443/TCP	HTTPS (secure connection)

### How to Configure Filtering Systems

If the school's filtering system has both internal and external filtering, the URLs for the testing sites (see [Table 2](#)) must be added to your allowlist in both filters. Please see your vendor's documentation for specific instructions. Also, be sure to add these URLs to your allowlist in any multilayer filtering system (such as local and global layers).

### How to Configure for Domain Name Resolution

[Table 1](#) and [Table 2](#) list the domain names for CAI's testing and non-testing applications. Ensure the testing machines have access to a server that can resolve those names.

## How to Configure Network Settings for Online Testing

Local Area Network (LAN) settings on testing machines should be set to automatically detect network settings.

1. Open System Preferences.
2. Open Network.
3. Select **Ethernet** for wired connections or **WiFi** for wireless connections.

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4. Click **Advanced**.
5. Click **Proxies** tab.
6. Click Auto Proxy Discovery checkbox.
7. Click **OK** to close window.
8. Click **Apply** to close **Network** window.
9. Close System Preferences.

### How to Configure the Secure Browser for Proxy Servers

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 5](#) 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 5](#) 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 [Which Resources to Add to your Allowlist for Online Testing](#).

Table 5. Specifying proxy settings using the command line

Description	System	Command
Use the browser without any proxy	Mac	<code>./IndianaSecureBrowser -proxy 0 aHR0cHM6Ly9pbi50ZHMuY2FtYml1bWFzdC5jb20vc3R1ZGVudA==</code>
Set the proxy for HTTP requests only	Mac	<code>./IndianaSecureBrowser -proxy 1:http:foo.com:80 aHR0cHM6Ly9pbi50ZHMuY2FtYml1bWFzdC5jb20vc3R1ZGVudA==</code>
Set the proxy for all protocols to mimic the “Use this proxy server for all protocols” of Firefox	Mac	<code>./IndianaSecureBrowser -proxy 1:*.foo.com:80 aHR0cHM6Ly9pbi50ZHMuY2FtYml1bWFzdC5jb20vc3R1ZGVudA==</code>
Specify the URL of the PAC file	Mac	<code>./IndianaSecureBrowser -proxy 2:proxy.com aHR0cHM6Ly9pbi50ZHMuY2FtYml1bWFzdC5jb20vc3R1ZGVudA==</code>

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Auto-detect proxy settings	Mac	<code>./IndianaSecureBrowser -proxy 4 aHR0cHM6Ly9pbi50ZHMuY2FtYml1bWFzdC5jb20vc3R1ZGVudA==</code>
Use the system proxy setting (default)	Mac	<code>./IndianaSecureBrowser -proxy 5 aHR0cHM6Ly9pbi50ZHMuY2FtYml1bWFzdC5jb20vc3R1ZGVudA==</code>

## How to Install the Secure Browser for Mac using Advanced Methods

This section contains additional instructions for installing the Secure Browser for Mac.

### How to Clone 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.

1. On the computer from where you will clone the installation, do the following:  
Install the Secure Browser following the directions on the Indiana Assessment Portal. Be sure to run and then close the Secure Browser after the installation.
2. Clone the image.
3. Deploy the image to the target Macs.

### How to Uninstall the Secure Browser on Mac

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

## How to Configure Mac Workstations for Online Testing

This section contains additional configurations for Mac.

Several features on Mac workstations must be disabled before testing begins. Installing the Mac Secure Profile disables the hot keys for enabling Dictation, Mission Control, and Spaces and the trackpad gestures for accessing Lookup, Space Switching, Expose, and Notification Center. It also sets function keys to standard functions for all users of the Mac for which it is deployed. If you do not install the Secure Profile, these settings and the other settings listed below must be disabled manually. Even if you do install the Secure Profile, the other settings listed below must still be disabled manually.

CAI recommends installing the Mac Secure Profile, as it reduces the number of steps needed to set up Mac devices for online testing; however, the Mac Secure Profile is not required for online testing. Apple provided an updated Mac Secure Profile (now available on CAI's Indiana Assessment Portal) in October 2019 to disable the keyboard shortcuts for screenshots. Devices that had the Secure Profile installed before October 2019 will need to follow the steps below to manually disable keyboard shortcuts for screenshots or install the updated Mac Secure Profile by repeating the installation steps (below). If repeating the Secure Profile installation steps, the former Secure Profile does not need to be deleted. As noted above, there are other Mac device settings listed below that must be manually disabled, despite using the Mac Secure Profile.

### How to Install the Mac Secure Profile

The Secure Profile is a configuration profile that can be used to configure Mac workstations for online testing. It can be downloaded from the Indiana Assessment Portal's Secure Browser page and must be installed, along with the Secure Browser, before testing begins.

The Secure Profile disables the hot keys for enabling Mission Control, Spaces, Screenshots, and Dictation and the trackpad gestures for accessing Lookup, App Exposé, Launchpad, and Show Desktop. It also sets function keys to standard functions for all users of the Mac to which it is deployed, disables Voice Control, and disables the menu pop-up that appears when triple-tapping the power button on Touch Bar-enabled devices. If you do not install the Secure Profile, the features listed in this paragraph must be disabled manually. Even if you do install the Secure Profile, the features listed in the bullet points above must still be disabled manually.

Because the Secure Profile configures the operating system regardless of the operating system's current settings, there is no way for CAI to create a configuration profile to roll back the changes. Before you install the Secure Profile, you should back up your device profile's preferences and settings. Once the device is no longer used for testing, the profile can be removed, and your original settings can be reapplied.

To revert configurations made by the Secure Profile if you did not create a backup of your device profile's preferences and settings prior to installation, the features listed in the paragraph above must be re-enabled manually. These features can be re-enabled through System Preferences.

2020-2021 Update: The Secure Profile has been updated for 2020-2021 to disable Voice Control and the menu pop-up that appears when triple-tapping the power button on Touch Bar-



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enabled devices. If you have previously installed an older version of the Secure Profile, you must download and install the new version from the link the Indiana Assessment Portal.

1. Click the **Download the Secure Profile** link on the Mac tab of the Indiana Assessments Portal’s Secure Browser’s page to download the Mac Secure Profile.
2. Run the Mac Secure Profile installer.
3. Upon installation, restart your computer.

Figure 1. Download Mac Secure Profile



**How to Disable Updates to Third-Party Apps**

Updates to third-party apps may include components that compromise the testing environment. This section describes how to disable updates to third-party apps.

The following instructions are based on OS X 10.9; similar instructions apply for other versions of Mac OS.

1. Log in to the student’s account.
2. Choose Apple menu > **System Preferences**. The **System Preferences** dialog box opens.
3. Click **App Store**. The **App Store** window opens.
4. Mark Automatically check for updates.
5. Clear Download newly available updates in the background.
6. Clear Install app updates.
7. Mark Install system data files and security updates.

Figure 2. App Store Window



## How to Disable Updates to iTunes

You must disable updates to iTunes prior to testing. If iTunes updates pop up during a test, the Secure Browser will pause the test and the student will be kicked out of the testing session.

The following instructions are based on OS X 10.9; similar instructions apply for other versions of Mac OS.

1. Log in to the student's account.
2. Start iTunes.
3. Select iTunes > Preferences.
4. Under the Advanced tab, clear Check for new software updates automatically.
5. Click **OK**.

Figure 3. Advanced Preferences

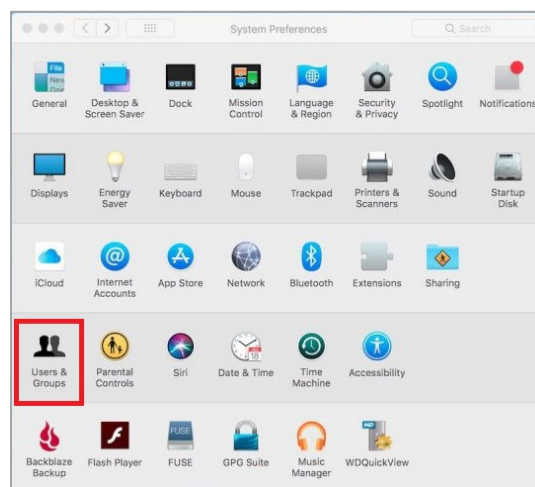


## How to Disable Fast User Switching

Fast User Switching is a feature in Mac OS X 10.11 and higher that allows for more than one user to be logged in at the same time. If Fast User Switching is not disabled and students try to access it during a test, the Secure Browser will pause the test. The following instructions describe how to disable Fast User Switching.

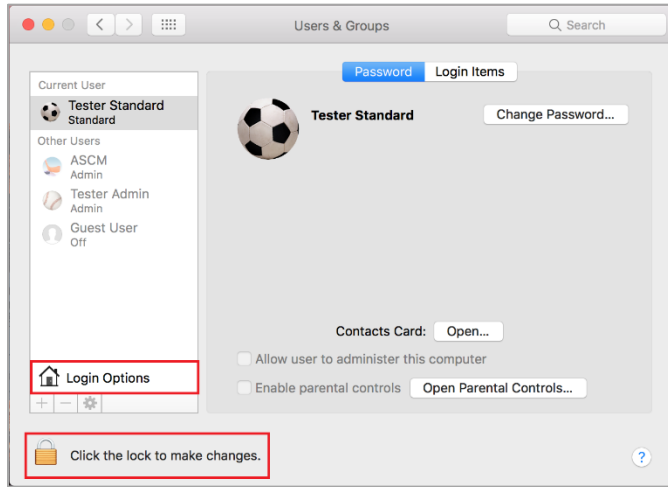
1. Choose Apple menu > **System Preferences**.

Figure 4. System Preferences > Users & Groups



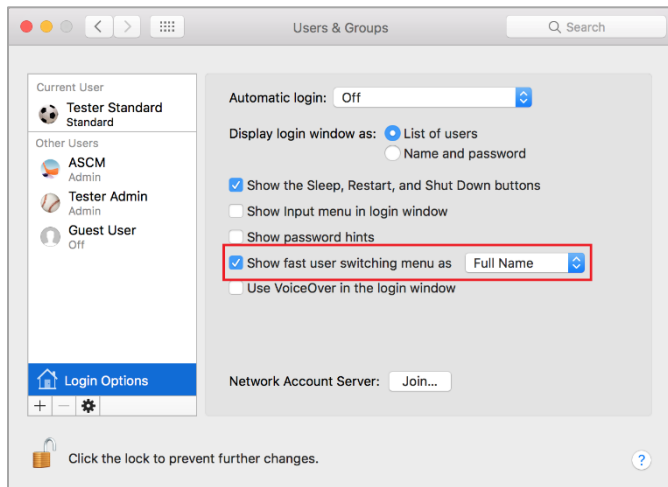
2. In System Preferences, click **Users & Groups**. The **Users & Groups** window opens.
3. If the padlock in the lower left corner is locked, click it and authenticate with administrator credentials.

Figure 5. Users & Groups



4. Click **Login Options**. The **Login Options** window opens.
5. Uncheck the Show fast user switching menu as... checkbox.

Figure 6. Login Options



Fast User Switching is now disabled. The Fast User Switching icon no longer appears in the menu bar.

Figure 7. Menu Bar



## How to Troubleshoot Mac Workstations

This section contains troubleshooting tips for Mac.

### How to Reset Secure Browser Profiles on Mac

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

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

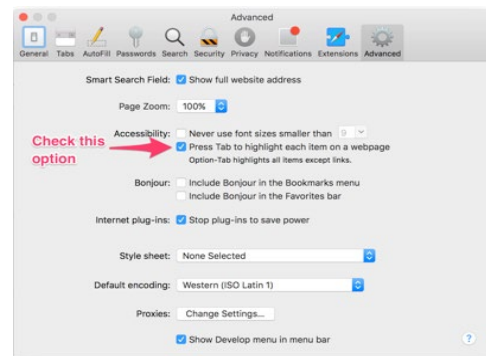
### How to Navigate to Tool Menu with the Keyboard Using a Safari Browser

Students can use any supported public browser for the Released Item Repository (RIR), and navigate to the Tool menu using standard methods, with the exception of Safari. To access the Tool menu using Safari, enable the "Press tab to highlight each item on a webpage" option in Safari Preferences, as shown below.

NOTE: Students who have the text-to-speech (TTS) accommodation enabled for the RIR will need to use the Secure Browser.

1. Open Safari, and from the Safari menu, click **Preferences**.
2. Click **Advanced**.
3. Mark the checkbox **Press tab to highlight each item on a webpage**.

Figure 8. Advanced Safari Preferences



## How to Disable Text-to-Speech Keyboard Shortcut

A feature in macOS 10.12 and later allows users to have any text on the screen read aloud by selecting the text and hitting a preset key or set of keys on the keyboard. By default, this feature is disabled and must remain disabled so as not to compromise test security. This section describes how to toggle this feature.

1. From the Apple menu, select **System Preferences**.
2. Select Accessibility.
3. Select **Speech**.
4. To enable this feature, check the **Speak selected text when the key is pressed** checkbox. To disable, deselect the checkbox.

## Appendix. Change Log

Changes to this guide after August 2, 2019 are noted.

Section	Description of Change
How to Configure Mac Workstations for Online Testing	Added information on disabling keyboard shortcuts for screenshots on Mac OS.
How to Configure Mac Workstations for Online Testing	Added updated guidance on Mac Secure Profile.
Throughout	CAI replaced a reference to AIR within text, URLs, or email address.
How to Download and Install the Mac Secure Profile	Added Voice Control to the list of features disabled by the Secure Profile and added note describing updates to the Secure Profile for 2020-2021.
How to Configure Networks for Online Testing	Changed all references of “whitelist” to “allowlist” or “add to your allowlist”.
Configurations, Troubleshooting, and Advanced Secure Browser Installation for Windows – Table 2	Added note: For 2020-2021, users should add both Cambium and AIR URLs listed to their allowlist.
How to Configure Networks for Online Testing	Removed next section “Configuring for Certificate Revocations”.  Our Secure Browser no longer uses the Online Certificate Status Protocol to check certificates. We now validate our certificates in our custom code.
How to Install the Mac Secure Profile	2020-2021 update – revised language throughout section.
How to Configure Mac Workstations for Online Testing	Removed sections <i>How to Disable Siri</i> . The secure browser now handles this configuration.
How to Configure Mac Workstations for Online Testing	Removed section <i>How to Disable Keyboard Shortcuts for Screenshots</i> . Secure browser has been updated to handle this.