

# Configurations, Troubleshooting, and Secure Browser Installation Guide for Linux

## For Technology Coordinators

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# Configurations, Troubleshooting, and Secure Browser Installation for Linux

This document contains instructions for installing the Secure Browser, as well as configurations, troubleshooting, and advanced Secure Browser installation instructions for your network and Linux devices.

## Installing Secure Browser for Linux

### Installing Secure Browser for Linux (32-bit)

This procedure installs Secure Browser on desktop computers running one of the Linux distributions listed on the [Supported Systems & Requirements](#) page. These instructions may vary for your individual Linux distribution.

1. Uninstall any previous versions 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. Click the **Download Browser** on the [Download Secure Browser](#) page. A dialog window opens. If prompted for a download location, select the desktop.
4. Right-click the downloaded file `FSASecureBrowserX.X-YYYY-MM-DD-i686.tar.bz2` (32-bit) and select **Extract Here** to expand the file. For Fedora, launch the terminal, enter **`tar xfv WVSecureBrowser.tar.bz2`**, and press enter. This creates the **FSASecureBrowser** folder on the desktop.
5. In a file manager, open the **FSASecureBrowser**.
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 an **FSASecureBrowser** 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 **FSASecureBrowser** 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 **X** in the upper-right corner of the screen.

## Installing Secure Browser for Linux (64-bit)

This procedure installs Secure Browser on desktop computers running one of the Linux distributions listed on the [Supported Systems & Requirements](#) page. These instructions may vary for your individual Linux distribution.

1. Uninstall any previous versions 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. Click the **Download Browser** on the [Download Secure Browser](#) page. A dialog window opens. If prompted for a download location, select the desktop.
4. Right-click the downloaded file `FSASecureBrowserX.X-YYYY-MM-DD-x86_64.tar.bz2` (64-bit), and select **Extract Here** to expand the file. This creates the **FSASecureBrowser** folder on the desktop.
5. In a file manager, open the **FSASecureBrowser**.
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 **FSASecureBrowser** 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 **FSASecureBrowser** 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 **X** in the upper-right corner of the screen.

## Extracting the Secure Browser TAR File

The following procedure explains how Fedora 29–30 or Ubuntu 18.04 users can extract the Secure Browser TAR file manually to the Desktop using terminal commands.

To extract the Secure Browser manually using terminal commands:

1. Launch **Terminal**.
2. Type the following:

```
tar xfv FSASecureBrowser.tar.bz2
```

Press **Enter**.

## Additional Configurations for Linux

This section contains additional configurations for Linux.

### Required Libraries & Packages

The following libraries and packages are required to be installed on all 32-bit and 64-bit Linux workstations:

- 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

The following libraries and packages are recommended to be installed on all 32-bit and 64-bit Linux workstations:

- NetworkManager 0.7 or higher
- DBus 1.0 or higher
- HAL 0.5.8 or higher

The following libraries and packages are required to be installed on all 64-bit Linux workstations:

- Sox
- Net-tools

### Adding Verdana Font

Some tests have content that requires the Verdana TrueType font. Therefore, ensure that Verdana is installed on Linux machines used for testing. The easiest way to do this is to install the Microsoft core fonts package for your distribution.

- Fedora—Follow the steps in the “How to Install” section of the following website:  
<http://corefonts.sourceforge.net/>.
- Ubuntu—In a terminal window, enter the following command to install the msttcorefonts package:  
`sudo apt-get install msttcorefonts`

## Disabling On-Screen Keyboard

Fedora and Ubuntu feature an on-screen keyboard that should be disabled before online testing. This section describes how to disable the on-screen keyboard.

*To disable the on-screen keyboard:*

1. Open **System Settings**.
2. Select **Universal Access**.
3. In the *Typing* section, toggle **Screen Keyboard** to **Off**.

## Troubleshooting for Linux

This section contains troubleshooting tips for Linux.

### Resetting Secure Browser Profiles on Linux

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

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.

### Text-to-Speech and Linux

Text-to-speech with tracking does not function correctly on Linux OS. If students require the use of this accommodation they must use a different operating system.

# Linux Technology Coordinator Checklist

This checklist can be printed out and referred to during review of networks and computers used for testing.

Activity	Target Completion Date	Reference
<b>For all Operating Systems</b>		
<input type="checkbox"/>	Verify that all of your school's computers/devices that will be used for online testing meet the operating system requirements.	3–4 weeks before testing begins in your school
		<a href="#">Supported Systems &amp; Requirements</a>
<input type="checkbox"/>	Verify that your school's network and Internet are properly configured for testing, conduct network diagnostics, and resolve any issues.	3–4 weeks before testing begins in your school
		<a href="#">Supported Systems &amp; Requirements</a>
<input type="checkbox"/>	Install the secure browser on all computers/devices that will be used for testing.	3–4 weeks before testing begins in your school
		<a href="#">Configurations, Troubleshooting, and Secure Browser Installation for Linux</a>
<input type="checkbox"/>	Enable pop-up windows and review software requirements for each operating system.	1–2 weeks before testing begins in your school
		<a href="#">Technology Setup for Online Testing</a>
<b>For Linux</b>		
<input type="checkbox"/>	Add Veranda font and disable on-screen keyboard.	3–4 weeks before testing begins in your school
		<a href="#">Adding Verdana Font, Disabling On-Screen Keyboard</a>



# FSA Help Desk and User Support

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

The Help Desk will be open **Monday–Friday from 7:00 a.m. to 8:30 p.m. Eastern Time** (except holidays or as otherwise indicated on the FSA Portal).

**Toll-Free Phone Support: 1-866-815-7246**

**Email Support: [fsahelpdesk@air.org](mailto:fsahelpdesk@air.org)**

In order to help us effectively assist you with your issue or question, please be ready to provide the FSA Help Desk with detailed information that may include the following:

- Device, 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

# Change Log

Location	Change	Date