






User Guide — Lightweight Linux for Macs

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Before You Begin

What You'll Need

-  An Intel Mac from 2008–2019 (see [Supported Models](#) (SUPPORTED_MODELS.md))
-  A USB drive (8 GB or larger)
-  Internet connection (Ethernet recommended for installation)
-  30–60 minutes of time
-  A backup of important data from your Mac

What This Kit Does

This kit transforms a minimal Linux installation into a fully configured, Mac-optimised desktop with:

- **XFCE** — A lightweight desktop environment that runs great on older hardware
 - **Google Chrome** — Set as the default browser
 - **Mac-specific drivers** — WiFi, trackpad, keyboard, display, audio, Bluetooth
 - **Storage optimisation** — Automatic tuning for your HDD or SSD
 - **OTA updates** — Automatic update checking with rollback capability
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Preparing Your Mac

Step 1: Back Up Your Data

Before anything else, back up your important files. You can:

- Use Time Machine to create a full backup
- Copy important files to an external drive or cloud storage

Step 2: Check Your Mac Model

1. Click the Apple menu () → **About This Mac**

2. Note the **Model Identifier** (e.g., “MacBookPro11,1”)
3. Check the [Supported Models](#) (SUPPORTED_MODELS.md) list to confirm compatibility

Step 3: Decide on Partitioning

You have two options:

- **Replace macOS entirely:** Linux gets the full disk (simpler)
- **Dual-boot:** Keep macOS alongside Linux (requires partitioning)

For dual-boot, use macOS Disk Utility to shrink your macOS partition first, leaving at least 30 GB for Linux.

Creating a Bootable USB

On macOS

1. Download [Ubuntu 22.04 LTS](https://ubuntu.com/download/desktop) (https://ubuntu.com/download/desktop) (or your preferred distro)
2. Download and install [balenaEtcher](https://www.balena.io/etcher/) (https://www.balena.io/etcher/)
3. Insert your USB drive
4. Open Etcher → Select the ISO → Select your USB drive → Flash

On Linux

```
# Find your USB device (e.g., /dev/sdb)
lsblk

# Write the ISO (replace sdX with your USB device)
sudo dd if=ubuntu-22.04-desktop-amd64.iso of=/dev/sdX bs=4M status=progress
sync
```

On Windows

Use [Rufus](https://rufus.ie/) (https://rufus.ie/) or [balenaEtcher](https://www.balena.io/etcher/) (https://www.balena.io/etcher/).

Installing the Base Linux System

Step 1: Boot from USB

1. Shut down your Mac
2. Insert the USB drive
3. Power on while holding the **Option (⌥)** key
4. Select the USB drive (it may appear as “EFI Boot”)
5. Select “Install Ubuntu” or “Try Ubuntu”

Step 2: Install Linux

Follow the standard Ubuntu installer:

1. Choose your language
2. Select **Minimal Installation** (recommended for lightweight setup)
3. Choose your partitioning scheme

4. Set your timezone, username, and password
5. Wait for installation to complete
6. Reboot when prompted

 **Tip:** If WiFi doesn't work during installation, connect via Ethernet or USB tethering. The kit will install proper WiFi drivers.

Step 3: First Boot

After rebooting, you'll have a basic Ubuntu desktop. Now it's time to run our kit.

Running the Installer

Step 1: Get the Kit

Open a terminal and run:

```
# Option A: Clone from GitHub
sudo apt install git
git clone https://github.com/lightweight-linux-for-macs/releases.git
cd releases

# Option B: Download a release
wget https://github.com/lightweight-linux-for-macs/releases/latest/download/
lightweight-linux-mac-1.0.0.tar.gz
tar xzf lightweight-linux-mac-1.0.0.tar.gz
cd lightweight-linux-mac-1.0.0
```

Step 2: Run the Installer

```
sudo ./install.sh
```

The installer will:

1. ☒ Detect your Mac hardware model
2. ☒ Update system packages
3. ☒ Install essential utilities
4. ☒ Install XFCE desktop environment
5. ☒ Install and configure Google Chrome
6. ☒ Apply performance tweaks
7. ☒ Install Mac-specific hardware drivers
8. ☒ Optimise storage (HDD/SSD auto-detection)
9. ☒ Set up OTA update system

Step 3: Reboot

```
sudo reboot
```

Post-Installation Setup

WiFi

If WiFi doesn't work immediately after installation:

1. Connect via Ethernet temporarily
2. Run: `sudo ./scripts/hardware/mac_drivers.sh --component wifi`
3. Reboot

Keyboard

The installer sets function keys to F1-F12 mode by default. To change:

```
# Edit /etc/modprobe.d/apple-keyboard.conf
sudo nano /etc/modprobe.d/apple-keyboard.conf

# Change fnmode:
# 0 = Fn key disabled
# 1 = Fn+F1 = F1 (media keys default)
# 2 = F1 = F1 (function keys default) ← installed default
```

Trackpad

Natural scrolling is enabled by default. To disable:

```
sudo nano /etc/X11/xorg.conf.d/70-apple-trackpad.conf
# Change "NaturalScrolling" from "true" to "false"
```

Display Scaling (Retina)

The kit auto-detects HiDPI displays. If scaling isn't right:

- **XFCE Settings** → **Appearance** → **Fonts** → Adjust DPI
- Or edit `/etc/profile.d/hidpi-xfce.sh`

Using Your New System

Desktop Overview

- **Application Menu:** Click the XFCE icon in the top-left, or press `Super` key
- **File Manager:** Thunar (in the dock/panel)
- **Terminal:** Right-click desktop → "Open Terminal Here", or press `Ctrl+Alt+T`
- **Settings:** Application Menu → Settings Manager

Essential Keyboard Shortcuts

Shortcut	Action
Super	Open application menu
Ctrl+Alt+T	Open terminal
Alt+F2	Run dialog
Ctrl+Alt+D	Show desktop
Alt+Tab	Switch windows
Super+L	Lock screen

Keeping Your System Updated

Automatic Updates

The OTA system checks for updates daily. By default, it downloads updates but asks before installing.

Manual Updates

```
# Check for kit updates
sudo /opt/lightweight-linux-mac/scripts/ota/update_manager.sh check

# Install kit updates
sudo /opt/lightweight-linux-mac/scripts/ota/update_manager.sh install

# Update system packages
sudo apt update && sudo apt upgrade
```

Rollback

If an update causes problems:

```
sudo /opt/lightweight-linux-mac/scripts/ota/update_manager.sh rollback
```

Dual-Booting with macOS

If you kept macOS alongside Linux:

Choosing an OS at Boot

1. Hold **Option** (⌥) at startup
2. Select “Macintosh HD” for macOS or the Linux partition

Installing rEFInd (Recommended)

rEFInd provides a graphical boot menu:

```
sudo apt install refind  
sudo refind-install
```

After installing, you'll see a boot menu every time you start your Mac, making it easy to choose between macOS and Linux.