Salix Startup Guide

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Contents

Abstract

The purpose of this manual is to help users easily install Salix.
The original version of the guide was written in September 2022. This version was slightly revised (and typeset with LaTeX) in November 2024.

1 Salix features

1. One application per task rationale.
2. Fully backwards compatible with Slackware.
3. Optimized for desktop usage.
4. With Salix and Salix tools to assist with system management.
5. High-quality package repositories with dependency support.

2 Installation mode

Salix offers three software installation options:

1. Full
2. Basic
3. Core, to meet your demands!

Performing a **Full** mode installation is the recommended way of installing Salix for most users. It includes a fully configured desktop environment with a complete selection of applications to fit the needs of most people, including office-related software, multimedia applications, Internet applications, all the Salix system configuration tools and more. We feel that the collection of software that accompanies each respective desktop environment will cover most users' needs but, of course, any user can tailor the software selection through the Salix package management tools as required.

A **Basic** mode installation is mostly targeted at advanced users. It includes the respective desktop environment of each edition, and a very minimal selection of software on top, namely the Salix system configuration tools and a web browser. WiFi connection tools or drivers are not present and only wired network connections are supported out of the box. The user is expected to know how to install extra software and tailor the installation to his / her needs.

A **Core** mode installation does not provide any graphical environment. It only installs a command-line system, including the Salix command line system and package management tools. It is intended for expert users who know how to use the command line tools to administer their systems. It is most commonly used to set up types of servers such as web servers and e-mail servers. The servers that host the Salix websites are hosted on, run Salix installed using the Core mode

method. Expert users can of course use this mode to install the X window system and any graphical environment on top of it if desired.

3 Salix repositories & Package management

1. `slapt-get` and its graphical interface Gslapt are used for package management, including `slapt-src` and Sourcery for an even wider selection of software to choose from!
2. A wide range of packages from Slackware, SlackBuild and Salix repositories.
3. The Salix repositories offer dependency resolution support and are the largest third-party software package repositories for Slackware offered to date.
4. The Salix repositories are offered for both 32-bit and 64-bit architectures.

4 Install Salix

4.1 Requirements

You'll need to consider the following before starting the installation:

1. Connect your laptop to a power source.
2. Ensure you have at least 25 GB of free storage space, or 5 GB for a minimal installation.
3. Have access to either a DVD or a USB flash drive containing the version of Salix you want to install.
4. Make sure you have a recent backup of your data. While it's unlikely that anything will go wrong, you can never be too prepared.

4.2 Boot from DVD

It's easy to install Salix from a DVD. Here's what you need to do:

1. Burn the Salix ISO image to a DVD.
2. Put the Salix DVD into your optical / DVD drive.
3. Restart your computer.

4.3 Boot from USB flash drive

After downloading the Salix ISO, you need to create a bootable USB to install from it.

There are many ways to do that; in Windows 10, you can use the **Rufus** USB creator, which exists in ISO in the `boot` folder to transfer the ISO to a USB stick

under Windows OS. Be sure to name the USB label "**LIVE**" (without quotation marks).

Also, you can download Rufus from here:

https://rufus.akeo.ie/

If you run another Linux distribution, you can use Unetbootin[1] to create a bootable USB. In this case, the USB label has to be named LIVE. If it is named differently, then booting from USB you must pass the parameter

```
medialabel=your_usb_label_name
```

To do this, press the Tab key and type at the end, for example, for a USB named myusb, **medialabel=myusb**.

You can also use the script **install_on_usb.sh** which exists in the ISO, in the boot folder to create the USB in any distribution. Read the relevant instructions in this file (README_INSTALL_ON_USB.TXT):

https://tinyurl.com/2p32uejs

You can also boot with a Salix DVD and run the **instonusb** GUI tool (developed in-house) to create a Salix Live bootable USB. (See subsection 7.2 for more details.)

Most computers will boot from USB automatically. Simply insert the USB flash drive and either power on your computer or restart it. You should see the same Welcome window we saw in the previous Install from DVD step, prompting you to choose your language and either install or try the Salix desktop.

If your computer doesn't automatically boot from USB, try holding F12 when your computer first starts. With most machines, this will allow you to select the USB device from a system-specific boot menu.

Note:

F12 is the most common key for bringing up your system's boot menu, but ESC, F2 and F10 are common alternatives. If you're unsure, look for a brief message when your system starts—this will often inform you which key to press to bring up the boot menu.

5 Prepare to install Salix

5.1 How to install Salix on a computer with UEFI

Some information:

[1] https://unetbootin.github.io/.

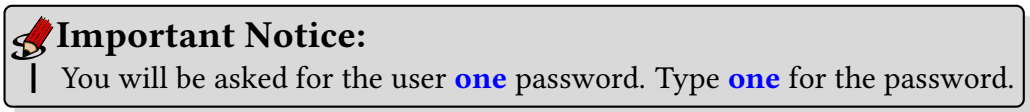
You can install Salix
- on an internal SSD disk
- or an external SSD disk
- or to a USB stick.

If you have created a Live USB to boot the system for installation, then while in the Live environment, you need to plug in another USB or SSD disk for installation. The procedure is the same. In the case of installing to an external SSD or USB, an `initrd` *image will be created (it is needed to boot the system).*

- **Unified Extensible Firmware Interface (UEFI)** is a modern replacement over the **BIOS** for booting up operating systems. In most BIOS settings, you can choose whether you want UEFI enabled or disabled.
- If you are only installing Salix on a computer, or you have Windows 7 or older on it, then you can disable UEFI in the BIOS settings and proceed to install Salix with a `/` (root) partition and a `swap` partition.
- However, if you already have Windows 8 or 10 installed on the computer, it will be using UEFI to boot; therefore UEFI cannot be disabled. Also, if you intend to install and dual-boot with Windows in the future, it may be a good idea to keep UEFI enabled.
- If you do not have Windows, but want to keep UEFI enabled, then you will need to create a 300–500 MB partition and pick its type as `boot EFI` while installing Salix. The rest of the partitions for Salix are the same. Just remember to create an EFI partition.
- If you forgot to create an EFI partition on a UEFI-enabled computer and installed Salix, then the installer will fail at the end.

6 Launch the installer

Run the installer from the Desktop or from the `System` menu > `Salix live installation`.



6.1 Partition your disk with GParted

First click on the `Partitions` button in the Salix Live Installer (SLI) and `GParted` will appear. Then there are two options:

6.1.1 If your computer supports UEFI

- Create a `gpt` partition table. Select your hard disk; in case your machine has more than one disk, hit the `New Partition Table` button, click on `msdos` and change it to `gpt` in order to create the GPT partition table.
- Create a 300–500 MB VFAT partition and signed bootable (i.e., with the flags `esp` and `boot`) (partition hex code `EF00`).
- Create a Linux EXT4 partition to hold the system (`/`) root.
- Optionally, create another Linux EXT4 partition to hold the `/home` partition.
- Finally, create a `swap` partition — 4098 MB (or 2 x RAM).
- Optionally, to enable BIOS / legacy boot, an additional BIOS boot partition (partition hex code `EF02`) and a hybrid MBR are required before installing GRUB. Create a VFAT (`fat32`) 34 MB BIOS GRUB partition, signed `bios_grub` (partition hex code `EF02`).
- All partitions should be Primary.

6.1.2 If your computer does not support UEFI

1. Create an `MSDOS` partition table.
2. Create a Linux EXT4 partition to hold the system (`/`) root.
3. Optionally, create another Linux EXT4 partition to hold the `/home` partition.
4. Finally, create a `swap` partition — 4098 MB (or 2 x RAM).

Close the GParted tool and return to SLI.

6.2 Select install location

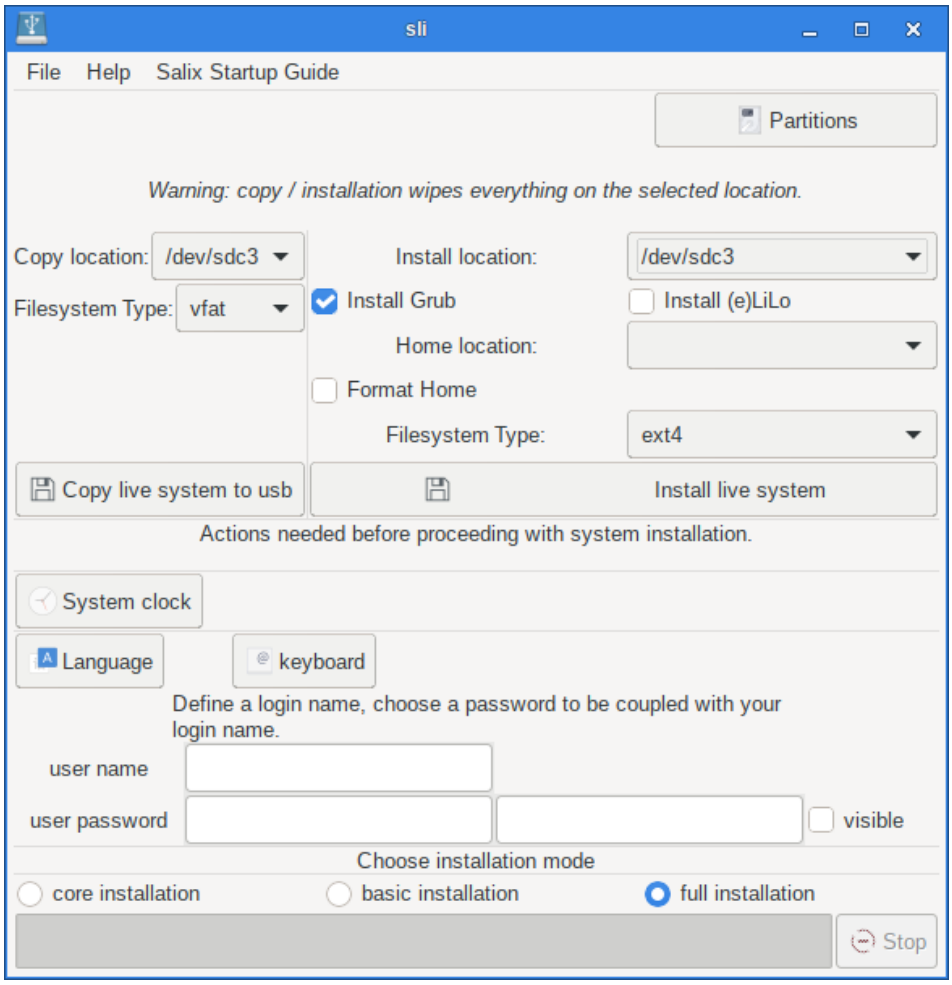
Click in the combo box `Install Location` and pick your root partition (`/`). Usually, the first partition (`/dev/sda1`) is the EFI partition. So the second partition created above it will be (`/dev/sda2`). **In a non-UEFI** computer, you have to pick `/dev/sda1` for the root (`/`) partition.

Next, pick the third partition (`/dev/sda3`) for the `/home` partition which was created above.

If your computer has another OS installed, and has GRUB installed, and you would like to boot to your other OS later to run `grub-update`, so that Salix will be shown in GRUB and can boot, then **do not check** `Install Grub`. **Do not check** `Install (e)LiLo`. In this case, no boot loader will be installed.

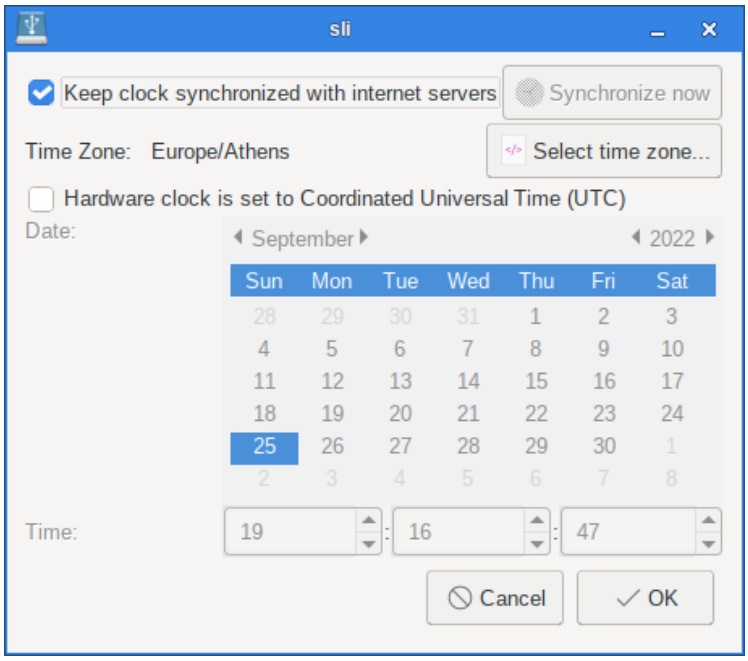
If you have created a `/home` partition, check `Format Home` if you want the `/home` partition to be formatted. Otherwise, do not check it.

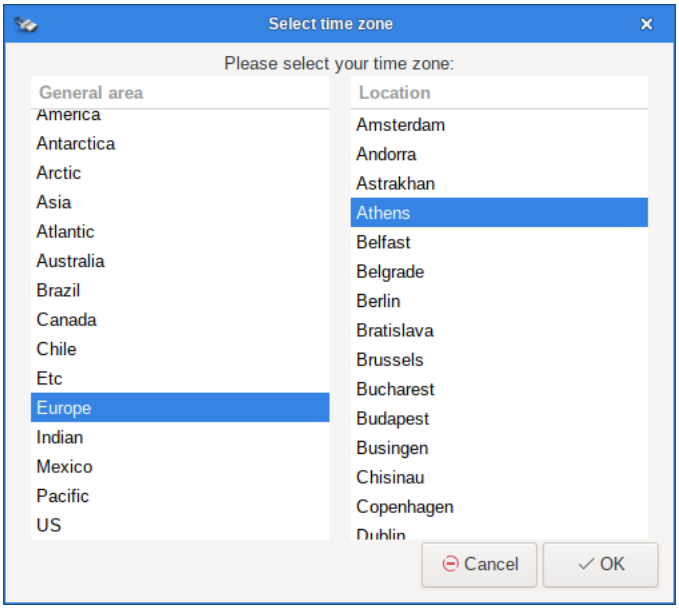
Choose the filesystem type. EXT4 is the default.



6.3 Set system clock and choose time zone

- Click on `System clock`.
- In the next window, check `Keep clock synchronized with internet servers`.
- When you finish this step, click on the `OK` button.

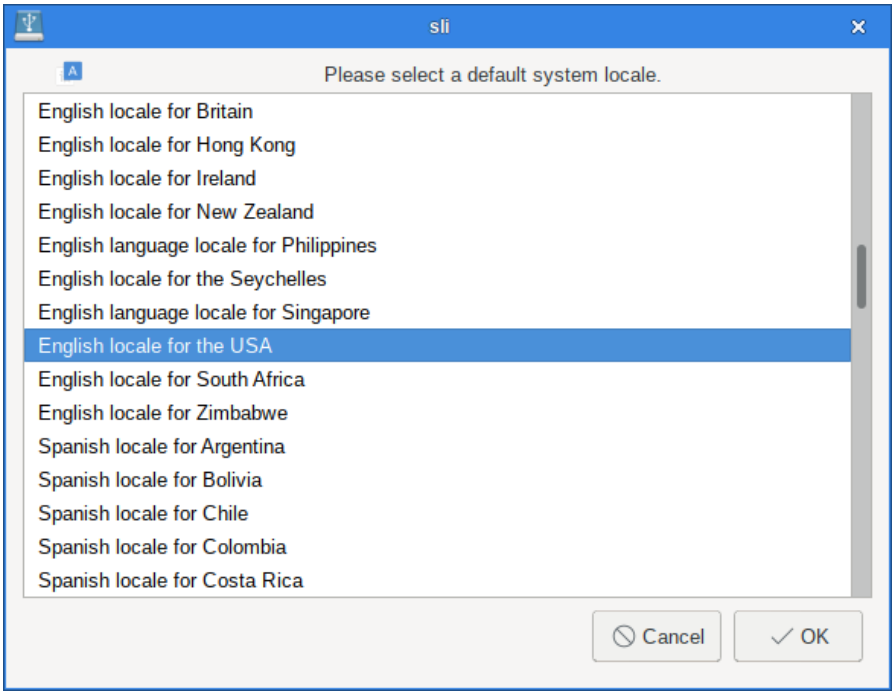




6.4 Set system locale / choose language

Click on the Language button and in the next window, choose your system locale.

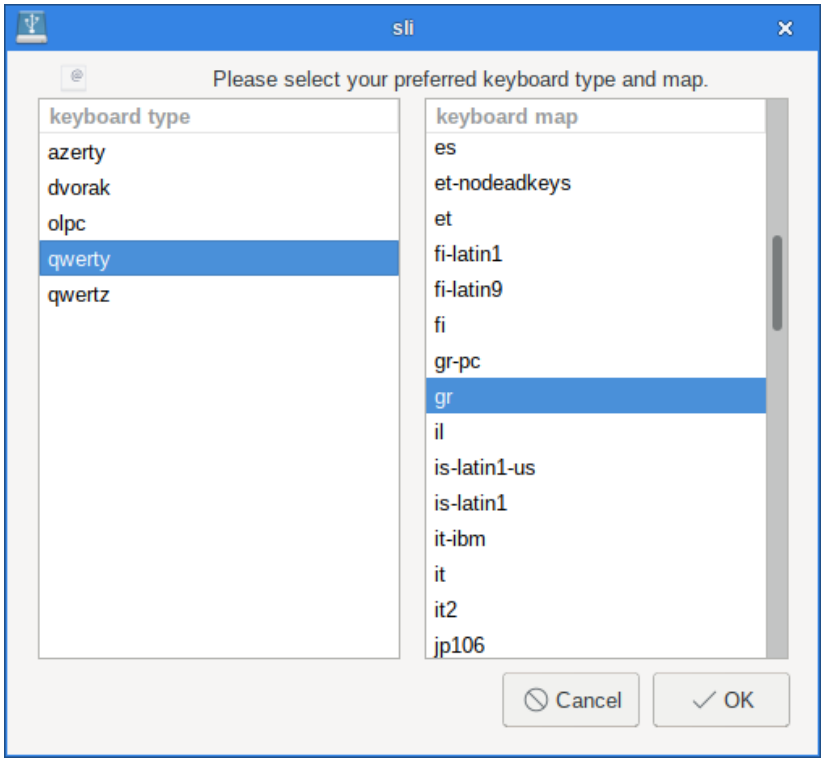
When you finish this step, click on the OK button.



6.5 Select keyboard layout

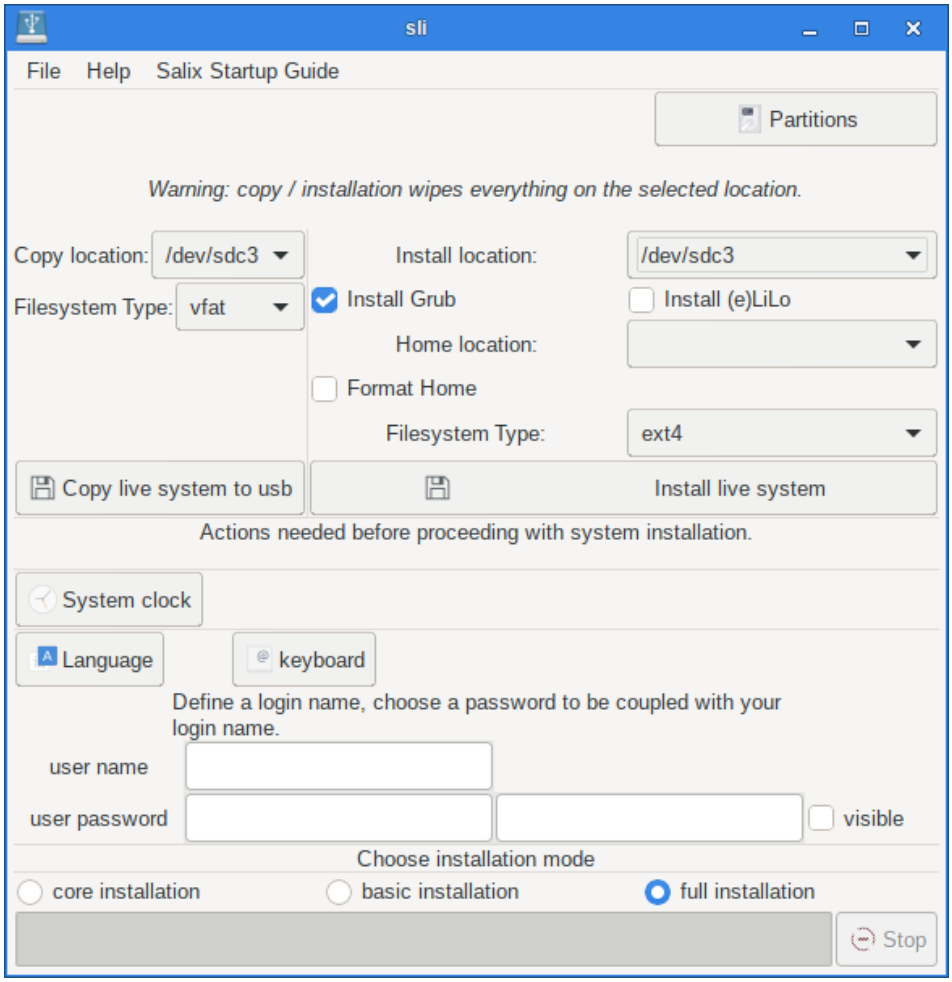
Click on the keyboard button and in the next window, choose your keyboard type and your keyboard map.

When you finish this step, click on the OK button.



6.6 Set user name, password & choose installation mode

- Type your `user name` and user password twice. Click on the `visible` check button, so that the user password is shown.
- Choose your `installation mode`. `full installation` is the default.
- Finally, click on the `Install live system` button to begin the installation to your hard disk.
- The installer will now complete in the background. Installation should only take a few minutes.



6.7 Installation complete

After everything has been installed and configured, a small window will appear telling you installation is complete.

Close the `Salix Live Installer` (SLI) and reboot your computer.

Congratulations! You have successfully installed the Salix Linux operating system!

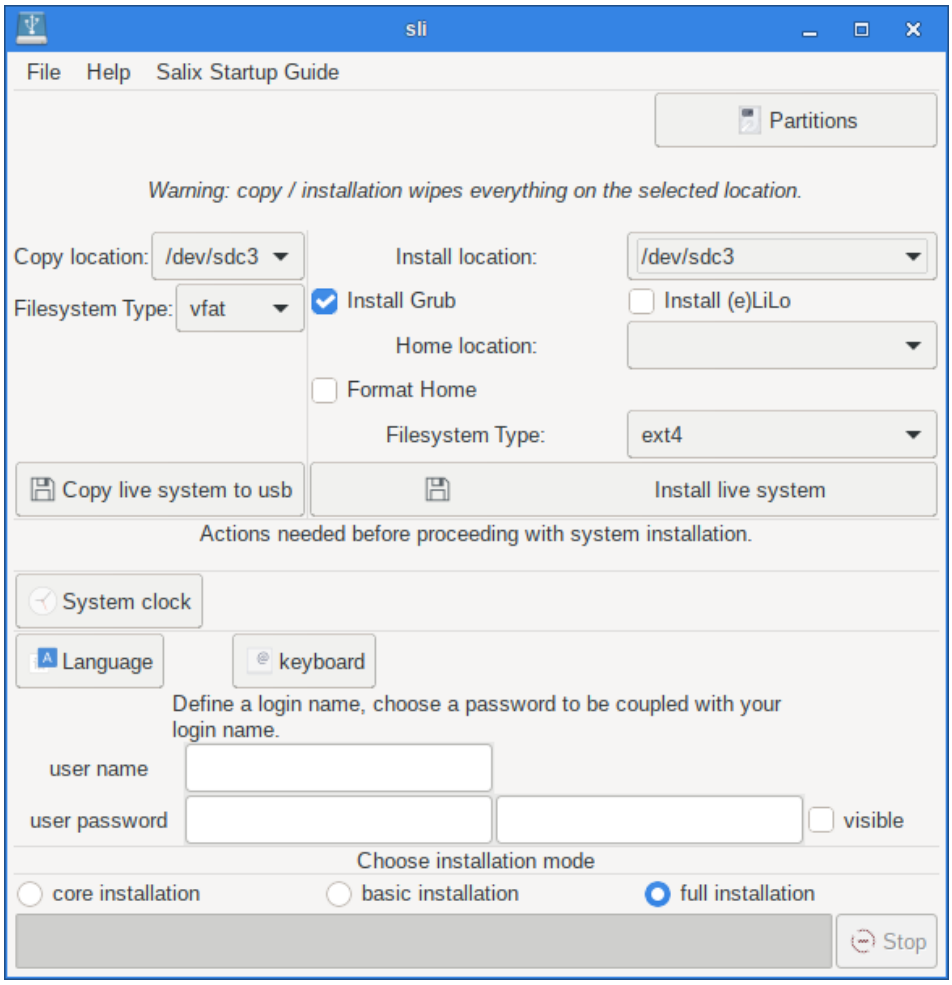
It's now time to start enjoying Salix!

7 How to install Salix to a USB stick

7.1 Using the Salix Live Installer (`sli`)

- If you want to install the system to USB as a frugal installation, then plug your USB stick in your computer and pick your USB from the `Copy location:` combo box. The USB will be shown as `/dev/sdb1` or `/dev/sdc1`, etc.
- Choose the `Filesystem Type`; the USB stick will be formated. VFAT is the default.

Important:
The USB stick will be formatted and signed bootable; **all previously existing data will be lost**.



- Then, click on the `Copy live system to usb` button to begin the installation on USB.
- If you use SLI to create a Salix Live USB, then you **cannot create later a persistent file or directory** to keep your changes in USB, e.g., installing new applications.

7.2 Using the instonusb GUI tool

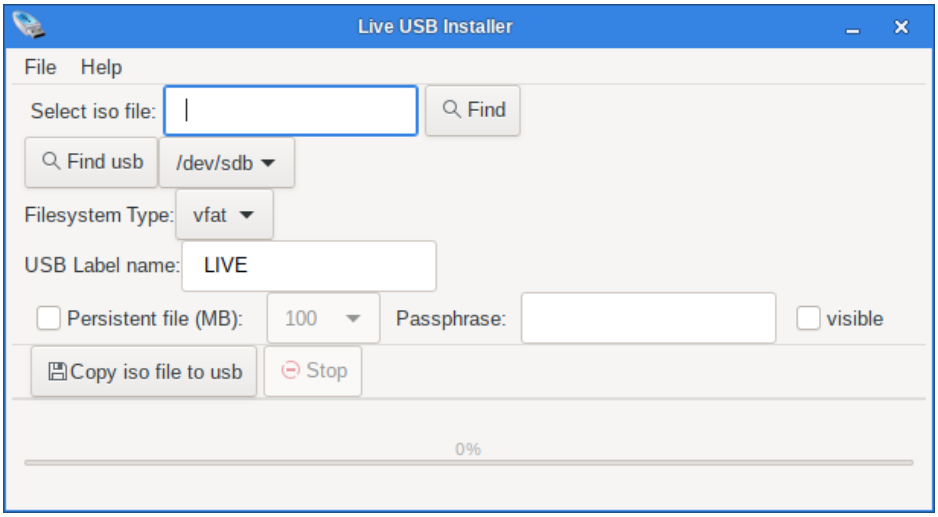
`instonusb` is a GUI tool written in C to install Salix, Salix 32- and 64-bit Live ISOs to a USB stick. It can also create an encrypted persistent file.

The package (binary and source code) can be found in the Salix repositories, or you can download it from here:

`https://people.salixos.org/djemos/salix/instonusb/`

If you want a persistent file, then you can use the `instonusb` GUI tool.

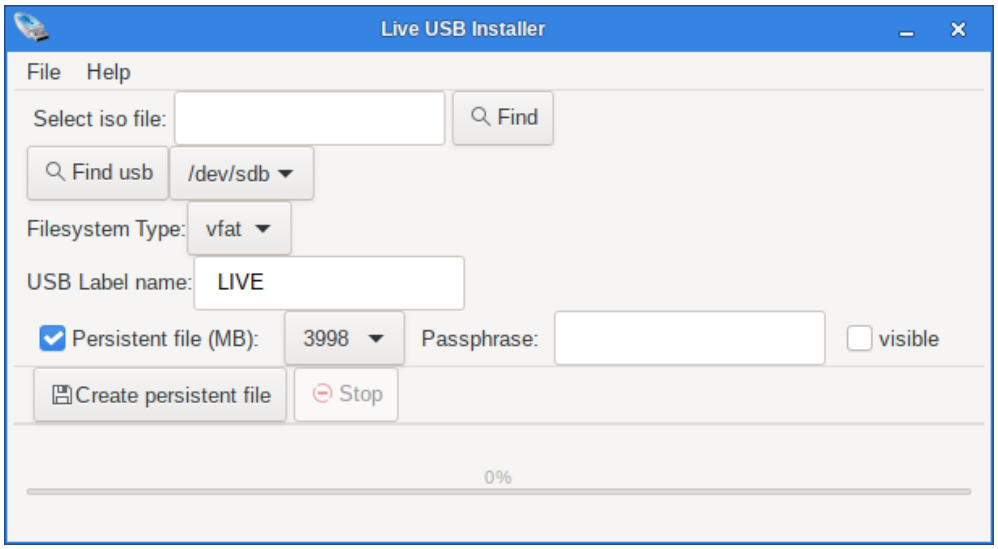
- Plug in your USB.
- Click on `System` > `Install live iso to usb`.
- Click on the `Find` button, and choose the location where the Salix ISO is downloaded on your hard disk.
- Click on the `Find usb` button to find your USB, in case you plugged it in after running the `instonusb` GUI tool.
- The `USB label name` is set to `LIVE`, so that Salix can be found and booted.
- Click on the `Copy iso file to usb` button to begin the installation.



After installation is complete, it's time to create the persistent file.

- Check `Persistent file (MB)`.

- Choose the persistent file size in MB (for vfat choose a size from 100 MB to 3998 MB, for ext3 choose a size from 100 MB to 14436 MB).
- Optionally, you can type a `Passphrase` to encrypt your persistent file.
- Click on the `visible` check button to see your passphrase.
- Click on `Create persistent file` to create your persistent file. Note that if the desired persistent size is large, it will take a long time to be created. So, make yourself a cup of coffee.



Suggestion:
I usually format the USB stick to VFAT and create a 3998 MB file (4 GB — it cannot be larger because of VFAT limitations), so that I can use the remaining space on a 14 GB USB stick to store other data. In addition, I can use the USB stick as a common USB in any PC.

If you format the USB with the EXT3 file system, then the persistent file can be as large as you like — 14 GB or more.

If you format the usb as EXT3, there is another option. You do not have to create a persistent file, but booting from the USB with the option `Salix Live [persistent]` from menus, then a **directory named `persistent`** (default) will be created where you can keep your changes between reboots. All of the USB's remaining size will be used.

Note: If you use a directory for persistent changes, you cannot use encryption.

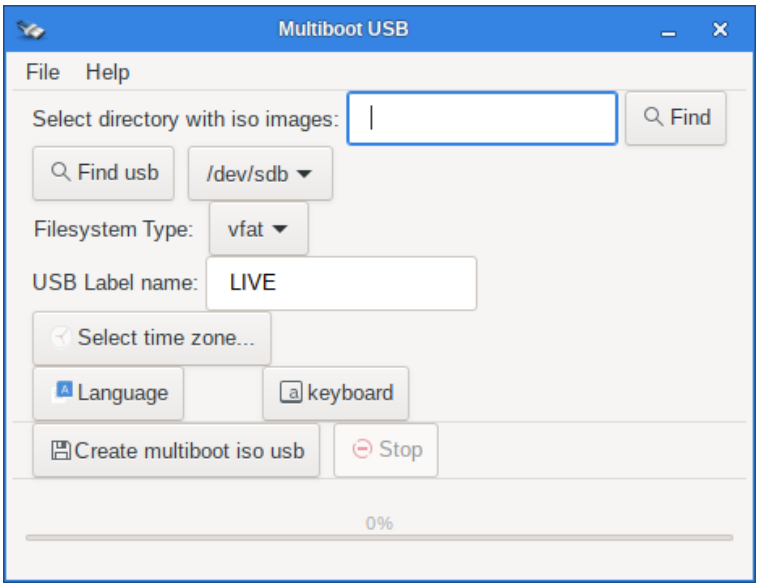
Attention: Never create the folder manually (as persistence will not work).

8 Multibootusb tool

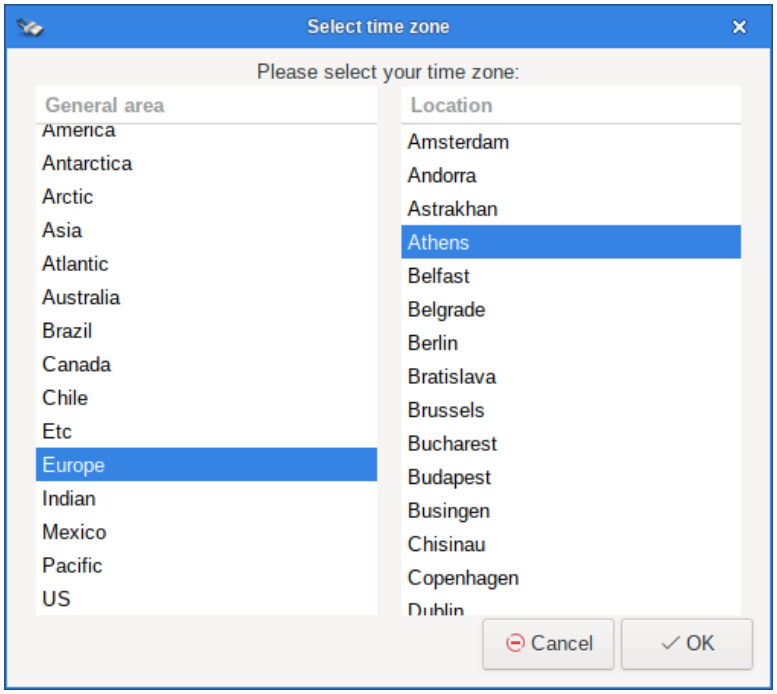
multibootusb is a GUI tool written in C to create a live USB, including 32- and 64-bit Live editions of Salix and Salix, and at boot time to choose the one to boot in a live environment. This tool cannot be used to boot other distros. It has been written specifically for Salix and the Salix Live ISO editions.

8.1 How to use

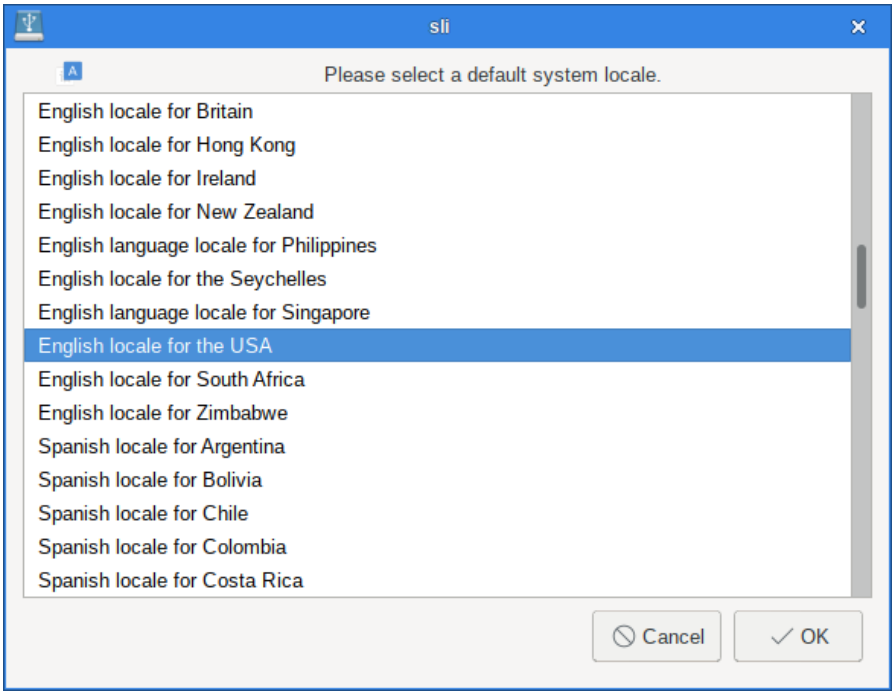
- Download the Salix, Salix ISO 32- and 64-bit editions.
- Create a folder and move all images into the folder.
- Plug in your USB.
- Then, run `multibootusb` by clicking on the `Find` button.
- Choose the folder where the ISO images are stored.



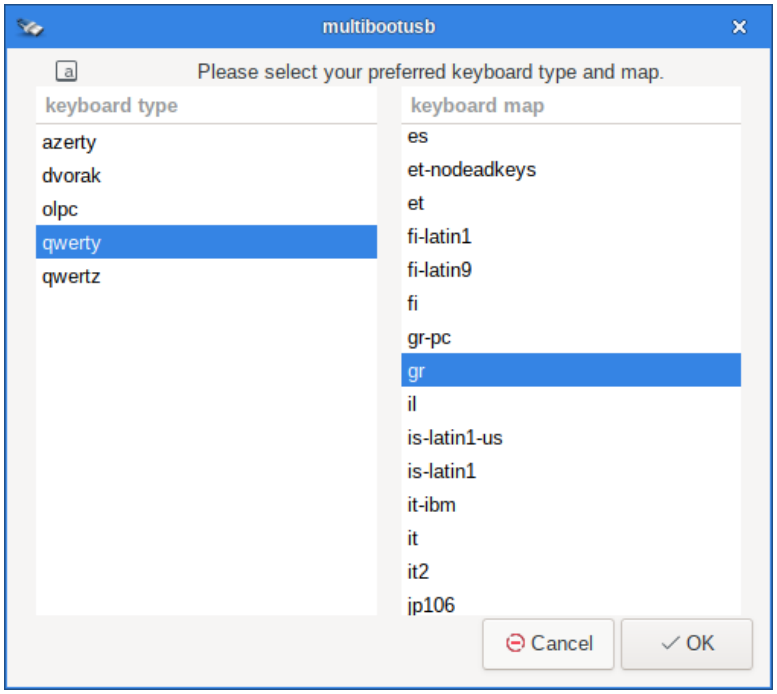
- Choose your time zone to boot the Live ISOs.



- Choose your language locale to boot the Live ISOs.



- Choose your `keyboard type` and `keyboard map` to boot the Live ISOs.



- Click on the OK button to create the multibootusb.
- Then, boot and select from the menus the ISO that you would like to boot.

8.2 Source and binaries for `multibootusb`

The source and binaries are located here:

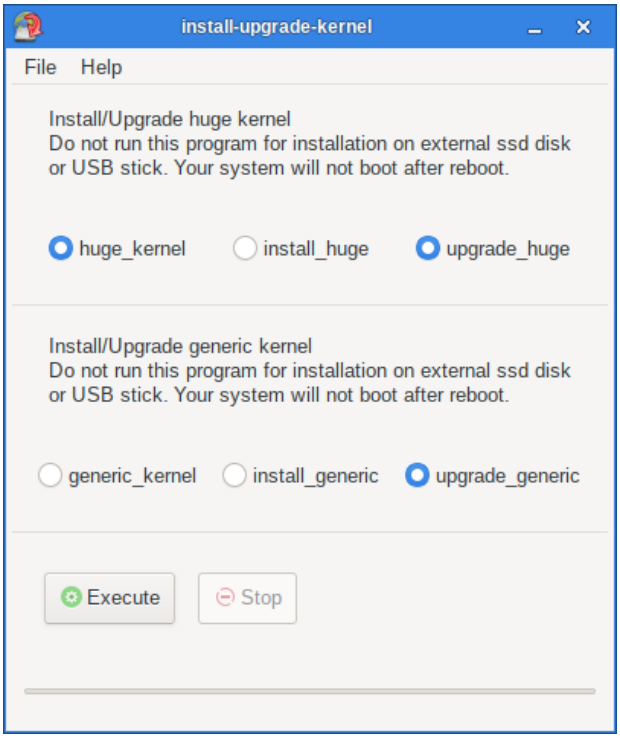
https://people.salixos.org/djemos/salix/multibootusb/

9 Install — Upgrade Kernel on internal disks

install-upgrade-kernel-gtk is a GUI tool of the script that makes it easy to install kernel packages without removing the previous kernel packages, and upgrading GRUB menu's boot loader. It is written in C using Glade and GTK2.

It is used for Salix installations on internal disks.

`install-upgrade-kernel-gtk` can be used on any Slackware or Slackware-based system.

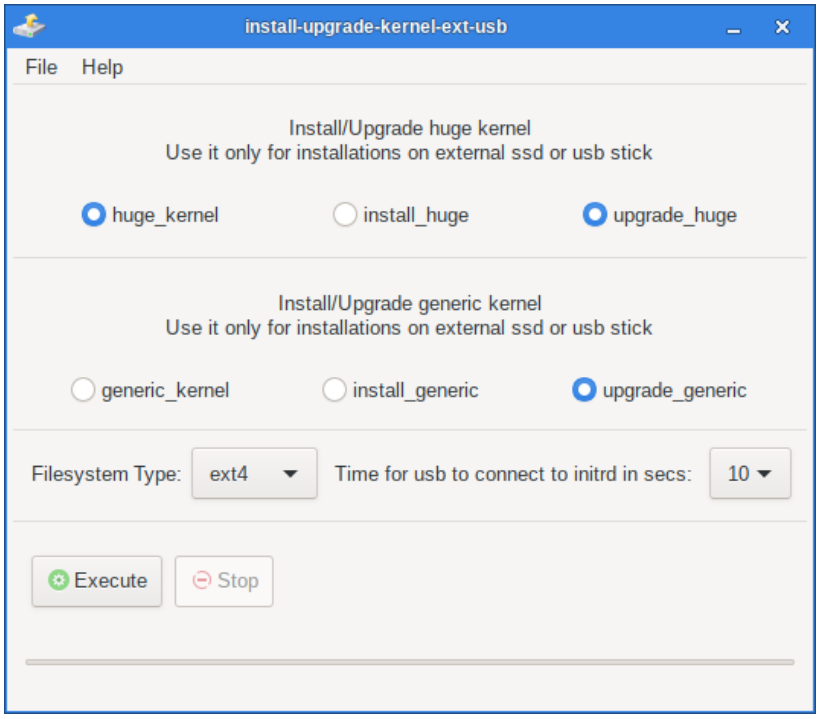


10 Install – Upgrade Kernel on external SSD disk or USB stick

install-upgrade-kernel-ext-usb is a GUI tool of the script that makes it easy to install kernel packages without removing the previous kernel packages and upgrading GRUB menu's boot loader. It is written in C using Glade and GTK2.

It is used for Salix installations on external SSD disks or USB sticks.

`install-upgrade-kernel-ext-usb-gtk` can be used on any Slackware or Slackware-based system.



11 Finding help

If you get stuck, help is always at hand.

- Ask in the Salix forum:
  https://forum.salixos.org/
- Salix Wiki:
  https://docs.salixos.org/wiki/Main_Page
- Documentation:
  https://forum.salixos.org/viewforum.php?f=30

Note:
Standard **user login** is one with **password**: one.

For installation and for all work requiring administrator privileges, the super user one with password one is used.