

# Esperanto Characters on Mint 21.3 Xfce

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Although the *Fundamento de Esperanto* (‘Foundation of Esperanto’) [1905], which lays out the basis of the language, allows the use of an alternative method<sup>1</sup> for the supersigns<sup>2</sup> when one cannot properly type them, it is preferable to use the correct diacritics whenever technically possible.

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<sup>1</sup>The so-called “h-system” allows the workaround of using *ch* in place of *ĉ*, *gh* for *ĝ*, *hh* for *ĥ*, *jh* for *ĵ*, *sh* for *ŝ*, and *ŭ* is replaced by *u*.

<sup>2</sup>Also known as the “hatted letters” (*ĉapelitaj literoj*).

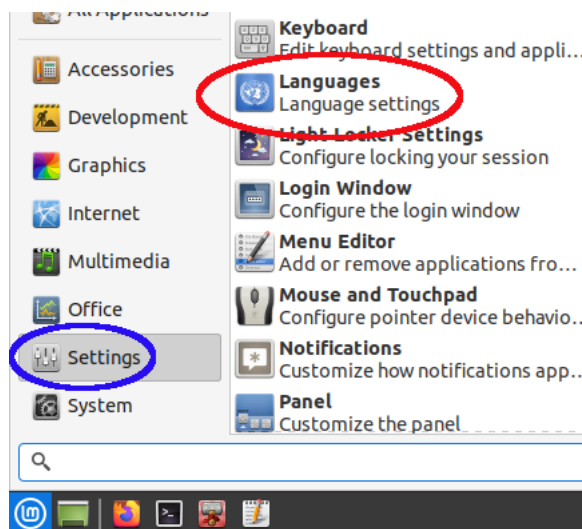
Since the advent of Unicode, it is much easier to add Esperanto keyboard layouts in the major Linux desktop environments.<sup>3</sup> The era of legacy Latin-3 encodings and special TrueType fonts has fallen by the wayside as application support for Unicode improved.<sup>4</sup>

This tutorial explains how to properly type Esperanto's diacritical letters (ĉ, ĝ, ĥ, ĵ, ŝ, ŭ) via Unicode with minimal fuss in Mint 21.3 Xfce — without needing to change your system locale. (In my case, the locale remains set as English (US) [en\_US.UTF-8]).<sup>5</sup> These instructions apply only to Xfce, *not* to the Cinnamon or MATE desktop environment.

## 1 Install Esperanto Language Support

Linux Mint has a wide selection of language packs that support computing in different languages. You should begin by installing the Esperanto language pack.

- From the main menu > go to **Settings** > then select **Languages**.



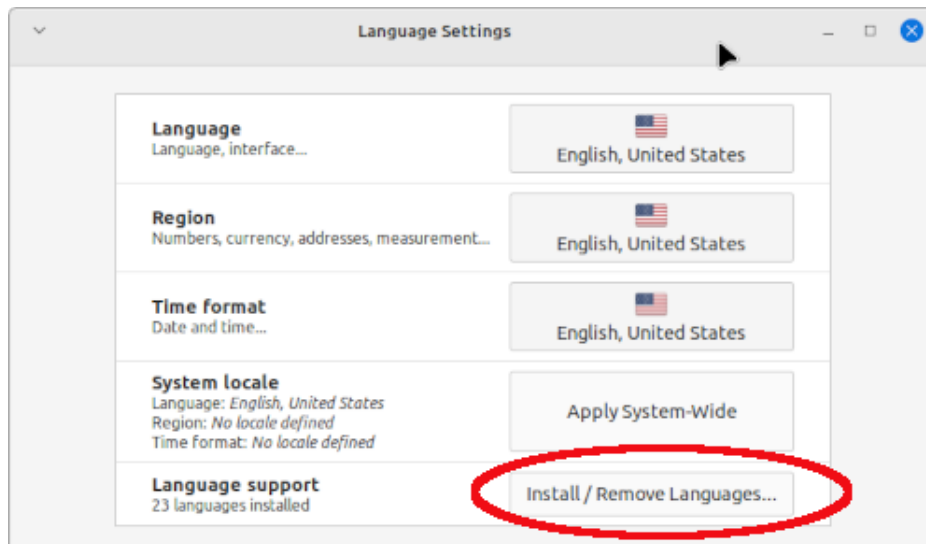
- From this dialog, click on the **Install / Remove Languages** button.

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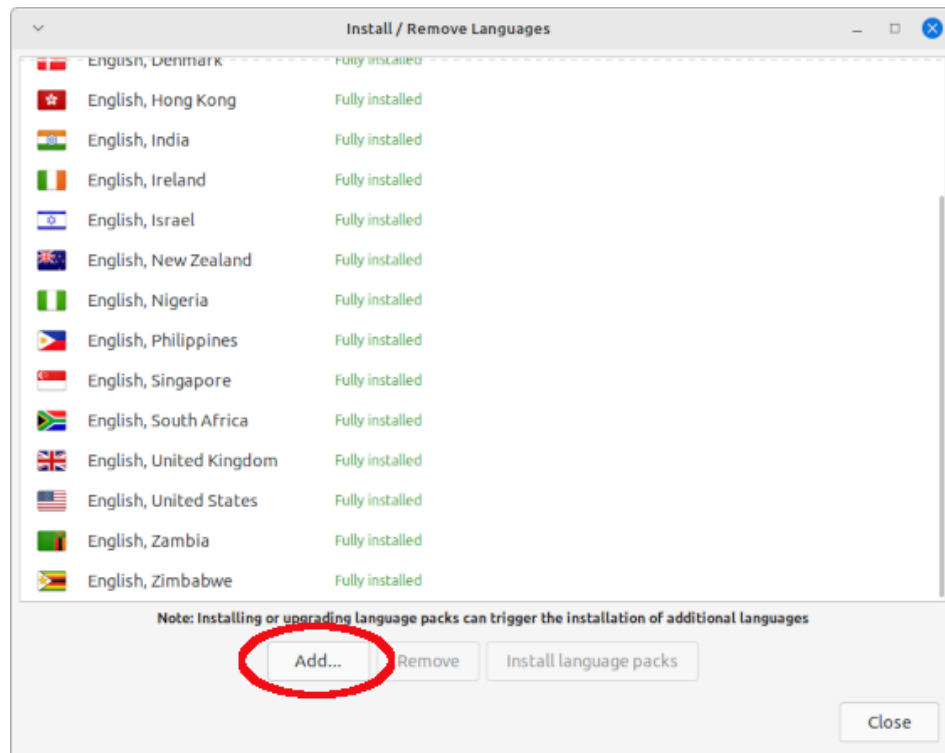
<sup>3</sup>Unicode is a character encoding standard with the capacity to support over one million characters. It is being developed with the goal of having a single character set that supports all characters from all scripts, that are in common use around the world today.

<sup>4</sup>The Latin-3 (ISO-8859-3) encoding standard, which supported Esperanto, Turkish and Maltese, was popular from the late 1990s until the early 2000s.

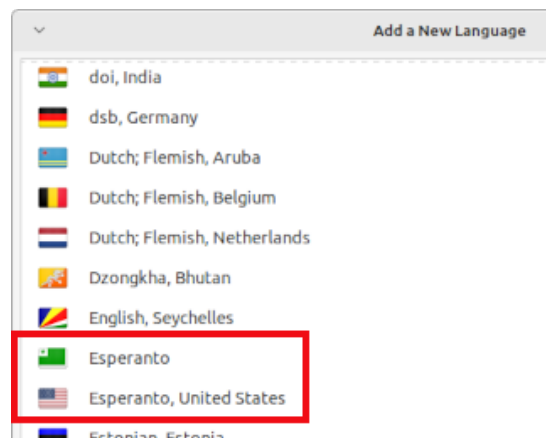
<sup>5</sup>If you need to view your system locale information, see section 5 of this guide.



- Authenticate by providing your password.
- From the dialog below, click on the **Add** button.

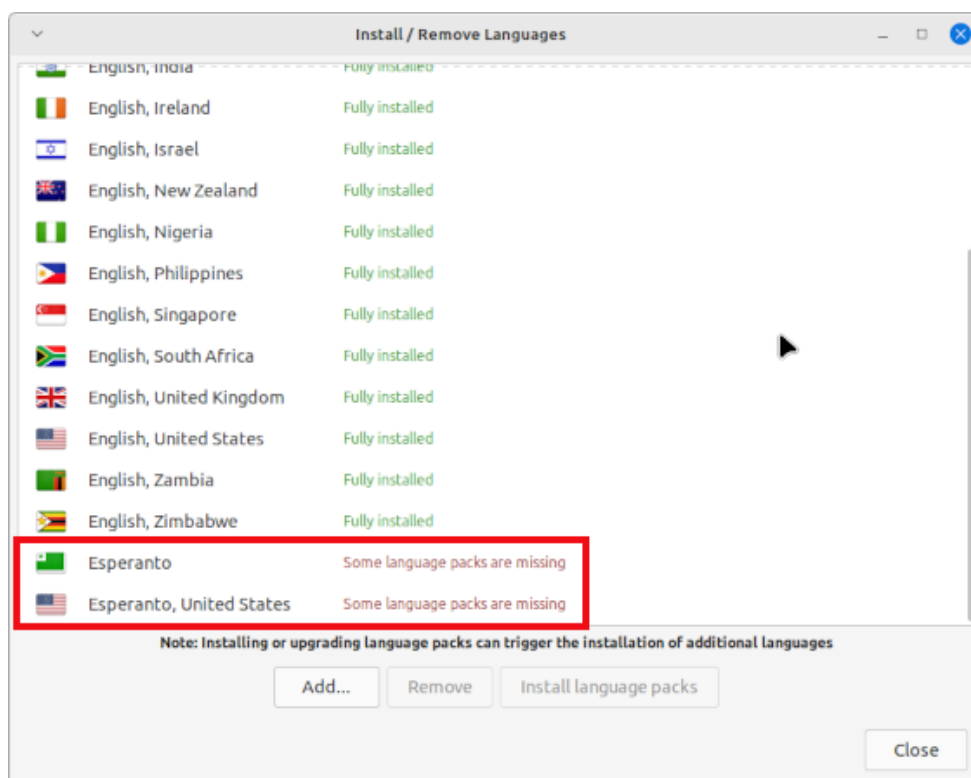


- From this dialog, scroll down to **Esperanto**. Select it and click on **Install**.

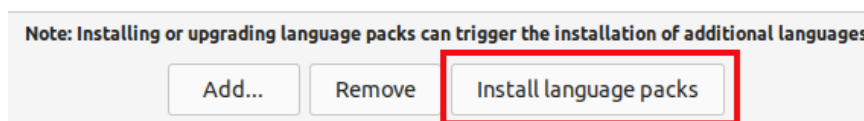


- Next, click on the **Add** button and choose **Esperanto, United States**.
- Click on the **Install** button.

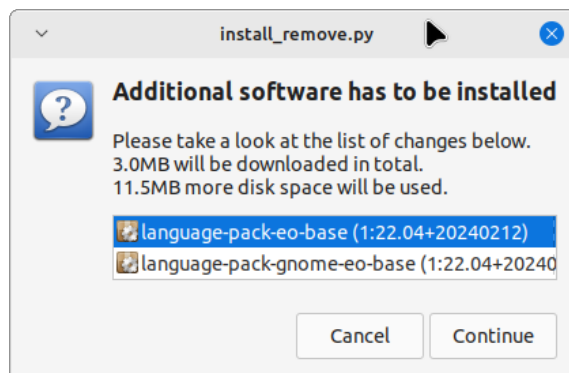
The language packs may show up in the list as “Some language packs are missing.”



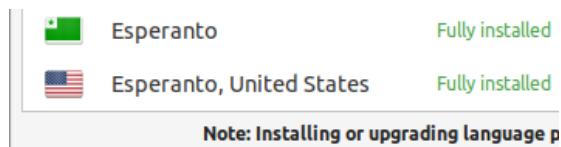
- To fix this, select the Esperanto pack, then click on the **Install language packs** button.



- The system will notify you that additional software has to be installed. Click on the **Continue** button.



- When everything indicates “Fully installed,” click on the **Close** button.



## 2 Without Separate Keyboard Layout

### 2.1 The “Compose Key” Method

The advantage of this method is that it provides many special language characters without needing to define specific keyboard shortcuts and without permanently switching the keyboard layout.

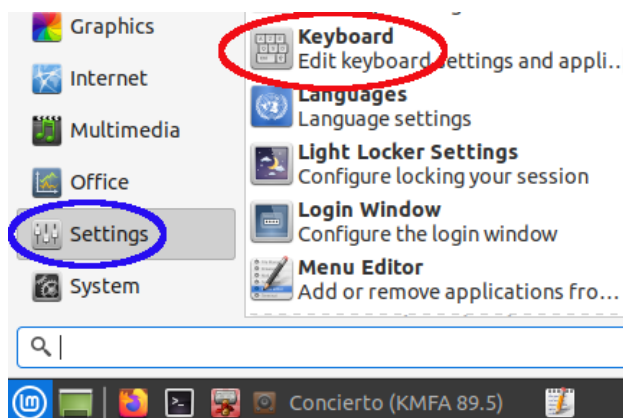
This method’s disadvantage is that it is awkward and requires three keystrokes (including the circumflex on the upper-case register).

To configure this, you must first select a Compose key (also known as an AltGr key).<sup>6</sup>

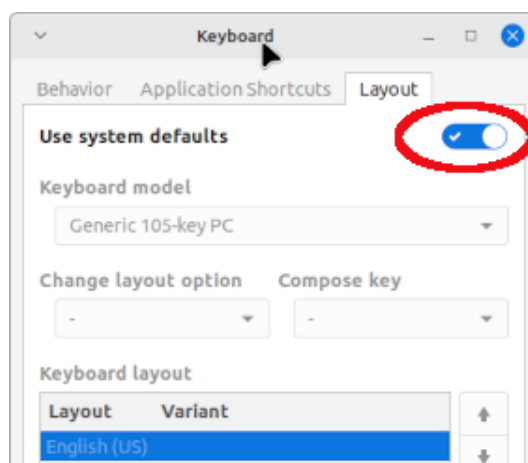
- From the main menu > go to **Settings > Keyboard:**

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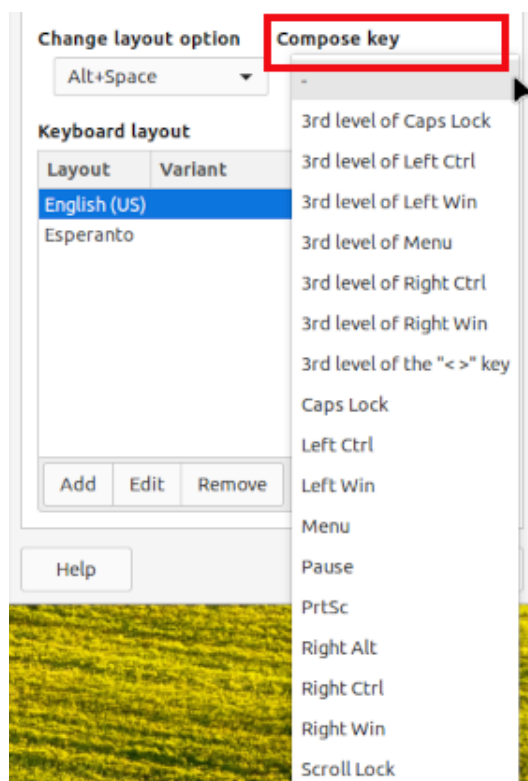
<sup>6</sup>The AltGr key (also known as the **Alt Graph** key or the **Alternate Graphic** key) is located where the Right Alt key is normally found (to the right of the spacebar). When pressed along with a keyboard key, it enables the entry of special characters.



- A **Keyboard** dialog window will open. Click on the **Layout** tab to bring it forward. Turn off/ deselect **Use system defaults** (as it is probably activated by default) by sliding the button to the left:



- Under the **Compose key** setting, there is a drop-down menu which lists different options:



- Select your preferred Compose key. (I chose the Right Super [aka Windows] (or Right Win) key. Other typical choices are the Right Alt key and the Right Ctrl key.)<sup>7</sup>
- Click on the **Close** button.

Using your current English (US) keyboard, you should now be able to type Esperanto's supersigned letters with the following three-key combinations:

Compose key then <sup>8</sup> followed by **c** produces **ĉ**

Compose key then <sup>8</sup> followed by **g** produces **ĝ**

<sup>7</sup>In case you are puzzled by what "3rd level" means in that screenshot (I was), a blog post by Timothy Boronczyk provides a clear explanation: <https://zaemis.blogspot.com/2012/01/esperanto-accented-characters-in-ubuntu.html>

<sup>8</sup>The circumflex symbol is on the upper register of the number "6" key, i.e., Shift + 6.



Compose key then  followed by  produces ĥ

Compose key then  followed by  produces ĵ

Compose key then  followed by  produces ŝ

Compose key then  followed by  produces ŭ

To type upper-case letters, use the same pattern:

Compose key then  followed by  produces Ĉ

As an aside, the “Compose key” method allows you to type a wide variety of other language characters and symbols. For a partial list, refer to the “Common compose combinations” section of the Wikipedia article below:

[https://en.wikipedia.org/wiki/Compose\\_key](https://en.wikipedia.org/wiki/Compose_key)

## 3 With Separate Keyboard Layout

### 3.1 English (intl., with AltGr dead keys) Layout

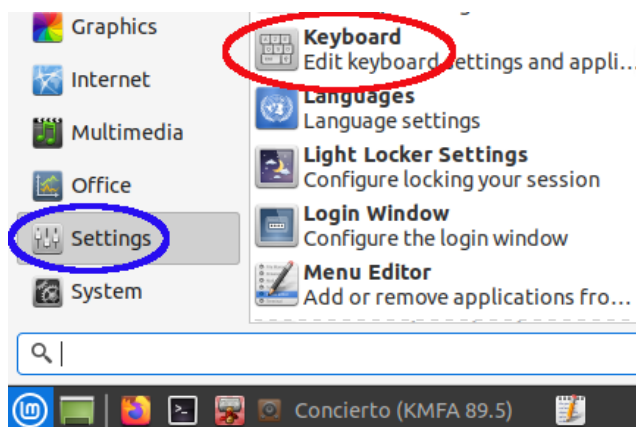
This method involves installing a second keyboard layout which uses the AltGr key (whose function is described in subsection 2.1 above).

In addition to the Esperanto supersigns, this keyboard layout allows you to type most of the diacritics found in Western European languages, as well as special symbols like ¢, £, ¥, €, © and diphthongs (such as æ or œ).<sup>9</sup>

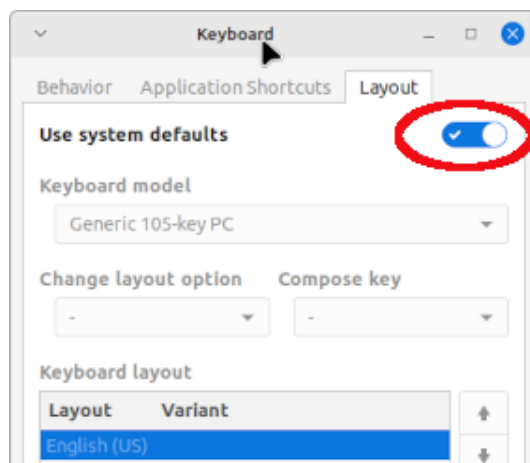
- From the main menu > go to **Settings** > **Keyboard**:

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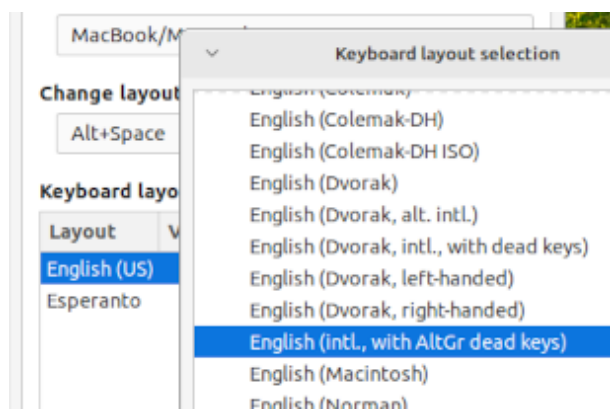
<sup>9</sup>If you are interested in how to type these symbols, you may download a PDF cheat sheet created by Dave Child: <https://cheatography.com/davechild/cheat-sheets/ubuntu-compose-key-combinations/#downloads>



- When the **Keyboard** dialog opens, choose the **Layout** tab to bring it forward. Turn off / deselect **Use system defaults** (as it is probably activated by default) by sliding the button to the left:



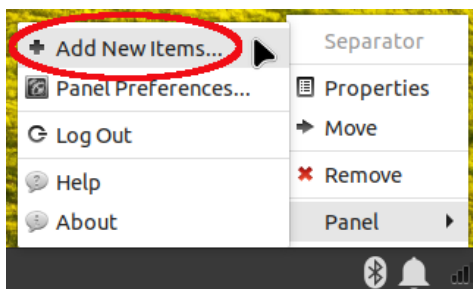
- Click on the **Add** button at the bottom of the dialog.
- A new pop-up window will open. Scroll down to “English (US)”, click on its flippy triangle and choose “English (intl., with AltGr dead keys)”:



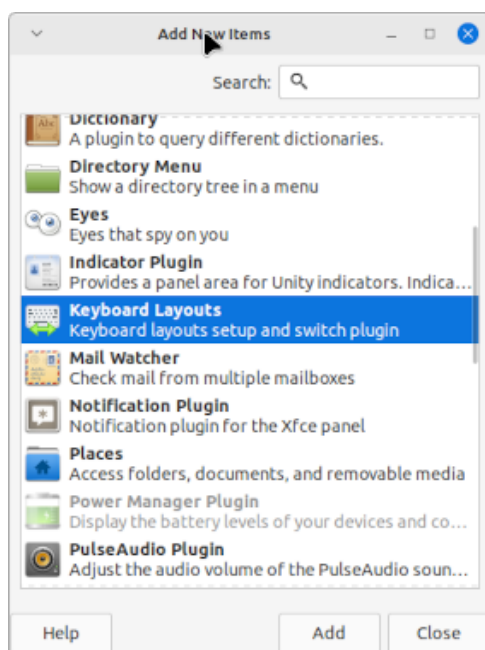
- Click the **OK** button. Then, click on the **Close** button.
- To select / activate this alternative keyboard layout, you need to add a Keyboard Switcher to your panel. Subsubsection 3.1.1 below describes how to accomplish that.

### 3.1.1 Add the Keyboard Layout Plugin

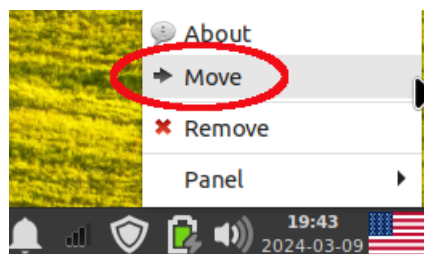
- Right-click on the bottom panel; next, go to **Panel > Add New Items**.



- From the dialog window that opens, scroll down and select **Keyboard Layouts**:



- Click the **Add** button to add the switch plugin. It will appear in the panel. Next, click on the **Close** button to dismiss the open dialog.
- The plugin will be placed at the far right end of your panel. If you would like to move it, right-click on its icon and choose **Move**:

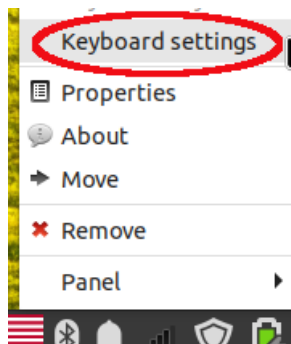


- Move the plugin to your desired location. For example, I placed mine to the left of the Bluetooth icon:

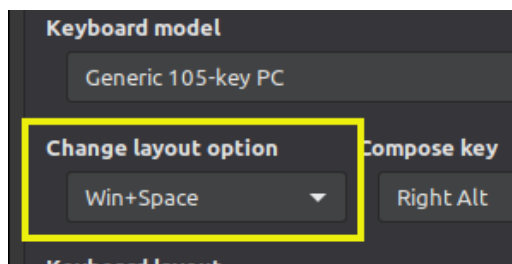


To change between your installed keyboard layouts, simply click on the flag icon and select your desired layout.

If you wish, you can also assign a keyboard shortcut to quickly switch between layouts. To accomplish this, right-click on the flag icon and select the **Keyboard settings** option:



- A **Keyboard** dialog will open. Click on the **Layout** tab to bring it forward.
- The **Change layout option** has a drop-down menu with a variety of choices available. I chose the Win+Space key combination:

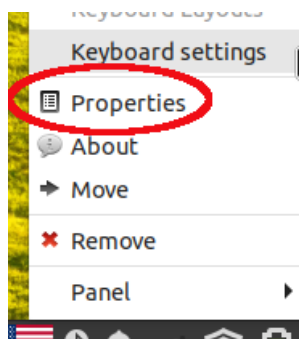


- Click on the **Close** button to close the open dialog.

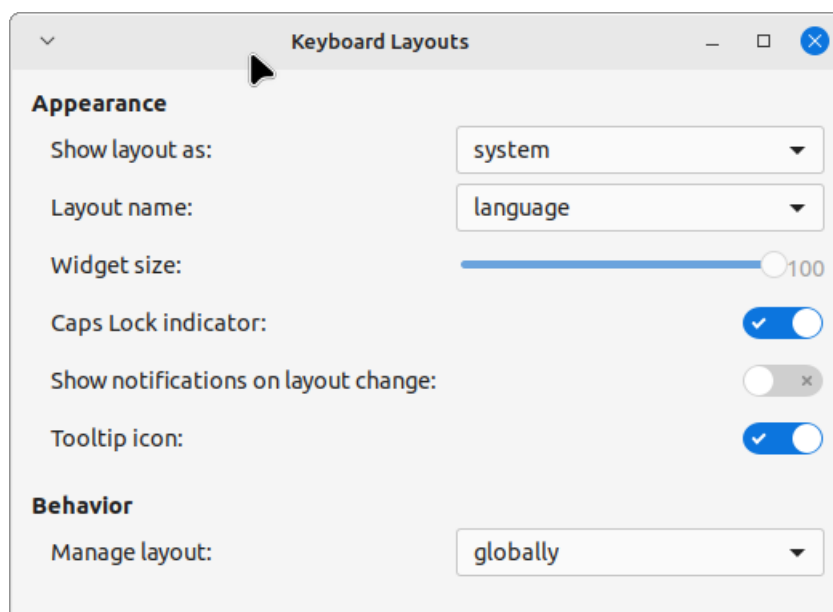
### 3.1.2 Change Display Style of Keyboard Layout Icons (from Flags to Text Labels)

You can customize the display style of the keyboard layout icons from their flags to text labels. To accomplish this:

- Right-click on the flag icon in the systray, and choose **Properties**:



- A **Keyboard Layouts** dialog will open. Change the **Show layout as** setting to system, and the **Layout name** to language:



Those settings produce the result shown below:



When the **Show layout as** option is set to text, I dislike the resulting display because the language abbreviation uses a Courier-style font which looks oversize compared to the other panel elements:



- I should mention the **Behavior : Manage layout** setting (shown above). I recommend choosing “globally”; this way, you do not have to remember which application — word processor, E-mail program, etc. — is using which keyboard layout.

### 3.1.3 Typing Esperanto’s Supersigns

To type Esperanto’s special supersigns, use the following key combinations.

The letters with circumflexes require three separate keystrokes:

1. Press the Compose key (e.g., Right Win) and release it. (How to assign your Compose key is described in subsection 2.1 above.)
2. Press Shift + 6 (i.e., ^) and release the keys.
3. Press the **c** key to produce **ĉ**.

(Pressing **g** will type **ĝ**; **h** will create **ĥ**; **j** yields **ĵ**; and **s** produces **ŝ**).

The u with breve (ŭ) requires some “finger Olympics” to achieve the successive key presses:

1. Press AltGr (Right Alt) + Shift + 9.
2. Release the keys.
3. Press the **u** key to produce **ŭ**.

## 3.2 With Esperanto Keyboard Layout

Mint 21.3 Xfce also offers the option of using a dedicated Esperanto keyboard layout; this is my preference for typing extended blocks of Esperanto text.

If you decide to use this layout, please follow the procedure outlined in subsection 3.1. (I have omitted previous screenshots in this section to save space.)

- From the main menu > go to **Settings > Keyboard**.
- When the **Keyboard** dialog window opens, click on the **Layout** tab to bring it forward. Turn off/ deselect **Use system defaults** (as it is probably activated by default) by sliding the button to the left.

- Click on the **Add** button at the bottom of the dialog.
- A new pop-up window, labeled **Keyboard layout selection**, will open. Scroll down to Esperanto and select it. [Do *not* choose Esperanto (legacy)]:



- Click the **OK** button. Then, click on the **Close** button.
- To select / activate this Esperanto keyboard layout, you need to add a Keyboard Switcher to your panel. Subsubsection 3.1.1 describes how to configure this.
- To change the display style of the keyboard layout icons, please refer to subsubsection 3.1.2 above.

### 3.2.1 Typing Esperanto's Supersigns

Typing Esperanto's diacritical letters with this layout is straightforward:



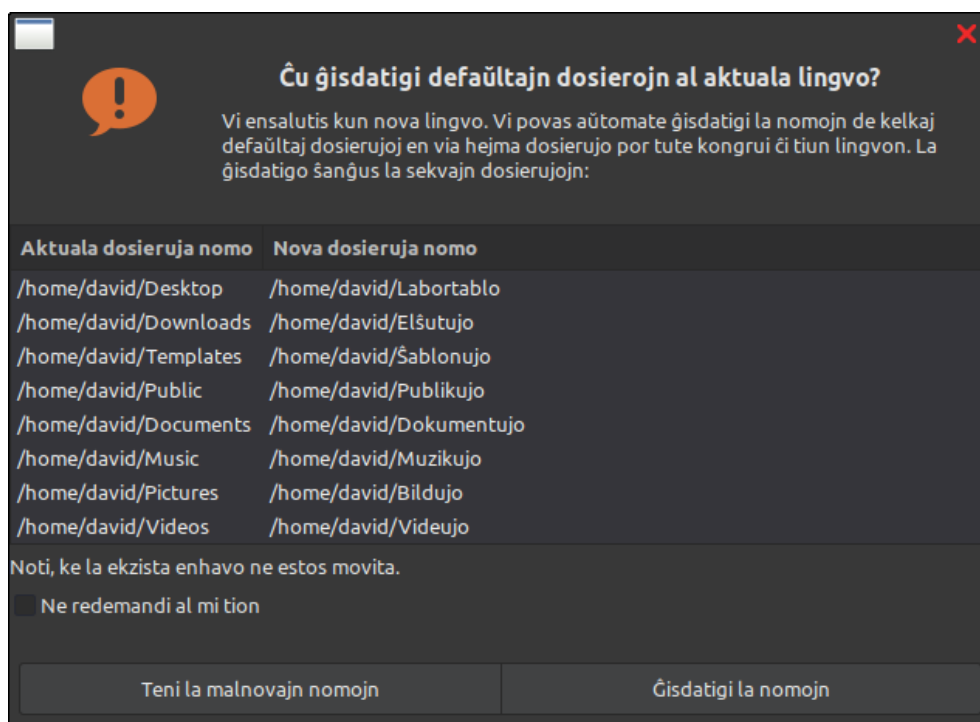
Key	Result	Key	Result
q	ŝ	Q	Ŝ
w	ĝ	W	Ĝ
y	ŭ	Y	Ŭ
[	ĵ	Shift + [ ( { )	Ĵ
]	ĥ	Shift + ] ( } )	Ĥ
x	ĉ	X	Ĉ

## 4 Change the Interface Language to Esperanto (Optional)

Installing Esperanto language support allows you to convert / change your Linux Mint OS to an Esperanto interface, if you wish.

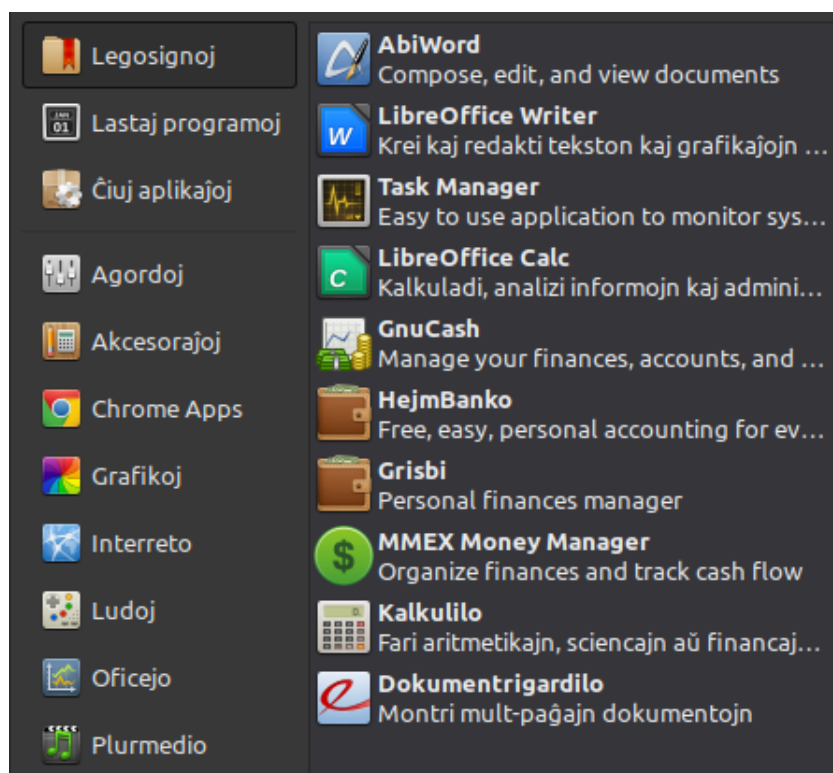
To change the OS language interface, go to the **Settings** menu > **Languages**. Then, click on the **Language** button and explicitly change it **Esperanto, United States**. For the language change to take effect, you must log out and back in again.

After choosing this option, you will be prompted immediately after your first login, to decide whether to change the default folder names to their Esperanto equivalents:



The folders' content will not be changed — only the folder names. If you are a beginner with Esperanto, you might not understand (or might overlook) the option to retain the English folder names (“Teni la malnovajn nomojn”) and to dismiss this dialog in the future (check / tick “Ne redemandi al mi tion”).

Below is a screenshot of my Xfce menu after changing the language interface. As you can see, not all of the menu items have been translated into Esperanto:



## 5 System Locale Information

If you need to view / check information about the currently installed locale, issue either of the commands below from a Terminal. (Sample output from my Mint 21.3 Xfce system is included).

```
kalwisti@kalwisti-ThinkCentre-M800:~$ locale
LANG=en_US.UTF-8
LANGUAGE=en_US
LC_CTYPE="en_US.UTF-8"
LC_NUMERIC="en_US.UTF-8"
LC_TIME="en_US.UTF-8"
LC_COLLATE="en_US.UTF-8"
LC_MONETARY="en_US.UTF-8"
LC_MESSAGES="en_US.UTF-8"
LC_PAPER="en_US.UTF-8"
LC_NAME="en_US.UTF-8"
LC_ADDRESS="en_US.UTF-8"
LC_TELEPHONE="en_US.UTF-8"
LC_MEASUREMENT="en_US.UTF-8"
LC_IDENTIFICATION="en_US.UTF-8"
LC_ALL=
```

```
kalwisti@kalwisti-ThinkCentre-M800:~$ localectl status
System Locale: LANG=en_US.UTF-8
    VC Keymap: n/a
    X11 Layout: us
    X11 Model: pc105
```

## 6 Conclusion

I hope that you have found this guide useful, if you were needing to type more than just an isolated Esperanto word or phrase. As is typical under Linux, there are multiple ways to accomplish a given task. With Xfce 4.18.1, you may choose to type the supersigns **a)** without using a separate keyboard layout **b)** via a separate English (intl., with AltGr dead keys) layout or **c)** via a native Esperanto layout. Select whichever method works best for you and your use of the keyboard.

*Agrablan kaj komfortan tajpadon!*