

Installing ScanNav on Linux / MacOS / ChromeOS

Introduction

Starting from **version 23.0** ScanNav can be used on PCs running Linux, MacOS, or ChromeOS without using a virtual machine.

Prerequisites:

Wine software must first be installed on your PC (see Installation chapter below). Unlike virtual machine environments such as VMware, VirtualBox, or Parallels, who create a complete emulation environment for a Windows PC by reserving part of the memory and disk space, Wine is only a very light interface to the system calls and the application runs in the same environment as any other Linux or MacOS native application.

Restrictions / known issues:

All ScanNav functions are available in this configuration. There are, however, a few known issues related to previous versions of Wine, or specific components that can be worked around:

- Night/day vision mode does not work on Wine 7.0. This is due to a bug in Wine 7.0 and is solved in Wine 8.0
- Screen orientation other than North Up didn't work on version 23.0. This has been solved in version 23.0SP1
- A memory leak was discovered with Wine version 7.0, which could result in memory limits being exceeded after a few hours of navigation. This is fixed in version 8.0 of Wine. It is therefore recommended to update to version 8.0, which is now available as the latest "stable" version.
- Firefox refuses to open the documentation from the installation folder. This is related to access rights problems of the version of Firefox installed by default in the latest Linux distributions, with the "SNAP" system which implies restrictions on access to local files. It is therefore copied on first access, or when modifications are made during installation, into an accessible directory under your "Documents/ScanNav Settings" folder.

Note that it is also possible since version 23.0 to read the documentation online rather than locally, provided you have an Internet connection. See [documentation in the release notes](#).

- Some minor display bugs may occur if you use the "**Wayland**" graphical environment which is installed by default in the latest versions of Ubuntu, and which still has some shortcomings. Concerning ScanNav, the known problems concern only the absence of display of the frame when moving or resizing the toolbars. However, it is the source of other more annoying problems, especially on remote control software like VNC or AnyDesk who simply don't work with Wayland, which prevents any support operation. It is therefore advisable to deactivate this component, or at least to know how to deactivate it in the event of any issue (see below)

Connection to instruments:

Some connections have special admin characteristics, especially for native serial ports, or USB adapters:

- Serial devices belong to the "dialout" group, and the standard user does not have access to them. You must therefore **add your user to the "dialout" group** (see installation below)
- Depending on the version, Wine maps serial devices by presenting "Windows-style" names (ie COM1, COM2, ... COMxx), If this is not the case, it is possible to enter the Linux device name directly, i.e. "/dev/ttySx" for native serial ports, and "/dev/ttyUSBx" or "/dev/ttyACMx" for USB connections ("x" being the port number). This may change depending on the native system (Linux / MacOS, or ChromeOS), more details will be provided later.

The TCP or UDP network connections are configured strictly identically as on native Windows.

Installing Wine

This chapter is not intended to replace the official Wine documentation available on their site (<https://www.winehq.org/>). There are also many tutorials available on the web dealing with the subject.

This is just a quick memo listing the different commands to use for installation. This procedure was performed on an **Ubuntu 22.04 environment**, and although it should be very similar on the many other Linux distributions, there may be slight differences. For more details on the commands used, or in case of doubt of malfunction, please refer to the official Wine documentation.

For installation on Mac, it is strongly recommended to use [CrossOver](#) which simplifies everything and allows you to have a little support for a small contribution.

[CrossOver](#) is also a recommended solution for users unfamiliar with Linux, or with an aversion to text command lines.

The tests were initially performed with the "stable" version 7.0.1 of Wine. Following the discovery of a memory leak problem, we moved to the development version 8.0rc2 where the problem is corrected. Version 8.0 of Wine is now available as the latest "stable" version, so we recommend using this version.

1) Download and Installation of Wine on Linux

In the following procedure, the commands to run in the terminal are in *blue italic font*

- Uninstalling old versions of Wine: Before installing, if you had an old version of Wine, it is recommended to uninstall it first (mandatory if you are changing from "development" to "stable" version, or vice versa back)

sudo apt purge "wine"*

Note: It is not necessary to delete the .wine directory, you will find the data, and other programs that may have been installed after installing the new version of Wine.

- Add 32-bit support if not already done :

sudo dpkg --add-architecture i386

- Install the **32 bits version of OpenGL**

sudo apt update

sudo apt install libgl:i386

Note: ScanNav will work without this package, but the screen orientation functionality will be disabled.

- Add the winehq repository:

sudo mkdir -pm755 /etc/apt/keyrings

sudo wget -O /etc/apt/keyrings/winehq-archive.key <https://dl.winehq.org/wine-builds/winehq.key>

The next line depends on the version of your Linux distribution. It is indicated here for **Ubuntu 22.04**, please refer to <https://wiki.winehq.org/Ubuntu> for other versions of Ubuntu, or <https://wiki.winehq.org/Download> for other distributions of Linux

sudo wget -NP /etc/apt/sources.list.d/ <https://dl.winehq.org/wine-builds/ubuntu/dists/jammy/winehq-jammy.sources>

- Actual installation:

sudo apt update

sudo apt install --install-recommends winehq-stable

or if you prefer the "development" version: *sudo apt install --install-recommends winehq-devel*

- Once finished check the installed version which must be 8.0rc2 or higher:

wine --version

Note: ScanNav is also functional with version 6.0.3 and 7.0.1, but it is recommended to use the latest version (8.0 to date) to avoid issues listed above.

- Give access to the serial **communication ports** to the current user:

*sudo addgroup **user** dialout* (replace **user** with your login name)

- Optional but recommended: Installation of winetricks (allows easier access to commands)

sudo apt install winetricks

- Install the **Arial font** via winetricks, otherwise an error message may appear when starting ScanNav, which does not pose any particular problem but is still annoying.

- Launch **winetricks** (via command line, or application icon)

Note: Winetricks might show some warnings about WINEPREFIX being 64 bits, this does not affect ScanNav, you can ignore them. It will also ask to install the wine-mono package which you need to accept.

- ⇒ 1st screen: select "Select the default wineprefix", then validate
- ⇒ 2nd screen: select "Install a font", then validate
- ⇒ 3rd screen: select "arial", then validate
- ⇒ The font installation proceeds (if it has not already been done), then winetricks returns to the 2nd screen.
- ⇒ 2nd screen: click on "run winecfg"
- ⇒ New "windows like" screen: in the "Applications" tab, choose the Windows version "Windows 10", then validate with "Ok" (this is normally already the case on recent versions of Wine)
- Optional: You can optionally install **wine-gecko** , but it is not necessary to do it now, you will be asked to install it the first time you use functions using Html dialogs, such as the guides, or interrogation of Navionics chart objects. More info on <https://wiki.winehq.org/Gecko>
- Optional: **Disabling Wayland** . As indicated above, the Wayland graphical environment, although functional with ScanNav, can cause some problems. To disable it, just uncomment a line in a configuration file
 - Make a backup of the file “/etc/gdm3/custom.conf” before anything else
 - Open the “/etc/gdm3/custom.conf” file with any text editor in administrator mode (sudo).
 - Look for the following 2 lines near the top of the file:
 - # Uncomment the line below to force the login screen to use Xorg
 - # WaylandEnable=false
 - remove the "#" character in front of WaylandEnable, the 2 lines should ultimately be:
 - # Uncomment the line below to force the login screen to use Xorg
 - WaylandEnable=false
 - Save the file, then exit your session and reconnect or reboot.
 - Verification: in a console, run the command " *echo \$XDG_SESSION_TYPE* »
 - ⇒ The result must be “x11”
 - ⇒ you can also test before making the modification, in this case the result will be "wayland"
 - To reactivate Wayland, just re-comment the “WaylandEnable=false” line and restart your session.

2) Installing Wine on MacOS

For installation on Mac, it is strongly recommended to use the version distributed by CrossOver (<https://www.codeweavers.com/crossover>) which took over the development of Wine for MacOS and provides the appropriate support.

Some other alternatives exist such as [homebrew](#) or [PlayOnMac](#) but they have not yet been tested at the time of writing this document. Please refer to the following page for alternatives: <https://wiki.winehq.org/MacOS>

Advanced users can download the sources to do their own installation. However, we will not be able to provide support on this point.

3) Installing Wine on ChromeOS

Wine is known to work on ChromeOS, but we haven't any feed-back back yet. We will therefore complete this chapter later. First make sure your CPU is x86 based (Intel or AMD), ARM processors are not compatible to date.

ChromeOS is based on Linux, but it is not enabled by default. It must therefore be activated according to Google's instructions, see <https://support.google.com/chromebook/answer/9145439?hl=en>

The installation is then identical to the installation under Linux.

A complete tutorial on installing Wine 7.0 on ChromeOS is available here: <https://beebom.com/how-use-windows-10-apps-chromebook-using-wine/>. You will probably find plenty other tutorials on Google.

[CrossOver](#) also offers a completely integrated installation for ChromeOS.

Installation of ScanNav (version 23.0 minimum)

The ScanNav installation package is the same as for Windows.

Download the latest **full version for Windows 10** from the ScanNav download page

<https://www.scannav.com/GB/download.php>

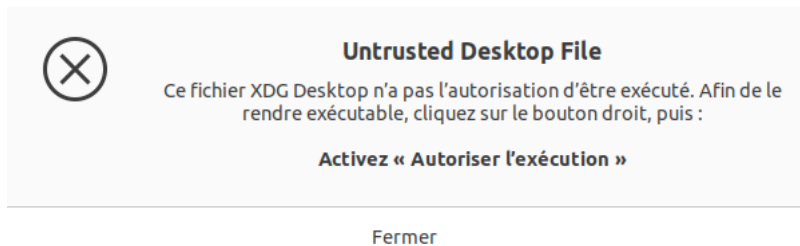
You then have several possibilities

- Either using the command line:
wine "Path to downloaded installation file" (ScanNavInst230.exe for version 23.0)
- Or using *winetricks*
 ⇒ 2nd screen: select "run uninstaller", then validate (yes, it's "uninstaller"!!!)
 ⇒ New "windows like" screen: click on button "Install.. ." at the top right, then go and find the ScanNav installation file in your download location (ScanNavInst230.exe for version 23.0).
 ⇒ The next steps are identical to the installation under Windows

If the installation indicates that your version of Windows is not compatible, this can mainly be due to 2 causes:

- Either you have an old version of Wine, and/or it is configured in Windows XP compatibility or lower: Install the latest version of Wine, and/or configure it in "Windows 10" mode (see *winetricks* above)
- Or maybe you downloaded the version of ScanNav for XP: Make sure to download the version for Windows 10, and try again.
- Note: It is possible to configure Wine in Windows XP mode and install the XP version of ScanNav, but this is **strongly discouraged**.

Note: Wine creates desktop launcher icons. On the latest versions of Ubuntu, on first installation, these may be marked with a small red cross, and the following message will be displayed when you double-click on it



Just authorize the execution by following the instructions, the red cross will disappear, and you will be able to launch the application.

Updates:

Since version 23.0 of ScanNav, there is no longer a special update version via msp patch files (which was a problem under Wine), just install the latest version which will update any installed version.

Uninstallation:

To uninstall ScanNav, you can:

- Either use the "Uninstall ScanNav" icon
- Or use *winetricks* :
 ⇒ 2nd screen: select "run uninstaller", then validate
 ⇒ Select ScanNav in the list then click on "delete"

Uninstalling ScanNav does not delete any personal data. You will find these back after reinstalling a new version.

Note: Shortcuts created on the Linux desktop by Wine are not removed during uninstallation. You can delete them manually without problem, they will be recreated as needed during a new installation.