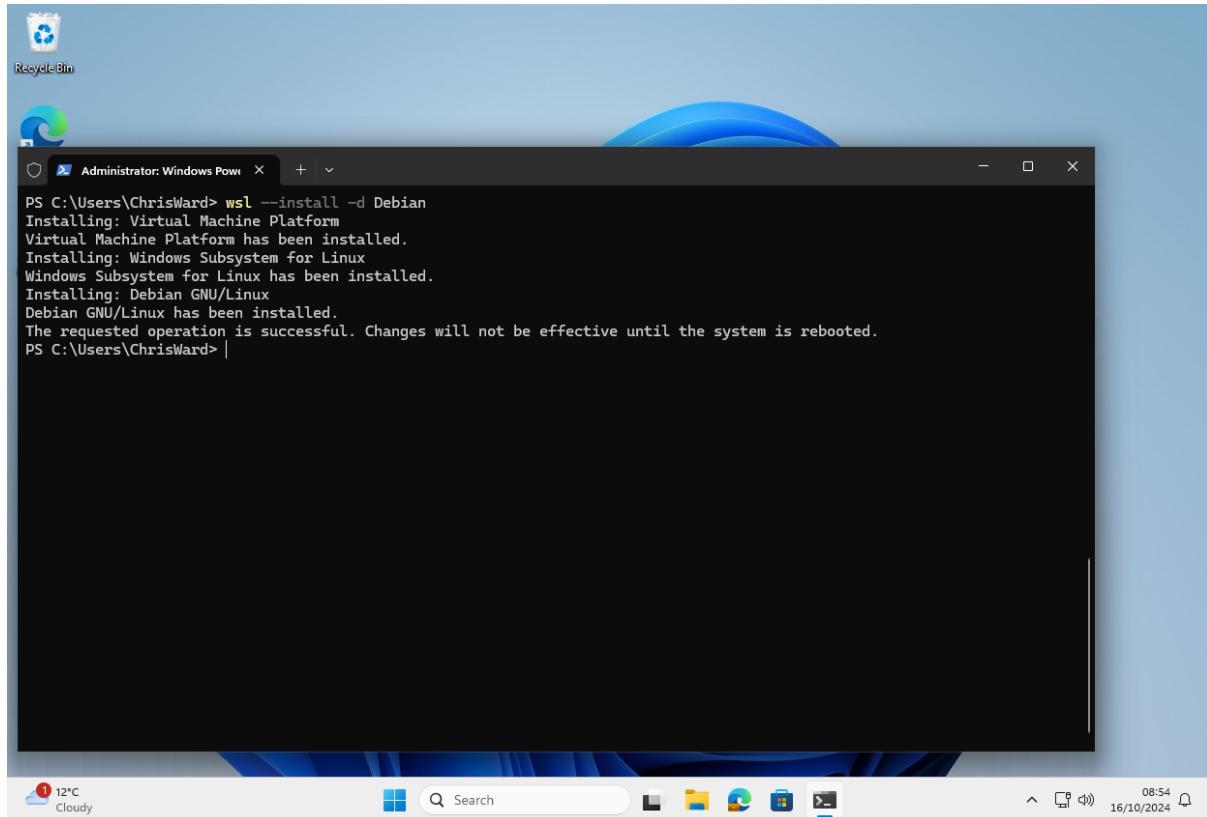


Each participant will build two zip files, each of which extracts to an installable screensaver which is a Linux distribution. All required software and data is publicly licenced and is accessible on the public Internet.

Hardware requirement: A PC running Windows 10 or newer which is capable of running WSL2. WSL2 only runs on some CPUs and requires a BIOS setting to enable virtualization.

Internet requirement: Each participant will download up to 10 GB of data.

Install WSL2 with Debian



Install cygwin from <https://cygwin.com/> with git

Screenshot of a web browser showing the Cygwin Installation page (<https://cygwin.com/install.html>). The page displays the Cygwin logo and the tagline "Get that *Linux* feeling - on Windows". A sidebar on the left contains links for Cygwin, Cygwin/X, Community, Documentation, Contributing, and Related Sites. A modal window titled "Cygwin Net Release Setup Program" is open, showing the setup program's logo and a brief description of its purpose. The download "setup-x86_64.exe" is listed in the Downloads panel.

Installing and Updating Cygwin Packages

Installing and Updating Cygwin for 64-bit versions of Windows

Run [setup-x86_64.exe](#) any time you want to update or install a package.

The [signature](#) for [setup-x86_64.exe](#) can be used to verify the file's integrity.

General installation notes

When installing packages for the first time, the setup program and the Cygwin distribution are installed by default, which takes approximately 10 minutes.

Clicking on categories and packages in the setup program package list will update your system with any new package releases.

Once you've installed your desired subset of the Cygwin distribution, running it will update your system with any new package releases.

The setup program will check by default if it runs with administrative privileges. If you want to avoid this behaviour and install under an unprivileged account just for your own usage, run setup with the `--no-admin` option.

Q: How do I add a package to my existing Cygwin installation?

A: Run the setup program and select the package you want to add.

Screenshot of a Windows desktop environment showing the Cygwin Installation page in a browser window. A modal window titled "Choose A Download Site" is open, listing various download sites. The site "https://www.mirrorservice.org" is selected. The desktop taskbar shows icons for File Explorer, Task View, and other applications.

Installing and Updating Cygwin Packages

Installing and Updating Cygwin for 64-bit versions of Windows

Run [setup-x86_64.exe](#) any time you want to update or install a package.

The [signature](#) for [setup-x86_64.exe](#) can be used to verify the file's integrity.

General installation notes

When installing packages for the first time, the setup program and the Cygwin distribution are installed by default, which takes approximately 10 minutes.

Clicking on categories and packages in the setup program package list will update your system with any new package releases.

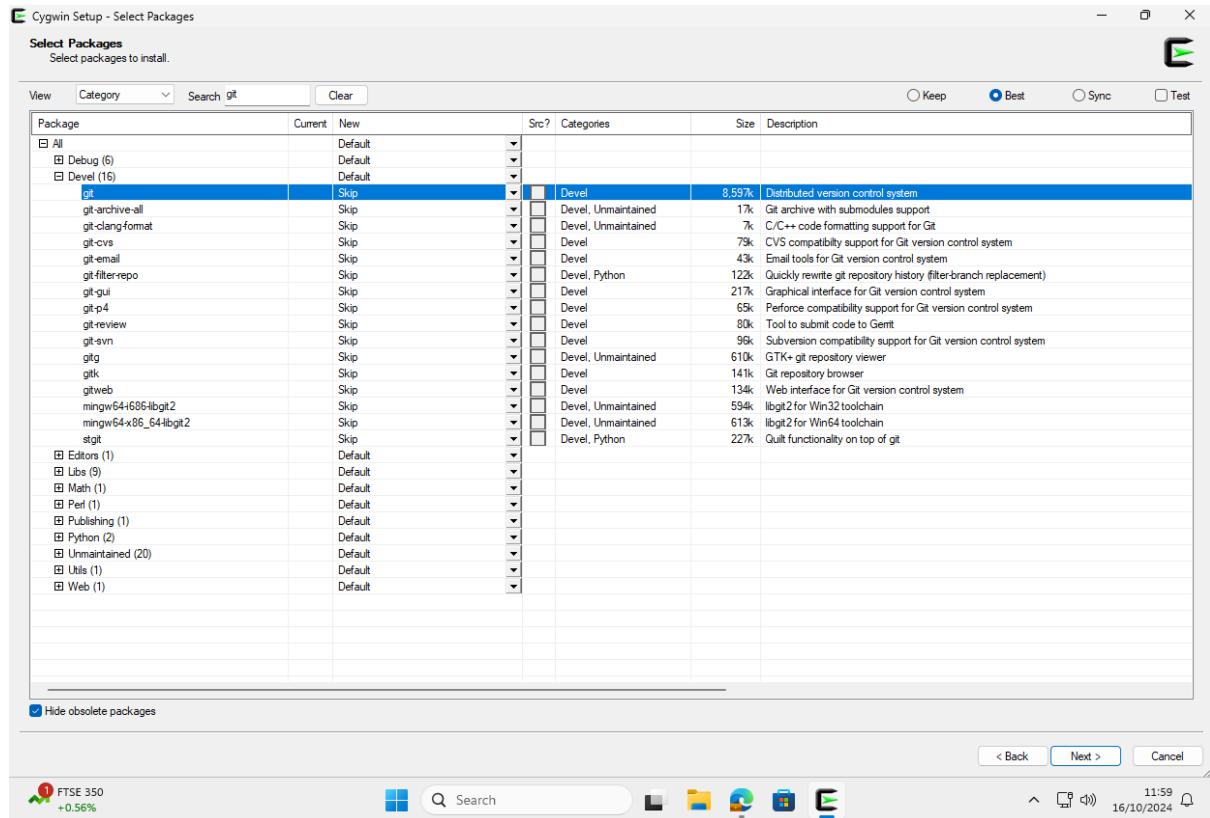
Once you've installed your desired subset of the Cygwin distribution, running it will update your system with any new package releases.

The setup program will check by default if it runs with administrative privileges. If you want to avoid this behaviour and install under an unprivileged account just for your own usage, run setup with the `--no-admin` option.

Q: How do I add a package to my existing Cygwin installation?

A: Run the setup program and select the package you want to add.

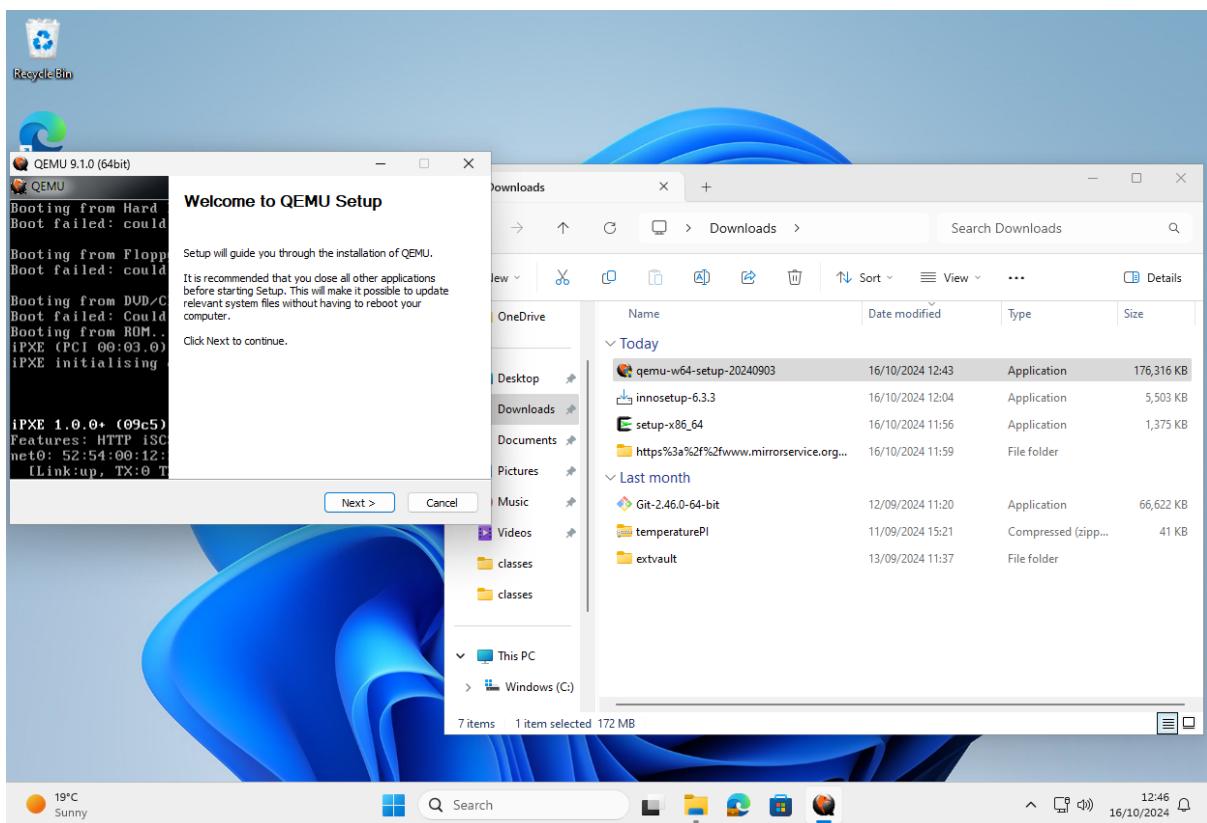
Screenshot of a Windows desktop environment showing the Cygwin Installation page in a browser window. A modal window titled "Choose A Download Site" is open, listing various download sites. The site "https://www.mirrorservice.org" is selected. The desktop taskbar shows icons for File Explorer, Task View, and other applications.



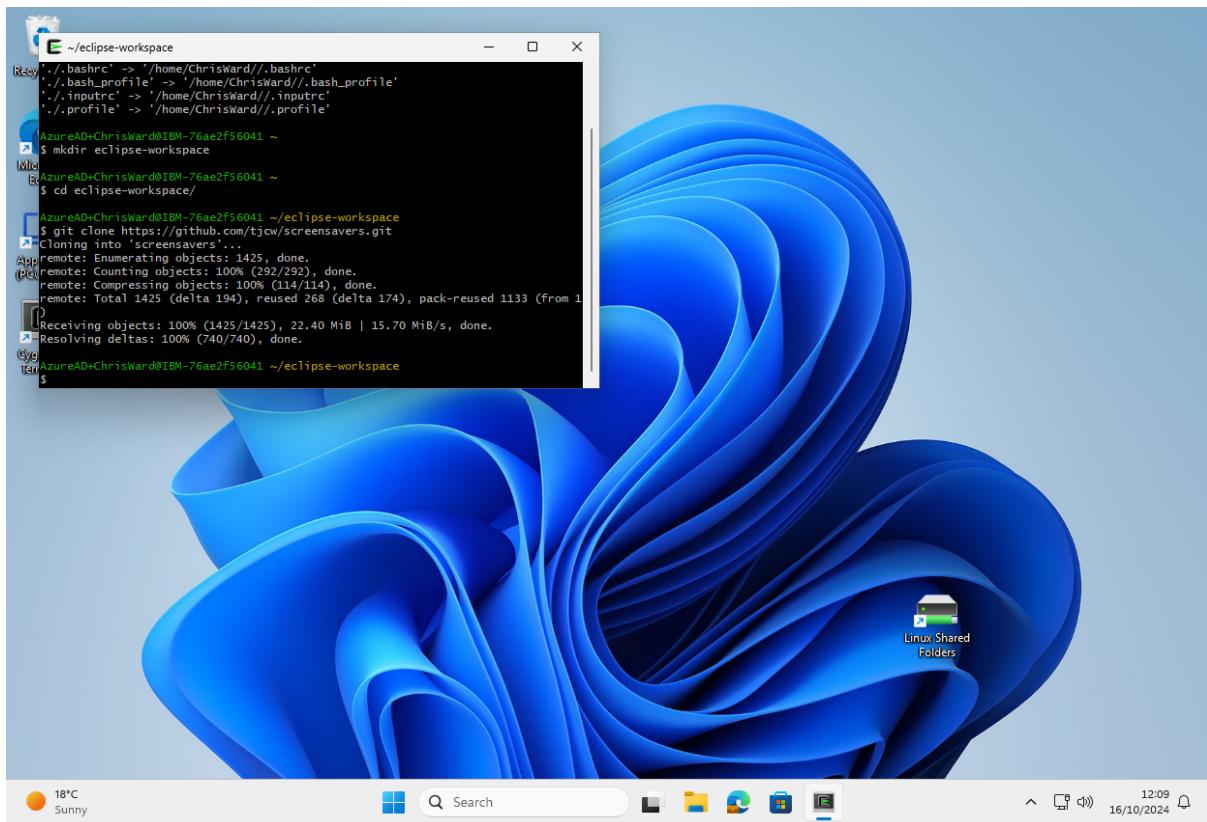
Install Inno Setup from <https://jrsoftware.org/isinfo.php>

The screenshot shows a web browser displaying the Inno Setup download page at <https://jrsoftware.org/isdl.php>. The page features a sidebar with links like 'Contribute', 'Documentation', 'FAQ', 'Third-Party Files', 'Translations', 'Links', 'Toolbar2000', 'Toolbar97', 'Support', 'Forums', and 'Contact'. A counter indicates '21484929 visitors since Jan. 1998'. The main content area is titled 'Stable Release' and lists several new features of Inno Setup 6. A file download dialog is overlaid on the browser window, showing two files: 'innosetup-6.3.3.exe' and 'setup-x86_64.exe'. Below the download dialog, a 'License Agreement' window is open, asking for acceptance of the terms. At the bottom of the browser window, there's a note about checking the 'Inno Setup FAQ' for common problems and a 'Remember to check the Inno Setup FAQ for solutions to common problems...' message.

Install Qemu for Windows from <https://qemu.weilnetz.de/w64/>

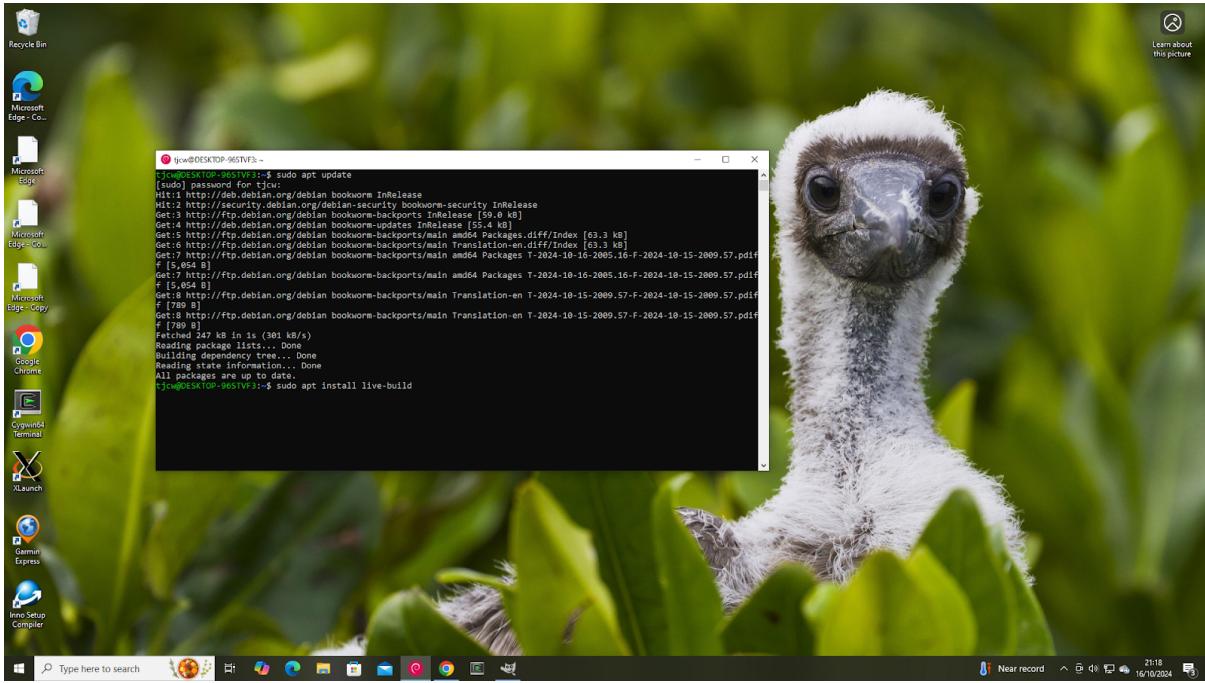


Clone <https://github.com/tjcw/screensavers.git> under cygwin



Clone <https://github.com/tjcw/screensavers.git> under WSL2

Install 'live-build' under WSL2



Customise the selection of software to go in the isos (WSL2 commands)

tjcw@DESKTOP-96STVF3:~/lb\$ vi

~/eclipse-workspace/screensavers/lb-package-lists/freeduc-bookworm.list.chroot

tjcw@DESKTOP-96STVF3:~/lb\$ vi

~/eclipse-workspace/screensavers/lb-package-lists/gk-bookworm.list.chroot

Run 'build-both' under WSL2 to generate the isos

tjcw@DESKTOP-96STVF3:~/lb\$ sudo ~/eclipse-workspace/screensavers/bin/build-both

Set up the install script for Inno Setup (Cygwin commands)

tjcw@DESKTOP-96STVF3 ~

\$ cd eclipse-workspace/

tjcw@DESKTOP-96STVF3 ~/eclipse-workspace

\$ cd screensavers/

tjcw@DESKTOP-96STVF3 ~/eclipse-workspace/screensavers

\$ cd packaging/

tjcw@DESKTOP-96STVF3 ~/eclipse-workspace/screensavers/packaging

\$ mkdir qemu

tjcw@DESKTOP-96STVF3 ~/eclipse-workspace/screensavers/packaging

\$ cp -r "/cygdrive/c/Program Files/qemu/." qemu

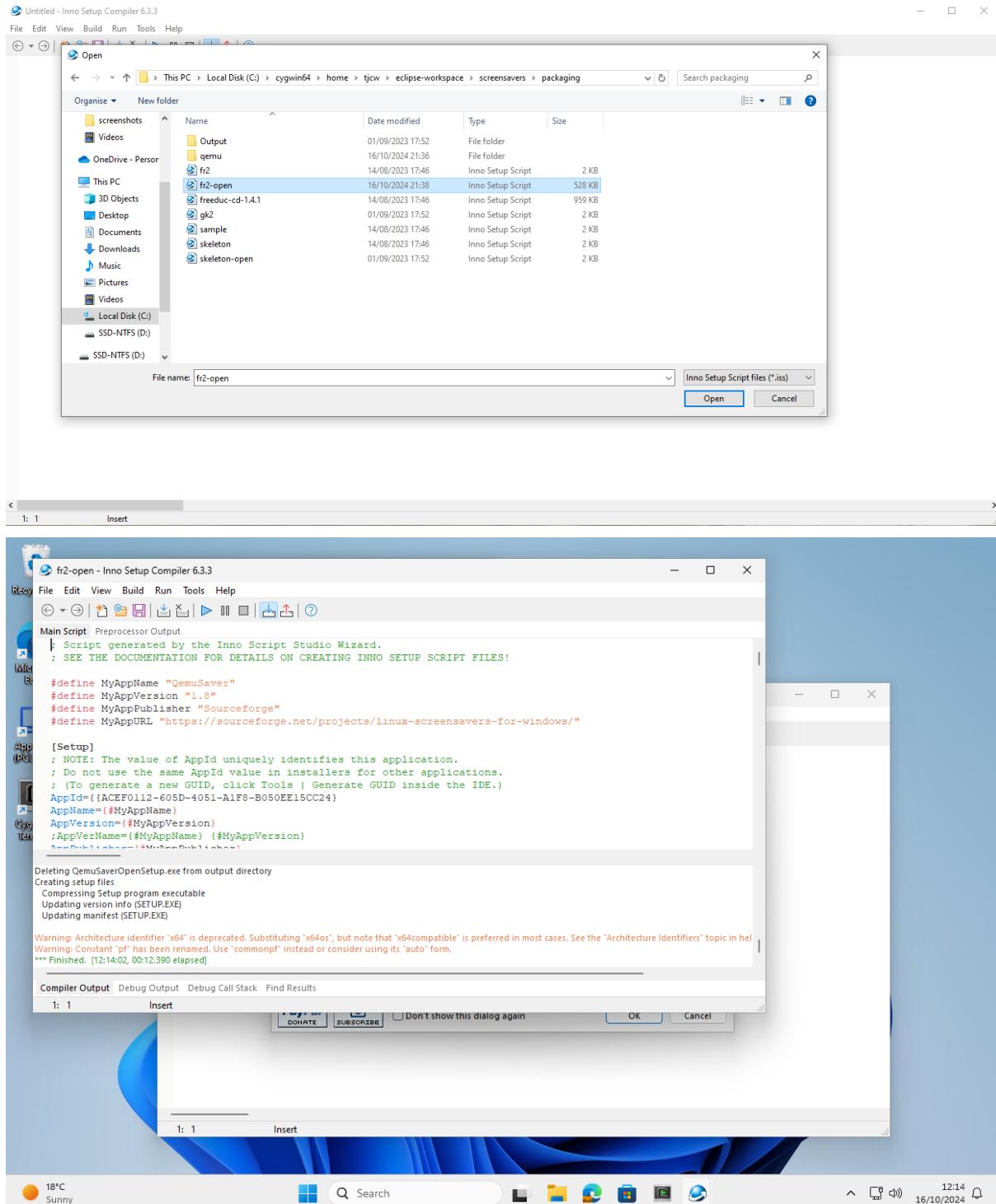
tjcw@DESKTOP-96STVF3 ~/eclipse-workspace/screensavers/packaging

\$./package-qemu-open.sh >fr2-open.iss

tjcw@DESKTOP-96STVF3 ~/eclipse-workspace/screensavers/packaging

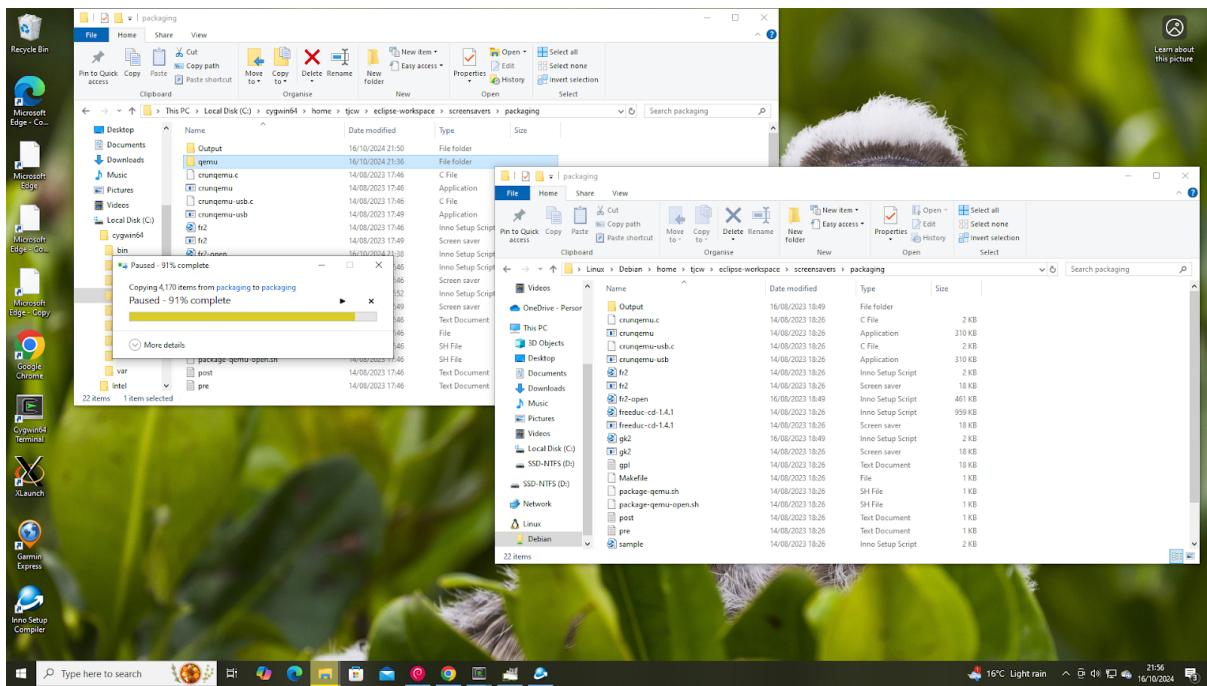
\$

Run Inno Setup to create the installers



After opening 'fr2.iss', choose 'Build/Compile'.

Transfer the installers and 'Qemu for Windows' to WSL2



Set up the unzipped files by running “setup_assembly”

```
tjcw@DESKTOP-96STVF3:~/eclipse-workspace/screensavers/bin$ cat setup_assembly
#!/bin/bash -x
mkdir -p ~/assembly/QemuSaverOpen/unzip/extras
~/assembly/GamesKnoppix2/unzip/extras
mv ~/eclipse-workspace/screensavers/packaging/qemu ~/assembly/QemuSaverOpen/unzip/
cp ~/eclipse-workspace/screensavers/packaging/Output/QemuSaverOpenSetup.exe
~/assembly/QemuSaverOpen/unzip/
cp ~/eclipse-workspace/screensavers/packaging/fr2.scr
~/assembly/QemuSaverOpen/unzip/extras/
ln ~/lb/isos/freeduc-bookworm.iso ~/assembly/QemuSaverOpen/unzip/extras/fr2.iso

cp ~/eclipse-workspace/screensavers/packaging/Output/GamesKnoppix2Setup.exe
~/assembly/GamesKnoppix2/unzip/
cp ~/eclipse-workspace/screensavers/packaging/gk2.scr
~/assembly/GamesKnoppix2/unzip/extras/
ln ~/lb/isos/gk-bookworm.iso ~/assembly/GamesKnoppix2/unzip/extras/gk2.iso
tjcw@DESKTOP-96STVF3:~/eclipse-workspace/screensavers/bin$
```

Zip up the ISOs, the installers, and ‘QEMU for Windows’

```
tjcw@DESKTOP-96STVF3:~/assembly/QemuSaverOpen/unzip$ zip -r
..../QemuSaverOpen.zip .
tjcw@DESKTOP-96STVF3:~/assembly/GamesKnoppix2/unzip$ zip -r ..../GamesKnoppix2.zip
```

Transfer the zip files from WSL2 to Windows

Test

Extract each zip file and run the installer exes. Sometimes the installers are detected as malware. They aren't malware, so if necessary add the QemuSaverOpen and GamesKnoppix2 directories to the exclusion list.
Go to screensaver settings and select fr2 or gk2.

Optionally, run 'fetch-source' to fetch the source code for all components. You will need the source code if you propose to distribute the screensavers, as recipients may ask you for it. 'fetch-source' will download more than 100 GB of data, which may stress the available internet connection.

Bibliography

https://www.researchgate.net/publication/272094609_Linux_screensaver_for_Windows First publication about running Linux as a Windows screensaver

<https://www.linux.com/news/linux-as-a-screensaver-for-windows-the-gift-of-open-source-games-and-sboms-for-the-holidays/> Updated publication about running Linux as a Windows screensaver