Install the Waterfox Web Browser on a Linux system

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1 Introduction

The Waterfox Web Browser is a fork of Mozilla. It is similar to Firefox, but is independently maintained. It is currently owned by *System1* which is a research organisation involved in software development for statistical applications using R .

Waterfox is not currently available for download in any of the Linux distros which I use (Debian, Void, Solus). I decided to install it in Void Linux. The following is an account of my install procedure

2 Obtain the download file

Go to the waterfox website [2]

```
https://www.waterfox.net/download
```

Download the file

```
 waterfox-G4.1.1.1.en-US.linux-x86_64.tar.bz2
```

3 Unpack the download file

Move the download file away from the Download directory to somewhere sensible where you can unpack it. Dont put it anywhere in */usr* because that is reserved for software controlled by the package system. Options are

- in */usr/local/...*

- in your home directory

I choose */usr/local* so I made a directory */usr/local/src* and copied the .bz2 file there.

That download file is a tar archive compresses with the *bzip2* program. To unpack it got to the */usr/local/src* directory and do

```
bzip2 -dc waterfox-G4.1.1.1.en-US.linux-x86_64.tar.bz2 | tar xvf -
```

it will make a directory called *waterfox* which will contain all the unpacked material as follows

```
[nevj@trinity waterfox]$ ls
application.ini      libmozavcodec.so   libnssutil3.so   plugin-container
browser              libmozavutil.so    libplc4.so       precomplete
defaults             libmozgtk.so       libplds4.so      removed-files
dependentlibs.list   libmozsandbox.so   libsmime3.so     update-settings.ini
fonts                libmozsqlite3.so   libsoftokn3.so   updater
gmp-clearkey         libmozwayland.so   libssl3.so       updater.ini
icons                libnspr4.so        libxul.so        waterfox
libfreeblpriv3.so    libnss3.so         omni.ja          waterfox-bin
liblgpllibs.so       libnssckbi.so      platform.ini
```

4 How to install this unpacked material?

We have to decide what all these files are for? Well, firstly, that file called *waterfox* looks like a binary, so lets check

```
[nevj@trinity waterfox]$ file waterfox
waterfox: ELF 64-bit LSB pie executable, x86-64, version 1 (SYSV),
 dynamically linked, interpreter /lib64/ld-linux-x86-64.so.2,
 BuildID[sha1]=1473cfde0d27954992968743ce38e3661efb0cd3,
 for GNU/Linux 3.2.0, stripped
```

Yes, that is an executable file. So what is *waterfox-bin*? A quick check with *cmp* reveals it is just an exact copy of *waterfox*. No idea why?

So before we install it, how about we check if it will run? Just type *./waterfox*, and yes it runs and brings up a browser window, but nothing appears in the applications menu, and there is no desktop icon. A proper install might fix that.

We need to put the binary in some *bin* directory, but not */bin* and not */usr/bin*. So I opt for */usr/local/bin*

```
cp waterfox /usr/local/bin
```

That is all. Now I do not have to be in */usr/local/src/waterfox* to execute it, I can just type *waterfox* from anywhere, because */usr/local/bin* is in my *PATH*.

4.1 Getting an app menu item and an icon

There is still a lot of material in */usr/local/src/waterfox* and we need to put it somewhere where the system can find it. The same material for firefox is in */usr/lib/firefox* on my system, so I opt for */usr/local/lib/waterfox*. So copy it over

```
cd /usr/local/src/waterfox
mkdir /usr/local/lib/waterfox
cp -r * /usr/local/lib/waterfox
cd /usr/lib
ln -s /usr/local/lib/waterfox waterfox
```

Now I magically get an entry for Waterfox Web Browser in the Applications
Menu, but still no desktop icon. Why the link? Well my system only seems to
look in */usr/lib* when it is looking for applications. Without the link, I dont get
an entry in the Applications Menu.

Now for the icon. My system defines material for desktop icons in */usr/share/applications*.

```
/usr/share/applications
[nevj@trinity applications]$ ls
firefox.desktop
gcr-prompter.desktop
gcr-viewer.desktop
gtk3-icon-browser.desktop
........
mimeinfo.cache
uxterm.desktop
xscreensaver-properties.desktop
xterm.desktop
```

We need to look at the *firefox.desktop* file and modify it to make a *water-
fox.desktop* file . Fortunately someone has already done that , and I was able to
get the following from the waterfox website

```
[Desktop Entry]
Version=1.0
Name=Waterfox Web Browser
Comment=Browse the World Wide Web
GenericName=Web Browser
Keywords=Internet;WWW;Browser;Web;Explorer
Exec=waterfox %u
Terminal=false
X-MultipleArgs=false
Type=Application
Icon=waterfox
Categories=GNOME;GTK;Network;WebBrowser;
MimeType=text/html;text/xml;application/xhtml+xml;application/xml;application/rss+xml;applic
StartupNotify=true
Actions=new-window;new-private-window;

[Desktop Action new-window]
Name=Open a New Window
Exec=waterfox -new-window
```

```
[Desktop Action new-private-window]
Name=Open a New Private Window
Exec=waterfox -private-window
```

Now where do we put it? We take our clue again from firefox. The file
firefox.desktop is in */usr/share/applications*. We cant put *waterfox.desktop*
there, beacuse that is inside the package system, so we need to put it in
/usr/local/share, so

```
cd /usr/local/share
mkdir applications
cd /usr/local/src/waterfox
cp waterfox.desktop /usr/local/share/applications
cd /usr/share/applications
ln -s /usr/local/share/applications/waterfox.desktop waterfox.desktop
```

Again the link is necessary to get the system to detect the presence of *wa-
terfox.desktop* file The icon now appears on the display background. Install
succedssful.

5 Testing

The browser starts from either the icon or the App Menu. It looks similar to
firefox. I can put in some web addresses and start browsing. An image of the
browser window is showewn in Figure 1

It puts coloured tabs on the screen for frequently accessed sites, and there
is a dropdown menu on the top right for configuration.

5.1 Acknowledgment
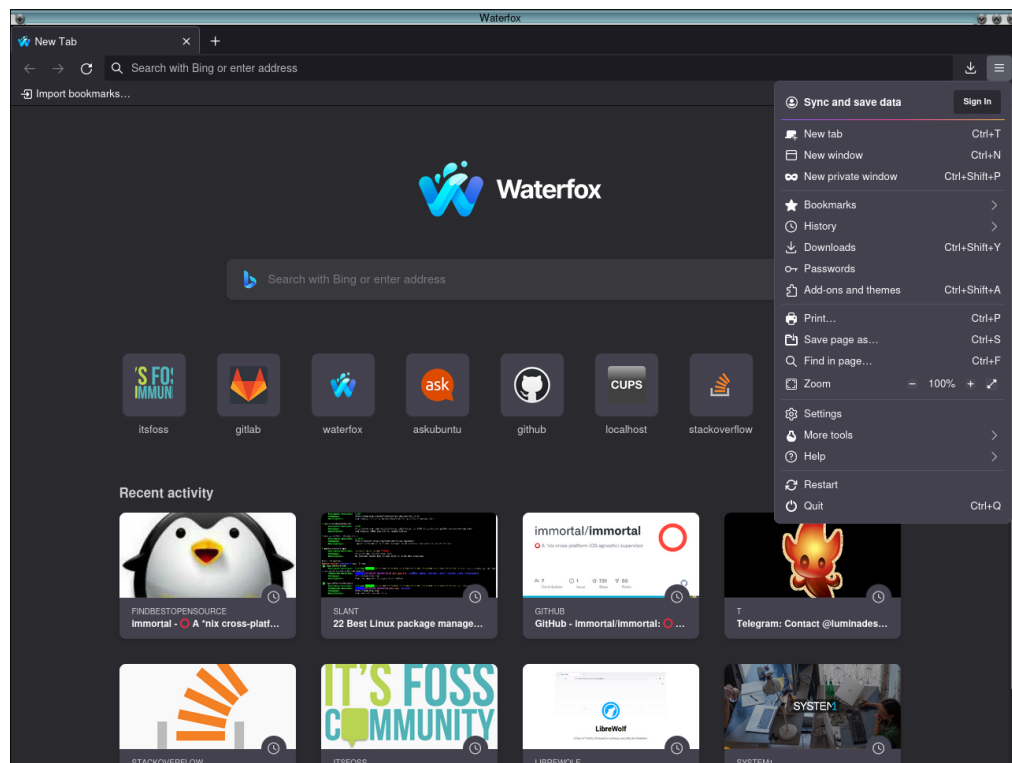
References

[1] Waterfox website. URL https://www.waterfox.net

Figure 1: Screenshot of the waterfox browser window