

Wine - Easing the switch from Window\$

Rohit Rawat
Linux User Group at UTA

What is Wine?

- Wine (originally an acronym for "Wine Is Not an Emulator") is a compatibility layer capable of running Windows applications on several POSIX-compliant operating systems, such as Linux, Mac OSX, & BSD.

API Calls

- An Application Programming Interface provides facilities for
 - Accessing the file system
 - Drawing windows and dialog boxes
 - Accessing graphics and other devices
 - Networking, and many other services
- Windows programs are written using the Windows API (Win32/Win64)
- Linux, Unix, and BSD applications are written using the POSIX standard (a public IEEE standard)
- Other examples would be the Android and iOS APIs

API Calls

- Wine **translates** Windows API calls into POSIX calls on-the-fly.
- Virtual machines/Emulators are slow, having to emulate each processor instruction at a low level.
- Wine and Unix can sometimes be faster than Windows itself.

Window\$ Copyrights?

- You ***do not need to buy*** a copy of Windows to run Wine.
- Wine developers have written their own implementation of the Windows API from scratch using publicly available information and experimentation.

Popular Wine Uses

- Microsoft Office (till Office 2010)
- Adobe Photoshop CS6
- Google's Picasa and Sketchup
- Valve's Steam and many other games
- Teamviewer remote access for Linux
- Spotify music client

Wine structure

- Wine (1.6 or 1.7) - gives the core functionality
 - Winecfg is an included graphical configuration utility
- Winetricks – helper script for
 - Installing DLLs and libraries necessary to run certain programs
 - Installing some popular programs automatically

Wine Bottles

- Wine bottles are like different installed instances of Windows
- Apps installed in one bottle do not see or affect apps in other bottles
- Advantages:
 - Prevents a new app from damaging others
 - Lets you run apps on different versions of Windows and load different DLLs to ensure compatibility

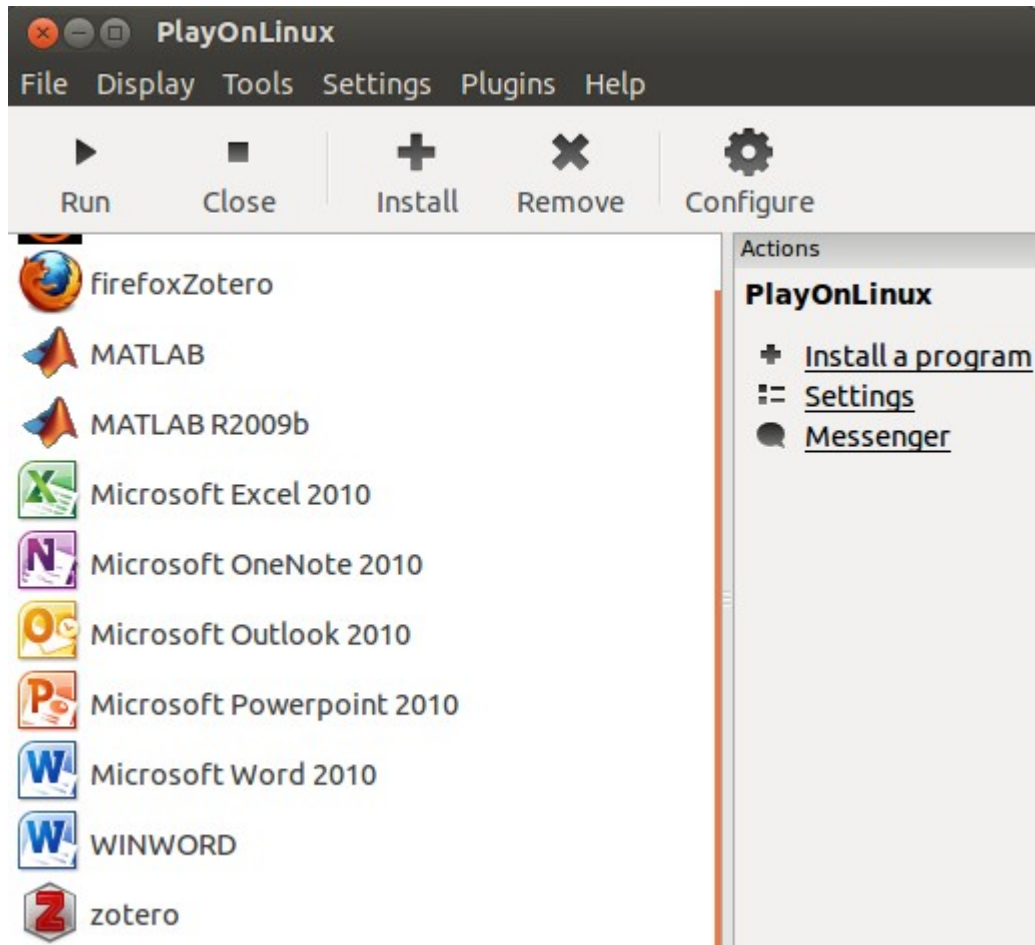
Wine Bottles

- Wine bottles can be created and managed from the command line
- The default bottle is called “.wine” in your home folder
- The WINEPREFIX and WINEARCH environment variables are used for selecting bottles.
- But this can become a hassle

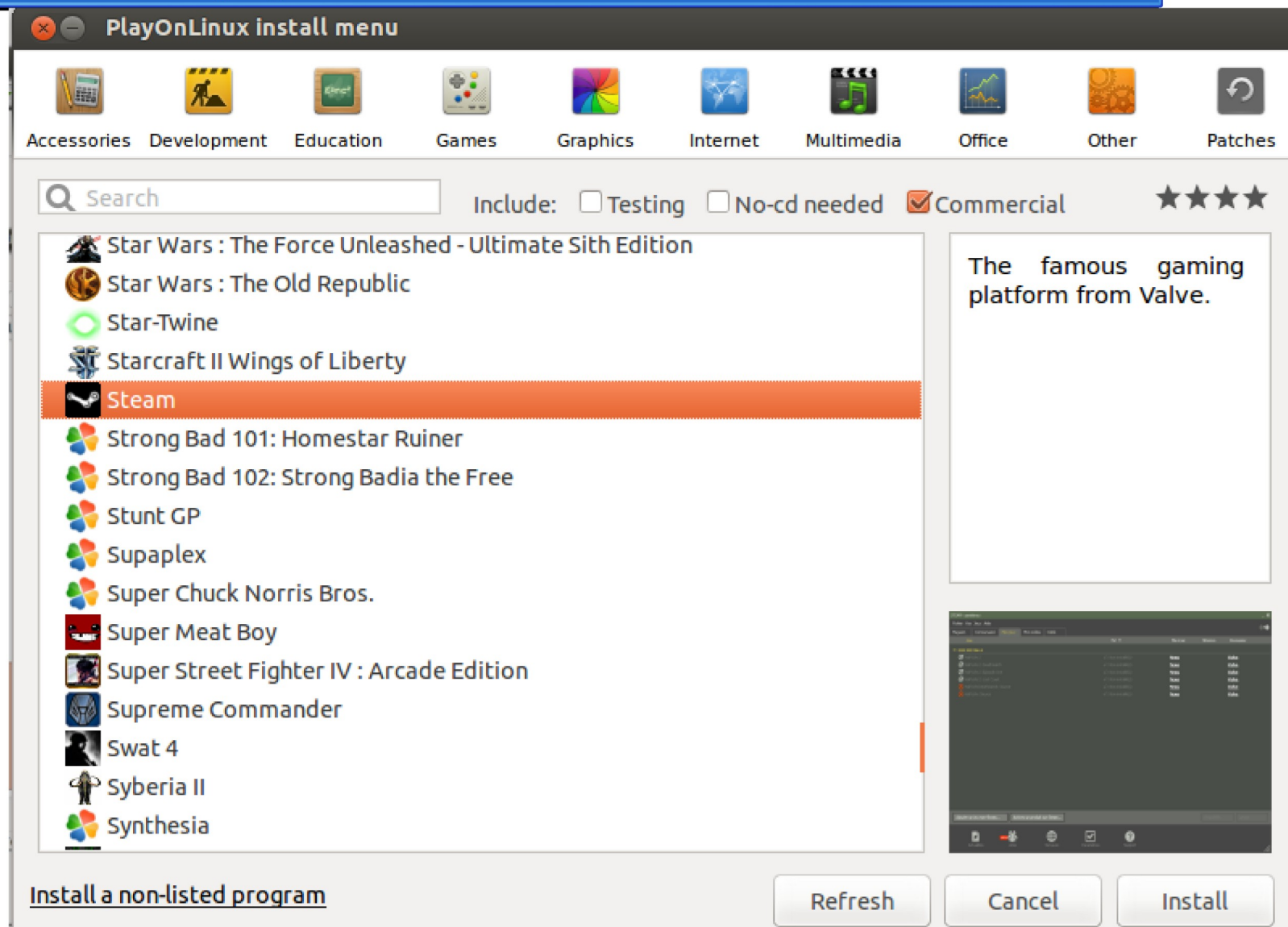
Wine Front-ends

- Wine front-ends make installation and use of Windows software easy
 - **PlayOnLinux** (also PlayOnMac)
 - Automatically installs required DLLs and frameworks
 - Uses the correct version of Wine
 - Applies any necessary patches

PlayOnLinux



Many Supported Games and Applications



Checking Support

WineHQ - Steam Official Release - Mozilla Firefox

appdb.winehq.org/objectManager.php?sClass=version&id=19444

WineHQ Wiki AppDB Bugzilla Forums

Search: Google™ Custom Search

Category: [Main](#) > [Games](#) > [Game Tools](#) > [Steam](#) > [Official Release](#)

Name	Steam
Version	Official Release
License	Free to use
URL	http://www.steampowered.com
Votes	146
Rating	Gold
Wine Version	1.5.27
Free Download	Download

[View/Submit Screenshot](#)

Maintainers of this version:

- [Alexander Stiehl](#)
- [Artur hoOmE](#)
- [Bob Wya](#)

Description

Steam automatically updates itself to the latest version whenever it is run. This is the platform for all recent Valve games. You can find out information about whether or not individual games (such as Half Life) run by checking out their respective sections in the database. **This page is about Steam only.** When adding test results please specify **video card** and **driver version** you are using. Available natively for Mac OS X and Linux.

Selected Test Results (selected in 'Test Results' table below)

What works
Everything I've tried so far, including (but not limited to):

- Purchasing games.
- Installing games.
- Running games.

What does not
Running Steam without the "-no-dwrite" argument.

What was not tested
Lots of games.

Additional Comments

Applications are rated Platinum/Gold/Silver/Bronze/Garbage based on user success. Installation instructions are usually included at the bottom of the page.

My most often used Apps

Windows App	Linux Alternative	What I Use
MS Office	LibreOffice	LibreOffice and MS-Office under Wine and Virtualbox
MATLAB	MATLAB for Linux, Octave, FreeMat, SciLab	Both Octave and MATLAB under Wine
Steam Games	Steam for Linux	Both Steam for Linux and Wine
Visual Studio	Eclipse, Netbeans, etc.	Build Win32 apps in a Virtual Machine Build all other cross platform apps in Netbeans

Incompatible Applications

- Some applications just won't run under Wine
 - In case the Linux alternative does not fit your needs, use a virtual machine running Windows