Getting Started with Wine

First Things First.

Computer programs are written to operate in a specific operating system environment. Trying to run a program written for Microsofts' Windows operating system in an environment created by a different operating system won't work, as the program contains instructions that need to be interpreted by the Windows environment.

If we really need to run programs intended for different operating systems (for example, Linux and Windows) on the same computer, we have 3 options -

- Dual Boot Linux and Windows
- Run an Emulator under Linux for the Windows Programs
- Run Wine on linux for the Windows Program

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Dual Booting

This will run both Linux and Windows programs most effectively, as they are both running in the environment for which they were designed, but it can be a disadvantage to be continually rebooting.

Running an Emulator in Linux

This can work quite well, but may need a reasonably powerfull computer with lots of memory, and will certainly need a valid Microsoft license for the version of windows running inside the emulator.

The advantage is that you don't have to continually reboot, and you may be able to cut and paste from a Windows application to the Linux environment and vice versa.

The disadvantage is that the emulator will extract a performance penalty and the programs running inside the emualtor will not be fully integrated with the desktop.

Running Wine

Wine provides a set of Linux library routines that act like the Windows Application Programming Interface (API). As the Wine user guide puts it ..

“Think of Wine as a compatibility layer, when a Windows program tries to perform a function that Linux doesn’t normally understand, Wine will translate that program’s instruction into one supported by the system. “

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A partial list of Wine features:

- Support for running Win32 (Win 95/98, NT/2000/XP), Win16 (Win 3.1) and DOS programs
- Optional use of external vendor DLL files (such as those included with Windows)
- X11-based graphics display, allowing remote display to any X terminal, as well as a text mode console
- Desktop-in-a-box or mixable windows
- DirectX support for games
- Good support for various sound drivers including OSS and ALSA
- Support for alternative input devices
- Printing: PostScript interface driver (psdrv) to standard Unix PostScript print services
- Modem, serial device support
- Winsock TCP/IP networking support
- ASPI interface (SCSI) support for scanners, CD writers, and other devices

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Installing Wine

Use the Package Manager, Luke!

Most 'mainline' distributons will have a version of Wine in the package repositories. Check to see if there are any updates.

In addition, if the distros' version is too old and/or buggy – not unknown – the wine web site http://winehq.org has a number of up to date packages for popular distributions.

You may like to install a few other related packages at the same time – for example clamav and avscan to check any windows files for viruses and xwine to set up a simple GUI for wine.

When you have installed Wine, a quick test is to start a terminal and type the command ..

```
$  wine winefile
```

This should start the Wine file manager, which acts somewhat like the File Explorer in Windows 3.1.

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Wine Configuration

Configuration is best carried out using the wincfg program installed with Wine. You can set a number of items here, including which Windows version to mimic, where various windows folders are located, and which disk drives to use.

If you click on the autodetect button in the 'Drives' tab, wine seems to interrogate the ***/etc/fstab*** file and update its' drive list accordingly.

Also note that you can specify the windows version to mimic globally and for individual programs.

You may need to install specific windows .dll libraries, and you can set one or more of these to be used in preference to any of the 'standard' Wine .dll libraries.

At this stage, it may be of interest to consult the ***Wine User Guide***, downloadable from the Wine website.

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Installing Windows Programs

Provided you have set up a CDROM to act as a Wine drive, you can start up a terminal and type something like ..

```
$ wine d:\program1\setup.exe
```

And Wine will run the install program for your application.

If you want to install from floppy disks, then you will need to install the mtools package, which allows you to work with MSDOS disks more readily, and will detect floppies that are not the standard 1.44MB format. This can be critical to a successfull install.

If the windows program uses floppy disks to install, you may find the following procedure one way of sucessfully working with them.

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Insert the first flopy disk in the drive. Use the mtools program mmount to mount the floppy so that Wine can read it ..

```
$ mmount a:
```

Then start a new terminal, and type in something like

```
$ wine a:\setup.exe
```

The setup program should run and start the install process. Follow the prompts in the normal way. If the setup program requests another floppy disc, do the following ..

Change focus to another desktop, where you can see the floppy icon on the desktop. Unmount using the right-click menu.

Change focus to the terminal where you originally used the mmount command. Remove the current floppy disk and insert the next one as requested by the setup program.

Use the mmount command again to mount the new floppy.

Change focus back to the setup program window, and click OK on the request for the next floppy disk.

Repeat for each floppy disk or until setup is complete.

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The Wine install file folders

```
.wine
|-- dosdevices
|    |-- a: -> /mnt/floppy
|    |-- c: -> ../drive_c
|    |-- d: -> /home
|    |-- e: -> /win2k
|    `-- h: -> /home/nslinux-centos
`-- drive_c
     |-- Documents
     |-- Program Files
     |    |-- Common Files
     |    |-- Internet Explorer
     `-- windows
          |-- MSAPPS
          |-- command
          |-- fonts
          |-- inf
          |-- profiles
          |-- system
          |-- system32
          |-- temp
```