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Gaming on Linux
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Image courtesy of <http://heretic.linuxgames.com/>

“Gaming and Linux, isn't that an oxymoron?” you may ask. “I thought that Linux was only used for programming, sysadmin and the LAMP stack.”

As we will see, Linux is an extremely versatile operating system, which a large number of free, quality games can run on. One of the beauties of open source gaming is that with the portability of the source code. This will allow your system to customize the game based upon your unique preference of Linux or Unix. All of the games I will mention are free to download. Most are

community-based and would welcome your input or developmental help if you really enjoyed the game and wanted to become a game programmer. With the research involved in this article, I was amazed at the number and quality of games that are produced, generally speaking, for no monetary recompense. Gaming is one of the hidden gems of the open-source movement.

Where do I start?

What I would suggest before anything else, is to visit the Wikipedia [site about Linux games](#). Like most things wiki, it gives us a general overview and is a good place to start. The prerequisites for most of the games require a compiler, working video drivers (Ubuntu 6.10 and Fedora Core 6 are the best at supporting video cards out of the box), a window manager (Gnome, KDE or X) and various libraries. I would suggest searching games in the following order:

1. Try your package manager. Most of the games here mentioned can be directly downloaded from yum, yast2, apt-get, pkg_add, etc., depending your distribution. This is the easiest road to take.
2. If the package manager does not feature the game that you desire, the game's website will have the source download. Sometimes they include flavor-specific downloads in the form of RPM (Red Hat and Novell families) or DEB (Debian-based families) files. Try these first.
3. If the game's website does not have an RPM or DEB file for easy installation, or your specific distribution is not supported, you will have to compile from source. The steps to compile and install a program in any Unix-variant are as follows:

```
./configure  
make  
sudo make install
```

If these commands are executed from the correct directory and return with no errors, you have successfully installed the game. If not, take a look at the documentation that came with the download, the game's homepage or related forums for answers.

Hmm, thirty-one flavors, ya say....

I will now give an overview of some standouts in each gaming genre. If you desire more games in a specific genre, please access the comprehensive lists at the end of the article.

Card and Puzzle Games

By volume, the most games available in Linux are card and puzzle games. Just about any card game, board game or puzzle game that you can think of is found in Linux. Either search your package manager or web-search the game

title with the word 'Linux' behind it (eg. 'Risk Linux'). I do want to mention a standout, though: [PouetChess](#) is a 3D chess game that has great graphics and AI.

Strategy

My personal favorite genre of games is strategy. I confess that I was addicted to Starcraft throughout my junior high years and dedicated too much time to repelling Zerg rushes. But I started with the old Mac game Oregon Trail. I remember hurrying to be the first one done with my 2nd grade phonics exercises so I could play the *only* game on the class's *only* computer and travel in my wagon across the Oregon trail.

Currently, my favorite game in this genre is [Glest](#). It requires current video drivers, but it plays fantastically. It is similar to Warcraft III. If you want a game like Warcraft II, try FreeCraft. Although the development team has received a cease and desist order from Blizzard, you can still download it [here](#). Another noteworthy RTS is [NetPanzer](#), a World War II based RTS game.

For turned-based fans, [Battle for Westnoth](#) is a very addictive, turn-based strategy game, similar to the Heroes of Might and Magic series. For those Civilization fans, [Freeciv](#) and [FreeCol](#) are turn-based open source Civ games with a plethora of online players. I, however, prefer FreeCol over Freeciv. You can make custom levels with Freeciv and with either can become a server for other online games as well with these games.

Some other noteworthy strategy games in Linux are:

UFO:Alien Invasion NG
<http://ufo.myexp.de/>

Heroes of Might and Magic III
<http://www.lokigames.com/products/heroes3/>

Globulation2-a futuristic RTS game with nice graphics.
http://globulation2.org/wiki/Main_Page

Widelands-RTS game, Similar to Settlers II
<http://www.widelands.org>

Lincity NC-SimCity 3000 Clone
http://lincity-ng.berlios.de/wiki/index.php/Main_Page

Scorched 3D-3D artillery game similar to Scorched Earth
<http://scorched3d.sourceforge.net>

Action

There are a large number of great games for the arcade/action fan. The greatest part about these games is that you can enjoy gaming without spending money, but just time. I have enjoyed many of these, so I will list them for your convenience. Standouts are X-Moto (extremely fun), Wormux and Pingus (Lemmings with penguins).

Neverball

<http://icculus.org/neverball/>

Planet Penguin Racing

<http://projects.planetpenguin.de/racer>

Wormux-Worms Clone

<http://www.wormux.org/wiki/en/index.php>

Kobo Deluxe-Old-school EGA space shooter

<http://olofson.net/kobodl/>

X-Moto-very fun Motocross game

<http://xmoto.sourceforge.net/>

Torcs-A Need for Speed-type game

<http://torcs.org/>

Maelstrom-3D asteroids

<http://www.devolution.com/~slouken/Maelstrom/>

GL-117-Combat Flight Simulator

<http://www.heptargon.de/gl-117/gl-117.html>

SuperTux-Mario Brothers Clone

<http://super-tux.sourceforge.net>

Trigger-3D rally racing car game

<http://www.positro.net/trigger>

TuxCart-Mario Cart Clone

<http://sourceforge.net/projects/tuxkart/>

SuperTuxKart-Mario Cart 64 Clone

<http://supertuxkart.berlios.de>

Slune-A OpenGL game reminiscent of Nintendo 64

<http://home.gna.org/oomadness/en/slune>

Pingus-Lemings with penguins

<http://pingus.seul.org/>

D2X-Descent 2 Port

<http://www.icculus.org/d2x/>

Adventure/RPG

While graphically advanced adventure/RPG games within Linux are scarce (this is also true of Windows gaming), here are a few good games listed below. Also, look at the section about Nethack.

Adonthell-Waste's Edge

<http://adonthell.linuxgames.com>

Arkhart-Design your own RPG

<http://arkhart.nekeme.net/en/?name=Home>

Barrage

<http://lgames.sourceforge.net/index.php?project=Barrage>

Emulator for Lucas Arts' adventure games

<http://www.scummvm.org>

Nethack

Nethack is one of the oldest and longest running Linux/Unix games available. It is a complex but graphically simple adventure game. Think of Rogue from DOS days. Although Nethack is simple ASCII art, there are several games which add a graphical layer to the enjoyable complexity that Nethack sports.

Nethack-the original

<http://www.nethack.org/>

Egoboo-3D dungeon adventure game in the spirit of Nethack

<http://egoboo.sourceforge.net/>

Falcon's Eye

<http://users.tkk.fi/~jtpelto2/nethack.html>

All other Nethack Variants

<http://roguelikes.sauceforge.net/pub/nethack/variants/index.html>

First Person Shooters

Linux supports many top flight first person shooters (FPS). Some are mods of Quake or Doom, and some are independent and new. Quake was the first major FPS to be available in Linux. You can also refer to the list of [free first](#)

[person shooters](#) if you want more FPS action in Linux.

Return to Castle Wolfenstein: Enemy Territory

http://returntocastlewolfenstein.filefront.com/file/Enemy_Territory;14408

Alien Arena 2007

http://www.gamershell.com/download_15294.shtml

America's Army

<http://www.americasarmy.com/>

Heretic

<http://heretic.linuxgames.com/np/heretic2.shtml>

PRBoom-Doom port (one of many)

<http://prboom.sourceforge.net/>

Nexuiz

<http://www.alienstrap.org/nexuiz/>

Tremulous

<http://tremulous.net/>

Warsow

<http://www.warsow.net/>

World of Warcraft with Wine

<http://www.blizzplanet.com/content/459/>

Emulators

Although we would like everything to run natively in Linux, that sometimes can't be the case. There are many solutions that allow you to run programs written for other operating systems within Linux. For a good resource on running virtualized games in Linux, click [here](#). Here are some of virtualization options.

1. [Loki](#)

This company compiles games written for Windows in Linux. The result is a native installation of many commercial games in Linux.

2. [Wine](#)

Wine is a program that emulates native Windows DLL's. It runs any Windows-based program. I have had about a 75% success ratio for getting programs to work with Wine. Wine is by far the best start choice for getting anything Windows to work on Linux.

3. [VMWare](#)

If you are a die hard and want to install Windows games but not dual boot, but

can't get them to work using Loki or Wine, consider using VMWare. Just install a Windows virtual machine and run them on the virtual Windows machine using VMWare under Linux.

4. DOSEmu

If you are planning to virtualize anything in DOS, use this program. It gives you a virtual DOS machine that is as if you had your old 386 pulled out of the garage.

Console Emulation

Mario Brothers on Linux? You bet. Here is a list of ways that you can convert your Linux box into any number of consoles: NES, SNES, Gameboy, Playstation and others. If you want to find out about other console emulators within Linux, search the console name followed by 'Linux' in any search engine.

Snes9X

<http://www.snes9x.com/>

ZSNES-a SNES emulator

<http://gfceu.thepiratecove.org/index.php>

Gsnex9x-SNES emulator

<http://sourceforge.net/projects/gsnex9x/>

PCSX-Sony Playstation emulator

<http://www.pcsx.net/>

VBA Express-Game Boy Advance emulator

<http://vbaexpress.tuxfamily.org/english.php>

Linux Gaming Sites

Here are some great sources for new and exciting developments in the Linux gaming world. If you would like to look into the news of Linux games, feel free to bookmark the following links.

Linux Game Tome

<http://happypenguin.org>

Linux Games

<http://www.linuxgames.com/>

OOMadness

<http://home.gna.org/oomadness/en/index.html>

Linux Game Reviews and News

http://pcburn.com/Linux_Review-Index.php

SourceForge.net Games

http://sourceforge.net/softwaremap/trove_list.php?stquery=&sort=num_downloads&sortdir=desc&offset=0&form_cat=80

Other Recourses

These are several comprehensive lists of games within Linux.

Wikipedia's Game Lists

http://en.wikipedia.org/wiki/List_of_open_source_games

http://en.wikipedia.org/wiki/Linux_games

http://en.wikipedia.org/wiki/List_of_free_first-person_shooters

The Linux Gamers' Game List

<http://www.icculus.org/lgfaq/gamelist.php?license=free>

Gaming options within Linux

<http://www.linuxjournal.com/article/8630>

Linux Games

<http://www.linux.org/apps/>

Using Linux's game list-by far the most comprehensive list

<http://www.usinglinux.org/games/>

Troubleshooting

If you are having problems getting games to work on Linux, here are some steps to try.

If installed from source, check the specific errors thrown in the

```
./configure
```

```
make
```

```
sudo make install
```

Many times a missed dependency or an updated library does the trick. For games that utilize 3D graphics, make sure the current version of your graphics card driver is installed, as well as current versions of SDL, Mesa, Xgl, and other libraries are installed. An investigation of the errors during the install process is crucial to getting the game running.

If you have additional problems, here are a few sites to help you.

Troubleshooting Gaming in Linux

http://tldp.org/HOWTO/html_single/Linux-Gamers-HOWTO/

Troubleshooting for Ubuntu users
<http://ubuntuforums.org/forumdisplay.php?f=93>

Good luck and happy gaming!!!