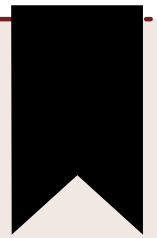
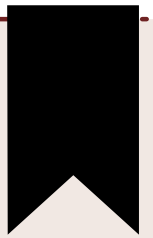
Gaming On Linux



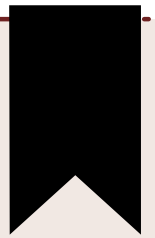
Now featuring more than just Nethack...

Topics



- Drivers
- Configuration
- Hardware
- Distros and Gaming Platforms
- Games That Run Well On Linux

Why game on Linux?



- Windows sucks
- Lots of games now supported on Linux

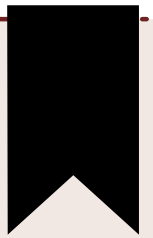
Drivers: NVIDIA

- Libcl
- Libvdpau
- Nvidia-304xx
- Nvidia-304xx-libgl
- Nvidia-304xx-utils
- Opencl-nvidia-304xx

Drivers: ATI

- Xf86-video-ati
- Mesa drivers
  - These tend to be hairy

Configuration



- Understand how your window manager handles windows
- Best to be using one that doesnt force tiling

Hardware

- At least 4GB RAM
- Nvidia card, 1GB RAM
- 4 Cores
- The more powerful the better, especially if using Wine/PlayOnLinux
- OpenGL and older graphics cards

Distros and Gaming Platforms

- Arch, Ubuntu, Mint, Debian
- SteamOS
- Steam
- Desura
- Wine/PlayOnLinux

Steam

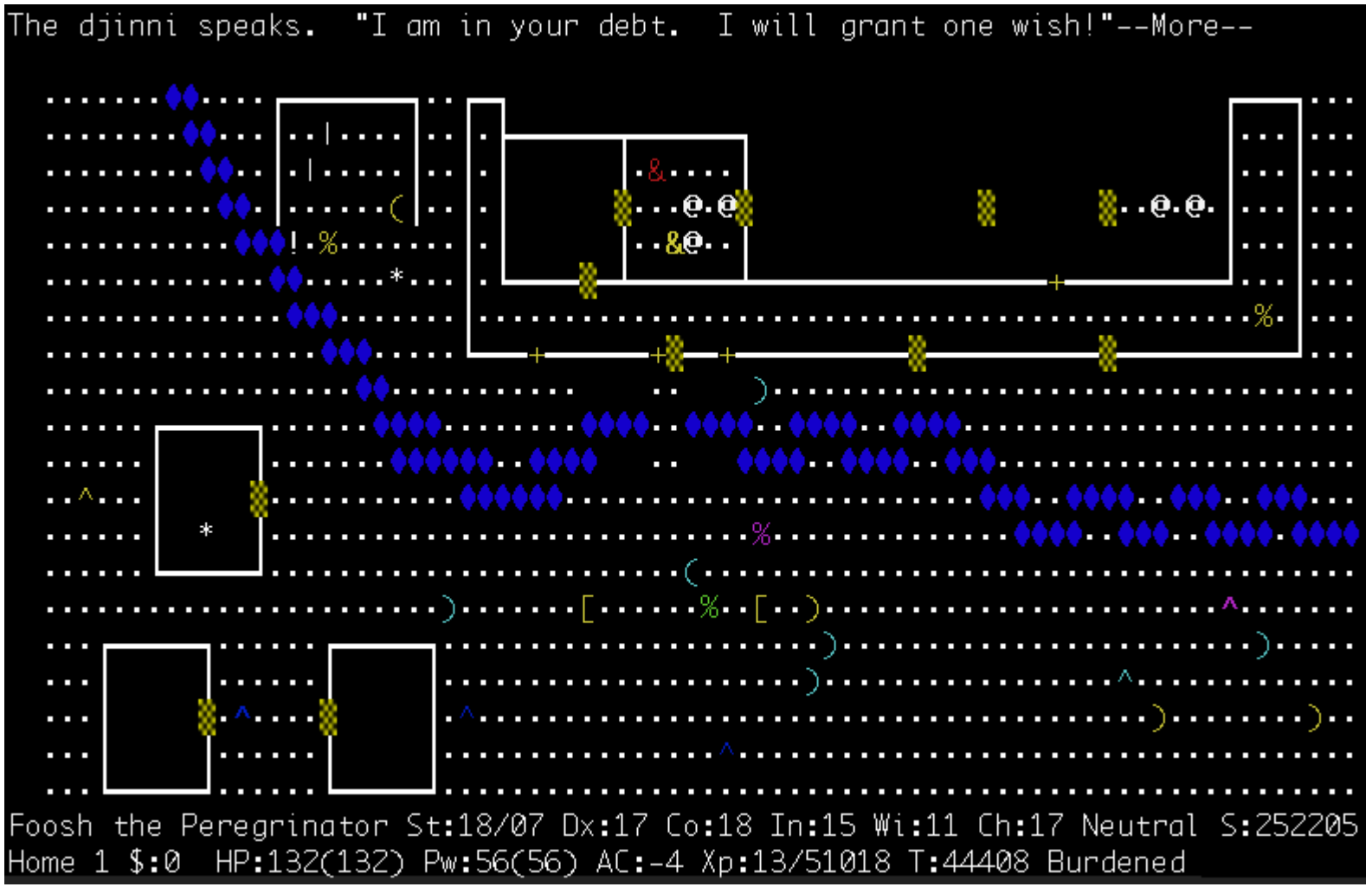
- Big push by Valve for gaming on Linux
  - Linux, the future of gaming?
  - SteamOS
  - Native Linux Clients

PlayOnLinux

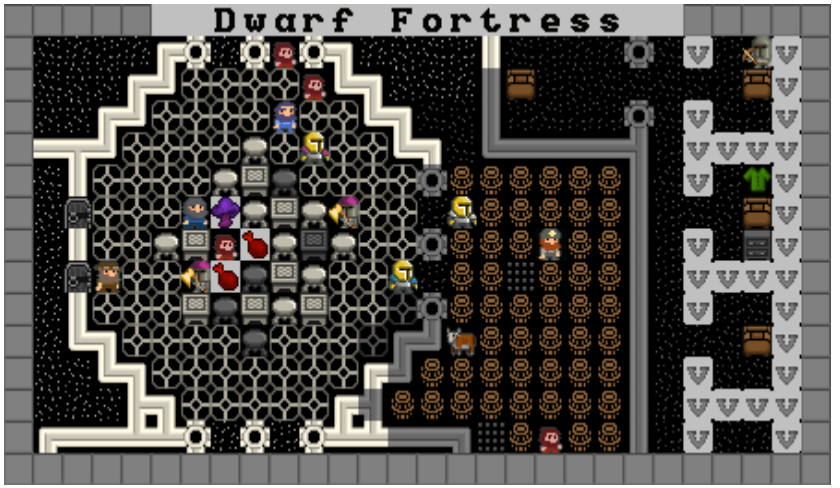
- Wine frontend designed for gaming
- Easy config
- Lots of tutorials
- More demanding than native clients, but still very playable

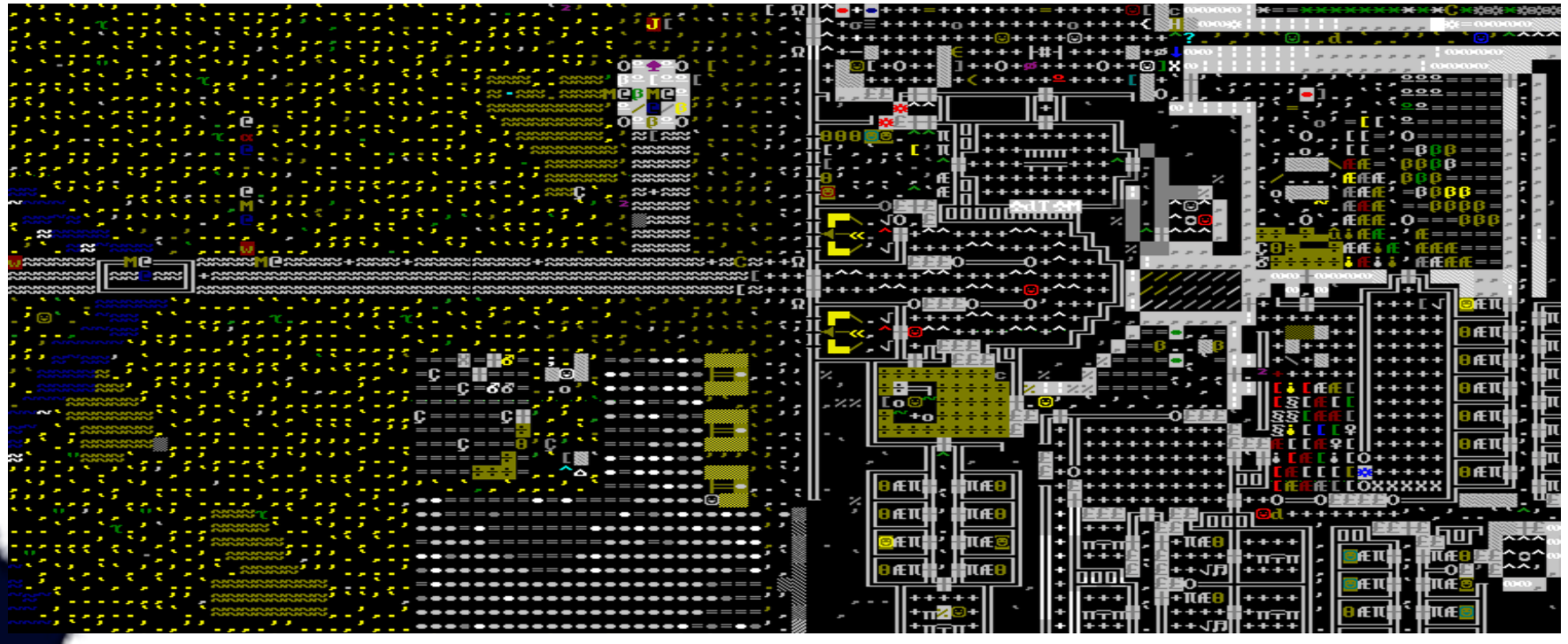
Great Linux Games

- Nethack



Dwarf Fortress





DoTA2

Counter Strike

Guild Wars 2

Colossus Rumblus
35
Seismic Attacks
25
Colossus Rumblus
35
1093
Search the catacombs for the patriarch
Locate Colossus Rumblus.
Colossus Rumblus
Graveling Breeder
35
Blitz [OZO]
35
Wickedflame [OZO]
35
Glob of Globby Goop
Main
Combat
Warmaster Grast: Lead the way. No barrier can stop me from defending my homeland!
Tzark: My resonance cascader will dislodge the rocks blocking the graveling tunnels.
Tzark: Hmm. The ethereal flux oscillator indicates an opened path...in the next room. Let's go!
Careless: no
Wickedflame has targeted Graveling Breeder, press T to assist.
You have called target on Graveling Breeder.
[Guild]
3,520
80

Many more...

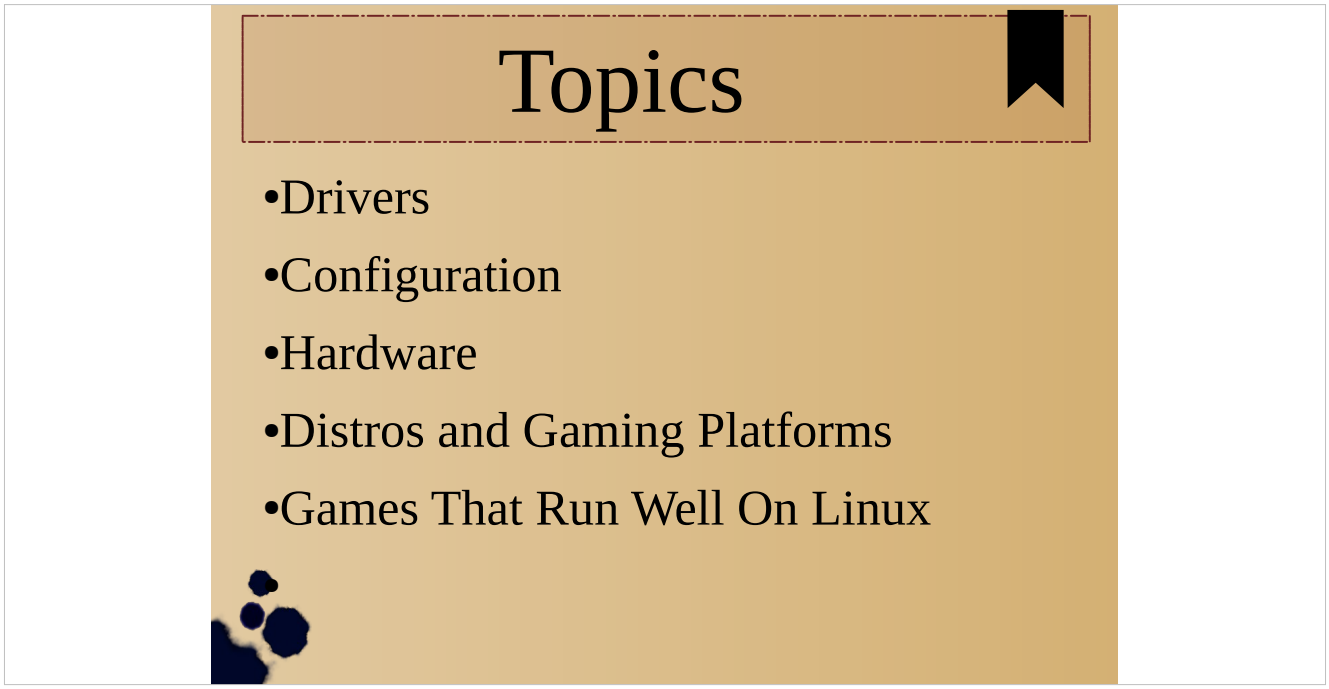
- EVE Online
- World of Warcraft
- Metro 2033
- Guild Wars
- Left 4 Dead
- The Elder Scrolls: Oblivion

And now...

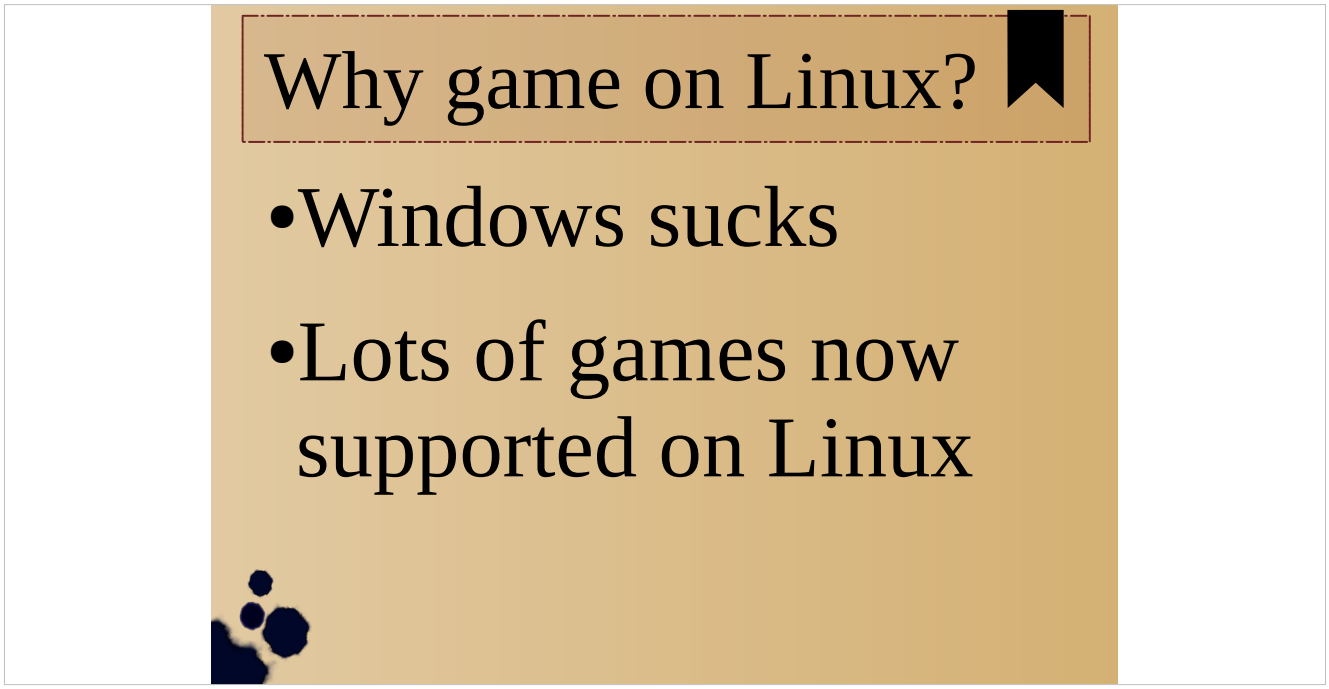
- A live demo of DoTA2 on Ubuntu

Gaming On Linux

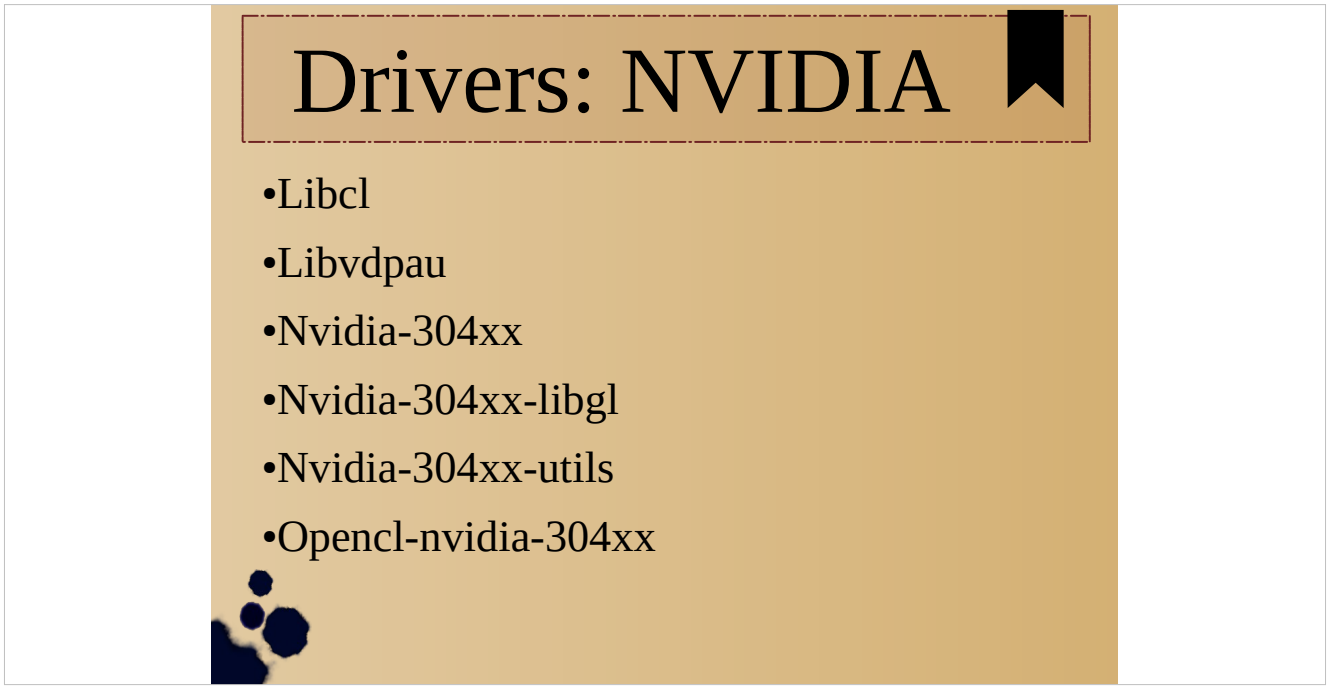
Now featuring more than just Nethack...



Topics that will be covered:
-Driver Downloads and Configuration
-Optimal Hardware for Gaming on Linux
-The best Distros, Game Distribution Platforms, and emulation environments for Linux Gaming
-A review of games/game engines that run well on Linux



Why game on Linux?
--I think most can agree that using Windows sucks, and now that developers and game companies have started recognizing that Linux is a great platform for development and gaming, we are seeing much more support for native Linux gaming than we have in the past.



If you have an NVIDIA graphics card the packages listed above are want you are going to want to get if you plan to do any gaming.

There are also beta/testing nvidia drivers available (nvidia-310xx) but in my experience I have found that it is always better to use the stable versions. One might consider trying the beta drivers if the stable ones are not working.

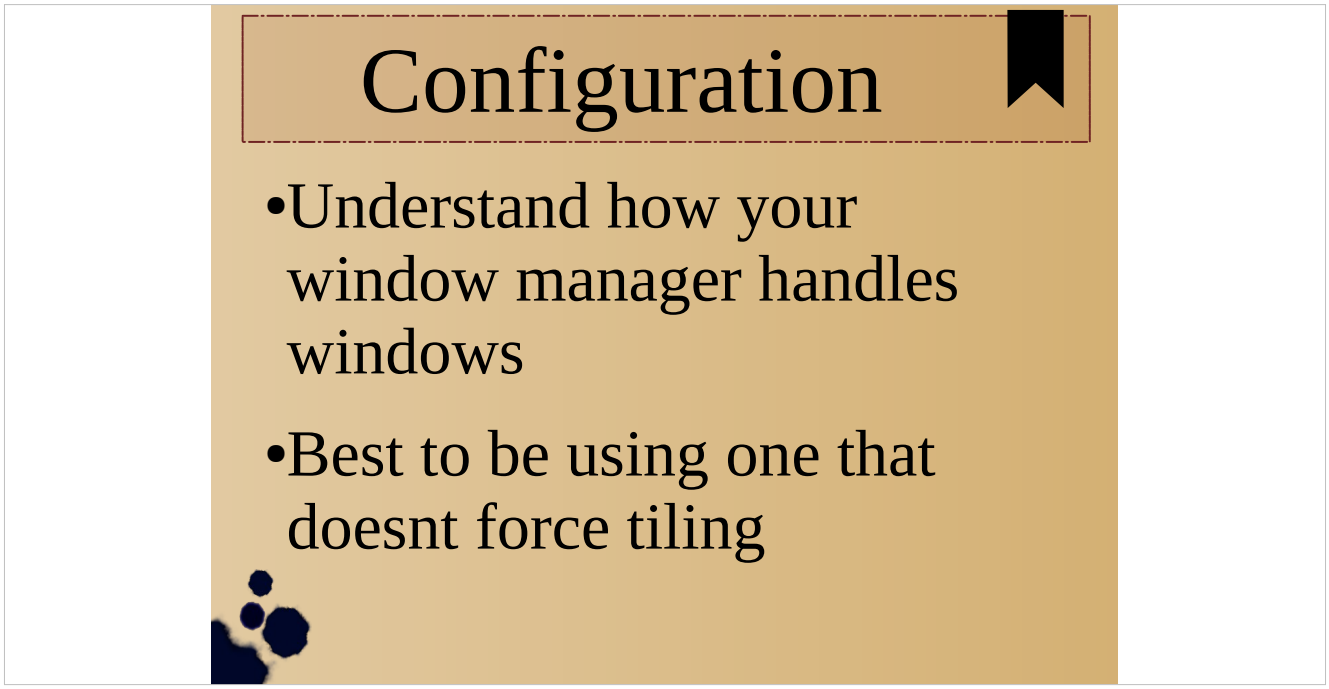
Drivers: ATI

- Xf86-video-ati
- Mesa drivers
  - These tend to be hairy

The above packages are what you will need for ATI graphics card.

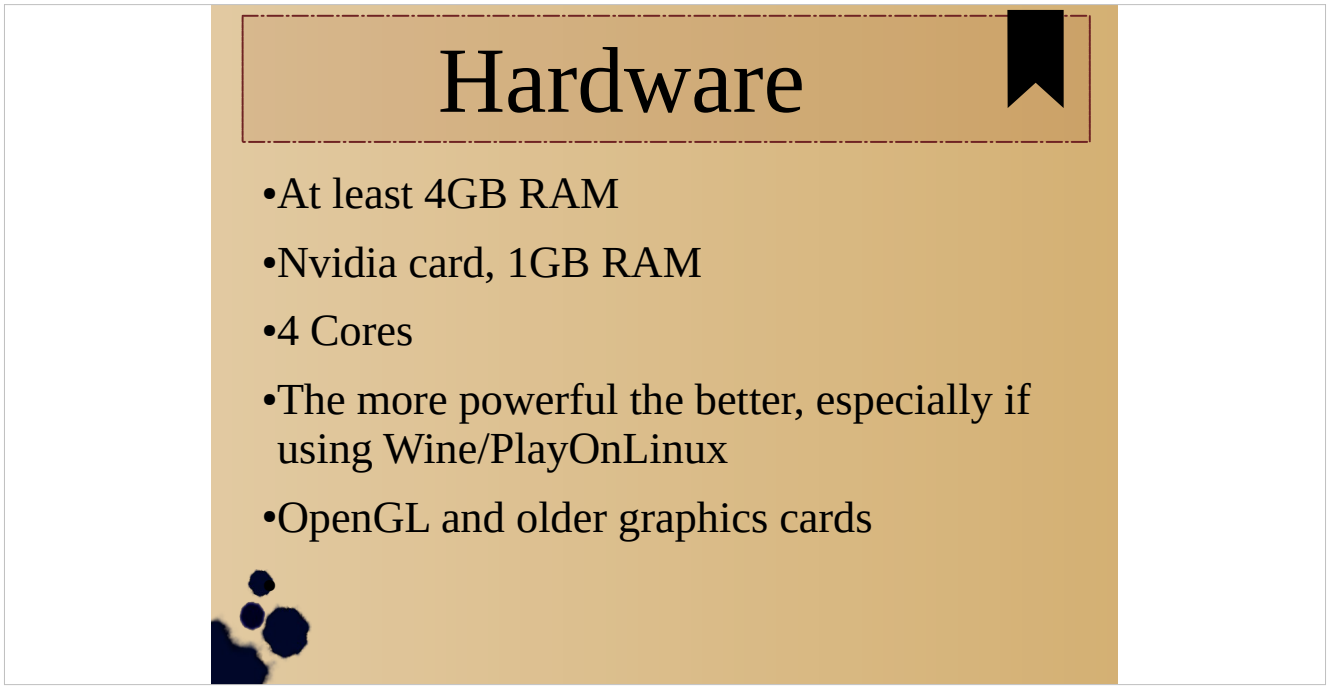
Apparently there are also DirectX compatable Mesa drivers for ATI cards, however I have never used these and as I understand it these can tend to get hairy.

In my experience I have always found that for gaming on Linux NVIDIA cards are a much better choice – more often than with ATI they will work out of the box or with little configuration and will continue to work. In the past I have had a lot of different problems with ATI cards but your milage may vary.



When getting ready to game on Linux, try to have an idea of how your window manager is going to handle the game window. For gaming on Linux I suggest using a window manager that supports stacking/floating of windows. When using a window manager like Ratpoison that forces window tiling the game window can sometimes end up competing with the window manager and you wont be able to play.

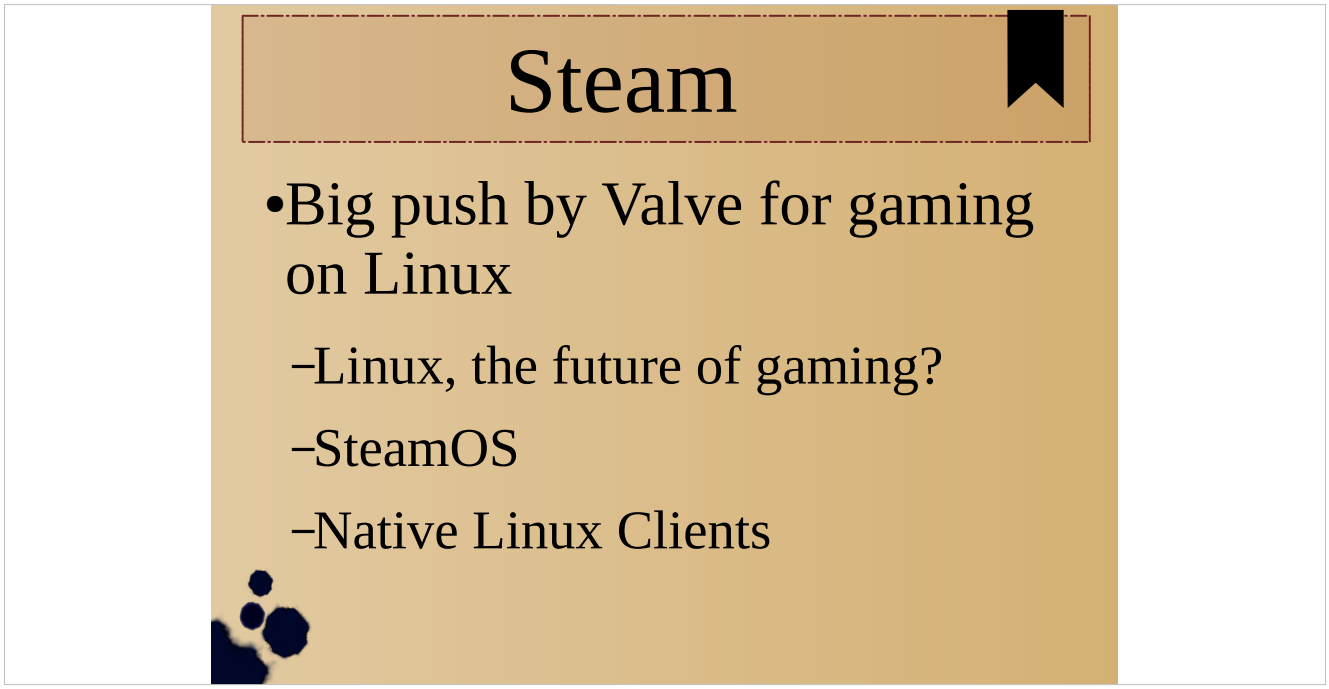
Also understand how your window manager is going to handle games going fullscreen. If the game has the option available, try to set the window to be in borderless fullscreen mode. In my experience I have found this to be the optimal setting in terms of getting my window manager to agree with the window.



Listed above is what I would call the “Minimum Requirements” hardware-wise for gaming on Linux. When using an emulation environment (Wine) there is going to be a lot of overhead so one needs to have better hardware than might be required on Windows.

Usually you will be fine though if the game in question has a native Linux client.

In my experience, the distros listed above will perform the best with gaming. Ubuntu/Debian have packages in the repos for Valve's game distribution software Steam. If this is your first forray into gaming on Linux I would suggest starting with a Debian derivitive.

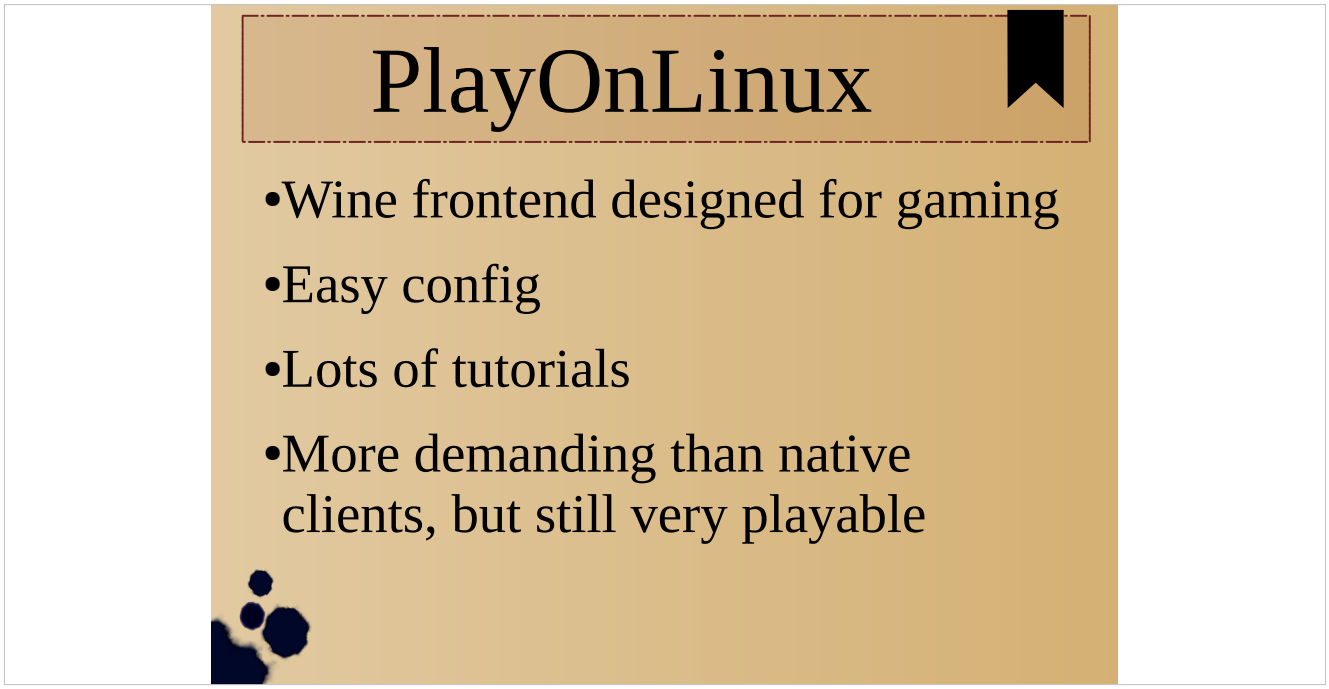


Steam on Linux these days is awesome. There is almost 200 Linux games available on Steam right now, including many of Valves best titles (Half Life, Counter Strike, etc.)

Game Newell, the CEO of Valve, is also making a big push for game development/gaming on Linux, as he believes Linux/Open-Source/Community Driven software is the future.

Valves next console, the Steambox, running SteamOS (a Debian derivitive) is going to be awesome for the Linux community, as Valve will be developing games for Linux and encouraging other developers to do so!

Expect to see a lot more Linux support coming for Valve in the future!



Wine is a Windows emulation environment, and essentially creates little C:\ filesystems in your home folder which its emulated windows uses to interact with .exe's. Via Wine, and its gaming frontend, PlayOnLinux, a lot of Windows exclusive games become available to Linux users.

Setting up Wine/PlayOnLinux is not hard at all, there are a lot of great tutorials, and a lot of games run really well in Wine. Not all of them do however – consult the Wine wiki for game specific details.

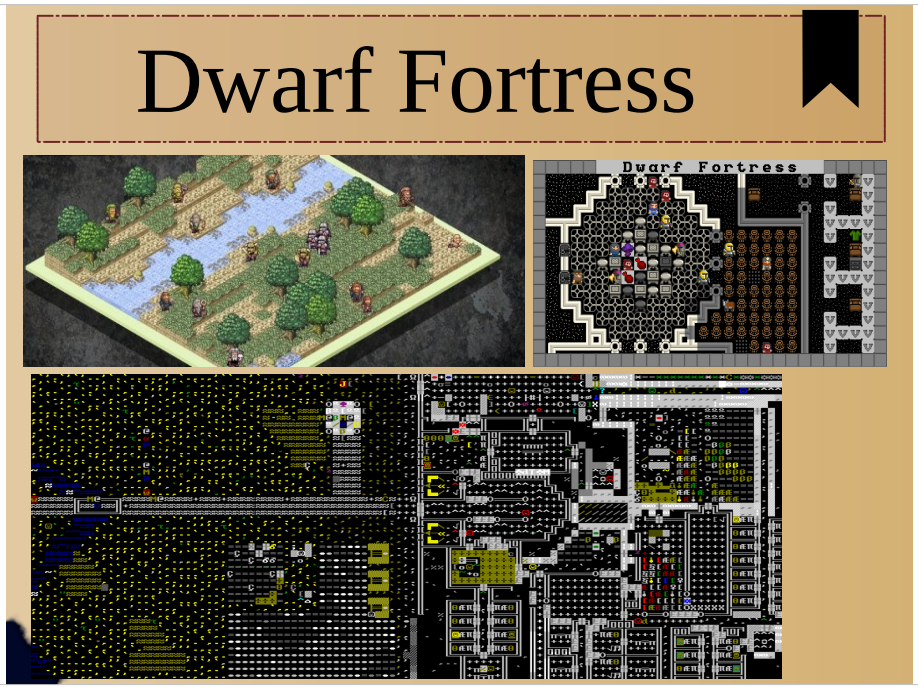
The thing to keep in mind with Wine is that there is a huge amount of overhead when gaming in Wine. Because you computer has to emulate a windows environment, run the game, and then translate all of the system calls back into the kernal, we end up taking a big performance hit. If youre going to be using PlayOnLinux its recommended to have good hardware.

Great Linux Games

- Nethack

Nethack –
-Arguably the best/most famous roguelike game of all time, this game has an amazing amount of depth.

You are basically either a wizard or a knight and you run around a dungeon encountering crazy enemies. Definitely check this out if you never have before – its very fun and VERY addicting!



In Dwarf Fortress the only real goal is to survive. You start with a party of dwarfs and you have to build a fortress to survive in. Before long Necromancers, Goblins, and a ton of other monsters will be trying to kill you, so when the game starts get building quick. There is almost no way to describe the amount of depth this game has – I've made small circuit boards in Dwarf Fortress that control functions in the Dwarf Community. Please check this game out if you are into intense strategy/building/warfare games.

The entire game is rendered in ASCII characters but there are now a number of graphical tilesets and renderers available.

DoTA2

5v5 Team strategy/combat game, based off of the highly successful mod of Warcraft 3 called Defense of the Ancients. This game has a native Linux client that runs great, is free to play, and easily available on Steam. Definitely check this one out if you're new to gaming on Linux.

Counter Strike

In Valves classic team-deathmatch FPS, Counter Strike, two teams shoot it out for control of the bomb site. One team Counter Terrorists try to defuse the bomb, while the Terrorists try to blow up the map! High intensity and very fun. It now has a native Linux client that runs great!

Also, most games using Valves Source Engine (Half Life, Counter Strike, Team Fortress) are all available on Linux.

Guild Wars 2

MMORPG where the player levels up their character and trys to obtain more items/loot.

Great example of a game that runs excellently in Wine – Guild Wars and Guild Wars 2 are two games that have been seen in some instances to run BETTER on Wine/Linux than in Windows.

Many more...

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