# Nautilus

The internals of a file manager

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#### Overview

- Threads
- File management
- Search
- Network



#### Nautilus - What is it?

- Used in Ubuntu, Fedora, Open Suse and all enterprise distros
- Created by Eazel and contributed by Linux Foundation
- 16 years old C code
- Predates libraries
- Manages Desktop



- Pthread
- GIOScheduler
- GTask
- Thread pool



### Nautilus – Stay in context

- Question. Who thinks Nautilus uses...? Raise hand!!
  - Pthread
  - GIOScheduler
  - Gtask
- Question. Who thinks Nautilus uses Glib Threadpools?

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### File Management - A Nautilus File

- NautilusFile
  - GFile
  - Cache

- NautilusDirectory
  - Gfile
  - Cache
  - NautilusFiles



### File Management – A GFile

- File abstraction → g\_file\_from\_uri
- Operation abstraction → g\_file\_move, g\_file\_copy...
- Attributes abstraction → g\_file\_query\_info...



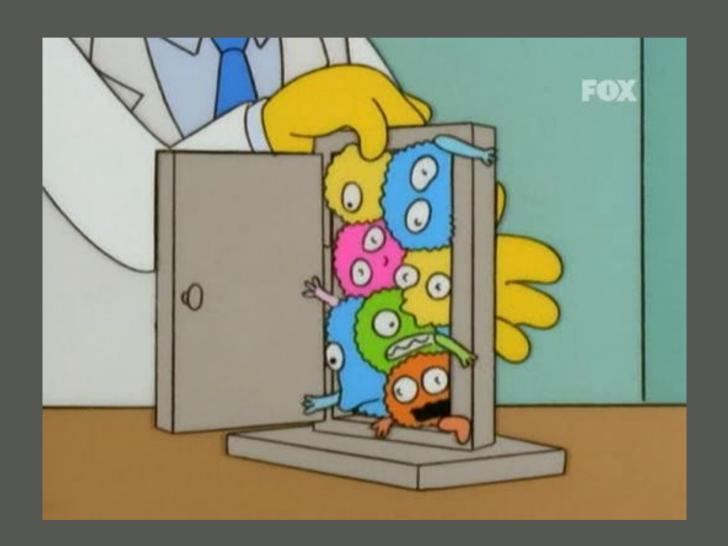


### File Management - GVFS

- GVFS implementation of GFile
- GVFS implementation of GFile operations
- GVFS Recent, Trash, FUSE, Google Drive
- Command line tool



### Search - How can possibily work?





- Pthread
- GIOScheduler
- GTask
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### What you should keep in mind

- Use threads
- Use a frecking threadpool
- Use a cache
- Use already well tested libraries
- IMHO Don't use c. I mean, DON'T USE C.



### Phew we are finishing

- Nautilus https://wiki.gnome.org/Apps/Nautilus
- Email csoriano@gnome.org
- Catch me to play ping pong





## Thank You!

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