



Getting Started with GNU/Linux

Bayview Computer Club - Meeting #2, October 11th, 2018



What is Linux?

- Technically, just a kernel
 - The base for operating systems to be developed on
 - Abstracts core functions to allow software to run on top without directly touching the hardware
-
- You can also refer to Linux as the entire “system”, with all of the other components creating the operating system, however the correct way to refer to the full system is GNU/Linux



Home



Trash





What is a GNU/Linux Distro?

- A different “flavour” of Linux
- Offers different packages and a specific “look”
- All can still run the same programs
- Distro list: distrowatch.com
- Examples: Ubuntu, Debian, Arch, Fedora

The image shows the Windows Start menu interface. At the top, there is a navigation bar with four icons: a red heart for 'Избранное' (Favorites), a blue document icon for 'Приложения' (Apps), a computer monitor icon for 'Компьютер' (Computer), and a green circular arrow icon for 'Выход' (Sign out). Below this bar, the 'Приложения' section is active, indicated by a blue underline. The title 'Все приложения' (All apps) is displayed. A list of application categories follows: 'Графика' (Graphics), 'Интернет' (Internet), 'Мультимедиа' (Multimedia), 'Настройка' (Settings), 'Образование' (Education), 'Офис' (Office), 'Приложения Chrome' (Chrome apps), 'Разработка' (Development), 'Система' (System), 'Службные' (Services), and 'alex'. The 'Образование' category is currently selected, highlighted with a blue background and a white right-pointing arrow. At the bottom, there is a search bar with the placeholder text 'Введите текст для поиска...' (Enter text to search...). The 'alex' user profile icon is visible in the bottom left corner.

```

1 [                                     0.0%] Tasks: 118, 289 thr; 1 running
2 [                                     0.7%] Load average: 0.12 0.24 0.30
3 [                                     0.0%] Uptime: 02:44:34
4 [                                     0.0%]
Mem [|||||] 1.97G/7.74G
Swp [|||||] 0K/0K

PID USER      PRI  NI  VIRT   RES   SHR  S CPU% MEM%   TIME+  Command
25001 alex       20   0  27340  3992   3204  R  0.7  0.0  0:00.25  http
10119 alex       20   0  842M  83484  61196  S  0.7  1.0  0:07.55  /usr/bin/yakuake
24710 alex       20   0  893M  76760  58308  S  0.7  0.9  0:00.99  /usr/bin/qbittorrent
6446 alex       20   0  261G  479M  230M  S  0.0  6.0  2:17.62  /usr/bin/plasmashell
6626 alex       20   0  261G  479M  230M  S  0.0  6.0  0:05.38  /usr/bin/plasmashell
6497 alex       20   0  261G  479M  230M  S  0.0  6.0  0:04.22  /usr/bin/plasmashell
995 root        20   0  277M  9304   6176  S  0.0  0.1  0:01.98  /usr/lib/policykit-1/polkitd --
F1 Help F2 Setup F3 Search F4 Filter F5 Tree F6 SortBy F7 Nice - F8 Nice + F9 Kill F10 Quit
+ CeaHC
alex: http

```

Depeche Mode
Useless

mime — Dolphin

← → ↑ ▢ ▣ ▤ ▥ ▦ ▧ ▨ ▩ 🔍 📁 📌 ☰ ☱ ☲ ☳ ☴ ☵ ☶ ☷













Точки входа

- Домашняя папка
- Видео
- Документы
- Загрузки
- Изображения
- Музыка
- Фото
- Git**
- Сеть
- Корневая папка
- Корзина

Устройства

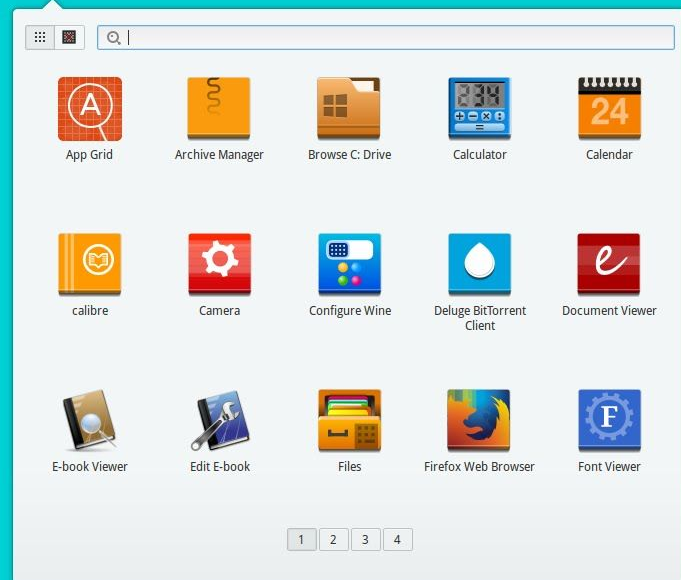
- Multimedia
- Жёсткий диск (19,5 Гиб)
- Зарезервировано системой
- Жёсткий диск (35,9 Гиб)
- Файл-устройство
- Файл-устройство
- Файл-устройство
- DNS
- Файл-устройство

📁 > Git > tmp > mime

 folder	 mime.apk	 mime.avi	 mime.deb	 mime.flatpak	 mime.jpg
 mime.md	 mime.mp3	 mime.rpm	 mime.svg	 mime.txt	 mime.zip

1 папка, 11 файлов (22 Б)

свободно 3,2 Гиб





Computer



Home



Install Linux Mint



Search

All Applications

Accessories

Graphics

Internet

Office

Sound & Video

Universal Access

Administration

Preferences

Places

Calendar

LibreOffice

LibreOffice Base

LibreOffice Calc

LibreOffice Draw

LibreOffice Impress

LibreOffice Math

LibreOffice Writer



356 MB...
902 MB...
178 MB...
33 MB ...
Trash
File Sys...
Home

SOFTPEDIA®

manjaro - File Manager

File Edit View Go Help

< > ^ ^ /home/manjaro/

DEVICES

- File System
 - 356 MB Volume
 - 902 MB Volume
 - 178 MB Volume
 - 33 MB Volume

PLACES

- manjaro
- Desktop
- Trash

NETWORK

- Browse Network

Desktop Documents Downloads Music Pictures

Public Templates Videos

8 items, Free space: 3.1 GB

Update Manager
3 available updates
Show available updates

Manjaro Welcome

manjaro 15.12 Capella 64-bit

elcome to Manjaro, and thank you for joining our community!

Manjaro Developers, hope that you will enjoy using Manjaro as much as we enjoy building it. The
ow will help you get started with your new operating system. So enjoy the experience, and don't
to send us your feedback.

Documentation

- Read Me
- Release Info
- Wiki

Support

- Forums
- Chat Room
- Mailing Lists

Installation

- use Thus
- use Calamares
- use CLI-Installer

NOTE: The username and password for the Live Environment are both 'manjaro'.

Show this dialog on startup? Close

manjaro

Terminal Emulator
Use the command line

File Manager
Browse the file system

Web Browser
Browse the web

Mail Reader
Read your email


Add/Remove Software
Add or remove software insta...


Favorites

- Recently Used
- All
- Accessories
- Development
- Education
- Games
- Graphics
- Internet
- Multimedia
- Office

GitHub



← → ↻ [GitHub, Inc. \[US\]](#) | <https://github.com> ☆ ⋮



 Search GitHub Pull requests Issues Marketplace Explore



 **probonopd** ▾



Browse activity



Discover repositories



 **shouhuanxiaoji** pushed to `master` in **Gamuxorg/Applimages** 28 minutes ago
 7f9af39 Update qBittorrent.yml


 **shouhuanxiaoji** pushed to `master` in **Gamuxorg/Applimages** 42 minutes ago
 4c4f429 update to 4.x




 **samcv** pushed to `gh-pages` in **samcv/rakudo-appimage-module-test-automati on** 4 hours ago
 e224daf Travis build 361 pushed to gh-pages


 **samcv** pushed to `gh-pages` in **samcv/rakudo-appimage-module-test-automati on** 4 hours ago
 e29e5dd Travis build 361 pushed to gh-pages


 **samcv** pushed to `gh-pages` in **samcv/rakudo-appimage-module-test-automati on** 4 hours ago
 318d337 Travis build 361 pushed to gh-pages






 **samcv** pushed to `gh-pages` in **samcv/rakudo-appimage-module-test-automati on** 4 hours ago
 5f1d327 Travis build 361 pushed to gh-pages

 **Amir-Yu** starred **probonopd/ESP8266HueEmulator** 5 hours ago

 **m-o-s-t-a-f-a** pushed to `patch-1` in **probonopd/dana** 5 hours ago
 3190a91 Update .appveyor.yml
 7e8e925 Update .appveyor.yml
[28 more commits »](#)








 **Use any theme with GitHub**
You can now use any of the hundre community-curated themes on Gith- change the look and feel of your Git site.
[View 12](#)


Repositories you contribute to 







[Load more...](#)

Your repositories **266** **New**




All Public Private Sources











[Load more...](#)




 **15:03**
Sunday, December 17, 2017




 **Updates**
Updates detected, click to view




Navigation
















Let's Get Started!



SSH Client

Windows: MobaXTerm (or PuTTY, or your own SSH Client choice.)

(<https://mobaxterm.mobatek.net/download-home-edition.html>) Get the Portable Edition

GNU/Linux, macOS: SSH (from the terminal)

Open a terminal (on macOS: Spotlight search “terminal”).

Time to sign up for an account...

Line up at the front, and we'll register your account. Feel free to install the SSH client whilst you wait for the line to shorten.

Time to Connect!

Commands:

```
BCC-1: ssh username@10.240.90.43
```

```
BCC-3: ssh username@10.240.90.44
```

While you're waiting, run the command **htop**

Welcome to bash!

The best shell language. Period.



What is a shell?

Think of it as the file explorer in Windows or “finder” in MacOS, and that you can run programs to interact with the files (or the system itself). The shell acts as a user friendly way to interact with the kernel (it’s a shell around the Linux Kernel), that makes up part of the userspace.

Try these commands!

- `cd [path]`
- `ls`
- `mkdir [path]`
- `touch [path]`



Useful Tips

Navigating folders in the terminal is important!

- `cd ./` - Go to current directory
- `cd ../` - Go up one directory
- `cd ./hi` - Go into the folder named “hi” (“`cd hi`” also works)



Some Folders

- Do: `cd /`
- `/` - Root Directory
- `/bin` - Binaries (programs)
- `/etc` - Configuration files
- `/home` - User data (C:\Users in Windows)
- `/dev` - Device files
- `/proc` - Process Information



Creating and Editing Files

You can edit text files from the terminal! Think of it as notepad+++++

We'll be using a utility called **nano** (but there are other text editors!).

Try:

- Command: **nano testfile**
- Write in the file: **i luv linux**
- Save it (Control-X -> Y)
- Command: **cat ./testfile**



Downloading files from the Internet

- Downloading a file: `wget [link]`
- Try This:
 - `wget https://pastebin.com/raw/4U6BsFBD`
 - `ls`
 - `cat ./4U6BsFBD`
- Outputting the contents of a site: `curl [link]`
- Try This:
 - `curl https://pastebin.com/raw/4U6BsFBD`

Let's install a program!

Do: **sudo apt update**
sudo apt install sl

(Think of sudo as running with admin permissions)

Great!

Now let's run it!

Simply run: **sl**

To get the help menu, do **htop -h**

Challenge!

Try installing the program “lynx”,
and learn how to use it (from the
terminal)!



Try This!

- Install the package “**lolcat**”, and the package “**cowsay**”
- Run: **cowsay hi | lolcat**
- Run: **echo hi | lolcat**
- Run: **sudo apt install sl | lolcat**
- Run: **sl | lolcat**
- You just piped the output of commands into “lolcat”, which makes it colourful!
- Wow, you learned about piping.