

Introdução ao Sistema Gnu/Linux

Bem Vindos Calouros 2011

:D

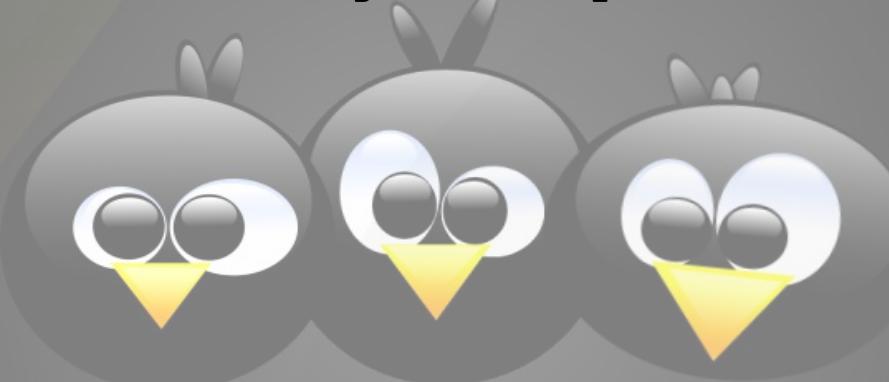
VERSÃO 2.0



Palestrantes

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- <http://damascenodiego.wordpress.com>



- **Eduardo Costa de Carvalho**

- duducostacarvalho@gmail.com
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Agenda:

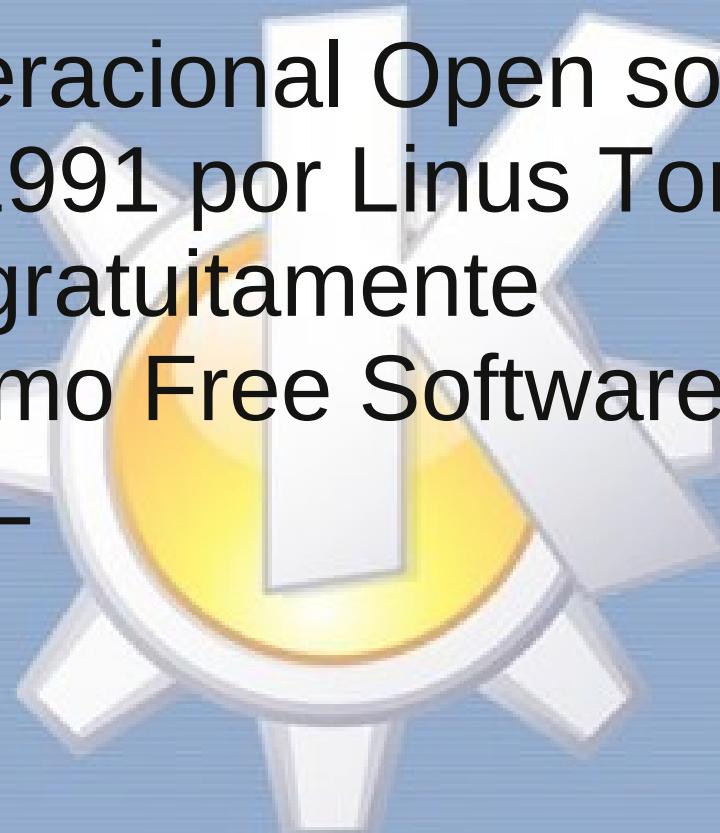
- História do Gnu/Linux
- Licença GPL
- “Distro” o que é isso?
- Motivação - Linux, Ser ou Não Ser?
- Instalação
- Alguns Conceitos - Survival Kit
- Referências - Pra onde eu corro?

O que é Linux ?



O que é Linux ?

- Sistema operacional Open source
- Criado em 1991 por Linus Torvalds
- Distribuído gratuitamente
- Liberado como Free Software
- Licença GPL

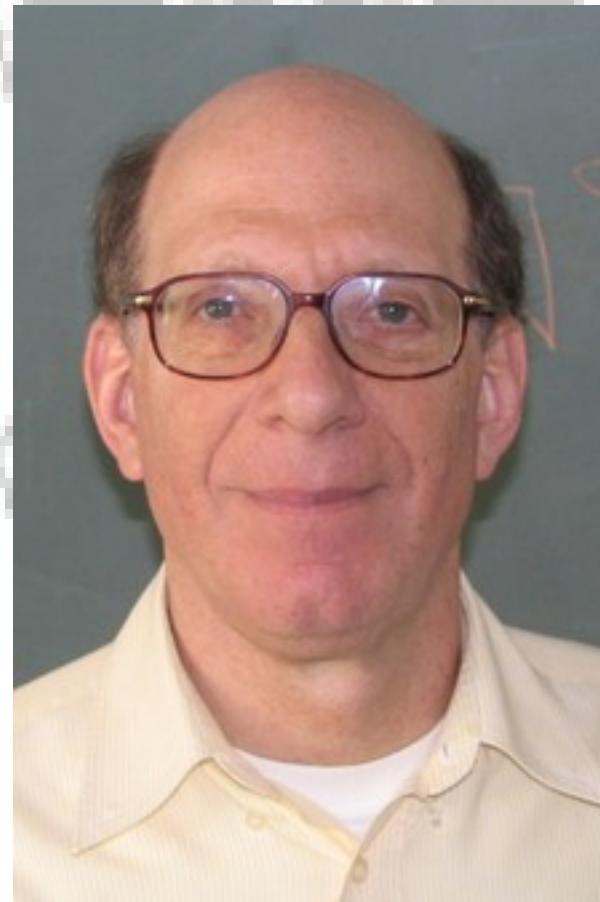


História do Gnu/Linux



Como tudo começou...

História do Gnu/Linux



Andrew S. Tanenbaum

História do Gnu/Linux



Linus Torvalds

```
int sys_setuid(int uid)
{
    if (current->euid && current->uid)
        if (uid==current->uid || current->uid==current->euid)
            current->euid=uid;
        else
            return -EPERM;
    else
        current->euid=current->uid=uid;
    return 0;
}

int sys_stime(long *tptr)
{
    if (current->euid && current->uid)
        return -1;
    startup_time = get_fs_long((unsigned long)current->start_time);
    return 0;
}

int sys_times(struct tms *tbuf)
{
    if (!tbuf)
        return jiffies;
    verify_area(tbuf,sizeof(*tbuf));
    put_fs_long(current->utime,(unsigned long)current->utime);
    put_fs_long(current->stime,(unsigned long)current->utime);
    put_fs_long(current->cutime,(unsigned long)current->utime);
    put_fs_long(current->cstime,(unsigned long)current->utime);
    return jiffies;
}

int sys_brk(unsigned long end_data_seg)
{
    if (end_data_seg >= current->end_code)
        end_data_seg < current->start_stack;
    current->brk = end_data_seg;
    return current->brk;
}

/*
 * This needs some heavy checking ...
 * I just haven't get the stomach for it. I also don't
 * understand sessions/pgroup etc. Let somebody else do it.
 */
int sys_setpgrp(int pid, int pgid)
{
    int i;

    if (!pid)
        pid = current->pid;
    if (!pgid)
        pgid = pid;
    for (i=0; i<NR_TASKS; i++)
        if (task->pid == pid && task->pgid == pgid)
            if (copy_mem(nr,task_struct(i,p)))
                free_page((long)task_struct(i,p));
            return -EAGAIN;
}
```

História do Gnu/Linux



Richard Stallman

História do Gnu/Linux



Projeto GNU

```

int sys_setuid(int uid)
{
    if (current->euid && current->uid)
        if (uid==current->uid || current->uid==current->euid)
            current->euid=uid;
        else
            return -EPERM;
    else
        current->euid=current->uid=uid;
    return 0;
}

int sys_stime(long *tbuf)
{
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    startup_time = get_fs_long((unsigned long)current->start_time);
    return 0;
}

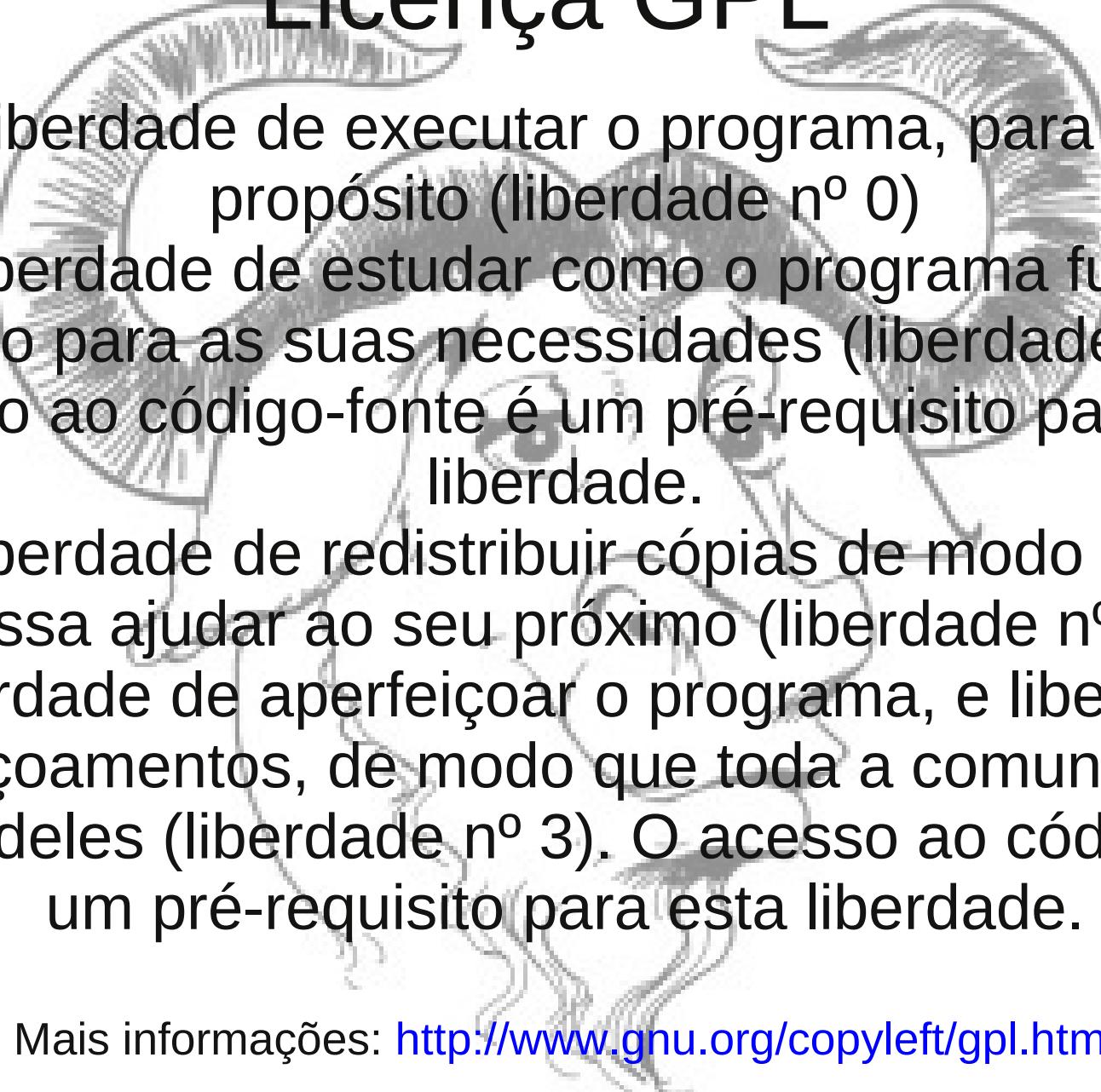
int sys_times(struct tms *tbuf)
{
    if (tbuf)
        return jiffies;
    verify_area(tbuf,sizeof(*tbuf));
    put_fs_long(current->utime,(unsigned long)current->process_time);
    put_fs_long(current->stime,(unsigned long)current->process_time);
    put_fs_long(current->cutime,(unsigned long)current->process_time);
    put_fs_long(current->ctime,(unsigned long)current->process_time);
    return jiffies;
}

int sys_brk(unsigned long end_data_seg)
{
    if (end_data_seg >= current->end_code)
        end_data_seg < current->start_stack;
    current->brk = end_data_seg;
    return current->brk;
}

/* This needs some heavy checking ...
 * I just haven't get the stomach for it. I also don't
 * understand sessions/pgroup etc. Let somebody else explain.
 */
int sys_setpgid(int pid, int pgid)
{
    int i;
    if (!pid)
        pid = current->pid;
    if (!pgid)
        pgid = pid;
    for (i=0;i<NR_OPEN;i++)

```

Licença GPL

- 
1. A liberdade de executar o programa, para qualquer propósito (liberdade nº 0)
 2. A liberdade de estudar como o programa funciona e adaptá-lo para as suas necessidades (liberdade nº 1). O acesso ao código-fonte é um pré-requisito para esta liberdade.
 3. A liberdade de redistribuir cópias de modo que você possa ajudar ao seu próximo (liberdade nº 2).
 4. A liberdade de aperfeiçoar o programa, e liberar os seus aperfeiçoamentos, de modo que toda a comunidade se beneficie deles (liberdade nº 3). O acesso ao código-fonte é um pré-requisito para esta liberdade.

Mais informações: <http://www.gnu.org/copyleft/gpl.html>

Empresas e Organizações



“Proteger e Padronizar o Linux”

- Mais de 70 membros: AMD, HP, IBM, Intel, Nokia, Sun Microsystems...;
- Linux Foundation emprega o próprio Linus Torvalds;
- Ajuda na colaboração entre as empresas de Linux
- Proteção da marca Linux.

Empresas e Organizações



- Associação mundial sem fins lucrativos de corporações e outros que trabalham rumo a promoção do crescimento do Linux e do FOSS

The World is "Open Source"

Empresas e Organizações



É chefiada por Jon "maddog" Hall.

The World is "Open Source"

Distro – O que é isso?



Linux distro timeline

Version 7.2 by NPL (popplusx@gmail.com)

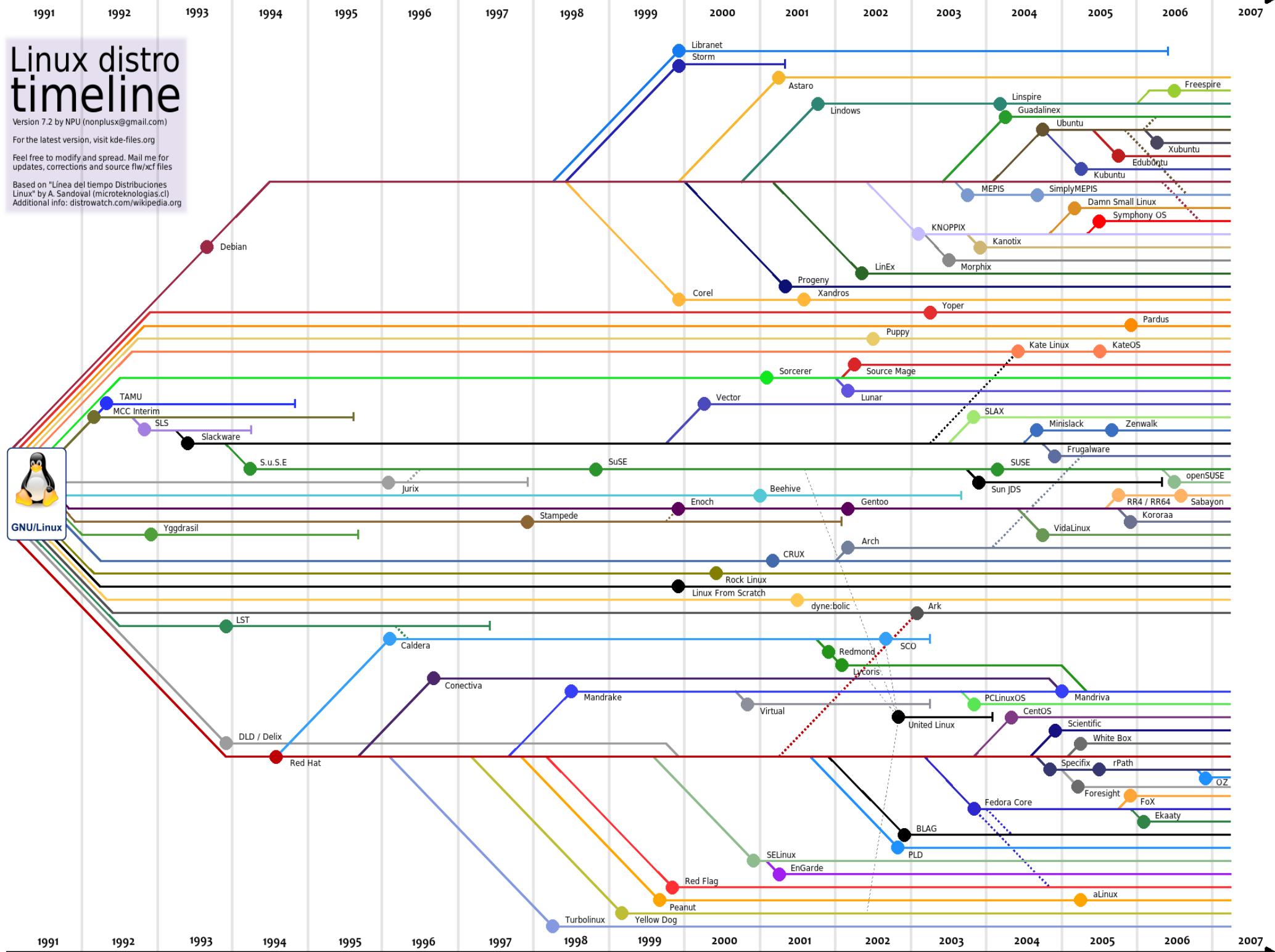
For the latest version, visit kde-files.org

Feel free to modify and spread. Mail me for updates, corrections and source flw/xcf files

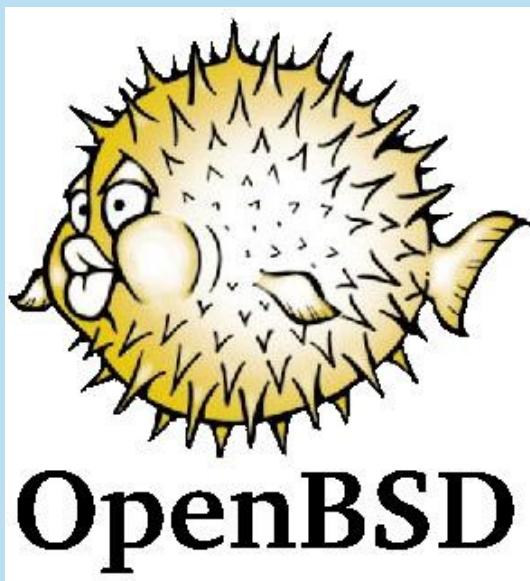
Based on "Línea del tiempo Distribuciones Linux" by A. Sandoval (microteknologias.cl)
Additional info: distrowatch.com/wikipedia.org



GNU/Linux



Existem outros?



Curso baseado no Ubuntu



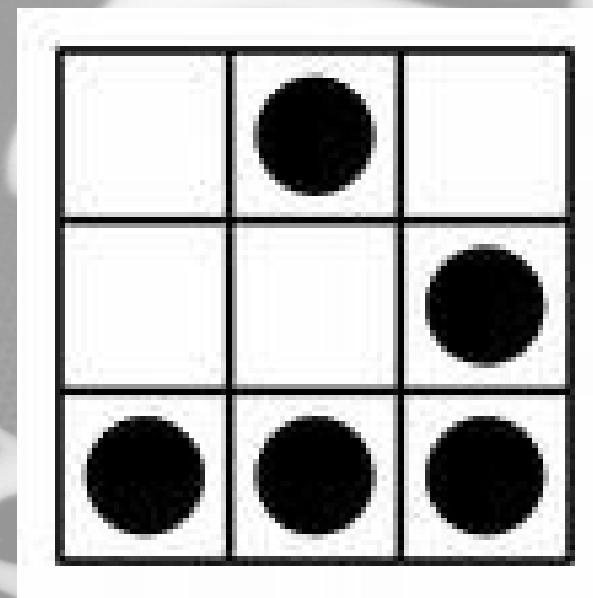
Ubuntu, safe, easy and beautiful.

Motivação - Linux, Ser ou Não Ser?



Linux *vs.* Windows

Hacking



- Liberdade para mexer no código

Transparência



open source

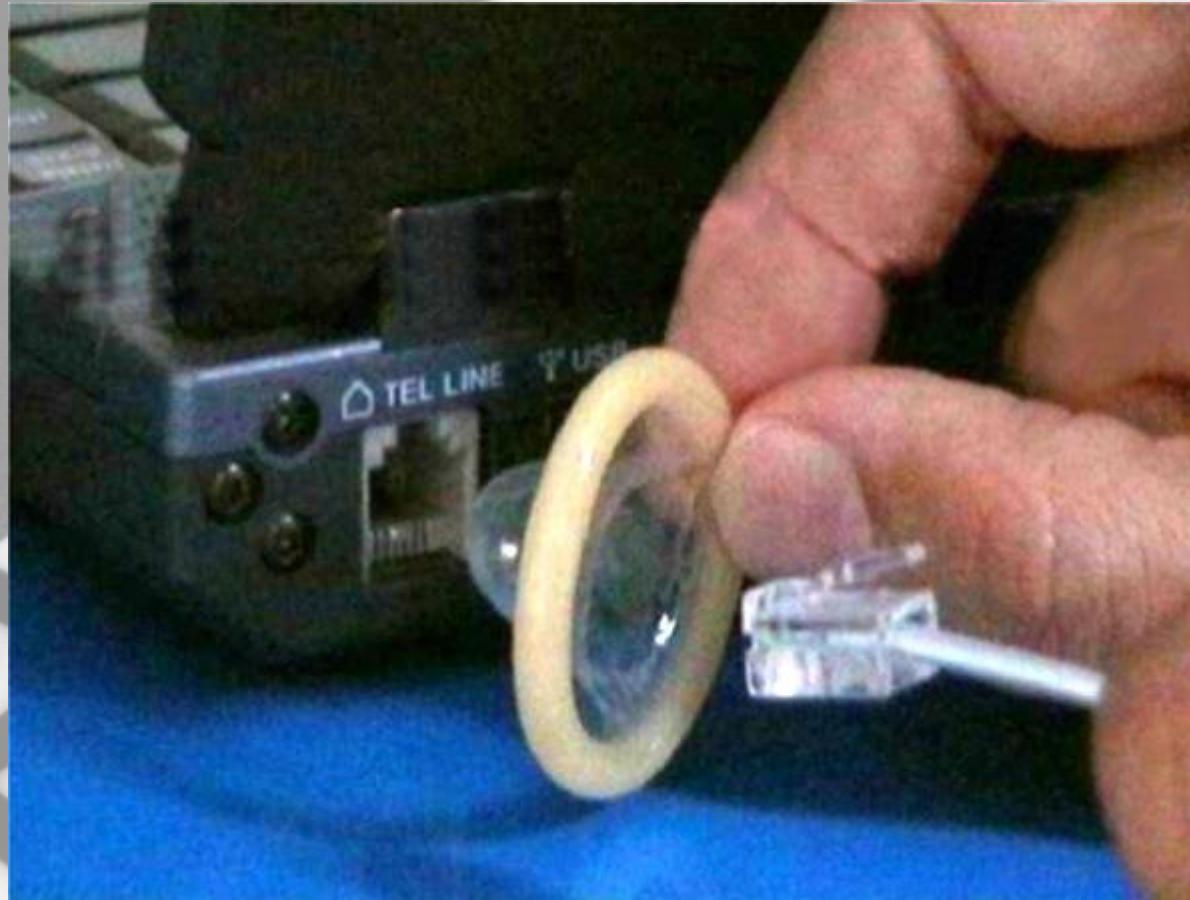
- Você sabe o que ocorre no seu S.O.

Segurança



- Políticas de Segurança

Virus



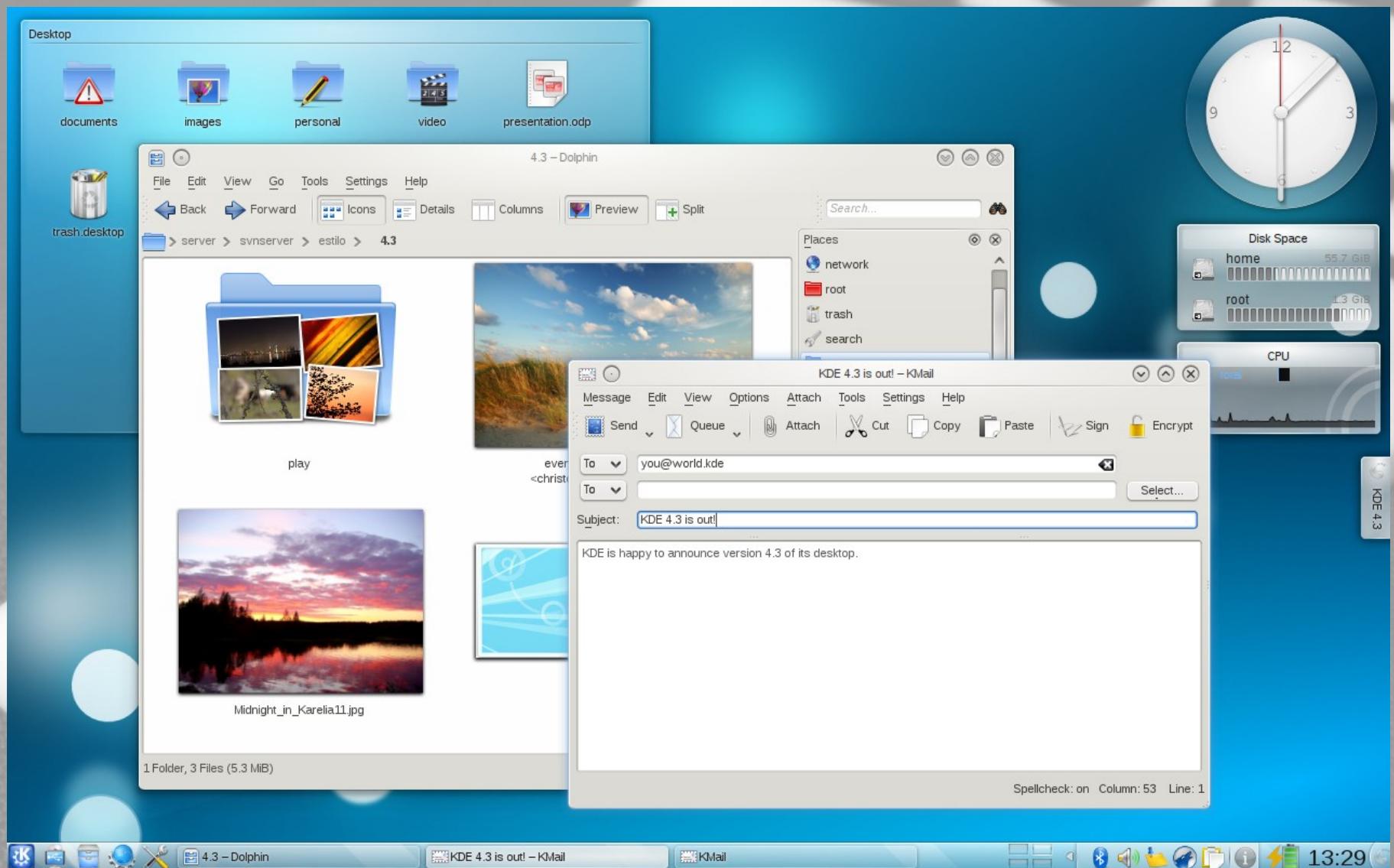
- Chances de contrair virus são mínimas...

Altamente Personalizável



- ## • Diversas Interfaces...

Altamente Personalizável



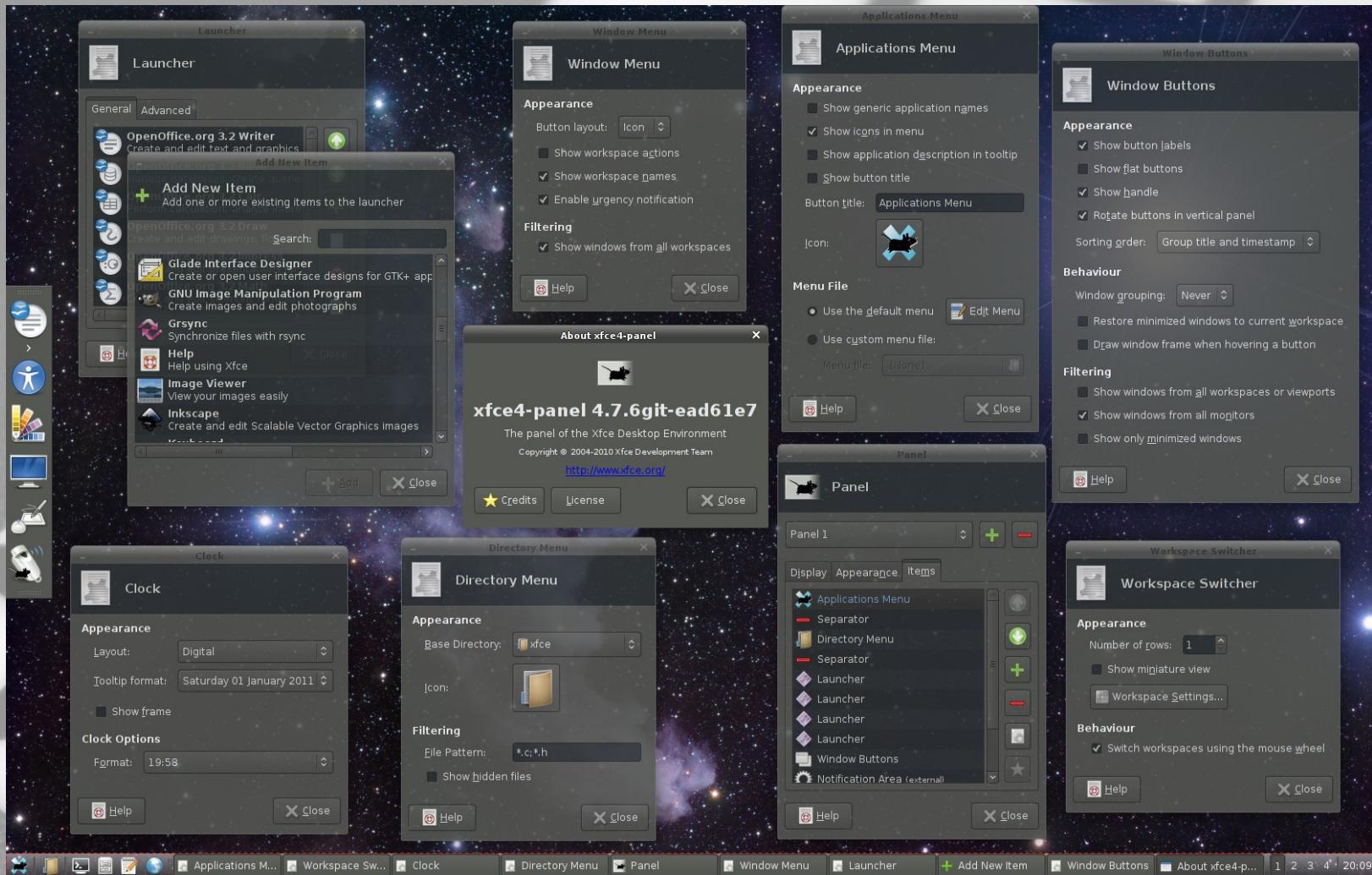
KDE

Altamente Personalizável



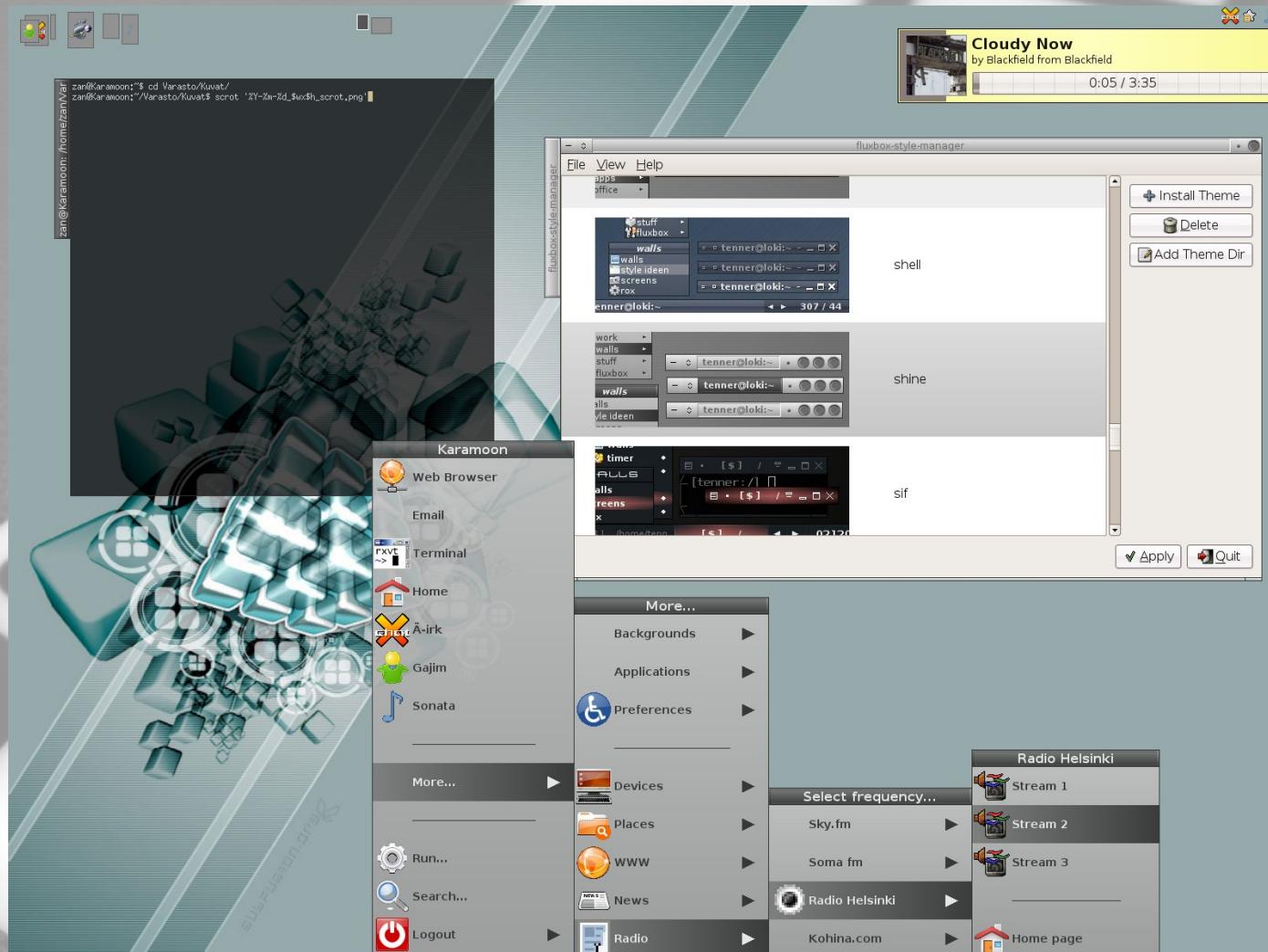
GNOME

Altamente Personalizável



XFCE

Altamente Personalizável



FLUXBOX

Altamente Personalizável



LXDE

Projetos que usaram Linux



Projetos que usaram Linux



Projetos que Usam Linux



Projetos que Usam Linux



- Sony PS3 Cluster

Projetos que Usam Linux



- Meego

Projetos que Usam Linux



- Android

Instalação



Use Ubuntu

To use Ubuntu as a Live CD, put this CD in the CD drive and turn on or restart your computer. To install Ubuntu, run the Live CD and double click on the "Install" icon. The default installation will erase all existing software and data from your computer. If this is not what you want, follow the instructions carefully during installation.

To try Windows versions of some of the programs included in Ubuntu, put the CD in the drive while Windows is running.

The Ubuntu Promise

- Ubuntu will always be free of charge, including enterprise releases and security updates.
- Ubuntu comes with full commercial support from Canonical and hundreds of companies around the world.
- Ubuntu includes the very best open source and accessibility infrastructure from the community.

Pass it on!

This CD can be used to install Ubuntu on desktops and laptops. So install it, enjoy it, and pass it on.

Ubuntu 7.10
for your PC

Legally free to copy, modify and redistribute.
Ubuntu and the Ubuntu logo are
registered trademarks of Canonical Ltd.
www.ubuntu.com

Alguns Conceitos - Survival Kit

- Usuário normal \$
 - Root : #
 - Back Space ("<--") apagar caracter à esquerda
 - Del: apagar o caracter acima do cursor.
 - CTRL+A mover o cursor para o inicio da linha
 - CTRL+E mover o cursor para o fim da linha.
 - CTRL+U apagar o que estiver à esquerda do cursor
 - CTRL+K apagar o que estiver à direita do cursor
 - CTRL+Y para colocar o texto que foi apagado
 - CTRL+L limpar a tela (clear)

Onceitos - Survival Kit

apagar carácter à esquerda.
ter acima do cursor.

cursor para o inicio da linha.

cursor para o fim da linha.

que estiver à esquerda do cursor.

que estiver à direita do cursor.

ar o texto que foi apagado.

la (clear).

FILE COMMANDS

- ls - directory listing
- ls -al - formatted listing with hidden files
- cd dir - change directory to dir
- cd - change to home
- pwd - show current directory
- rm -rf dir - force remove directory dir *
- cp file1 file2 - copy file1 to file2
- cp -r dir1 dir2 - copy dir1 to dir2; create dir2 if it doesn't exist
- mv file1 file2 - rename or move file1 to file2 if file2 is an existing directory, moves file1 into directory file2
- ln -s file link - create symbolic link link to file
- touch file - create or update file
- cat > file - places standard input into file
- more file - output the contents of file
- head file - output the first 10 lines of file
- tail file - output the last 10 lines of file
- tail -f file - output the contents of file as it grows, starting with the last 10 lines

SEARCHING

- grep pattern file - search for pattern in files
- grep -r pattern directory - search for pattern in the current directory
- command | grep pattern - search for pattern in the output of command
- locate file - find all instances of file

SYSTEM INFO

- date - show the current date and time
- cal - show this month's calendar
- uptime - show current uptime
- w - display who is online
- whoami - who you're logged in as
- last - show who has logged in and out on the system
- free - show memory and swap usage
- df - show disk usage
- du - show directory space usage
- free - show memory and swap usage
- whereis app - show possible locations of app
- which app - show which app will be run by default

COMPRESSION

- tar cf file.tar files - create a tar named file.tar containing files
- tar xt file.tar - extract the files from file.tar
- tar czf file.tar.gz files - create a tar with Gzip compression
- tar xzf file.tar.gz - extract a tar using Gzip
- tar czf file.tar.bz2 - create a tar with Bzip2 compression
- tar xjf file.tar.bz2 - extract a tar using Bzip2
- gzip -p file.gz - compresses file and renames it to file.gz
- gzip -d file.gz - decompresses file.gz back to file

NETWORK

- ping host - ping host and output results
- whois domain - get whois information for domain
- dig domain - get DNS information for domain
- dig -x host - reverse lookup host
- wget file - download file
- wget -c file - continue a stopped download

INSTALLATION

- Install from source:
./configure
make
make install
- dpkg -i package - install a package (Debian)
rpm -Uvh pkg.rpm - install a package (RPM)

PERMISSIONS

- chmod octal file - change the permissions of file to octal, which can be found separately for user, group, and world by adding:
 - 4 - read (r)
 - 2 - write (w)
 - 1 - execute (x)

Examples:

- chmod 777 - read, write, execute for all
- chmod 755 - rwx for owner, rx for group and world

For more options, see man chmod.

SHORTCUTS

- Ctrl+C - halts the current command
- Ctrl+Z - stop the current command, resume with fg or bg in the background
- Ctrl+D - exit of current session, similar to exit
- Ctrl+U - erases one word in the current line
- Ctrl+L - erases the whole line
- Ctrl+R - type to bring up a recent command
- !! - repeats the last command
- exit - log out of current session

Alguns Conceitos - Survival Kit



- Onceitos - Su

```
ls - directory listing
ls -al - formatted listing with hidden files
cd dir - change directory to dir
cd - change to home
pwd - show current directory
ls -l - list files in long format
ls -d - list directory
rm -rf dir - force remove directory dir *
cp file1 file2 - copy file1 to file2
cp -r dir1 dir2 - copy dir1 to dir2; create dir2 if it
doesn't exist
mv file1 file2 - rename or move file1 to file2
if file2 is an existing directory, moves file1 into
directory file2
ln -s file link - create symbolic link link to file
touch file - create or update file
cat > file - places standard input into file
more file - output the contents of file
head file - output the first n lines of file
tail file - output the last n lines of file
tail -f file - output the last n lines of file as it
grows,
```

- A cartoon penguin with a white belly and a yellow beak is holding a newspaper. The newspaper has a yellow diamond-shaped logo on the front page and the word "Postal News" printed on it.

- rvival Kit

```
○ date - show the current date and time
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○ whoami - who you are login in
○ finger - show who is play login about user
○ uname - show kernel information
○ ps - show process or application
○ free - show memory and swap usage
○ whereis app - show possible locations of app
○ which app - show which app will be run by default
```

- man - Mostra help do comando
help [opções] [comando]
- man -a mkdir

Comandos

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COMPRESSION

- tar cf file.tar files - create a tar named file.tar containing files
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FILE PERMISSIONS

- chmod octal file - change the permissions of file to octal, which can be found separately for user, group, and world by adding:
 - 4 - read (r)
 - 2 - write (w)
 - 1 - execute (x)

Examples:

- chmod 777 - read, write, execute for all
- chmod 755 - rwx for owner, rx for group and world

For more options, see man chmod.

PROCESS MANAGEMENT

- ps - display your currently active processes
- top - display all running processes
- kill pid - kill process id pid
- killall proc - kill all processes named proc (use with extreme caution)
- bg - lists stopped or background jobs; resume a stopped job in the background
- fg - brings the most recent job to foreground
- fg n - brings job n to the foreground

SHORTCUTS

- Ctrl+C - halts the current command
- Ctrl+Z - stops the current command, resume with fg in the foreground or bg in the background
- Ctrl+D - log out of current session, similar to exit
- Ctrl+W - erases one word in the current line
- Ctrl+U - erases the whole line
- Ctrl+R - type to bring up a recent command
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- grep -l pattern - search for pattern in the command output
- grep -i file - find all instances of file

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- Ctrl+R - type to bring up a recent command
- !! - repeats the last command
- exit - log out of current session

- ls - Mostra arquivos de diretórios
ls [opções] [caminho]
- ls -lha

cli commands

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Comandos

cd [caminho]

- cd .
- cd ..
- cd /
- cd ~

cli commands

PROCESS MANAGEMENT

- ps - display your currently active processes
- top - display all running processes
- kill pid - kill process id pid
- killall proc - kill all processes named proc (use with extreme caution)
- bg - lists stopped or background jobs; resume a stopped job in the background
- fg - brings the most recent job to foreground
- fg n - brings job n to the foreground

SHORTCUTS

- Ctrl+C - halts the current command
- Ctrl+Z - stops the current command, resume with fg in the foreground or bg in the background
- Ctrl+D - log out of current session, similar to exit
- Ctrl+W - erases one word in the current line
- Ctrl+U - erases the whole line
- Ctrl+R - type to bring up a recent command
- !! - repeats the last command
- exit - log out of current session

- `pwd` - Mostra o nome e caminho do diretório atual.

`pwd`

cli commands

PROCESS MANAGEMENT

- ① `ps` - display your currently active processes
- ① `top` - display all running processes
- ① `kill pid` - kill process id pid
- ① `killall proc` - kill all processes named proc (use with extreme caution)
- ① `bg` - lists stopped or background jobs; resume a stopped job in the background
- ① `fg` - brings the most recent job to foreground
- ① `fg n` - brings job n to the foreground

SHORTCUTS

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- ① `Ctrl+Z` - stops the current command, resume with `fg` in the foreground or `bg` in the background
- ① `Ctrl+D` - log out of current session, similar to `exit`
- ① `Ctrl+W` - erases one word in the current line
- ① `Ctrl+U` - erases the whole line
- ① `Ctrl+R` - type to bring up a recent command
- ① `!!` - repeats the last command
- ① `exit` - log out of current session

FILE COMMANDS

- ① `ls` - directory listing
- ① `ls -al` - formatted listing with hidden files
- ① `cd dir` - change directory to dir
- ① `cd ..` - change to home
- ① `cd .` - show current directory
- ① `mkdir dir` - create directory dir
- ① `rm file` - delete file
- ① `rm -rf dir` - force remove directory dir *
- ① `cp file1 file2` - copy file1 to file2
- ① `cp -r dir1 dir2` - copy dir1 to dir2; create dir2 if it doesn't exist
- ① `mv file1 file2` - rename or move file1 to file2 if file2 is an existing directory, moves file1 into directory file2
- ① `ln -s file link` - create symbolic link link to file
- ① `touch file` - create or update file
- ① `cat > file` - places standard input into file
- ① `more file` - output the contents of file
- ① `head file` - output the first 10 lines of file
- ① `tail file` - output the last 10 lines of file
- ① `tail -f file` - output the contents of file as it grows, starting with the last 10 lines

SEARCHING

- ① `grep pattern files` - search for pattern in files
- ① `grep -r pattern dir` - search recursively for pattern in dir
- ① `command | grep pattern` - search for pattern in the output of command
- ① `locate file` - find all instances of file

SYSTEM INFO

- ① `date` - show the current date and time
- ① `cal` - show this month's calendar
- ① `uptime` - show current uptime
- ① `w` - display who is online
- ① `whoami` - who you are logged in as
- ① `finger user` - display information about user
- ① `uname -a` - show kernel information
- ① `cat /proc/cpuinfo` - cpu information
- ① `cat /proc/meminfo` - memory information
- ① `man command` - show the manual for command
- ① `df` - show disk usage
- ① `du` - show directory space usage
- ① `free` - show memory and swap usage
- ① `whereis app` - show possible locations of app
- ① `which app` - show which app will be run by default

COMPRESSION

- ① `tar cf file.tar files` - create a tar named file.tar containing files
- ① `tar xf file.tar` - extract the files from file.tar
- ① `tar czf file.tar.gz files` - create a tar with Gzip compression
- ① `tar xzvf file.tar.gz` - extract a tar using Gzip
- ① `tar jxvf file.bz2` - extract a tar with Bzip2
- ① `tar xjvf file.bzip2` - extract a tar using Bzip2
- ① `gzip -c file` - compresses file and renames it to file.gz
- ① `gzip -d file.gz` - decompresses file.gz back to file

NETWORK

- ① `ping host` - ping host and output results
- ① `whois domain` - get whois information for domain
- ① `dig domain` - get DNS information for domain
- ① `dig -x host` - reverse lookup host
- ① `wget file` - download file
- ① `wget -c file` - continue a stopped download

INSTALLATION

- ① `Install from source:`
`./configure`
`make`
`make install`
- ① `dpkg -i pkg.deb` - install a package (Debian)
- ① `rpm -Uvh pkg.rpm` - install a package (RPM)

FILE PERMISSIONS

- ① `chmod octal file` - change the permissions of file to octal, which can be found separately for user, group, and world by adding:
 - 4 - read (r)
 - 2 - write (w)
 - 1 - execute (x)

Examples:

`chmod 777 -rwxrwxrwx` - read, write, execute for all
`chmod 755 -rwxr-xr-x` - rwx for owner, rx for group and world
 For more options, see man chmod.

- **mkdir** - Cria um diretório no sistema.
mkdir [opções] [caminho]
- **mkdir –verbose** /home/cbcc/minhaPasta

Comandos

FILE COMMANDS

- ls - directory listing
- ls -al - formatted listing with hidden files
- cd dir - change directory to dir
- cd - change to home
- pwd - show current directory
- mkdir - create directory
- rm file - delete file
- rm -rf dir - force remove directory dir *
- cp file1 file2 - copy file1 to file2
- cp -r dir1 dir2 - copy dir1 to dir2; create dir2 if it doesn't exist
- mv file1 file2 - rename or move file1 to file2 if file2 is an existing directory, moves file1 into directory file2
- ln -s file link - create symbolic link link to file
- touch file - create or update file
- cat > file - places standard input into file
- more file - output the contents of file
- head file - output the first 10 lines of file
- tail file - output the last 10 lines of file
- tail -f file - output the contents of file as it grows, starting with the last 10 lines

- grep pattern files - search for pattern in files
- grep -r pattern dir - search recursively for pattern in dir
- grep -v pattern file - search for pattern in the output, ignoring instances of file

SYSTEM INFO

- date - show the current date and time
- cal - show this month's calendar
- uptime - show current uptime
- w - display who is online
- whoami - who you are logged in as
- finger user - display information about user
- uname -a - show kernel information
- cat /proc/cpuinfo - cpu information
- cat /proc/meminfo - memory information
- man command - show the manual for command
- df - show disk usage
- du - show directory space usage
- free - show memory and swap usage
- whereis app - show possible locations of app
- which app - show which app will be run by default

COMPRESSION

- tar cf file.tar files - create a tar named file.tar containing files
- tar xf file.tar - extract the files from file.tar
- tar czf file.tar.gz files - create a tar with Gzip compression
- tar xzf file.tar.gz - extract a tar using Gzip
- tar file.tar.bz2 - create a tar with Bzip2 compression
- tar xjf file.tar.bz2 - extract a tar using Bzip2
- gzip file - compresses file and renames it to file.gz
- gzip -d file.gz - decompresses file.gz back to file

NETWORK

- ping host - ping host and output results
- whois domain - get whois information for domain
- dig -x host - reverse lookup host
- wget file - download file
- wget -c file - continue a stopped download

INSTALLATION

- Install from source:
 ./configure
 make
 make install
- dpkg -i pkg.deb - install a package (Debian)
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FILE PERMISSIONS

- chmod octal file - change the permissions of file to octal, which can be found separately for user, group, and world by adding:
 - 4 - read (r)
 - 2 - write (w)
 - 1 - execute (x)

Examples:

```
chmod 777 - read, write, execute for all
chmod 755 - rwx for owner, rx for group and world
For more options, see man chmod.
```

SHORTCUTS

- Ctrl+C - halts the current command
- Ctrl+Z - stops the current command, resume with fg in the foreground or bg in the background
- Ctrl+D - log out of current session, similar to exit
- Ctrl+W - erases one word in the current line
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- Ctrl+R - type to bring up a recent command
- !! - repeats the last command
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FILE COMMANDS

- ① ls - directory listing
- ① ls -al - formatted listing with hidden files
- ① cd dir - change directory to dir
- ① cd - change to home
- ① . - show current directory
- ① mkdir dir - create directory dir
- ① rm file - delete file
- ① rm -rf dir - force remove directory dir *
- ① cp file1 file2 - copy file1 to file2
- ① cp -r dir1 dir2 - copy dir1 to dir2; create dir2 if it doesn't exist
- ① mv file1 file2 - rename or move file1 to file2 if file2 is an existing directory, moves file1 into directory file2
- ① ln -s file link - create symbolic link link to file
- ① touch file - create or update file
- ① cat > file - places standard input into file
- ① more file - output the contents of file
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- ① tail file - output the last 10 lines of file
- ① tail -f file - output the contents of file as it grows, starting with the last 10 lines

SEARCHING

- ① grep pattern files - search for pattern in files
- ① grep -r pattern dir - search recursively for pattern in dir
- ① ack pattern - search for pattern in the current file
- ① ack -l pattern - list instances of file

SYSTEM INFO

- ① date - show the current date and time
- ① cal - show this month's calendar
- ① uptime - show current uptime
- ① w - display who is online
- ① whoami - who you are logged in as
- ① finger user - display information about user
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- ① man command - show the manual for command
- ① df - show disk usage
- ① du - show directory space usage
- ① free - show memory and swap usage
- ① whereis app - show possible locations of app
- ① which app - show which app will be run by default

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- ① tar cf file.tar files - create a tar named file.tar containing files
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- ① tar czf file.tar.gz files - create a tar with Gzip compression
- ① tar xzf file.tar.gz - extract a tar using Gzip
- ① tar -zcf file.bz2 - create a tar with Bzip2
- ① tar xzvf file.bz2 - extract a tar using Bzip2
- ① gzip file - compresses file and renames it to file.gz
- ① gzip -d file.gz - decompresses file.gz back to file

NETWORK

- ① ping host - ping host and output results
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- ① dig domain - get DNS information for domain
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- ① wget file - download file
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- ① Ctrl+U - erases the whole line
- ① Ctrl+R - type to bring up a recent command
- ① !! - repeats the last command
- ① exit - log out of current session

Comandos

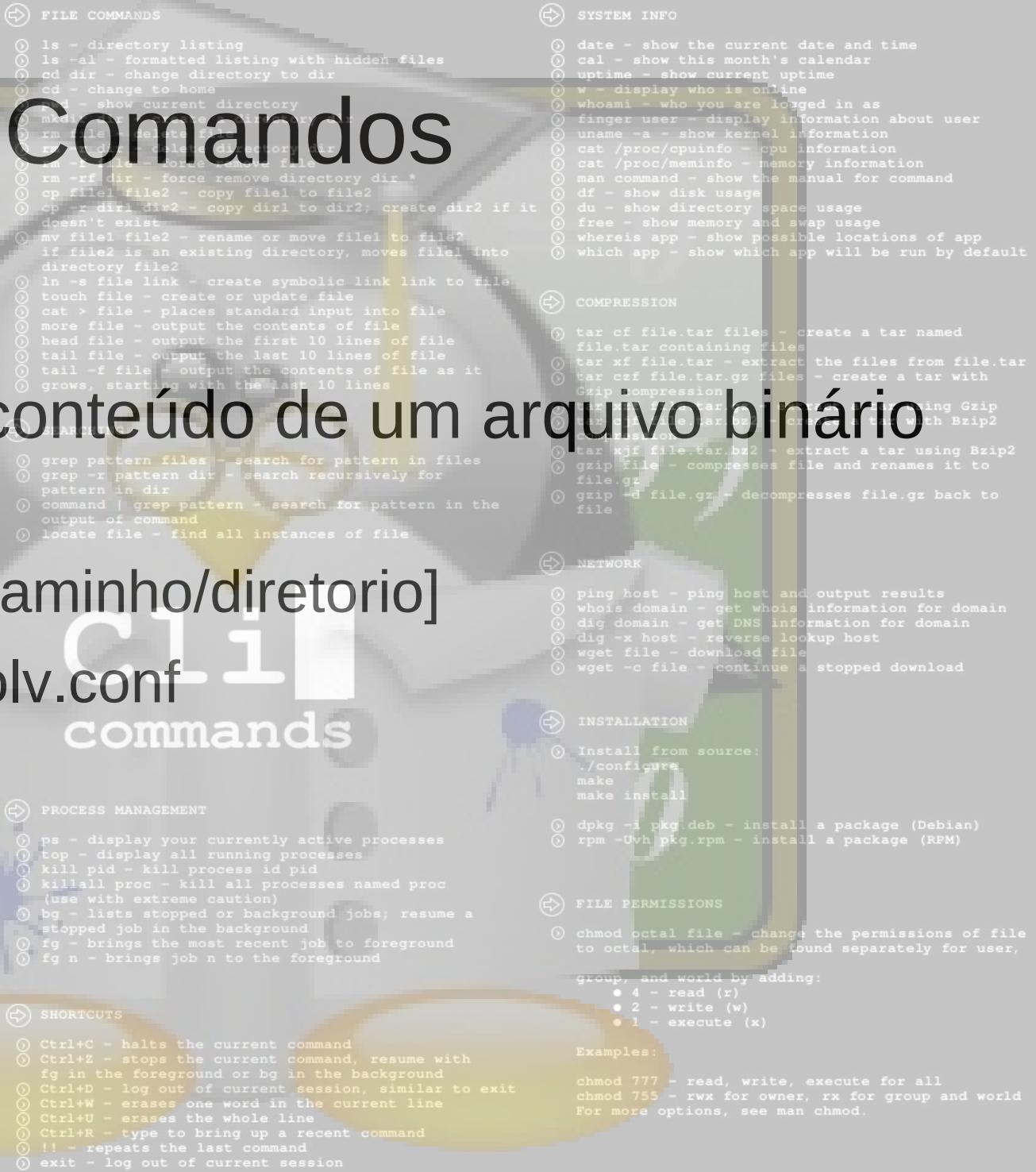
• rmdir - Remove um diretório do sistema
rmdir [caminho/diretorio]

cli commands

- **cat** - Mostra o conteúdo de um arquivo binário ou texto.

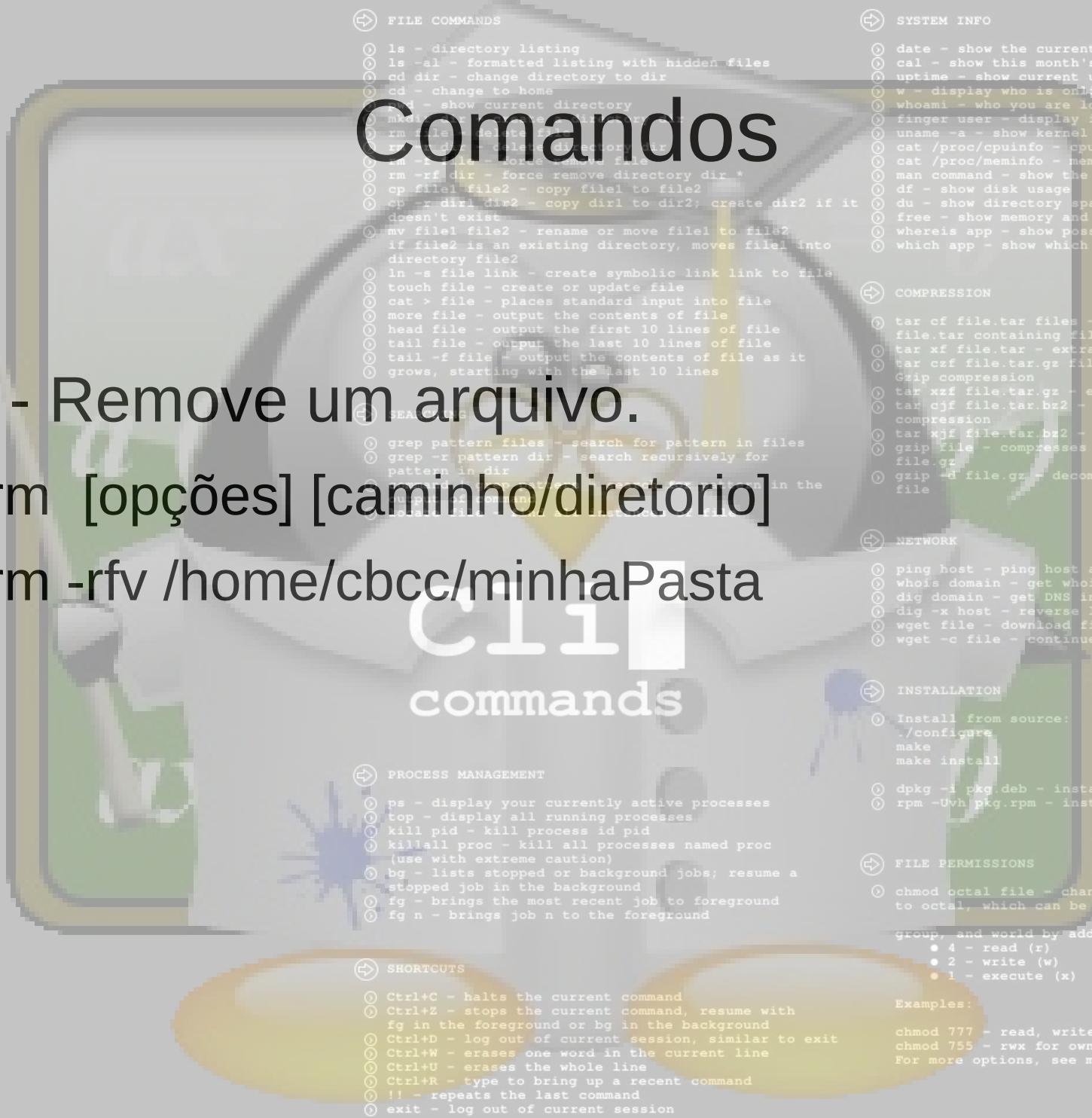
cat [opções] [caminho/diretório]

- **cat -n /etc/resolv.conf**



Comandos

- **rm** - Remove um arquivo.
`rm [opções] [caminho/diretório]`
 - `rm -rfv /home/cbcc/minhaPasta`



FILE COMMANDS

- ls - directory listing
- ls -al - formatted listing with hidden files
- cd dir - change directory to dir
- cd - change to home
- pwd - show current directory
- rm file - delete file
- rm -rf dir - delete directory dir
- cp file1 file2 - copy file1 to file2
- cp -r dir1 dir2 - copy dir1 to dir2; create dir2 if it doesn't exist
- mv file1 file2 - rename or move file1 to file2 if file2 is an existing directory, moves file1 into directory file2
- ln -s file link - create symbolic link link to file
- touch file - create or update file
- cat > file - places standard input into file
- more file - output the contents of file
- head file - output the first 10 lines of file
- tail file - output the last 10 lines of file
- tail -f file - output the contents of file as it grows, starting with the last 10 lines

- grep pattern files - search for pattern in files
- grep -r pattern dir - search recursively for pattern in dir
- grep -e pattern file - search for pattern in the command line - file

SYSTEM INFO

- date - show the current date and time
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- uptime - show current uptime
- w - display who is online
- whoami - who you are logged in as
- finger user - display information about user
- uname -a - show kernel information
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- tar cjf file.tar.bz2 - create a tar with Bzip2 compression
- tar xjf file.tar.bz2 - extract a tar using Bzip2
- gzip file - compresses file and renames it to file.gz
- gzip -d file.gz - decompresses file.gz back to file

NETWORK

- ping host - ping host and output results
- whois domain - get whois information for domain
- dig domain - get DNS information for domain
- dig -x host - reverse lookup host
- wget file - download file
- wget -c file - continue a stopped download

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Comandos

cli

commands

PROCESS MANAGEMENT

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- pwd - show current directory
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- cp -r dir1 dir2 - copy dir1 to dir2; create dir2 if it doesn't exist
- mv file1 file2 - rename or move file1 to file2 if file2 is an existing directory, moves file1 into directory file2
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- touch file - create or update file
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- tail -f file - output the contents of file as it grows, starting with the last 10 lines

- grep pattern files - search for pattern in files
- grep -r pattern dir - search recursively for pattern in dir
- grep -v pattern file - output lines not containing pattern in the file
- grep command - search for command in file

SYSTEM INFO

- date - show the current date and time
- cal - show this month's calendar
- uptime - show current uptime
- w - display who is online
- whoami - who you are logged in as
- finger user - display information about user
- uname -a - show kernel information
- cat /proc/cpuinfo - cpu information
- cat /proc/meminfo - memory information
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- df - show disk usage
- du - show directory space usage
- free - show memory and swap usage
- whereis app - show possible locations of app
- which app - show which app will be run by default

COMPRESSION

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- tar xf file.tar - extract the files from file.tar
- tar czf file.tar.gz files - create a tar with Gzip compression
- tar zcf file.tar.gz - create a tar using Gzip compression
- tar jcf file.tar.bz2 - extract a tar using Bzip2 compression
- tar xjf file.tar.bz2 - extract a tar using Bzip2
- gzip file - compresses file and renames it to file.gz
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NETWORK

- ping host - ping host and output results
- whois domain - get whois information for domain
- dig domain - get DNS information for domain
- dig -x host - reverse lookup host
- wget file - download file
- wget -c file - continue a stopped download

INSTALLATION

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FILE PERMISSIONS

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- Ctrl+W - erases one word in the current line
- Ctrl+U - erases the whole line
- Ctrl+R - type to bring up a recent command
- !! - repeats the last command
- exit - log out of current session

- mv - Move ou renomeia arquivos e diretórios.
mv [opções] [origem] [destino]
- m -iRv ./arq01.txt ./destino/

FILE COMMANDS

```
① ls - directory listing
① ls -al - formatted listing with hidden files
① cd dir - change directory to dir
① cd - change to home
① . - show current directory
① pwd - print working directory
① rm file - delete file
① rm -rf dir - delete directory dir
① cp file1 file2 - copy file1 to file2
① cp -r dir1 dir2 - copy dir1 to dir2; create dir2 if it
  doesn't exist
① mv file1 file2 - rename or move file1 to file2
  if file2 is an existing directory, moves file1 into
  directory file2
① ln -s file link - create symbolic link link to file
① touch file - create or update file
① cat > file - places standard input into file
① more file - output the contents of file
① head file - output the first 10 lines of file
① tail file - output the last 10 lines of file
① tail -f file - output the contents of file as it
  grows, starting with the last 10 lines
```

SEARCH

```
① grep pattern files - search for pattern in files
① grep -r pattern dir - search recursively for
  pattern in dir
① command grep pattern - search for pattern in the
  output of command
① locate file - find all instances of file
```

SYSTEM INFO

```
① date - show the current date and time
① cal - show this month's calendar
① uptime - show current uptime
① w - display who is online
① whoami - who you are logged in as
① finger user - display information about user
① uname -a - show kernel information
① cat /proc/cpuinfo - cpu information
① cat /proc/meminfo - memory information
① man command - show the manual for command
① df - show disk usage
① du - show directory space usage
① free - show memory and swap usage
① whereis app - show possible locations of app
① which app - show which app will be run by default
```

COMPRESSION

```
① tar cf file.tar files - create a tar named
  file.tar containing files
① tar xf file.tar - extract the files from file.tar
① tar czf file.tar.gz files - create a tar with
  Gzip compression
① tar zt file.tar.gz - test a tar using Gzip
① tar jcf file.tar.bz2 - create a tar with Bzip2
① tar xjf file.tar.bz2 - extract a tar using Bzip2
① gzip file - compresses file and renames it to
  file.gz
① gzip -d file.gz - decompresses file.gz back to
  file
```

NETWORK

```
① nslookup - query DNS for domain
① dig domain - get DNS information for domain
① dig -x host - reverse lookup host
① wget file - download file
① wget -c file - continue a stopped download
```

INSTALLATION

```
① Install from source:
  ./configure
  make
  make install
① dpkg -i pkg.deb - install a package (Debian)
① rpm -Uvh pkg.rpm - install a package (RPM)
```

FILE PERMISSIONS

```
① chmod octal file - change the permissions of file
  to octal, which can be found separately for user,
  group, and world by adding:
  • 4 - read (r)
  • 2 - write (w)
  • 1 - execute (x)
```

Examples:

```
chmod 777 - read, write, execute for all
chmod 755 - rwx for owner, rx for group and world
For more options, see man chmod.
```

SHORTCUTS

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① Ctrl+C - halts the current command
① Ctrl+Z - stops the current command, resume with
  fg in the foreground or bg in the background
① Ctrl+D - log out of current session, similar to exit
① Ctrl+W - erases one word in the current line
① Ctrl+U - erases the whole line
① Ctrl+R - type to bring up a recent command
① !! - repeats the last command
① exit - log out of current session
```

- chmod – Modifica permissões de acesso a arquivos e diretórios

chmod [opções] [permissões][diretório/arquivo]

- [opções] -Rv
- [permissões] ugoa+-=rwx

FILE COMMANDS

- ls - directory listing
- ls -al - formatted listing with hidden files
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- cd - change to home
- pwd - show current directory
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- rm -rf dir - delete directory dir
- cp file1 file2 - copy file1 to file2
- cp -r dir1 dir2 - copy dir1 to dir2; create dir2 if it doesn't exist
- mv file1 file2 - rename or move file1 to file2 if file2 is an existing directory, moves file1 into directory file2
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SEARCHING

- grep pattern files - search for pattern in files
- grep -r pattern dir - search recursively for pattern in dir
- grep -v pattern file - output lines not containing pattern
- grep command - search command for pattern
- grep command - search command and all its subcommands for pattern

SYSTEM INFO

- date - show the current date and time
- cal - show this month's calendar
- uptime - show current uptime
- w - display who is online
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- uname -a - show kernel information
- cat /proc/cpuinfo - cpu information
- cat /proc/meminfo - memory information
- man command - show the manual for command
- df - show disk usage
- du - show directory space usage
- free - show memory and swap usage
- whereis app - show possible locations of app
- which app - show which app will be run by default

COMPRESSION

- tar cf file.tar files - create a tar named file.tar containing files
- tar xf file.tar - extract the files from file.tar
- tar czf file.tar.gz files - create a tar with Gzip compression
- tar zcf file.tar.gz - create a tar with Gzip compression and all files are compressed
- tar -z -c -f file.tar.gz - create a tar using Gzip compression and all files are compressed
- tar xzf file.tar.gz - extract a tar using Bzip2 compression
- gzip file - compresses file and renames it to file.gz
- gzip -d file.gz - decompresses file.gz back to file

NETWORK

- ping host - ping host and output results
- whois domain - get whois information for domain
- dig domain - get DNS information for domain
- dig -x host - reverse lookup host
- wget file - download file
- wget -c file - continue a stopped download

INSTALLATION

- Install from source:
./configure
make
make install
- dpkg -i pkg.deb - install a package (Debian)
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FILE PERMISSIONS

- chmod octal file - change the permissions of file to octal, which can be found separately for user, group, and world by adding:
 - 4 - read (r)
 - 2 - write (w)
 - 1 - execute (x)

Examples:

chmod 777 - read, write, execute for all
chmod 755 - rwx for owner, rx for group and world
For more options, see man chmod.

PROCESS MANAGEMENT

- ps - display your currently active processes
- top - display all running processes
- kill pid - kill process id pid
- killall proc - kill all processes named proc (use with extreme caution)
- bg - lists stopped or background jobs; resume a stopped job in the background
- fg - brings the most recent job to foreground
- fg n - brings job n to the foreground

SHORTCUTS

- Ctrl+C - halts the current command
- Ctrl+Z - stops the current command, resume with fg in the foreground or bg in the background
- Ctrl+D - log out of current session, similar to exit
- Ctrl+W - erases one word in the current line
- Ctrl+U - erases the whole line
- Ctrl+R - type to bring up a recent command
- !! - repeats the last command
- exit - log out of current session

Comandos

cli
commands

FILE COMMANDS

```
ls - directory listing
ls -al - formatted listing with hidden files
cd dir - change directory to dir
cd - change to home
pwd - show current directory
rm file - delete file
rm -rf dir - force remove directory dir *
cp file1 file2 - copy file1 to file2
cp -r dir1 dir2 - copy dir1 to dir2; create dir2 if it
doesn't exist
mv file1 file2 - rename or move file1 to file2
if file2 is an existing directory, moves file1 into
directory file2
ln -s file link - create symbolic link link to file
touch file - create or update file
cat > file - places standard input into file
more file - output the contents of file
head file - output the first 10 lines of file
tail file - output the last 10 lines of file
tail -f file - output the contents of file as it
grows, starting with the last 10 lines
```

```
grep pattern files - search for pattern in files
grep -r pattern dir - search recursively for
pattern in dir
comm - grep pattern - search for pattern in both
output streams and print the lines that are common
between them
```

SYSTEM INFO

```
date - show the current date and time
cal - show this month's calendar
uptime - show current uptime
w - display who is online
whoami - who you are logged in as
finger user - display information about user
uname -a - show kernel information
cat /proc/cpuinfo - cpu information
cat /proc/meminfo - memory information
man command - show the manual for command
df - show disk usage
du - show directory space usage
free - show memory and swap usage
whereis app - show possible locations of app
which app - show which app will be run by default
```

COMPRESSION

```
tar cf file.tar files - create a tar named
file.tar containing files
tar xf file.tar - extract the files from file.tar
tar czf file.tar.gz files - create a tar with
Gzip compression
tar -zcf file.tar.gz - create a tar using Gzip
tar -jcf file.tar.bz2 - create a tar with Bzip2
tar xjf file.tar.bz2 - extract a tar using Bzip2
gzip file - compresses file and renames it to
file.gz
gzip -d file.gz - decompresses file.gz back to
```

NETWORK

```
ping host - ping host and output results
whois domain - get whois information for domain
dig domain - get DNS information for domain
dig -x host - reverse lookup host
wget file - download file
wget -c file - continue a stopped download
```

```
Install from source:
./configure
make
make install
```

```
dpkg -i pkg.deb - install a package (Debian)
rpm -Uvh pkg.rpm - install a package (RPM)
```

FILE PERMISSIONS

```
chmod octal file - change the permissions of file
to octal, which can be found separately for user,
group, and world by adding:
• 4 - read (r)
• 2 - write (w)
• 1 - execute (x)
```

Examples:

```
chmod 777 - read, write, execute for all
chmod 755 - rwx for owner, rx for group and world
For more options, see man chmod.
```

PROCESS MANAGEMENT

```
ps - display your currently active processes
top - display all running processes
kill pid - kill process id pid
killall proc - kill all processes named proc
(use with extreme caution)
bg - lists stopped or background jobs; resume a
stopped job in the background
fg - brings the most recent job to foreground
fg n - brings job n to the foreground
```

SHORTCUTS

```
Ctrl+C - halts the current command
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fg in the foreground or bg in the background
Ctrl+D - log out of current session, similar to exit
Ctrl+W - erases one word in the current line
Ctrl+U - erases the whole line
Ctrl+R - type to bring up a recent command
!! - repeats the last command
exit - log out of current session
```

- chown - Muda dono de um arquivo/diretório.

chown [opções] [dono.grupo] [diretório/arquivo]

- [opções] -Rv

- [grupo] usuários presentes no /etc/passwd

Comandos

- **top** - Mostra os programas em execução ativos, parados, tempo usado na CPU, detalhes sobre o uso da memória RAM, Swap, disponibilidade para execução de programas no sistema, etc.

commands

commands

- ```
○ date - show the current date and time
○ cal - show this month's calendar
○ uptime - show current uptime
○ w - display who is online
○ whoami - who you are logged in as
○ finger user - display information about user
○ uname -a - show kernel information
○ cat /proc/cpuinfo - cpu information
○ cat /proc/meminfo - memory information
○ man command - show the manual for command
○ df - show disk usage
○ du - show directory space usage
○ free - show memory and swap usage
○ whereis app - show possible locations of app
○ which app - show which app will be run by default
```

- Execução ativos,  
detalhes sobre  
disponibilidade  
sistema, etc.

- date - Permite ver/modificar a Data e Hora do Sistema.

**FILE COMMANDS**

- ls - directory listing
- ls -al - formatted listing with hidden files
- cd dir - change directory to dir
- cd - change to home
- cd - show current directory
- rm file - delete file
- rm -d dir - delete directory dir
- rm -rf dir - force remove directory dir \*
- cp file1 file2 - copy file1 to file2
- cp -r dir1 dir2 - copy dir1 to dir2; create dir2 if it doesn't exist
- mv file1 file2 - rename or move file1 to file2 if file2 is an existing directory, moves file1 into directory file2
- ln -s file link - create symbolic link link to file
- touch file - create or update file
- cat > file - places standard input into file
- more file - output the contents of file
- head file - output the first 10 lines of file
- tail file - output the last 10 lines of file
- tail -f file - output the contents of file as it grows, starting with the last 10 lines

**SYSTEM INFO**

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**COMPRESSION**

- tar cf file.tar files - create a tar named file.tar containing files
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- tar ccf file.tar.gz files - create a tar with Gzip compression
- tar xvf file.tar - extract tar using Gzip
- tar xvf file.tar.gz - extract a tar using Bzip2
- gzip file - compresses file and renames it to file.gz
- gzip -d file.gz - decompresses file.gz back to file

**NETWORK**

- ping host - ping host and output results
- whois domain - get whois information for domain
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Examples:

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- Ctrl+C - halts the current command
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- Ctrl+W - erases one word in the current line
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- Ctrl+R - type to bring up a recent command
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## FILE COMMANDS

- ① ls - directory listing
- ① ls -al - formatted listing with hidden files
- ① cd dir - change directory to dir
- ① cd - change to home
- ① pwd - show current directory
- ① rm file - delete file
- ① rm -rf dir - force remove directory dir \*
- ① cp file1 file2 - copy file1 to file2
- ① cp -r dir1 dir2 - copy dir1 to dir2; create dir2 if it doesn't exist
- ① mv file1 file2 - rename or move file1 to file2 if file2 is an existing directory, moves file1 into directory file2
- ① ln -s file link - create symbolic link link to file
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- ① more file - output the contents of file
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- ① tail -f file - output the contents of file as it grows, starting with the last 10 lines

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- ① grep -r pattern dir - search recursively for pattern in dir
- ① command | grep pattern - search for pattern in the output of command
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- ① date - show the current date and time
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- ① uptime - show current uptime
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- ① man command - show the manual for command
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## COMPRESSION

- ① tar cf file.tar files - create a tar named file.tar containing files
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- ① tar zcf file.tar.gz - create a tar using Gzip compression
- ① tar jcf file.tar.bz2 - extract a tar using Bzip2 compression
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## NETWORK

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- ① Ctrl+U - erases the whole line
- ① Ctrl+R - type to bring up a recent command
- ① !! - repeats the last command
- ① exit - log out of current session

- df - Mostra o espaço livre/ocupado de cada partição.

df [opções]

- df -h

# cli commands

## FILE COMMANDS

- ls - directory listing
- ls -al - formatted listing with hidden files
- cd dir - change directory to dir
- cd - change to home
- pwd - show current directory
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- rm -r dir - delete directory dir
- rm -rf file - force remove file
- rm -rf dir - force remove directory dir \*
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- mv file1 file2 - rename or move file1 to file2 if file2 is an existing directory, moves file1 into directory file2
- ln -s file link - create symbolic link link to file
- touch file - create or update file
- cat > file - places standard input into file
- more file - output the contents of file
- head file - output the first 10 lines of file
- tail file - output the last 10 lines of file
- tail -f file - output the contents of file as it grows, starting with the last 10 lines

- grep pattern files - search for pattern in files
- grep -r pattern dir - search recursively for pattern in dir
- command | grep pattern - search for pattern in the output of command
- locate file - find all instances of file

## SYSTEM INFO

- date - show the current date and time
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- w - display who is online
- whoami - who you are logged in as
- finger user - display information about user
- uname -a - show kernel information
- cat /proc/cpuinfo - cpu information
- cat /proc/meminfo - memory information
- man command - show the manual for command
- df - show disk usage
- du - show directory space usage
- free - show memory and swap usage
- whereis app - show possible locations of app
- which app - show which app will be run by default

## COMPRESSION

- tar cf file.tar files - create a tar named file.tar containing files
- tar xf file.tar - extract the files from file.tar
- tar czf file.tar.gz files - create a tar with Gzip compression
- tar zcf file.tar.gz - create a tar using Gzip archive
- tar jcf file.tar.bz2 - create a tar with Bzip2 compression
- tar xjf file.tar.bz2 - extract a tar using Bzip2
- gzip file - compresses file and renames it to file.gz
- gzip -d file.gz - decompresses file.gz back to file

## NETWORK

- ping host - ping host and output results
- whois domain - get whois information for domain
- dig domain - get DNS information for domain
- dig -x host - reverse lookup host
- wget file - download file
- wget -c file - continue a stopped download

## INSTALLATION

- Install from source:  
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- dpkg -i pkg.deb - install a package (Debian)
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## FILE PERMISSIONS

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### Examples:

chmod 777 - read, write, execute for all  
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- Ctrl+D - log out of current session, similar to exit
- Ctrl+W - erases one word in the current line
- Ctrl+U - erases the whole line
- Ctrl+R - type to bring up a recent command
- !! - repeats the last command
- exit - log out of current session

- **ln** - Cria links para arquivos e diretórios no sistema.

ln [opções] [origem] [link]

#### FILE COMMANDS

- ls - directory listing
- ls -al - formatted listing with hidden files
- cd dir - change directory to dir
- cd - change to home
- pwd - show current directory
- rm file - delete file
- rm -r dir - delete directory dir
- rm -rf file - force remove file
- rm -rf dir - force remove directory dir \*
- cp file1 file2 - copy file1 to file2
- cp -r dir1 dir2 - copy dir1 to dir2; create dir2 if it doesn't exist
- mv file1 file2 - rename or move file1 to file2 if file2 is an existing directory, moves file1 into directory file2
- ln -s file link - create symbolic link link to file
- touch file - create or update file
- cat > file - places standard input into file
- more file - output the contents of file
- head file - output the first 10 lines of file
- tail file - output the last 10 lines of file
- tail -f file - output the contents of file as it grows, starting with the last 10 lines

- grep pattern files - search for pattern in files
- grep -r pattern directory - search recursively for pattern in directory
- compgrep pattern file - search for pattern in the output of command
- locate file - find all instances of file

#### SYSTEM INFO

- date - show the current date and time
- cal - show this month's calendar
- uptime - show current uptime
- w - display who is online
- whoami - who you are logged in as
- finger user - display information about user
- uname -a - show kernel information
- cat /proc/cpuinfo - cpu information
- cat /proc/meminfo - memory information
- man command - show the manual for command
- df - show disk usage
- du - show directory space usage
- free - show memory and swap usage
- whereis app - show possible locations of app
- which app - show which app will be run by default

#### COMPRESSION

- tar cf file.tar files - create a tar named file.tar containing files
- tar xf file.tar - extract the files from file.tar
- tar czf file.tar.gz files - create a tar with Gzip compression
- tar -z - create a tar using Gzip
- tar -j - create a tar with Bzip2 compression
- tar xjf file.tar.bz2 - extract a tar using Bzip2
- gzip file - compresses file and renames it to file.gz
- gzip -d file.gz - decompresses file.gz back to file

#### NETWORK

- ping host - ping host and output results
- whois domain - get whois information for domain
- dig domain - get DNS information for domain
- dig -x host - reverse lookup host
- wget file - download file
- wget -c file - continue a stopped download

#### INSTALLATION

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make install
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#### FILE PERMISSIONS

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#### Examples:

chmod 777 - read, write, execute for all  
chmod 755 - rwx for owner, rx for group and world  
For more options, see man chmod.

#### SHORTCUTS

- Ctrl+C - halts the current command
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- Ctrl+D - log out of current session, similar to exit
- Ctrl+W - erases one word in the current line
- Ctrl+U - erases the whole line
- Ctrl+R - type to bring up a recent command
- !! - repeats the last command
- exit - log out of current session

- du - Mostra o espaço ocupado por arquivos e sub-diretórios do diretório atual.

du [opções]

- du -hs

# cli commands

#### PROCESS MANAGEMENT

- ps - display your currently active processes
- top - display all running processes
- kill pid - kill process id pid
- killall proc - kill all processes named proc (use with extreme caution)
- bg - lists stopped or background jobs; resume a stopped job in the background
- fg - brings the most recent job to foreground
- fg n - brings job n to the foreground

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#### FILE COMMANDS

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- ① ls -al - formatted listing with hidden files
- ① cd dir - change directory to dir
- ① cd - change to home
- ① pwd - show current directory
- ① rm file - delete file
- ① rm -rf dir - delete directory dir
- ① cp file1 file2 - copy file1 to file2
- ① cp -r dir1 dir2 - copy dir1 to dir2; create dir2 if it doesn't exist
- ① mv file1 file2 - rename or move file1 to file2 if file2 is an existing directory, moves file1 into directory file2
- ① ln -s file link - create symbolic link link to file
- ① touch file - create or update file
- ① cat > file - places standard input into file
- ① more file - output the contents of file
- ① head file - output the first 10 lines of file
- ① tail file - output the last 10 lines of file
- ① tail -f file - output the contents of file as it grows, starting with the last 10 lines

#### SEARCHING

- ① grep pattern files - search for pattern in files
- ① grep -A num file - print num lines following each matching line
- ① grep -B num file - print num lines preceding each matching line
- ① grep -c pattern file - count the number of lines containing pattern
- ① grep -v pattern file - print lines not containing pattern
- ① locate file - find all instances of file

#### SYSTEM INFO

- ① date - show the current date and time
- ① cal - show this month's calendar
- ① uptime - show current uptime
- ① w - display who is online
- ① whoami - who you are logged in as
- ① finger user - display information about user
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- ① cat /proc/cpuinfo - cpu information
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- ① man command - show the manual for command
- ① df - show disk usage
- ① du - show directory space usage
- ① free - show memory and swap usage
- ① whereis app - show possible locations of app
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#### COMPRESSION

- ① tar cf file.tar files - create a tar named file.tar containing files
- ① tar xf file.tar - extract the files from file.tar
- ① tar czf file.tar.gz files - create a tar with Gzip compression
- ① tar xzf file.tar.gz - extract a tar using Gzip
- ① tar cz -c file - create a tar with Bzip2 compression
- ① tar xzf file.tar.bz2 - extract a tar using Bzip2
- ① gzip file - compresses file and saves it to file.gz
- ① gunzip file.gz - decompresses file.gz back to file

#### NETWORK

- ① nslookup - look up hostnames and IP addresses
- ① host - look up hostnames and IP addresses
- ① dig domain - get DNS information for domain
- ① dig -x host - reverse lookup host
- ① wget file - download file
- ① wget -c file - continue a stopped download

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- ① Ctrl+R - type to bring up a recent command
- ① !! - repeats the last command
- ① exit - log out of current session

- grep - Procura por um texto dentro de um arquivo(s) ou no dispositivo de entrada padrão.

cat /home/cbc/arquivo.txt | grep padraoProcurado

- more - Permite fazer a paginação de arquivos ou da entrada padrão.

**FILE COMMANDS**

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- cp file1 file2 - copy file1 to file2
- cp -r dir1 dir2 - copy dir1 to dir2; create dir2 if it doesn't exist
- mv file1 file2 - rename or move file1 to file2 if file2 is an existing directory, moves file1 into directory file2
- ln -s file link - create symbolic link link to file
- touch file - create or update file
- cat > file - places standard input into file
- more file - output the contents of file
- head file - output the first 10 lines of file
- tail file - output the last 10 lines of file
- tail -f file - output the contents of file as it grows, starting with the last 10 lines

**SEARCH**

- grep pattern files - search for pattern in files
- grep -r pattern dir - search recursively for pattern in dir
- grep -c pattern - search for pattern in the output of command
- locate file - find all instances of file

**SYSTEM INFO**

- date - show the current date and time
- cal - show this month's calendar
- uptime - show current uptime
- w - display who is online
- whoami - who you are logged in as
- finger user - display information about user
- uname -a - show kernel information
- cat /proc/cpuinfo - cpu information
- cat /proc/meminfo - memory information
- man command - show the manual for command
- df - show disk usage
- du - show directory space usage
- free - show memory and swap usage
- whereis app - show possible locations of app
- which app - show which app will be run by default

**COMPRESSION**

- tar cf file.tar files - create a tar named file.tar containing files
- tar xf file.tar - extract the files from file.tar
- tar czf file.tar.gz files - create a tar with Gzip compression
- tar zt file.tar.gz - list the contents of a tar using Gzip
- tar zc file.tar.gz - compress the files in file.tar with Bzip2
- tar xjf file.tar.bz2 - extract a tar using Bzip2
- gzip file - compresses file and renames it to file.gz
- gzip -d file.gz - decompresses file.gz back to file

**NETWORK**

- ping host - ping host and output results
- whois domain - get whois information for domain
- dig domain - get DNS information for domain
- dig -x host - reverse lookup host
- wget file - download file
- wget -c file - continue a stopped download

**INSTALLATION**

- Install from source:  
./configure  
make  
make install
- dpkg -i pkg.deb - install a package (Debian)
- rpm -Uvh pkg.rpm - install a package (RPM)

**FILE PERMISSIONS**

- chmod octal file - change the permissions of file to octal, which can be found separately for user, group, and world by adding:
  - 4 - read (r)
  - 2 - write (w)
  - 1 - execute (x)

**Examples:**

- chmod 777 - read, write, execute for all
- chmod 755 - rwx for owner, rx for group and world

For more options, see man chmod.

# cli commands

**PROCESS MANAGEMENT**

- ps - display your currently active processes
- top - display all running processes
- kill pid - kill process id pid
- killall proc - kill all processes named proc (use with extreme caution)
- bg - lists stopped or background jobs; resume a stopped job in the background
- fg - brings the most recent job to foreground
- fg n - brings job n to the foreground

**SHORTCUTS**

- Ctrl+C - halts the current command
- Ctrl+Z - stops the current command, resume with fg in the foreground or bg in the background
- Ctrl+D - log out of current session, similar to exit
- Ctrl+W - erases one word in the current line
- Ctrl+U - erases the whole line
- Ctrl+R - type to bring up a recent command
- !! - repeats the last command
- exit - log out of current session

- **uptime** - Mostra o tempo de execução do sistema desde que o computador foi ligado.

uptime

# cli commands

## PROCESS MANAGEMENT

- ① `ps` - display your currently active processes
- ① `top` - display all running processes
- ① `kill pid` - kill process id pid
- ① `killall proc` - kill all processes named proc (use with extreme caution)
- ① `bg` - lists stopped or background jobs; resume a stopped job in the background
- ① `fg` - brings the most recent job to foreground
- ① `fg n` - brings job n to the foreground

## SHORTCUTS

- ① `Ctrl+C` - halts the current command
- ① `Ctrl+Z` - stops the current command, resume with `fg` in the foreground or `bg` in the background
- ① `Ctrl+D` - log out of current session, similar to `exit`
- ① `Ctrl+W` - erases one word in the current line
- ① `Ctrl+U` - erases the whole line
- ① `Ctrl+R` - type to bring up a recent command
- ① `!!` - repeats the last command
- ① `exit` - log out of current session

## FILE COMMANDS

- ① `ls` - directory listing
- ① `ls -al` - formatted listing with hidden files
- ① `cd dir` - change directory to dir
- ① `cd ..` - change to home
- ① `cd .` - show current directory
- ① `rm file` - delete file
- ① `rm -r dir` - delete directory dir
- ① `rm -rf file` - force remove file
- ① `rm -rf dir` - force remove directory dir \*
- ① `cp file1 file2` - copy file1 to file2
- ① `cp -r dir1 dir2` - copy dir1 to dir2; create dir2 if it doesn't exist
- ① `mv file1 file2` - rename or move file1 to file2 if file2 is an existing directory, moves file1 into directory file2
- ① `ln -s file link` - create symbolic link link to file
- ① `touch file` - create or update file
- ① `cat > file` - places standard input into file
- ① `more file` - output the contents of file
- ① `head file` - output the first 10 lines of file
- ① `tail file` - output the last 10 lines of file
- ① `tail -f file` - output the contents of file as it grows, starting with the last 10 lines

## SEARCH

- ① `grep pattern files` - search for pattern in files
- ① `grep pattern dir` - search recursively for pattern in directory
- ① `grep -v pattern file` - output of command
- ① `locate file` - find all instances of file

## SYSTEM INFO

- ① `date` - show the current date and time
- ① `cal` - show this month's calendar
- ① `uptime` - show current uptime
- ① `w` - display who is online
- ① `whoami` - who you are logged in as
- ① `finger user` - display information about user
- ① `uname -a` - show kernel information
- ① `cat /proc/cpuinfo` - cpu information
- ① `cat /proc/meminfo` - memory information
- ① `man command` - show the manual for command
- ① `df` - show disk usage
- ① `du` - show directory space usage
- ① `free` - show memory and swap usage
- ① `whereis app` - show possible locations of app
- ① `which app` - show which app will be run by default

## COMPRESSION

- ① `tar cf file.tar files` - create a tar named file.tar containing files
- ① `tar xf file.tar` - extract the files from file.tar
- ① `tar czf file.tar.gz files` - create a tar with Gzip compression
- ① `tar xzvf file.tar.gz` - extract a tar using Gzip
- ① `tar -zcf file.tar.gz` - create a tar with Bzip2
- ① `tar xjvf file.tar.bz2` - extract a tar using Bzip2
- ① `zipfile` - compresses file and renames it to file.zip
- ① `gunzip file.gz` - compresses file.gz back to file

## NETWORK

- ① `ping host` - ping host and output results
- ① `whois domain` - get whois information for domain
- ① `dig domain` - get DNS information for domain
- ① `dig -x host` - reverse lookup host
- ① `wget file` - download file
- ① `wget -c file` - continue a stopped download

## INSTALLATION

- ① `Install from source:`  
`./configure`  
`make`  
`make install`
- ① `dpkg -i pkg.deb` - install a package (Debian)
- ① `rpm -Uvh pkg.rpm` - install a package (RPM)

## FILE PERMISSIONS

- ① `chmod octal file` - change the permissions of file to octal, which can be found separately for user, group, and world by adding:
  - 4 - read (r)
  - 2 - write (w)
  - 1 - execute (x)

### Examples:

`chmod 777` - read, write, execute for all  
`chmod 755` - rwx for owner, rx for group and world  
 For more options, see man chmod.

# • reboot - Reinicia o computador.

reboot

# cli commands

## PROCESS MANAGEMENT

- ① ps - display your currently active processes
- ① top - display all running processes
- ① kill pid - kill process id pid
- ① killall proc - kill all processes named proc (use with extreme caution)
- ① bg - lists stopped or background jobs; resume a stopped job in the background
- ① fg - brings the most recent job to foreground
- ① fg n - brings job n to the foreground

## SHORTCUTS

- ① Ctrl+C - halts the current command
- ① Ctrl+Z - stops the current command, resume with fg in the foreground or bg in the background
- ① Ctrl+D - log out of current session, similar to exit
- ① Ctrl+W - erases one word in the current line
- ① Ctrl+U - erases the whole line
- ① Ctrl+R - type to bring up a recent command
- ① !! - repeats the last command
- ① exit - log out of current session

## FILE COMMANDS

- ① ls - directory listing
- ① ls -al - formatted listing with hidden files
- ① cd dir - change directory to dir
- ① cd - change to home
- ① . - show current directory
- ① mkdir - create directory
- ① rm file - delete file
- ① rm -rf dir - force remove directory dir \*
- ① cp file1 file2 - copy file1 to file2
- ① cp -r dir1 dir2 - copy dir1 to dir2; create dir2 if it doesn't exist
- ① mv file1 file2 - rename or move file1 to file2 if file2 is an existing directory, moves file1 into directory file2
- ① ln -s file link - create symbolic link link to file
- ① touch file - create or update file
- ① cat > file - places standard input into file
- ① more file - output the contents of file
- ① head file - output the first 10 lines of file
- ① tail file - output the last 10 lines of file
- ① tail -f file - output the contents of file as it grows, starting with the last 10 lines

- ① grep pattern files - search for pattern in files
- ① grep -r pattern dir - search recursively for pattern in dir
- ① command | grep pattern - search for pattern in the output of command
- ① locate file - find all instances of file

## SYSTEM INFO

- ① date - show the current date and time
- ① cal - show this month's calendar
- ① uptime - show current uptime
- ① w - display who is online
- ① whoami - who you are logged in as
- ① finger user - display information about user
- ① uname -a - show kernel information
- ① cat /proc/cpuinfo - cpu information
- ① cat /proc/meminfo - memory information
- ① man command - show the manual for command
- ① df - show disk usage
- ① du - show directory space usage
- ① free - show memory and swap usage
- ① whereis app - show possible locations of app
- ① which app - show which app will be run by default

## COMPRESSION

- ① tar cf file.tar files - create a tar named file.tar containing files
- ① tar xf file.tar - extract the files from file.tar
- ① tar czf file.tar.gz files - create a tar with Gzip compression
- ① tar xzf file.tar.gz - extract a tar using Gzip
- ① tar cJf file.tar.bz2 - create a tar with Bzip2 compression
- ① tar xJf file.tar.bz2 - extract a tar using Bzip2
- ① gzip file - compresses file and renames it to file.gz
- ① gzip -d file.gz - decompresses file.gz back to file

## NETWORK

- ① ping host - ping host and output results
- ① whois domain - get whois information for domain
- ① dig domain - get DNS information for domain
- ① dig -x host - reverse lookup host
- ① wget file - download file
- ① wget -c file - continue a stopped download

## INSTALLATION

- ① Install from source:  
./configure  
make  
make install
- ① dpkg -i pkg.deb - install a package (Debian)
- ① rpm -Uvh pkg.rpm - install a package (RPM)

## FILE PERMISSIONS

- ① chmod octal file - change the permissions of file to octal, which can be found separately for user, group, and world by adding:
  - 4 - read (r)
  - 2 - write (w)
  - 1 - execute (x)

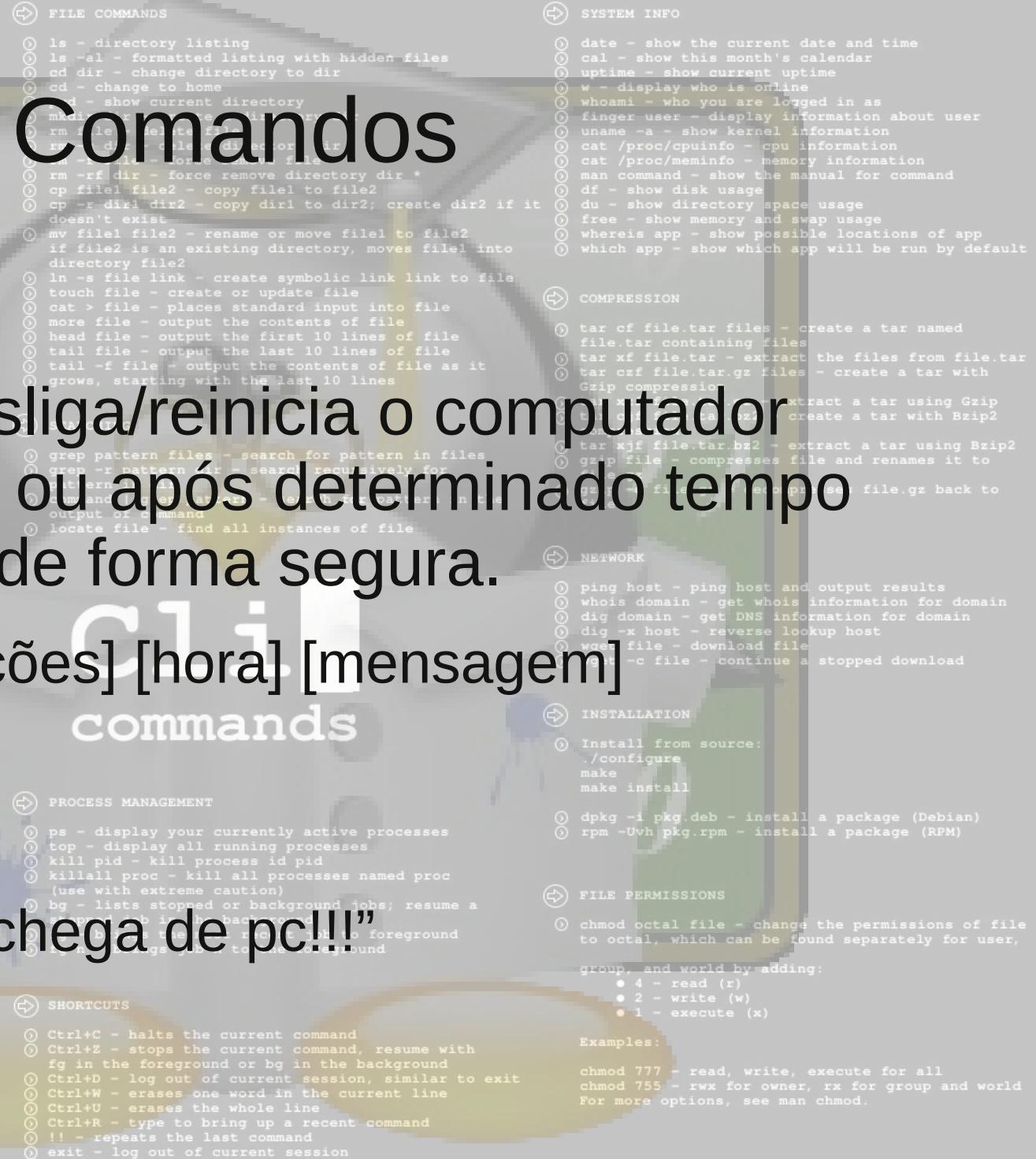
### Examples:

chmod 777 - read, write, execute for all  
chmod 755 - rwx for owner, rx for group and world  
For more options, see man chmod.

- shutdown - Desliga/reinicia o computador imediatamente ou após determinado tempo (programável) de forma segura.

shutdown [opções] [hora] [mensagem]

- [opções] -hr
- [hora] HH:MM
- [mensagem] “chega de pc!!!”



# FHS - Filesystem Hierarchy Standard

/bin/

Comandos binários essenciais para todos os usuários (ex: cat, ls, cp)

## SEARCHING

- grep pattern files - search for pattern in files
- grep -r pattern dir - search recursively for pattern in dir
- command | grep pattern - search for pattern in the output of command
- locate file - find all instances of file

/boot/

Arquivos do Boot loader (ex: núcleo, initrd).

/dev/

Dispositivos (ex: /dev/null).

## PROCESS MANAGEMENT

- ps - display your currently active processes
- top - display all running processes
- kill pid - kill process id pid
- killall proc - kill all processes named proc (use with extreme caution)
- bg - lists stopped or background jobs; resume a stopped job in the background
- fg - brings the most recent job to foreground
- fg n - brings job n to the foreground

## SHORTCUTS

- Ctrl+C - halts the current command
- Ctrl+Z - stops the current command, resume with fg in the foreground or bg in the background
- Ctrl+D - log out of current session, similar to exit
- Ctrl+W - erases one word in the current line
- Ctrl+U - erases the whole line
- Ctrl+R - type to bring up a recent command
- !! - repeats the last command
- exit - log out of current session

## SYSTEM INFO

- date - show the current date and time
- cal - show this month's calendar
- uptime - display how long the system has been up
- who - display who is online
- finger user - display information about user
- uname -a - show kernel information
- cat /proc/cpuinfo - cpu information
- cat /proc/meminfo - memory information
- man command - show the manual for command
- df - show disk usage
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- whereis app - show possible locations of app
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## COMPRESSION

- tar cf file.tar files - create a tar named file.tar containing files
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## FILE PERMISSIONS

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  - 4 - read (r)
  - 2 - write (w)
  - 1 - execute (x)

### Examples:

chmod 777 - read, write, execute for all  
chmod 755 - rwx for owner, rx for group and world  
For more options, see man chmod.

# FHS - Filesystem Hierarchy Standard

/etc/

Arquivos de configuração específicos do computador.

/etc/X11/

Arquivos de configuração para o X Window System, versão 11.

/home/

Diretórios de usuários.

/lib/

Diretório com as bibliotecas essenciais para os arquivos binários contidos nos diretórios /bin/ e /sbin/.

## FILE COMMANDS

- ls - directory listing
- ls -al - formatted listing with hidden files
- cd - change directory
- cd .. - go up one directory
- mkdir dir - create a directory dir
- rm file - delete file
- rm -r dir - delete directory dir
- rm -f file - force remove file
- cp file1 file2 - copy file1 to file2
- cp -r dir1 dir2 - copy dir1 to dir2; create dir2 if it doesn't exist
- mv file1 file2 - rename or move file1 to file2 if file2 is an existing directory, moves file1 into directory file2
- ln -s file link - create symbolic link link to file
- touch file - create or update file
- cat > file - places standard input into file
- more file - output the contents of file
- head file - output the first 10 lines of file
- tail file - output the last 10 lines of file

## SEARCHING

- grep pattern files - search for pattern in files
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- date - show the current date and time
- cal - show this month's calendar
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- uname -a - show kernel information
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- cat /proc/meminfo - memory information
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- free - show memory and swap usage
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- which app - show which app will be run by default

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- tar cf file.tar files - create a tar named file.tar containing files
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- tar xzf file.tar.gz - extract a tar using Gzip
- tar cjf file.tar.bz2 - create a tar with Bzip2 compression
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make install
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- rpm -Uvh pkg.rpm - install a package (RPM)

## FILE PERMISSIONS

- chmod octal file - change the permissions of file to octal, which can be found separately for user, group, and world by adding:
  - 4 - read (r)
  - 2 - write (w)
  - 1 - execute (x)

Examples:  
chmod 755 file - rwx for owner, rx for group and world  
chmod 755 file - rwx for owner, rx for group and world  
For more options, see man chmod.

## SHORTCUTS

- Ctrl+C - halts the current command
- Ctrl+Z - stops the current command, resume with fg
- Ctrl+D - log out of current session, similar to exit
- Ctrl+W - erases one word in the current line
- Ctrl+U - erases the whole line
- Ctrl+R - type to bring up a recent command
- !! - repeats the last command
- exit - log out of current session

# FHS - Filesystem Hierarchy Standard

/proc/

Sistemas de arquivo virtual, que possui o estado do núcleo e processos do sistema; a maioria dos arquivos é baseada no formato texto (ex: tempo de execução, rede).

/root/

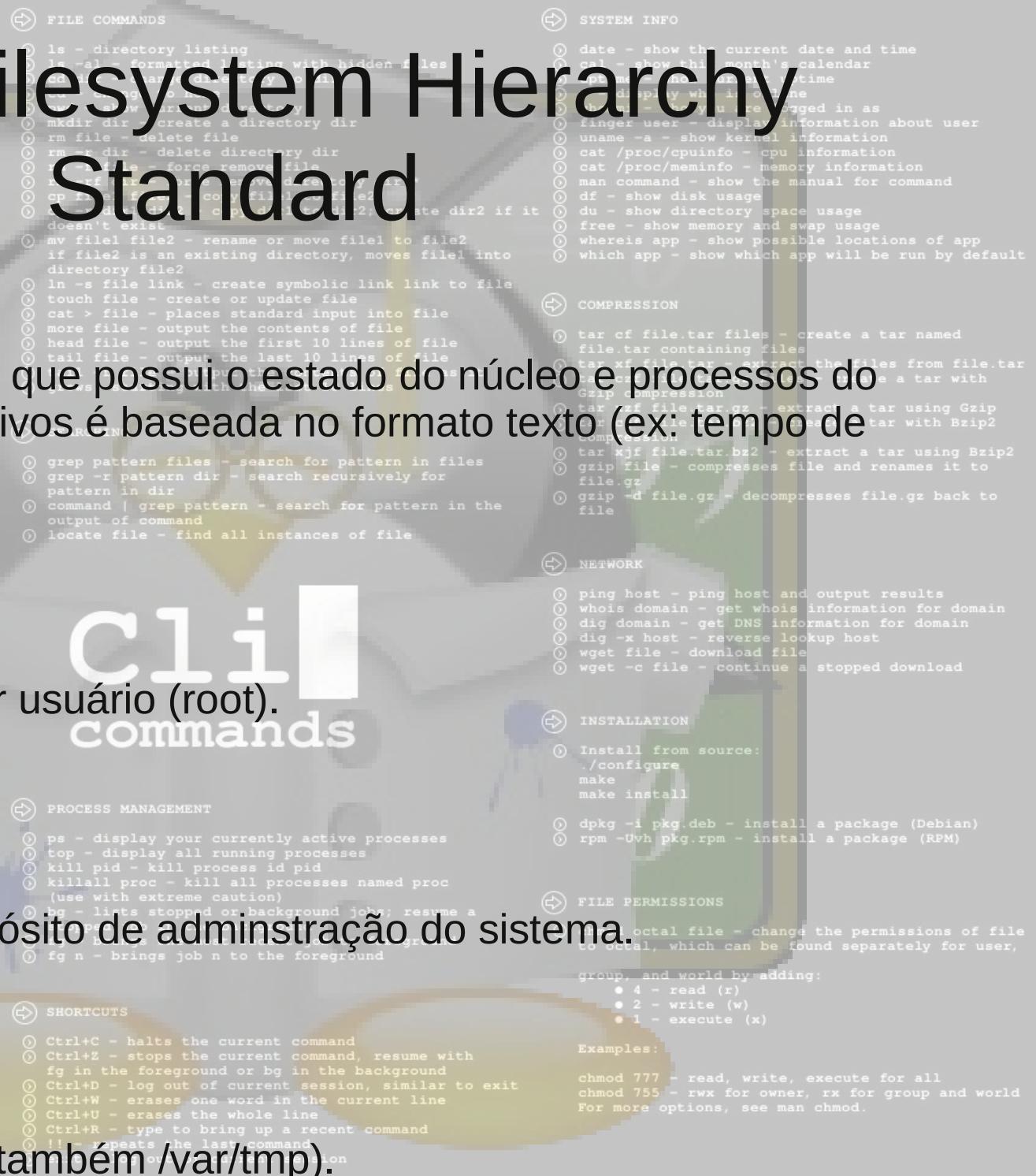
Diretório home para o super usuário (root).

/sbin/

Arquivos binários para propósito de administração do sistema.

/tmp/

Arquivos temporários. (Ver também /var/tmp).



# FHS - Filesystem Hierarchy Standard

/usr/

Hierarquia secundária para dados compartilhados de usuários, cujo acesso é restrito apenas para leitura. 

/usr/include/

Diretório padrão para arquivos do tipo header.

/usr/lib/

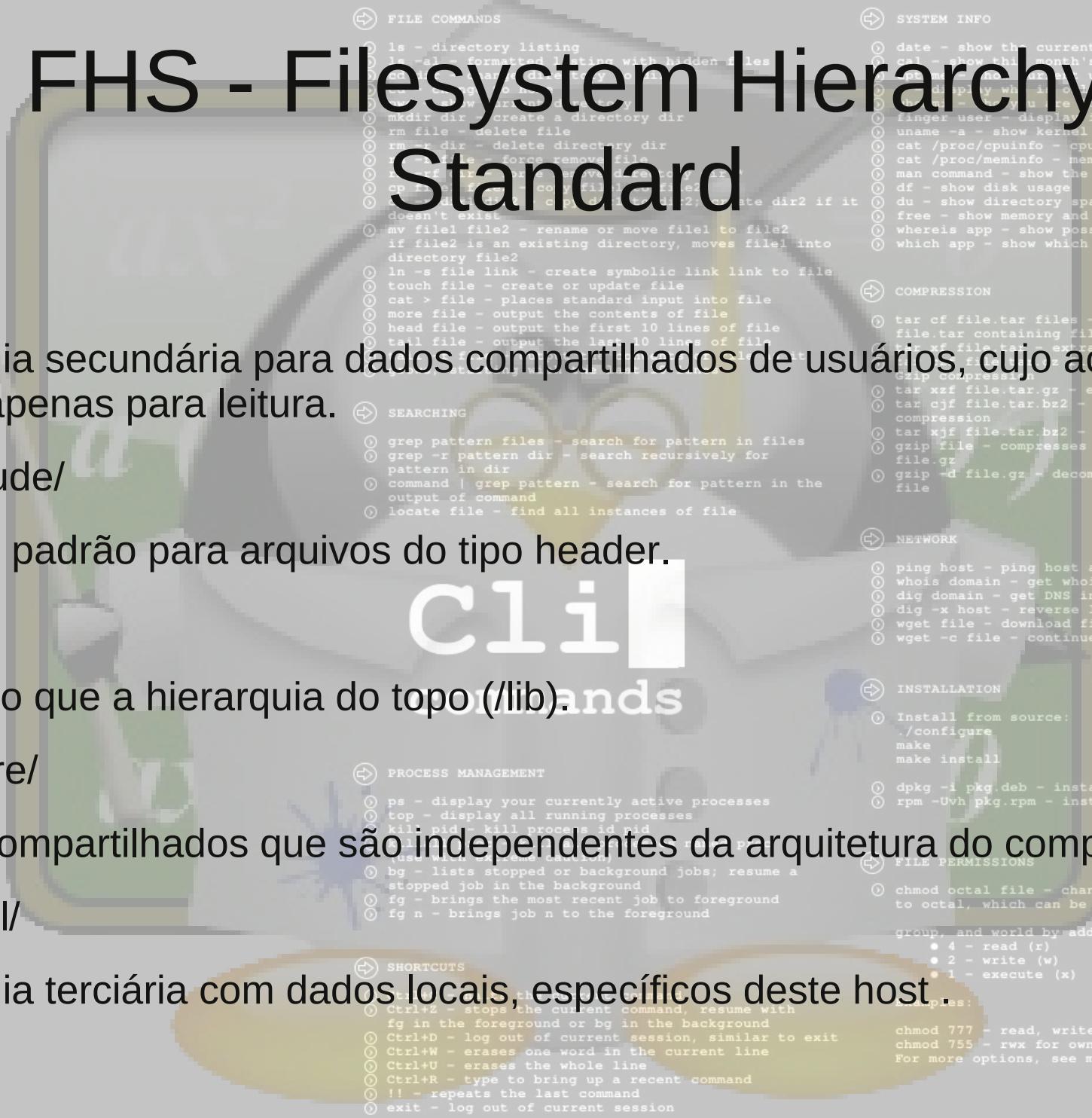
O mesmo que a hierarquia do topo (`/lib`).

/usr/share/

Dados compartilhados que são independentes da arquitetura do computador..

/usr/local/

Hierarquia terciária com dados locais, específicos deste host



# FHS - Filesystem Hierarchy Standard

/var/

Arquivos "variáveis", como logs, base de dados, páginas Web e arquivos de e-mail.

/var/lock/

Arquivos de lock. Utilizados para manter o controle sobre recursos em uso.

/var/log/

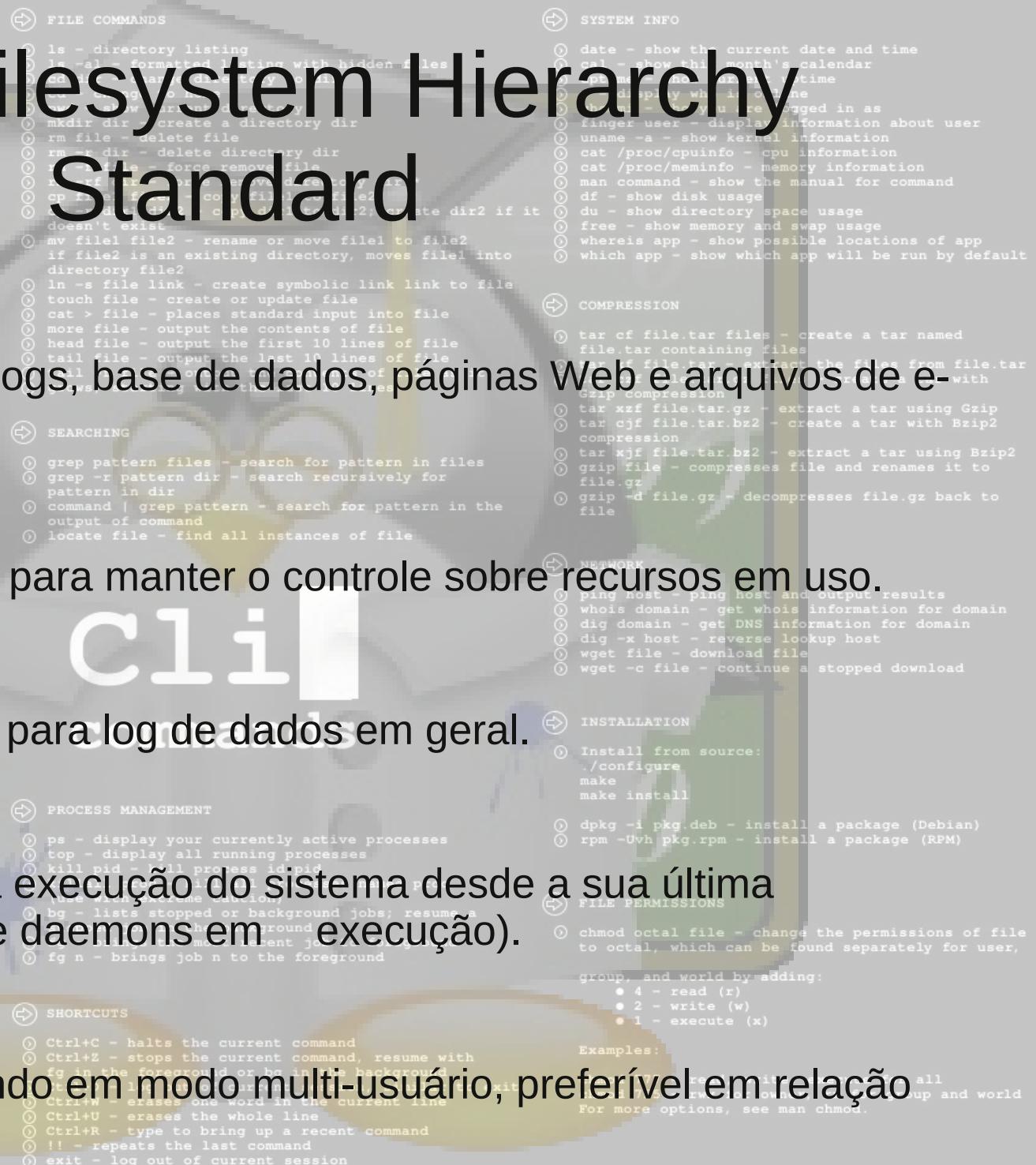
Arquivos para log. Utilizado para log de dados em geral.

/var/run/

Contém informação sobre a execução do sistema desde a sua última inicialização. (ex: usuários e daemons em execução).

/var/tmp/

Arquivos temporários. Quando em modo multi-usuário, preferível em relação ao /tmp.

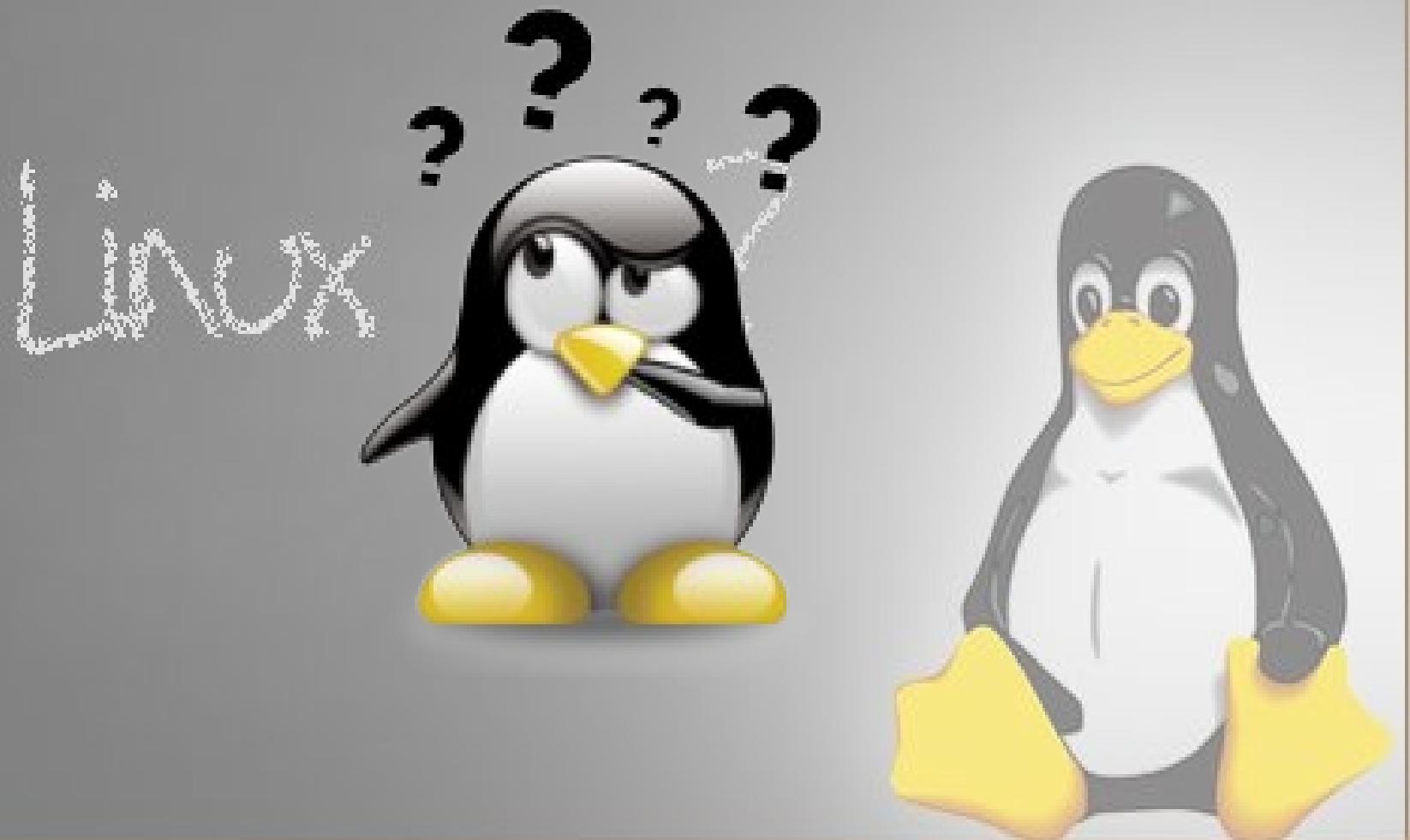


# • Referências - Pra onde eu corro?

- man / info
- Google
- [vivaolinux.com.br](http://vivaolinux.com.br)
- [identi.ca](http://identi.ca)
- newsletter
- Googlegroups
- [irc.freenode.net](http://irc.freenode.net)



# •Referências - Pra onde eu corro?



# •Referências - Pra onde eu corro?

Aplicativos Locais Sistema

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### Novidades

Iniciante - 4.11 Intermediário - 5.60 Avançado - 6.42

Adicione o guia Foca Linux no campo de pesquisas do Firefox ou Internet Explorer 7, [clicando aqui](#).

Adicione a barra de pesquisa do guia Foca Linux no Firefox, [clicando aqui](#).

BICAMPEÃO!!! O Foca Linux vence novamente o premio favoritos de 2007 do tradicional site de noticias br-linux (<http://br-linux.org>) com quase o triplo do percentual de votos do ano passado (26% e 10% em 2006). Veja o resultado final em <http://br-linux.org/linux/favoritos-2007-34-resultados-nas-categorias-da-comunidade>.

Spirit Linux (<http://www.spiritlinux.com.br>), empresa que apóia o guia Foca Linux é 5a colocada entre as empresas que apóiam a comunidade no premio favoritos de 2007 do site de noticias br-linux (<http://br-linux.org>).

18/11/2007 - Gleydson Mazioli é primeiro colocado em certificação Linux internacional. Leia mais [clicando aqui](#).

OBS.: Para receber um e-mail avisando sobre novas versões deste guia e lançamento de novos níveis de aprendizado, preencha o formulário localizado ao final desta página. Seu e-mail será usado somente para notificação de novas versões e de modo algum será passado a terceiros para prática de SPAM.

O Foca GNU/Linux é um guia que traz desde explicações básicas sobre computadores e o sistema GNU/Linux até a administração e segurança do sistema. Os assuntos do guia são explicados em linguagem clara e organizados de forma linear e didática, evitando termos técnicos nos níveis iniciais, até que o usuário se habite com sua utilização de forma gradual. Isto faz o guia indispensável para o usuário GNU/Linux iniciante ou os mais curiosos. Todas as seções do guia Foca GNU/Linux tem exemplos para melhor compreensão do assunto explicado e links dinâmicos que te levam facilmente a assuntos relacionados (na versão HTML).

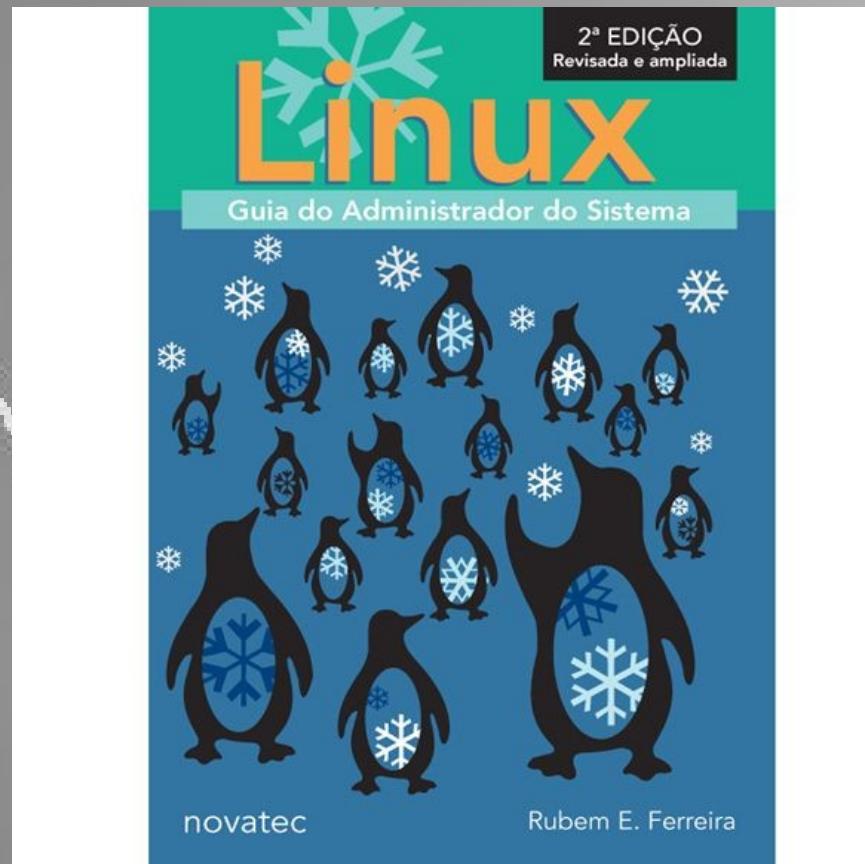
Para facilitar a leitura do guia, eu o dividi em três níveis de aprendizado: Iniciante, Intermediário e Avançado.

Localizar:  Anterior Próxima Realçar tudo Diferenciar maiúsc./minúsc. Texto não encontrado

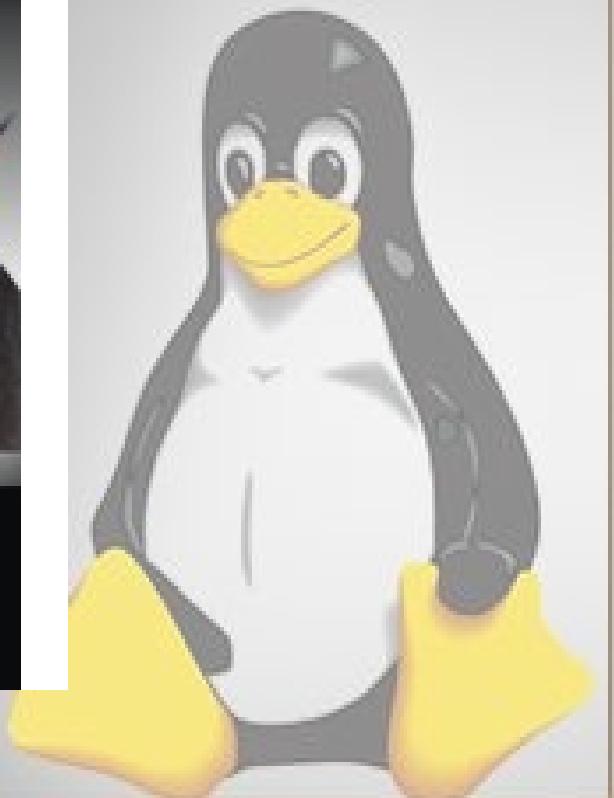
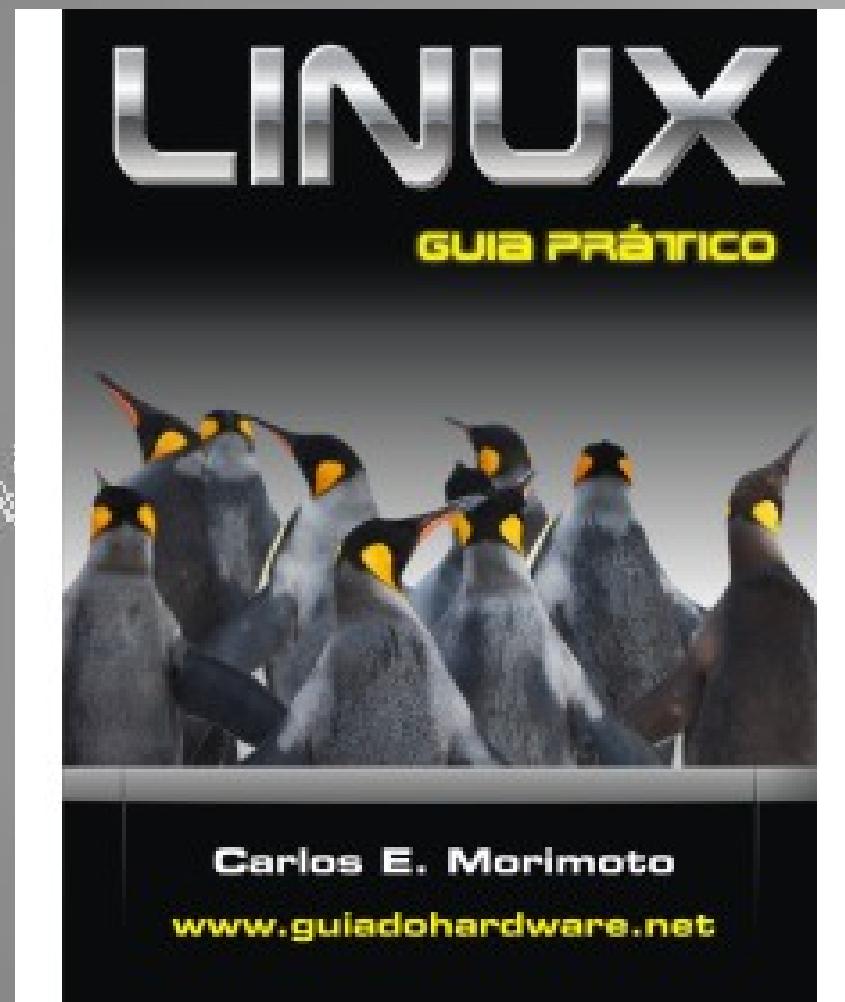
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Destaque

**Dynamips + Dynagen - Emulando Vlans com router on stick no Linux**  
Por Rodrigo Capelini

Neste pequeno artigo, pretendo mostrar na prática como criar um ambiente no Dynamips/Dynagen onde trabalha-se com switches e vlans, fazendo com que o roteamento entre as vlans seja feito pelo hospedeiro Linux.

**JOOMLA no openSUSE em 10 passos**  
Por Leandro Gregory

Esse artigo tem a função de auxiliar quem encontra dificuldades em instalar o Joomla no openSUSE. Ele não irá aprofundar na instalação do Joomla em si, pois citarei um artigo que o faça, mas trabalhará os pré-requisitos para a mesma. O Joomla está na sua versão 1.6 e o sistema operacional openSUSE em sua versão 11.3.

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**Backup em fita DAT com multivolume (LTO3)**  
Por Joca (Altemir Braz Dantas Junior)

Backup em fita Dat com multivolume (LTO3) usando mt, mttx e tar num DELL PowerVault 124T.

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**Wmap web scanner**  
Por Luiz Vieira

WMAP é um scanner de vulnerabilidades web que foi criado originalmente a partir de uma ferramenta chamada SQLMap. Esta

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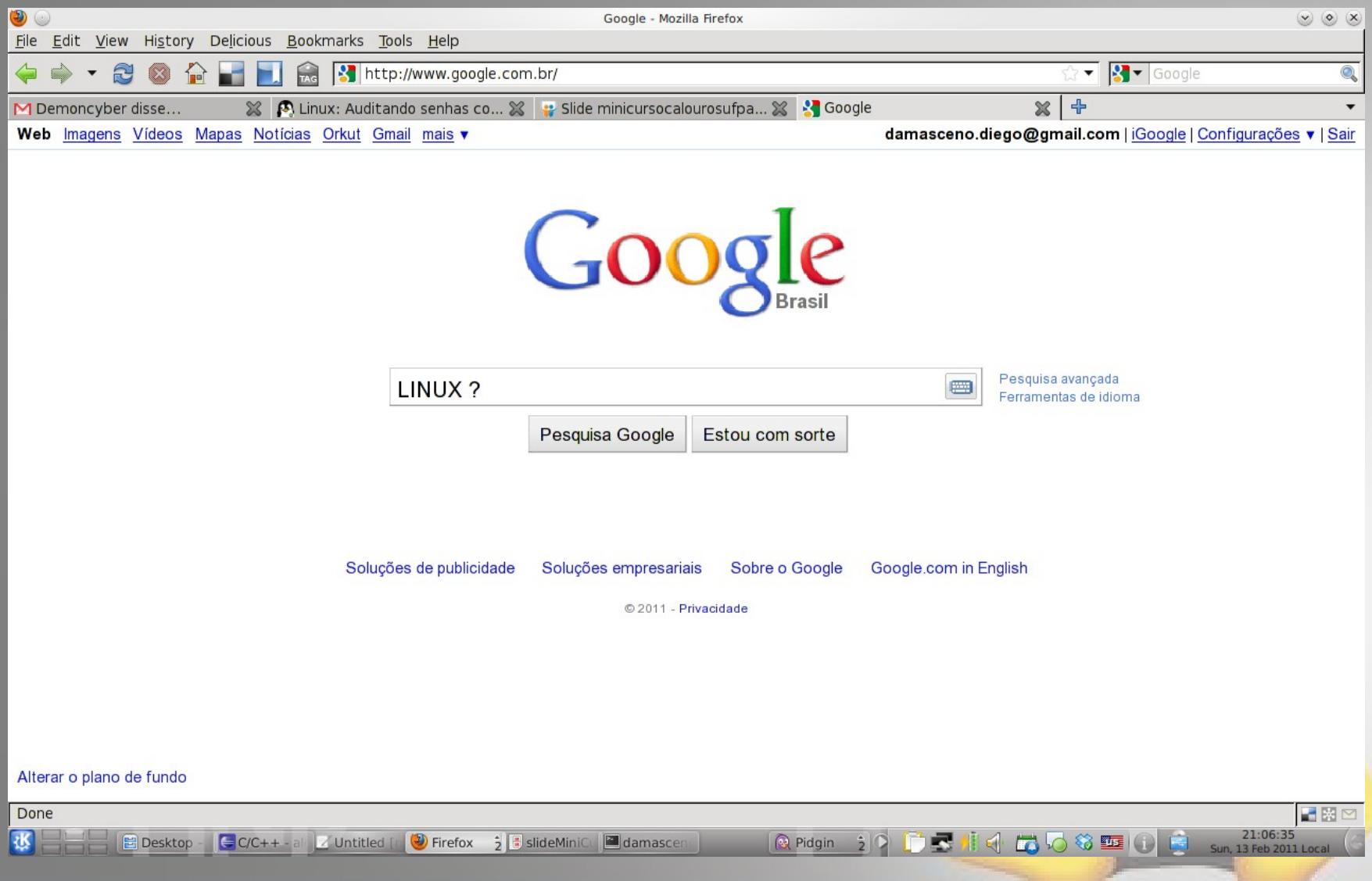
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