

Introdução ao Linux

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Filosofia Unix:

- Arquivos de texto armazenam dados.
- Sistema de arquivos hierárquico.
- Tratamento de alguns dispositivos como arquivos.
- Programas pequenos se unem para realizar uma tarefa maior.

Tanenbaum e o MINIX

Andrew D. Tanenbaum, em 1987, escreveu o livro **Operating Systems: Design and Implementation** (“Sistemas Operacionais: Projeto e Implementação”).

MINIX foi usado como material de apoio ao livro.

Inspirado no MINIX, **Linus Torvalds** criou seu próprio sistema operacional, o *kernel* do **Linux**.

Tanenbaum e o MINIX

Hello everybody out there using minix - I'm doing a (free) operating system (just a hobby, won't be big and professional like gnu) for 386(486) AT clones. This has been brewing since april, and is starting to get ready. I'd like any feedback on things people like/dislike in minix, as my OS resembles it somewhat (same physical layout of the file-system (due to practical reasons) among other things).

I've currently ported bash(1.08) and gcc(1.40), and things seem to work. This implies that I'll get something practical within a few months, and I'd like to know what features most people would want. Any suggestions are welcome, but I won't promise I'll implement them :-)

Linus (torvalds@kruuna.helsinki.fi) PS. Yes – it's free of any minix code, and it has a multi-threaded fs. It is NOT portable (uses 386 task switching etc), and it probably never will support anything other than AT-harddisks, as that's all I have :-).

— Linus Torvalds

Conhecendo o Linux

O Linux que conhecemos na verdade é o **GNU/Linux**.

A maioria das distribuições utilizam o *kernel* do Linux em conjunto com *softwares* GNU.

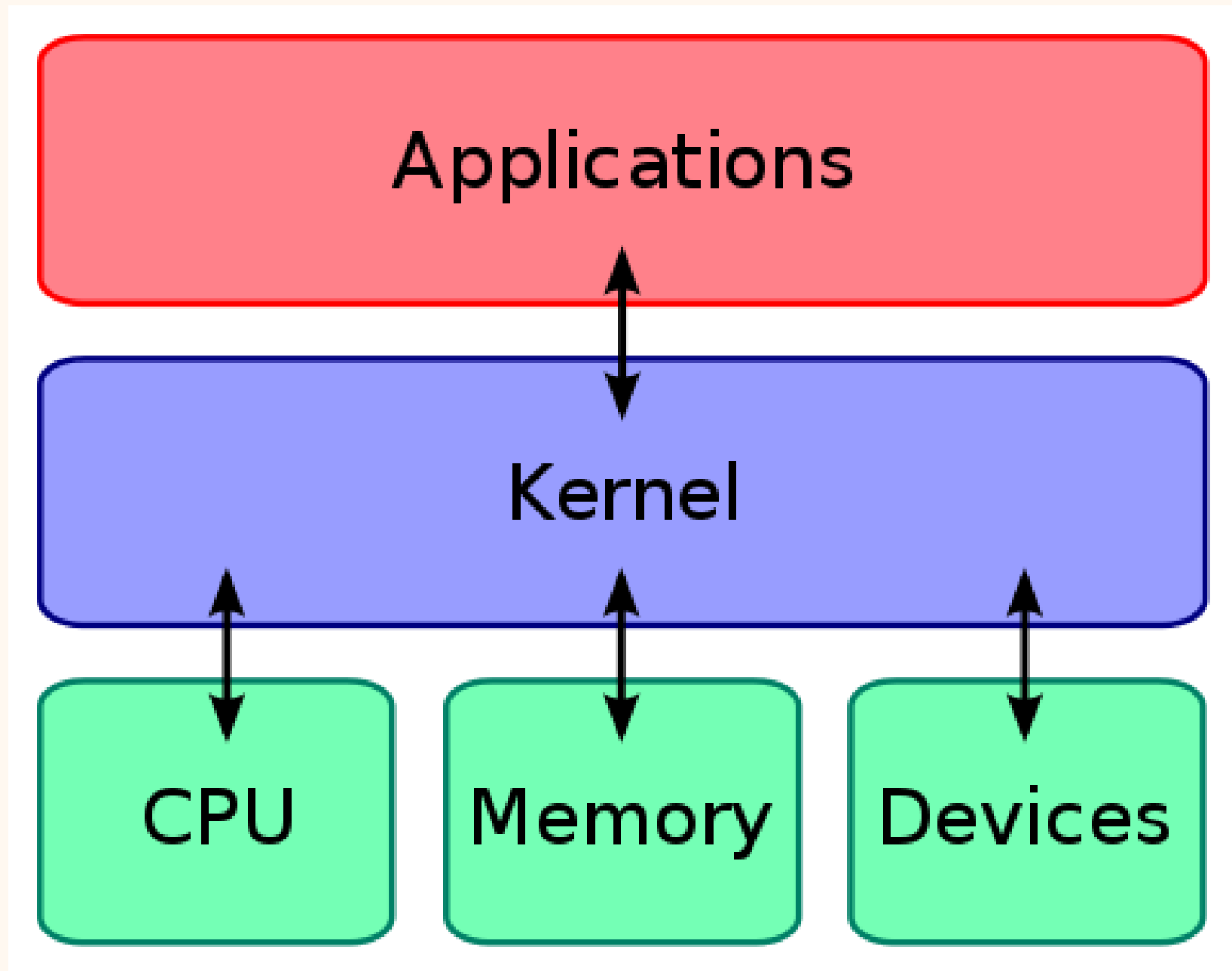
Projeto GNU

Iniciado em 1983 por **Richard Stallman** enquanto trabalhava no laboratório de inteligência artificial no MIT.

- *Software* livre
- *Software* proprietário

Stallman também criou a “Free Software Foundation” que administra as licenças GNU, como a GPL (*General Public License*).

Kernel



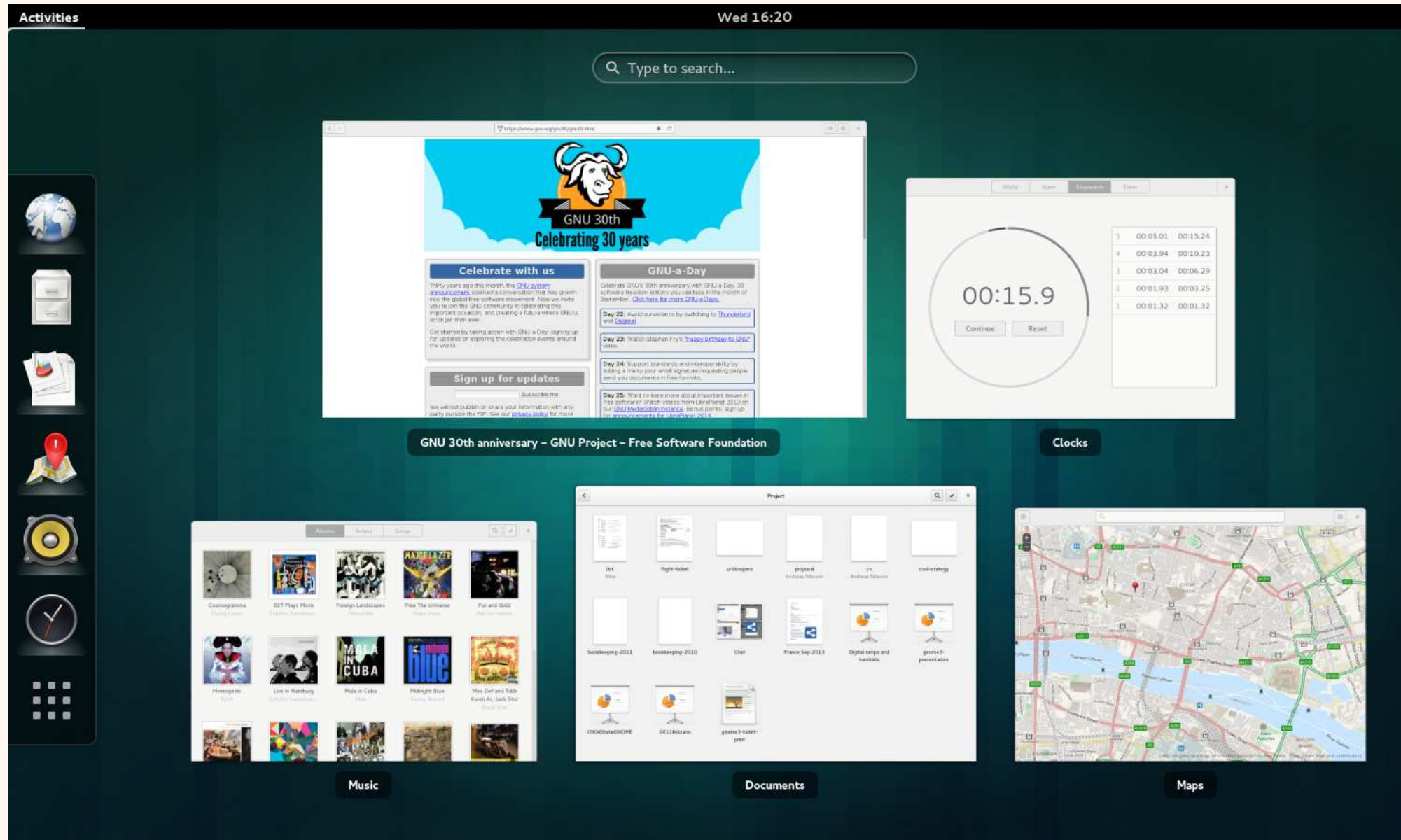
Distribuições

O que se conhece popularmente como Linux, é na verdade apenas o *kernel*, utilizado em todas as distribuições.

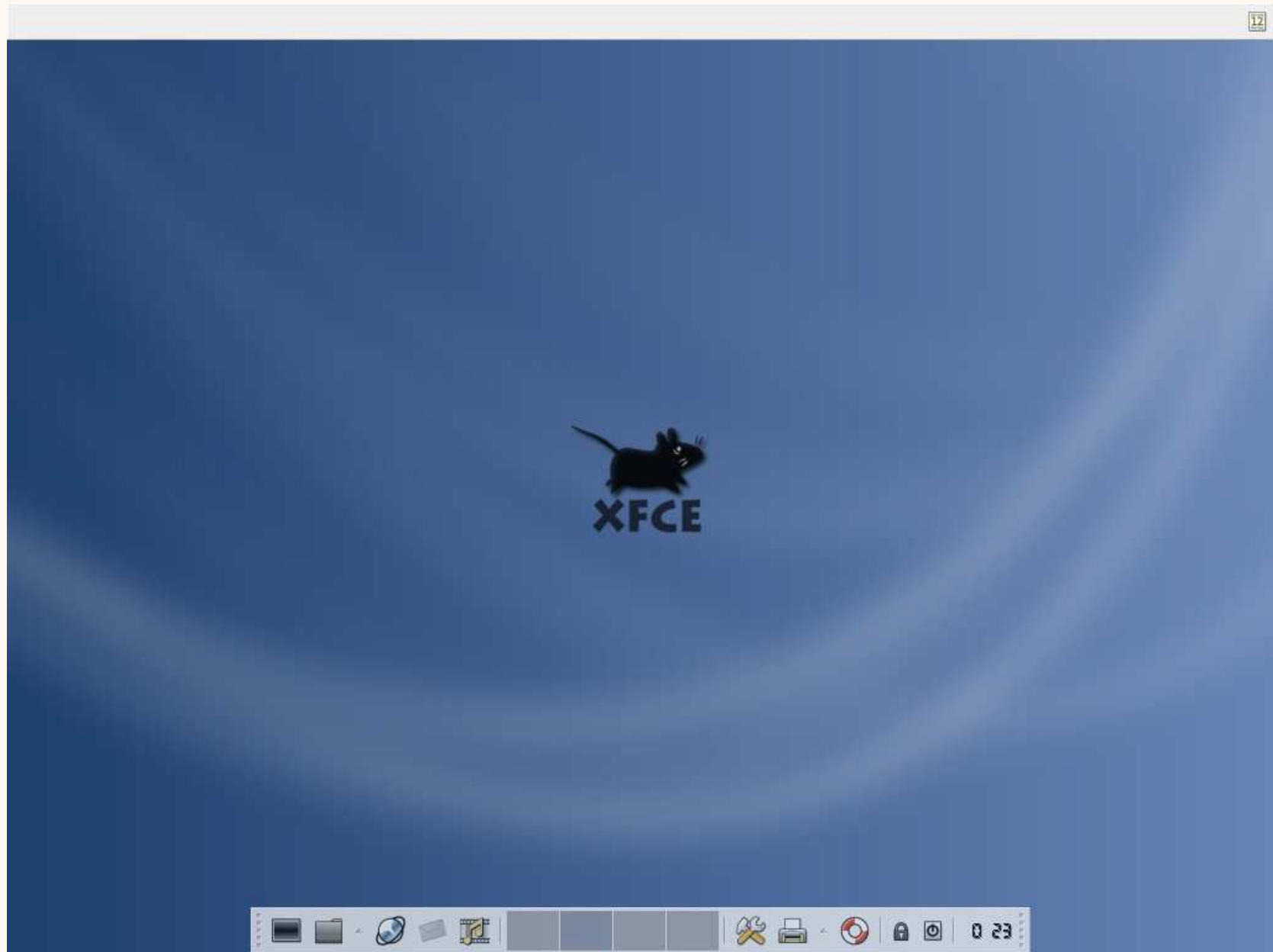
Distribuições nada mais são que o *kernel* do Linux juntamente com alguns outros *softwares* (em sua maioria GNU, mas não necessariamente) que dão funcionalidade ao sistema.



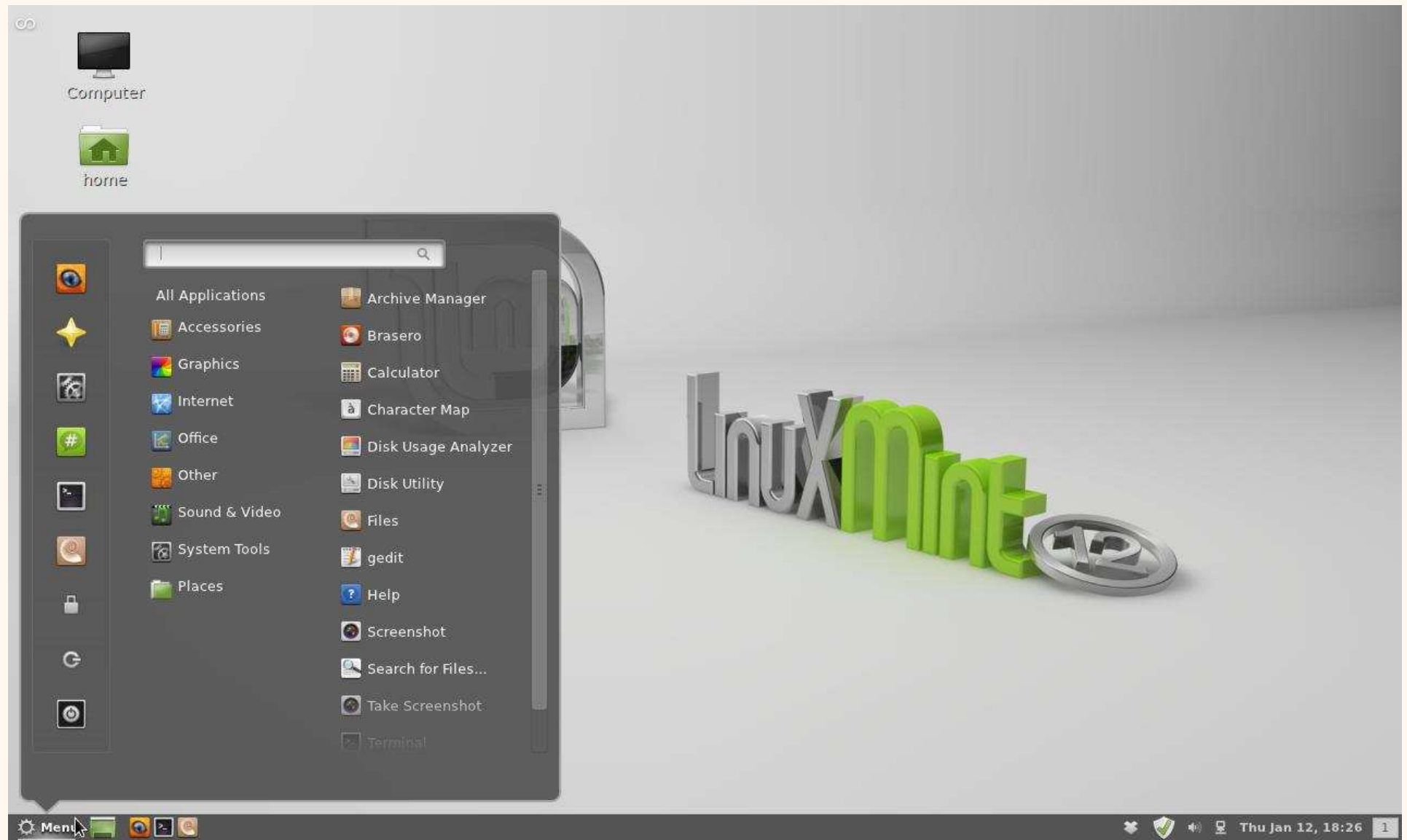
Desktop Environment - GNOME



Desktop Environment - XFCE



Desktop Environment - Cinnamon



Window Manager

Window Manager gerencia funções como:

- Aparência de janelas.
- Bordas de janelas.
- Comportamento na troca de janelas (Alt + Tab).

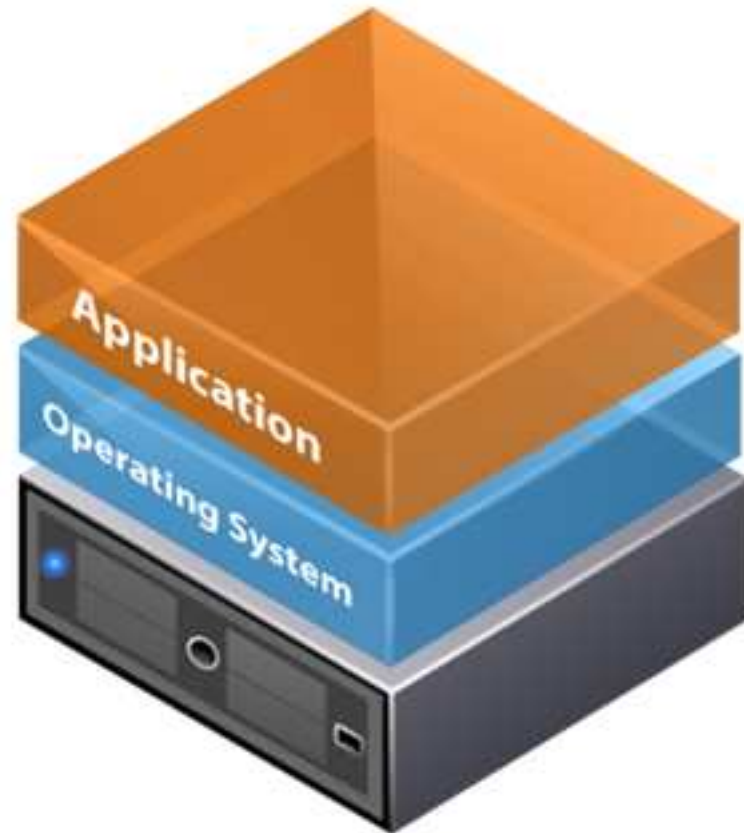
Window Manager

Diferentes temas de Window Manager



Alternativas de uso - Máquina Virtual

Arquitetura da Máquina Virtual



Traditional Architecture



Virtual Architecture

Alternativas de uso - Dual-Boot

GRUB



Alternativas de uso - Dual-Boot

GParted

The screenshot shows the GParted application window titled "/dev/sda - GParted". The interface includes a menu bar (GParted, Edit, View, Device, Partition, Help) and a toolbar with icons for creating, deleting, moving, and resizing partitions. A dropdown menu on the right shows the selected device: "/dev/sda (80.00 GiB)".

The main display area shows a visual representation of the disk layout. Three partitions are highlighted with colored borders: /dev/sda2 (40.04 GiB, yellow), /dev/sda3 (19.50 GiB, yellow), and /dev/sda5 (18.16 GiB, blue). A mouse cursor is hovering over the /dev/sda2 partition.

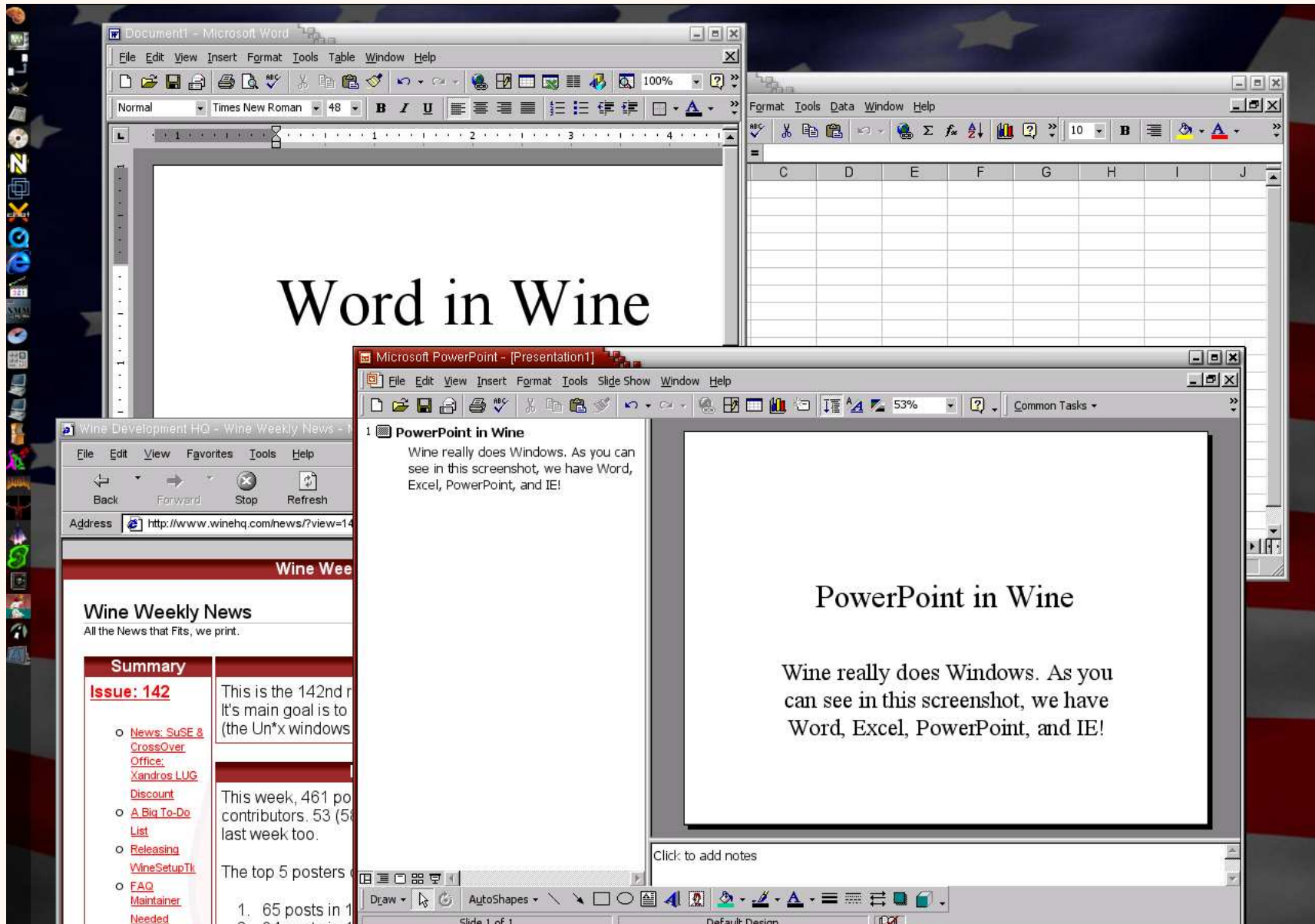
Below the visual representation is a table with the following columns: Partition, File System, Label, Size, Used, Unused, and Flags.

Partition	File System	Label	Size	Used	Unused	Flags
unallocated	unallocated		1.00 MiB	---	---	
/dev/sda1	ntfs	WinRE	1.46 GiB	500.07 MiB	999.93 MiB	
/dev/sda2	ntfs	Vista	40.04 GiB	9.53 GiB	30.51 GiB	boot
/dev/sda3	ntfs	Data	19.50 GiB	3.00 GiB	16.50 GiB	
unallocated	unallocated		3.98 MiB	---	---	
▼ /dev/sda4	extended		18.99 GiB	---	---	
/dev/sda5	ext4		18.16 GiB	2.88 GiB	15.27 GiB	
/dev/sda6	linux-swap		854.99 MiB	---	---	

At the bottom of the window, a status bar indicates "0 operations pending".

Alternativas de uso - Wine

Wine rodando Word



Porquê usar?

- Familiaridade geral com termos e conceitos;
- Aprendizado de boas práticas;
- Gerenciamento de pacotes;

FIM!

Dicas:

- **Aventure-se!**
- `www.google.com`
- `psl_pg@googlegroups.com`