



Experienced Linux users may be called upon, need to or want to explain Linux or introduce Linux to others.

This material was derived from presentation slides originally produced by Microcenter in 2009 and may not have been given at any of our previous meetings. It is something that may help beginners or you may want to use it to help others. It is an introduction to Linux that specifically targets those with very limited knowledge of computer technology.

We want it to be a good and informative overview of Linux for the curious. We hope to improve the explanations, while giving accurate and positive information.

Participation by those new to Linux and also those that have been using Linux for some time, may be very helpful in improving it. We expect and want comments, recommendations, and suggestions for improvement. This may take a bit of time. Therefore, from the beginning of this session, the slides will be made available; so that, participants can fully know and understand what will be covered and what may need to be changed.

Although most of our regular attendees have considerable Linux experience, it is always good to look back at what "grounded" us in the beginning. As this helps to explain to others, including bosses, "WHY".

Please help us make it better.

Introduction



stan reichardt

GNU/Linux for those New to Linux, the true Beginners

Brought to you by the

Newlinux Linux Users Group

<http://newlug.sluug.org/>

A Special Interest Group of the

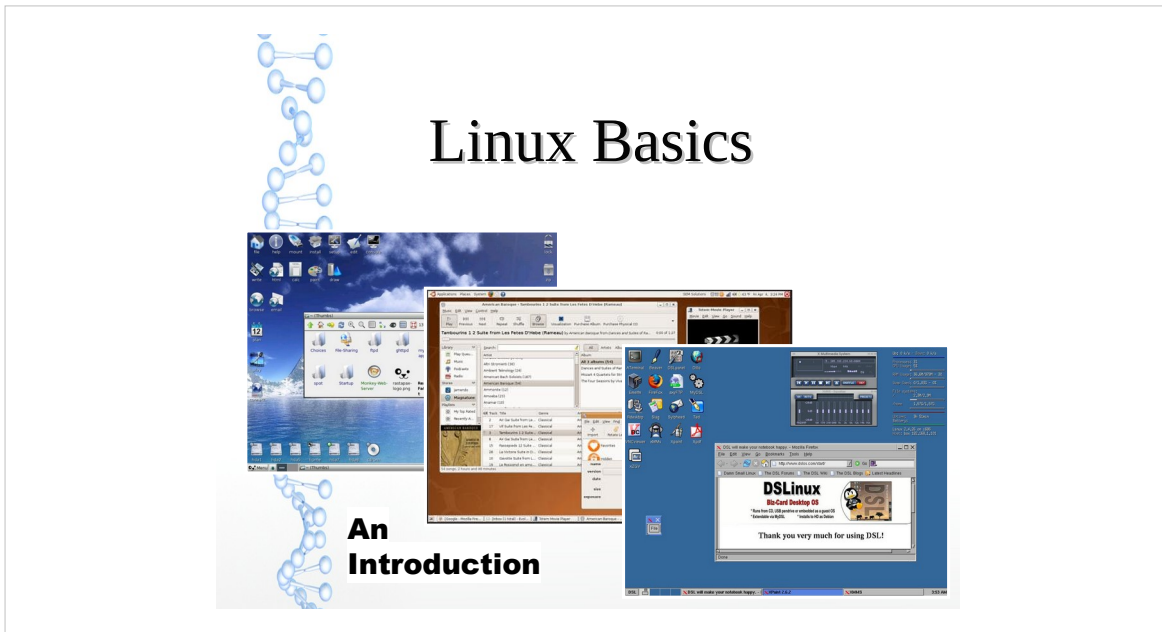
St. Louis Unix Users Group (SLUUG)

<http://www.sluug.org/>

All About Me

Stan Reichardt

- I started a beginner friendly user group for Linux newcomers **formerly** known as the Hazelwood Linux Users Group (<http://hzwlug.sluug.org>) in November 2000. Also, I am currently Vice-President of the St. Louis Unix Users Group. Both groups meet monthly. Membership and meetings are free.
- My start was around hobby computers back in the 1970's while on Active Duty with the U. S. Army Reserve. My interest became professional and over the next 10 years work included networked mini-computer systems, desktop PCs, help desk support for desktop users, data base programming, Unix System Administration, bulletin boards and more. I retired from Active Duty as an Information Systems Chief out of the U. S. Army Reserve Command.
- Contract work followed doing Software Deployment for the U. S. Postal Service, UNIX System Administration for U. S. Army Material Command, Linux Subject Matter Expert for Wave Technologies International, Senior Security Engineer auditing and evaluating security assessments for the U. S. Veterans Administration.
- I have received Linux +, and Security + certifications from CompTIA, the IT Industry Trade Association. That was years back.



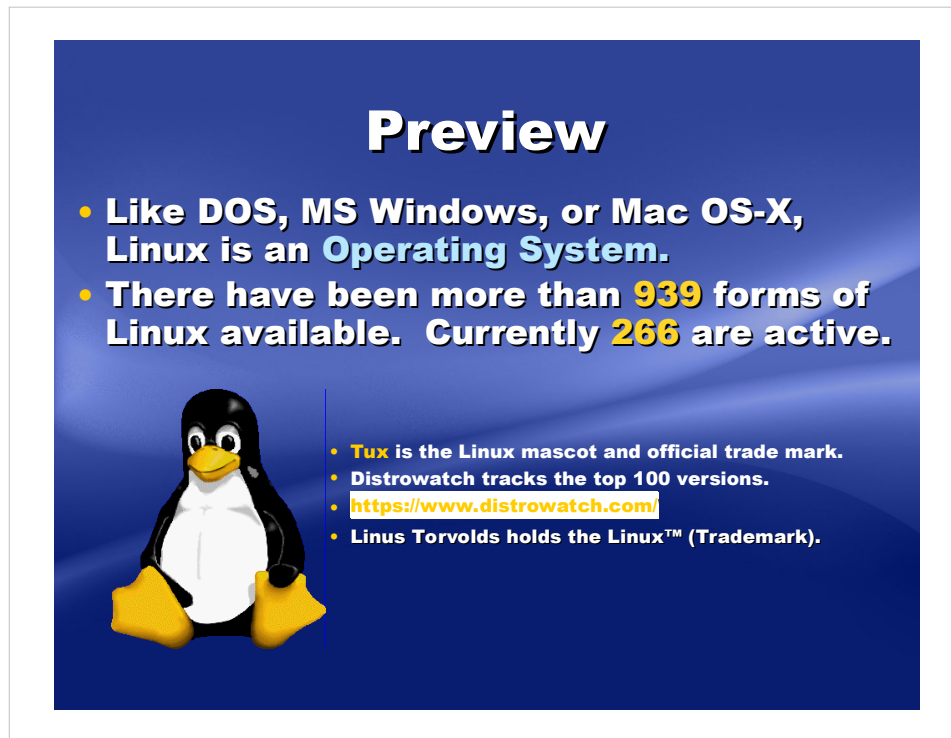
Section I

The name of the operating system is usually pronounced “Lin-” as in “Fin”, and “-ux” as in “Trucks”, with the emphasis on the first syllable.

Linux is a Unix-like and mostly standards compliant (POSIX) computer operating system assembled under the model of free and open-source software development and distribution. The defining component of Linux is the Linux kernel, an operating system kernel first released on 5 October 1991 by Finnish software developer **Linus Torvalds**.

Linux was originally developed as a free operating system for Intel x86-based personal computers, but has since been ported to more computer hardware platforms than any other operating system.

Linux is the leading operating system on servers and other big iron systems such as mainframe computers and supercomputers, **but is used on only around 1% of desktop computers**. Linux also runs on embedded systems, which are devices whose operating system is typically built into the firmware and is highly tailored to the system; this includes mobile phones, tablet computers, network routers, facility automation controls, televisions and video game consoles. Android,



You have to understand that Linux is a computer Operating System and that there are many forms of Linux available.

The Linux form is a complete package that includes the Linux kernel, software tools and applications. That form is known as a distribution (a distro). They are as varied as automobile makes and models.

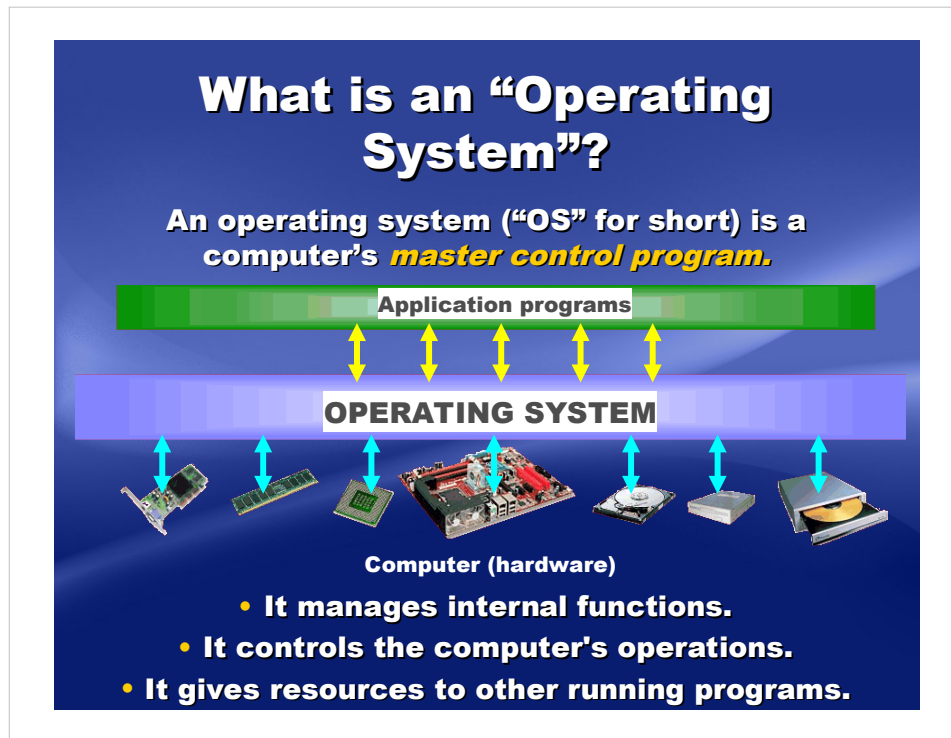
| | | |
|----------------|-------------------------|-----------------------|
| Ford Lincoln | Ford ~ F150 pickup | Chevy ~ Volt electric |
| Ford ~ Mustang | Ford ~ E350 utility van | Chevy ~ Capries |
| Ford ~ Focus | Chevy ~ Blazer | Dodge ~ pickup |

*In 2011, the “**Distrowatch.com**” database of **active** Linux distributions peaked at 323. Currently, however, it lists only 285. Distros have always come and gone. In fact, Distrowatch listed 791 distributions that had existed since it was founded in 2001, although less than forty percent had ever been in active development at any given time..*

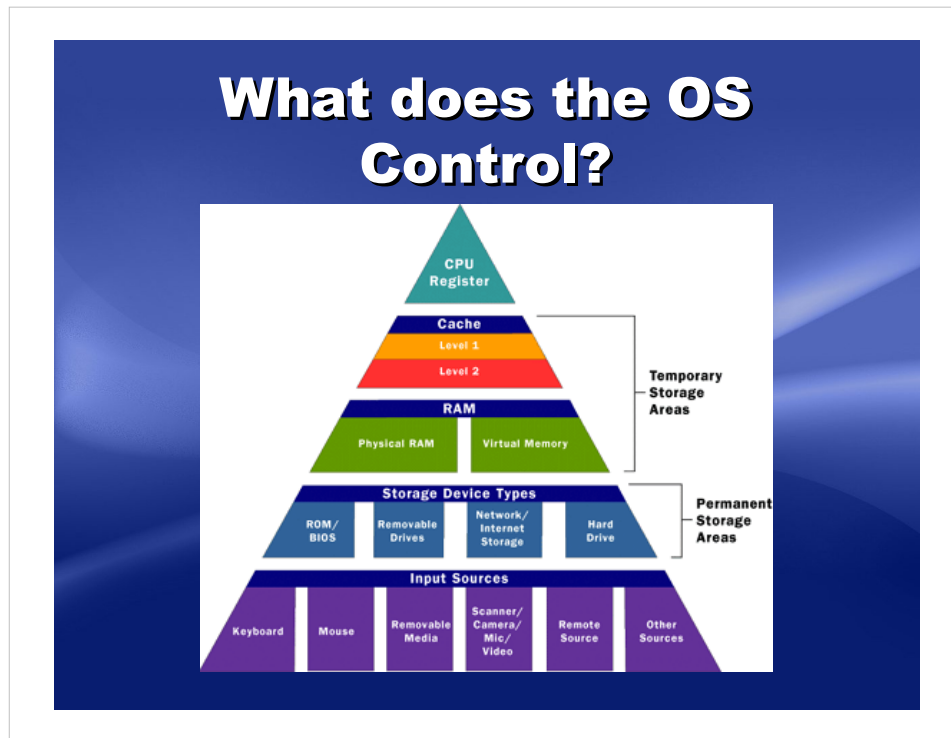
<http://www.datamation.com/open-source/why-is-the-number-of-linux-distros-declining.html>

<http://http://distrowatch.com/search.php?ostype=All&category=All&origin=All&basedon=All¬basedon=None&desktop=All&architecture=All&status=Active>

*As of 2022, 939 were known and 266 were designated active by “**Distrowatch.com**”.*



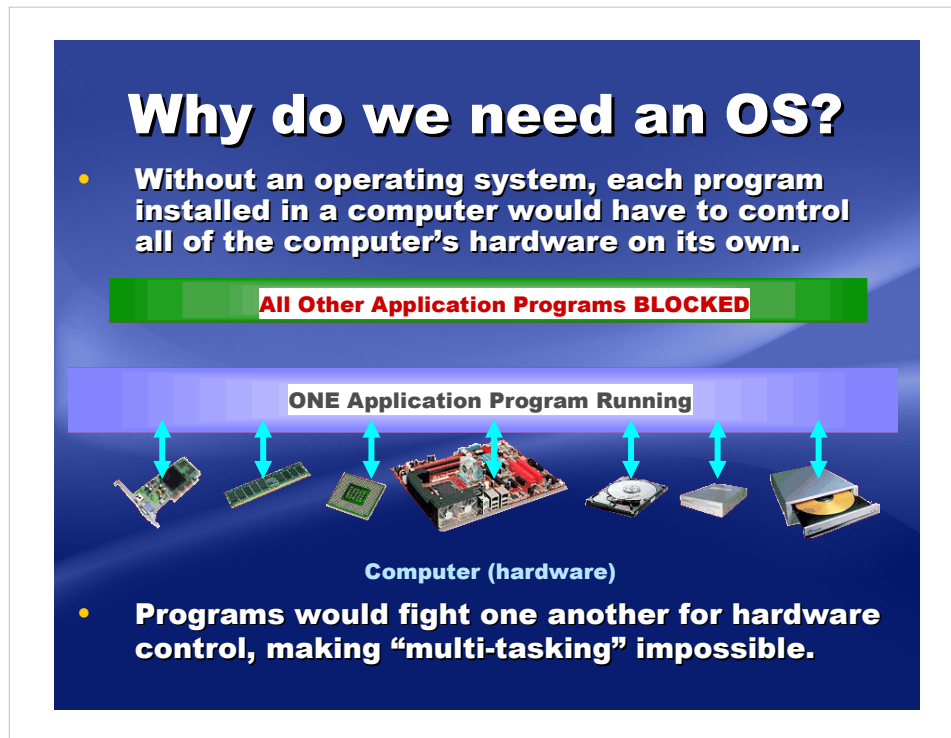
The earliest operating systems simply provided a standardized way for software developers to write application programs, which did not require a specific version of the program for each hardware configuration.



Many non-professional (the amateurs, beginners, home users, etc.) do not know details. Numbers are often thrown about without being correctly associated with appropriate hardware.

Learning correct terminology is important and necessary for getting community support.

What should we be saying here?



Multi-tasking is made possible by building and assigning "Application Programming Interfaces" (API's) for each installed program.

How would we pick an OS?

- **OS Compatibility**
 - with your computer hardware
 - with other systems (i.e. networking)
 - with specific application software
- **OS Features**
 - Standard Features
 - Special Features
- **OS Cost**
 - Purchase price, availability of updates
 - License issues

We usually see computers coming with an Operating System already installed. Users seldom install an Operating System.

One **key factor** in selecting an operating system is the availability of application software to make a computer perform a user's desired tasks. For those users who wish to buy application software "over the counter", commercial operating systems such as MacOS X and Microsoft Windows 11/10/Vista/7 are more understood than Linux.

A presentation slide with a blue background and white text. The title "Open Source Software" is at the top. Below it is a list of key points, with the first point being a URL and the second being a heading for a sub-list. A small penguin icon is in the bottom right corner of the slide.

Open Source Software

- <http://www.opensource.org/>
- **Key Points of Open Source:**
 - **Free Acquisition & Redistribution**
 - **Source Code** (must be included or available)
 - **Derived Works** (must allow modifications)
 - **Integrity of Source Code** (credit to authors)
 - **No Discrimination** (of persons, groups or use)
 - **Distribution of License** (can not be restricted)



Usually Open Source Software is licensed free of cost.

Linux is Free Open Source Software (FOSS).

Being free of cost is not the most important point.

The biggest difference in the development of Open Source Software is the way in which *communities of developers* pool their resources to create and distribute the software source code. Since no one entity controls the creation and distribution, no one entity *licenses and sells* the software.

How do we use an OS?

- An operating system has a “user interface” to accept commands.
- It can be **text-based...**

```

C:\>dir /w
Volume in drive C has no label.
Volume Serial Number is XXXX-XXXX

Directory of C:\

[All]                AUTOEXEC.BAT
[Backup]             COM1G.SYS      [Documents and Settings]
[Downloads]          [Drivers]       hpdrivers.log
[Program Files]     [Program Files] [SETUP]
[temp]               test.txt       [WINDOWS]

4 File(s)            13 412 bytes
11 Dir(s)           464 581 514 248 bytes free

```



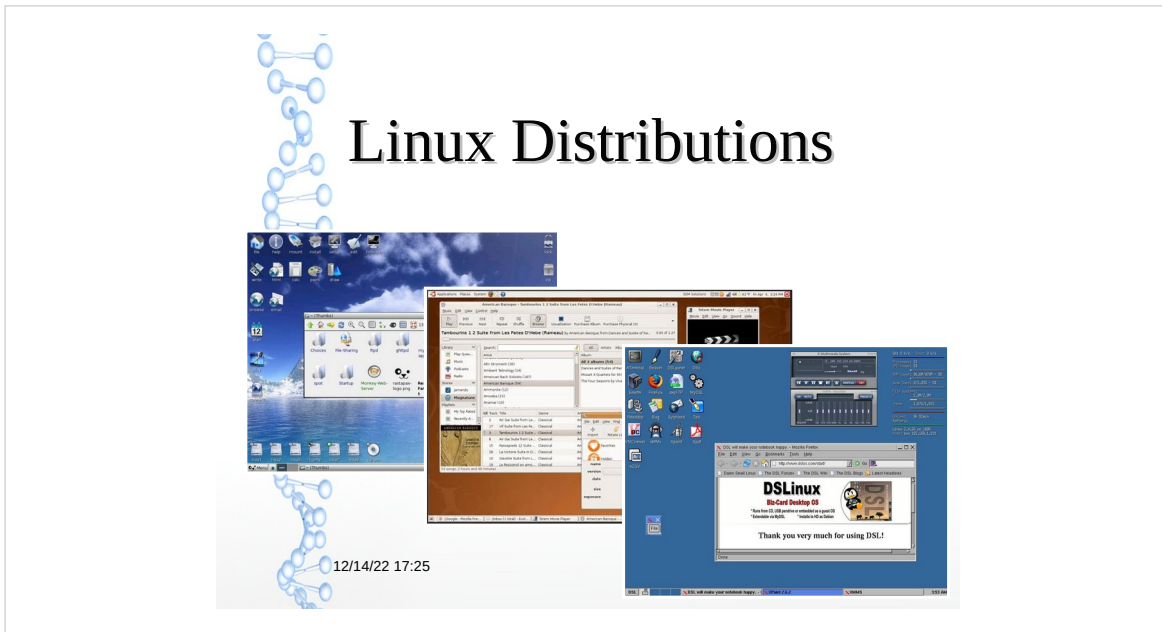
- **...or graphics-based.**

Most operating systems can be controlled either graphically or by textual commands. The “command line” user interface in Linux is usually accessed through a Terminal window.

You don't have to use a text based interface. There is a graphical user interface that has icons selectable with the mouse pointer.

There are Linux distros that look very much like MacOS.

There are Linux distros that look very much like Microsoft.



Section II

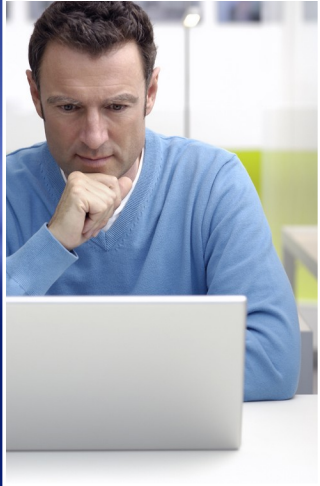
There are many distributions. We will just look at a **very small set** of examples.

To my mind asking if we have too many distributions is akin to asking if we have too many novels or too many paintings.

– Jesse Smith, Distrowatch

Variety Is The Spice Of Linux

- Currently there are **266** different active forms of Linux.
- Linux distributions, known as “**distros**” are based on one of several “**core**” versions.
- Compare distros at <https://www.distrowatch.com>



Think of a Linux distribution as a package. The package will have the Linux kernel, a selection of useful applications, tools to install everything and tools to manage using it, after it is installed.

Linux distributions usually differ in their graphical user interfaces, and for which hardware platforms (Windows, Macintosh, hand-held systems, etc.) the distributor has produced them.

Some distributions functionally designate separate “flavors”:

- Cloud
- Server
- Desktop (workstations)

Desktops are often differentiated by their **graphical** Desktop Environments:

- Gnome ~ GNU Network Object Model Environment
- MATE
- KDE ~ K Desktop Environment
- XFCE
- and a multitude of others.



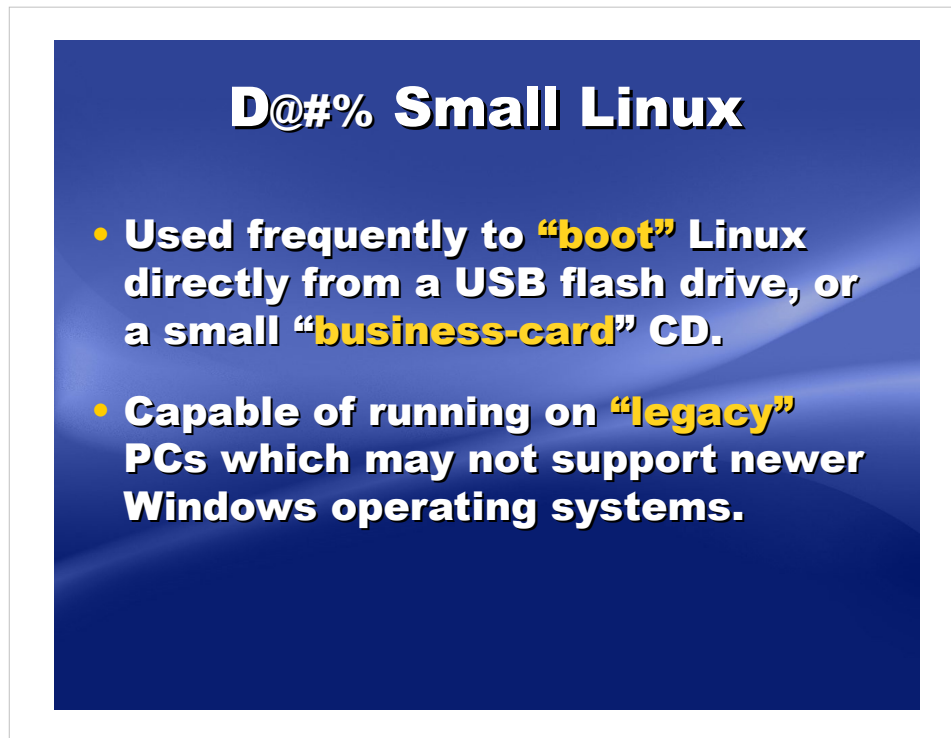
OUR FIRST EXAMPLE DISTRO:

Damn Small Linux started out as a business card size (50MB) live CD Linux distribution. Despite its minuscule size it strives to have a functional and easy to use desktop. **Damn Small Linux** has a nearly complete desktop, including XMMS (MP3, and MPEG), FTP client, links-hacked web browser, spreadsheet, email, spellcheck (US English), a word-processor, three editors (Nedit, nVi, Zile [emacs clone]), Xpdf, Worker (file manager), and more.

Some of the “richness” of the graphical user interface has been left out of **Damn Small Linux**, in favor of a wider range of system compatibility and faster system performance.

REMEMBER:

You don't have to use a text based inteface. There is a graphical user inteface that has icons selectable with the mouse pointer.



As described in its online documentation, **Damn Small Linux** is claimed to load and execute on as early as an 80486 system with 64 megabytes of system memory.

If you like **Damn Small Linux** you can install it on your hard drive. Because all the applications are small and light it makes a very good choice for older hardware.

OPTIONAL TEXT:

** Naim (AIM, ICQ, IRC), VNCviewer, SSH/SCP server and client, DHCP client, PPP, PPPoE, a web server, calculator, Fluxbox window manager, system monitoring apps, USB support, and soon it will have PCMCIA support as well.*



OUR SECOND EXAMPLE DISTRO:

Puppy Linux is yet another Linux distribution. What's different here is that Puppy is extraordinarily small, yet quite full-featured. Puppy boots into a ramdisk and, unlike live CD distributions that have to keep pulling stuff off the CD, it loads into RAM. This means that all applications start in the blink of an eye and respond to user input instantly. Puppy Linux has the ability to boot off a flash card or any USB memory device, CDROM, Zip disk or LS/120/240 Superdisk, floppy disks, internal hard drive. It can even use a multisession formatted CD-RW/DVD-RW to save everything back to the CD/DVD with no hard drive required at all.

REMEMBER:

You don't have to use a text based interface. There is a graphical user interface that has icons selectable with the mouse pointer.

OPTIONAL TEXT:

Note the minimalist image of a dog's face in the primary menu button on the taskbar, and in the icon for the "rastapax-logo.png" file in the Thumbs folder view (bottom center of open window.)

Wikipedia 2022-12 runs well under low-end PCs – even under 32 MB RAM.

Puppy Linux

- **Puppy Linux uses a traditional “graphical user interface” desktop like many popular Linux distros, such as antiX, Knoppix, MEPHIS, openSUSE, PCLinuxOS, or Zorin.**
- **Users moving from MS Windows to these Linux distros will easily recognize many similarities to the MS Windows “desktop”.**

One of the primary Linux distributions to introduce this user interface was *Debian Linux*, which in turn was an outgrowth of the X Window System, as previously applied to the Unix operating system.



OUR THIRD EXAMPLE DISTO “FAMILY”:

Ubuntu claims to be the most popular Linux.

In May 2014 Ubuntu claimed to have 22 million users.

The **Ubuntu** Web site includes 32- and 64-bit versions for Windows Intel, Windows AMD, Macintosh PowerPC and Macintosh Intel microprocessor platforms.

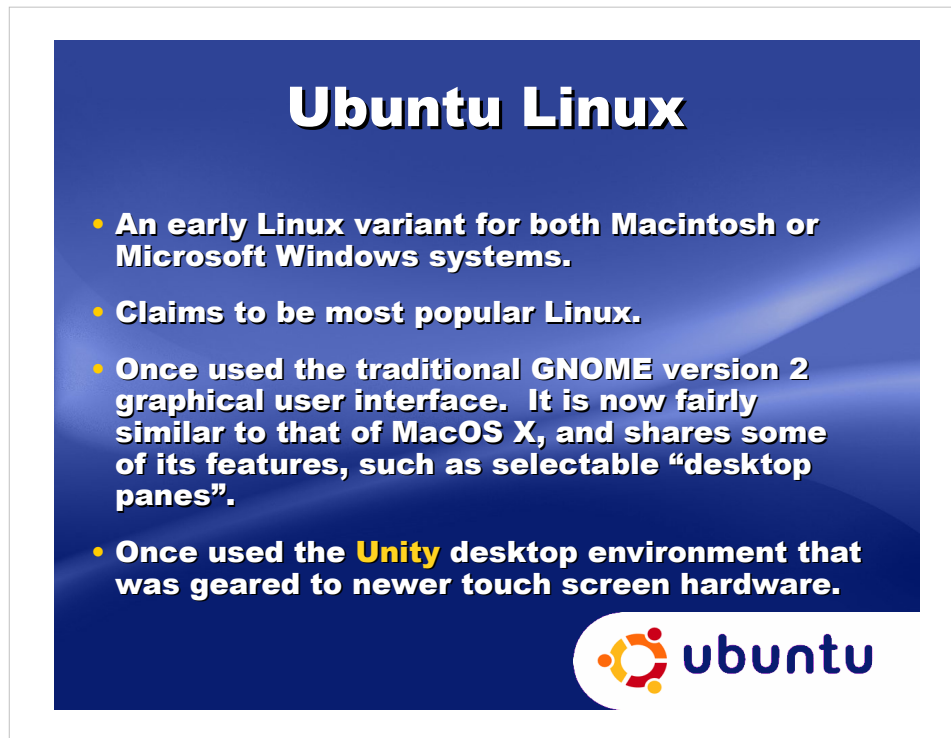
Ubuntu has functionally separate “**flavors**”:

- Cloud ~ combines server with a focus on remote backups.
- Server
- Desktop (Workstation)
- Phone
- Tablet

Note the top-of-screen menu with its circular **Ubuntu** logo, organized much the same way as the MacOS X menu bar.

REMEMBER:

You don't have to use a text based interface. There is a graphical user interface that has icons selectable with the mouse pointer.



Ubuntu made changes to their Desktop Environment that were very non-traditional. Changes were away from the traditional Gnome Desktop Environment to using something they named Unity. The next version of Gnome, Gnome 3 was making the same kind of changes; but, that's a whole nother story.

Compare these changes with buying a new car from your favored manufacture and finding the latest model has the steering wheel on the opposite side, luggage is in the front, and the engine is now in the rear. Oh, and no rear window! Those are changes that you could get used to using. But, would you want to do it?

Ubuntu is an ancient African word, meaning "humanity to others".



Additionally, the **Ubuntu** distribution is available in a family of different **Desktop Environments**. Here are **three** of them:

- **Edubuntu** ~ Defunct
- **Kubuntu** ~
- **Xubuntu** ~

There are more:

- **Ubuntu-Kalie** ~
- **Ubuntu-Gnome** ~
- **Ubuntu-MATE** ~

Possible future **Desktop Environments** ~ Ubuntu MATE, a return to a “Classic” or traditional Desktop Environment style.




- <https://ubuntu-mate.org/>
- <http://www.dedoimedo.com/computers/ubuntu-utopic-mate.html>

REMEMBER:

You don't have to use a text based interface. There is a graphical user interface that has icons selectable with the mouse pointer.

Edubuntu Kubuntu Xubuntu

- ~~Edubuntu uses the new **GNOME 3** graphical environment instead of Unity. Focus is on educational tools.~~
- **Kubuntu** uses the **KDE** graphical environment.
- **Xubuntu** uses the **Xfce** graphical environment for low power computers.

https://en.wikipedia.org/wiki/List_of_Linux_distributions#Ubuntu-based

~~**Edubuntu** is a partner project of Ubuntu, a distribution suitable for classroom use. The aim is that an educator with limited technical knowledge and skill will be able to set up a computer lab, or establish an on-line learning environment, in an hour or less, and then administer that environment without having to become a fully-fledged Linux geek. Its objective is to create an integrated and usable experience for educational users by enhancing Ubuntu with educational applications, tools, content, and themes.~~

Kubuntu is a free, user-friendly Linux distribution based on KDE's desktop software and on the Ubuntu Linux operating system. It has a biannual release cycle. Besides providing an up-to-date version of the KDE desktop at the time of the release, the project also releases updated KDE packages throughout the lifetime of each release.

Xubuntu is a Linux distribution based on Ubuntu Linux. Unlike its parent, however, Xubuntu uses the light-weight Xfce desktop environment and is optimised for lower-end machines. It is perfect for laptops, desktops and servers. It contains all the applications you need - a web browser, document and spreadsheet editing software, instant messaging and much more. The distribution includes only GTK+ applications where possible.

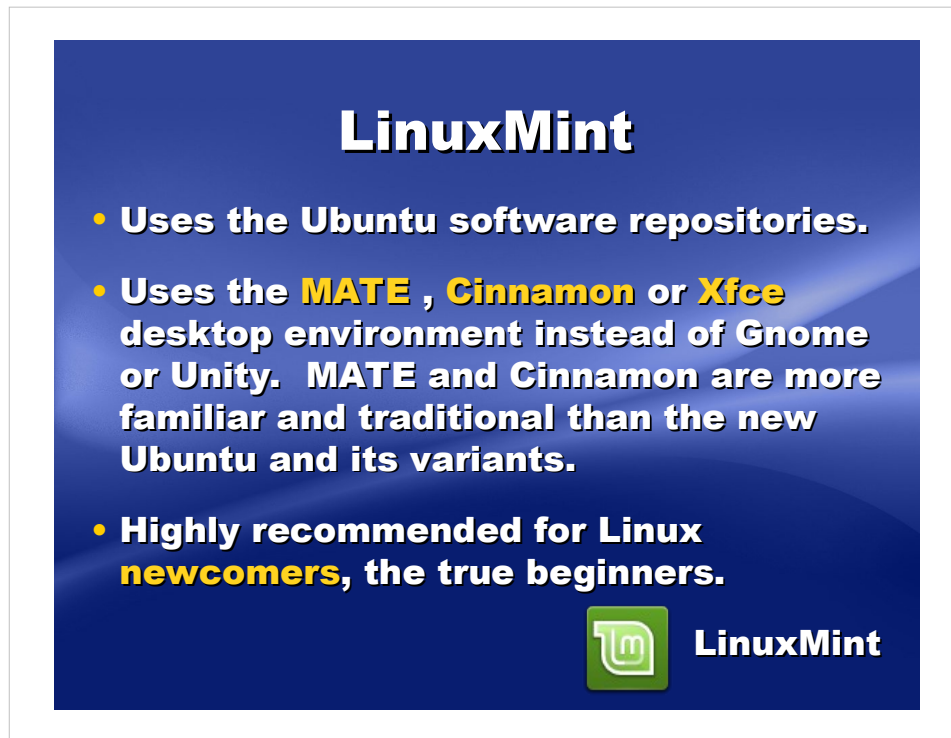


OUR FOURTH EXAMPLE DISTRO “FAMILY”:

Linux Mint Linux distribution has the goal to provide a more complete out-of-the-box working experience by including additional browser plugins, media codecs, support for DVD playback, Java and other components. It also adds a custom desktop and menus, several unique configuration tools, and a web-based package installation interface.

REMEMBER:

You don't have to use a text based interface. There is a graphical user interface that has icons selectable with the mouse pointer.



Linux Mint starts out using the **Ubuntu** software repositories. A *repository* is a special file server where finished software packages are made available for downloading.

LinuxMint documentation suggests starting out with the **MATE** or **Xfce** desktop environment for low powered systems

Linux Mint is highly recommended for newcomers to Linux.

**https://en.wikipedia.org/wiki/List_of_Linux_distributions#Ubuntu-based
Wikipedia 2022-12:**

Linux Mint synchronizes its release-cycle with Ubuntu's long-term support, and is tailored to user-friendliness for desktop users.

Linux Mint Debian Edition (LMDE) is Mint's Debian stable based version. Its purpose is to use Debian base packages/kernel under the hood should Ubuntu ever disappear. It's also used by Mint developers to develop their Cinnamon desktop.



Section III

Most people don't install Microsoft Windows or Apple Mac OS-X themselves, they buy a computer and it has the Operating System pre-installed.

Systems Pre-Loaded with Linux

- Major vendors infrequently provide Linux pre-loaded
- Examples, such as the **ASUS EeePC** and the **PowerSpec N108**, used different Linux distributions as their default operating system
- Some computer vendors that pre-load Linux
 - **Dell**
 - **System76**
 - **Tuxedo Computers**
 - **Star Labs**
 - **LinuxCertified**

Examples shown:

The “no longer available” EeePC used Xandros Linux (configured to work effectively with the EeePC's diminutive 7-inch diagonal screen), while the PowerSpec N108 system uses Ubuntu Linux.

- ASUS <https://system76.com/> EeePC no longer available
- PowerSpec <http://powerspec.com/>


Vendors that pre-load Linux on hardware:

- Dell <https://www.dell.com/> pricey ~ On again, off again. Hidden.
- System76 <https://system76.com/>
- Tuxedo Computers <https://www.tuxedocomputers.com/>
- Star Labs <https://starlabs.systems/>
- LinuxCertified <https://www.linuxcertified.com/>
- EmperorLinux <http://www.EmperorLinux.com> not secure

Vendors that pre-load Linux in the Cloud:


- Linode <https://www.linode.com/>
- Shells <https://www.shells.com/l/en-US/>

Disc Or Download



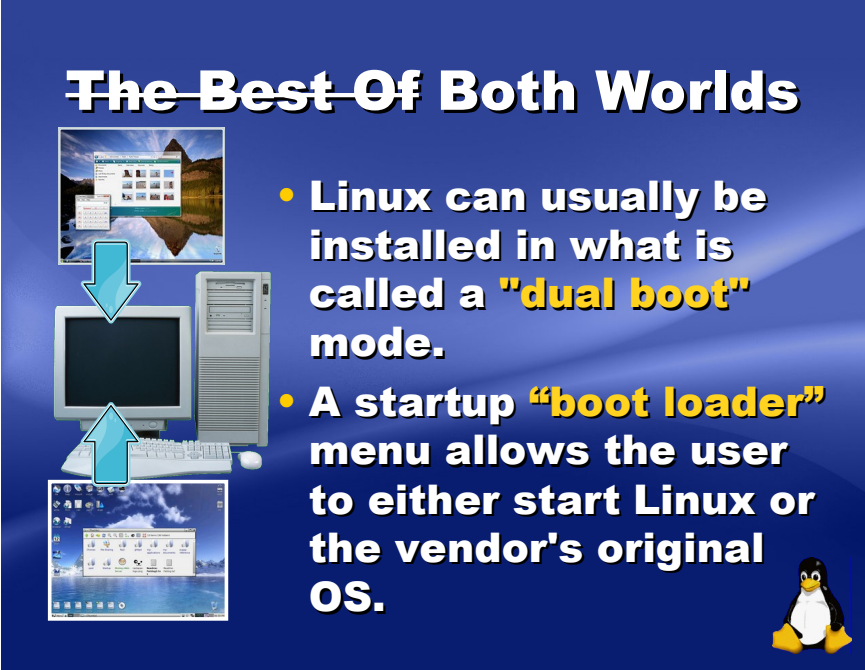
- **Once Available at Micro Center:** Distributions of Linux could be purchased as low-cost “stand-alone” CDs or DVDs.
- ~~Or, order from <http://www.esdisc.com/>~~

- Linux can be **downloaded** via a “**broadband**” Internet service as an ISO disc-image file, and **burned** as a bootable CD, DVD or USBstick.



ISO (International Standards Organization) disc-image files of Linux distributions can be more than a gigabyte in size: therefore, it is important to obtain them only through a “broadband” Internet connection. A dial-up telephone-line connection will take more than a day for the download.

The Best Of Both Worlds



- Linux can usually be installed in what is called a **"dual boot"** mode.
- A startup **"boot loader"** menu allows the user to either start Linux or the vendor's original OS.

One exception to this scenario is when an “overlay” program is used to mediate between the hard disc drive, BIOS and the operating system during the setup of the drive.

Virtualization is Safer

- **Dual booting can run into problems, especially with Microsoft updates.**
- **Dual booting can be difficult to fix if something goes wrong.**
- **Dual booting should NOT be recommended for novice users.**
- **Better to run Linux or Microsoft inside virtualization application.**

Safe Test Drive

- Most Linux distributions use a **“Run Live”** feature, allowing the user to safely run Linux directly from CD-ROM or other media **without making any permanent change**. A safe trial method.
- Test Bluetooth, mice, microphone, sound, touchpad, video camera, WiFi, etc.



```
■ INSTALL or UPDATE Linspire on this computer's hard drive
■ RUN Linspire directly from the CD without installing (LinspireLive?)
■ ADVANCED Options
```

In some Linux distributions, the “Run Live” files and the “Installation” files are on different media.

REMEMBER:

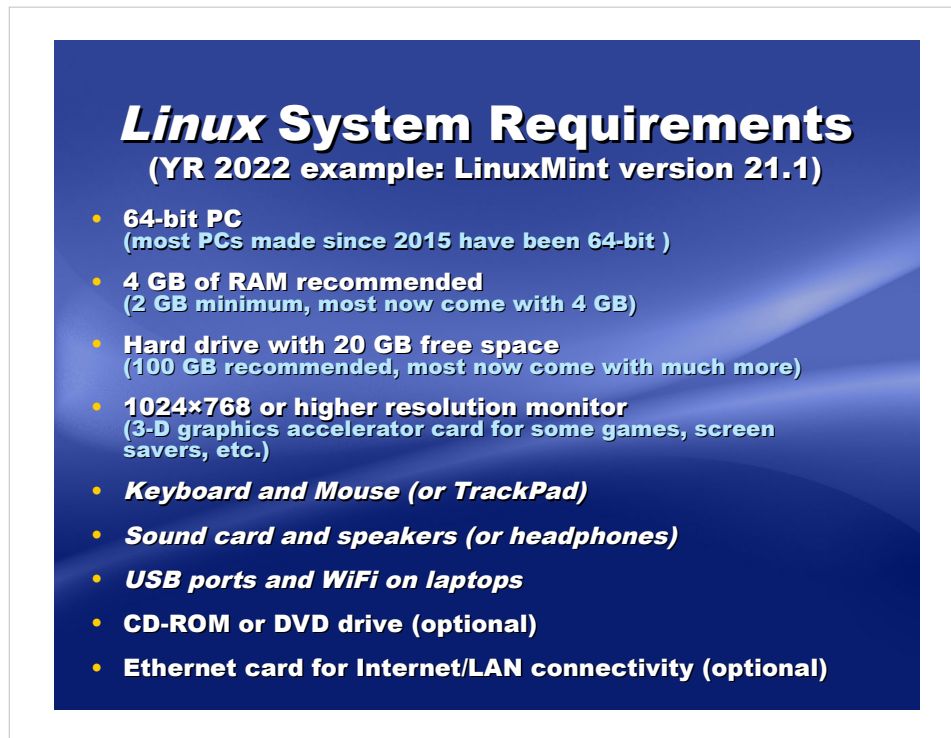
You don't have to use a text based interface. There is a graphical user interface that has icons selectable with the mouse pointer.

Linux System Requirements
(YR 2008 example: Ubuntu Linux version 8.x)

- **32- or 64-bit PC with 800 MHz+ CPU**
(including Macintosh G3 or newer)
- **384 MB of RAM recommended**
(256 MB minimum)
- **Hard drive with 3 GB free space**
- **1024×768 or higher resolution monitor**
(3-D graphics accelerator card for some games, screen savers, etc.)
- **Keyboard and Mouse (or TouchPad)**
- **Sound card and speakers (or headphones)**
- **CD-ROM or DVD drive**
- **Ethernet card for Internet/LAN connectivity**
- **56 Kbps hardware modem (optional)**

System hardware requirements vary with each Linux distribution.

Ubuntu Linux version 8.x came out in 2008. The RAM requirements for newer Linux distros may have increased, depending on the Desktop Environment.

A blue rectangular slide with white text. The title is "Linux System Requirements" in a large, bold, sans-serif font. Below the title is a subtitle "(YR 2022 example: LinuxMint version 21.1)" in a smaller, bold, sans-serif font. The slide contains a bulleted list of hardware requirements, each starting with a yellow dot. The requirements are: 64-bit PC (most PCs made since 2015 have been 64-bit), 4 GB of RAM recommended (2 GB minimum, most now come with 4 GB), Hard drive with 20 GB free space (100 GB recommended, most now come with much more), 1024x768 or higher resolution monitor (3-D graphics accelerator card for some games, screen savers, etc.), Keyboard and Mouse (or TrackPad), Sound card and speakers (or headphones), USB ports and WiFi on laptops, CD-ROM or DVD drive (optional), and Ethernet card for Internet/LAN connectivity (optional).

Linux System Requirements
(YR 2022 example: LinuxMint version 21.1)

- **64-bit PC**
(most PCs made since 2015 have been 64-bit)
- **4 GB of RAM recommended**
(2 GB minimum, most now come with 4 GB)
- **Hard drive with 20 GB free space**
(100 GB recommended, most now come with much more)
- **1024x768 or higher resolution monitor**
(3-D graphics accelerator card for some games, screen savers, etc.)
- **Keyboard and Mouse (or TrackPad)**
- **Sound card and speakers (or headphones)**
- **USB ports and WiFi on laptops**
- **CD-ROM or DVD drive (optional)**
- **Ethernet card for Internet/LAN connectivity (optional)**

System hardware requirements vary with each Linux distribution.

Ubuntu Linux version 8.x came out in 2008. The RAM requirements for newer Linux distros may have increased, depending on the Desktop Environment.

PC Management

Most Linux distributions are **“Plug and Play”** Ready.
“Run Live” to test safely:

- New hardware detection
- Wired & wireless networking
- USB and Firewire detection
- Device support includes:
 - Digital Cameras
 - Printers and Scanners
 - MP3 Players
 - Flash drives, memory card readers



As computer-industry standards have become more unified, setup and installation of Linux and Linux applications have become more intuitive and fluid.



NOTE * Partitioning, Formatting and file copying is usually (but not always) performed by booting the system from the Linux distribution disc.



The graphical user interface (“GUI”) setup may require the user to specify the resolution(s) of the display adapter and monitor during the setup process.

The sound volume is often muted with a new installation, causing some users to believe sound is broken.

Wireless cards on laptops can be a problem. So, it is a good idea to test first.





Section IV



Some Linux distributors offer large, comprehensive “on-line stores” from which Linux applications for one or more distributions can be downloaded, at little or no cost. Usually free of cost.

We have a **FOSS – Free Open Source Software** brochure handout.

Works Well With Others



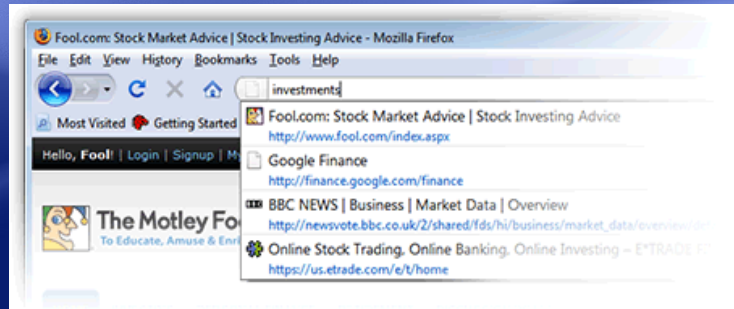
Two red arrows point from the OpenOffice screenshot to the Microsoft Word screenshot, indicating compatibility.

- Many open-source programs create and edit documents which are “cross-compatible” with their MacOS or Microsoft counterparts.
- Many have “cross-platform” versions.

Part of the cross-compatibility between open-source and commercial office suites was the adoption by Microsoft of the Open Source Extensible Markup Language (Open XML) and the Open Document Format for word-processing, spreadsheet and presentation files.

Communications

- **Web Browser – Firefox, Brave, etc.**
 - Features an adaptable address & search bar, making it easier to find information on the Internet.



A PRIME EXAMPLE OF FOSS

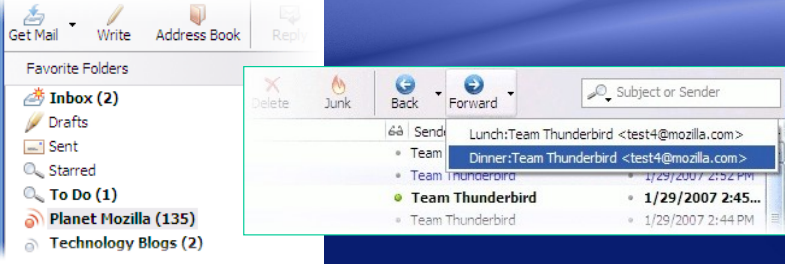
Firefox includes most of the features found in other Web browsers, such as tabbed browsing.

Other browsers:

- IE ~ Internet Explorer (only on Microsoft Windows)
- Chrome (from Google)
- Konqueror (from KDE)
- Iceweasle
- Links and Lynx (text only)
- Many more...

Communications

- **E-mail Client – Thunderbird, etc.**
 - Includes advanced searching features within the e-mail program itself.



ANOTHER EXAMPLE OF FOSS:

Most e-mail client applications can handle multiple e-mail addresses for a given user, sending and receiving e-mail for all entered addresses in one operation.

If you use Google Mail, Yahoo Mail, HotMail or a similar Internet mail package, you just use the browser to get to that application. You don't have to “re-install” or “configure” anything on Linux.



YET ANOTHER EXAMPLE OF FOSS:

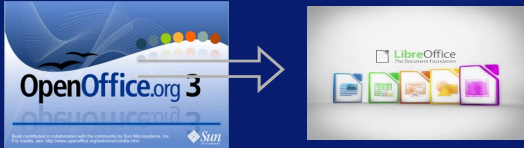
LibreOffice is a powerful office suite of applications. It contains:

- **Writer**, the word processor,
- **Calc**, the spreadsheet application,
- **Impress**, the presentation engine,
- **Draw**, our drawing and flowcharting application,
- **Math** for editing mathematics, and
- **Base**, our database and database frontend.

Productivity

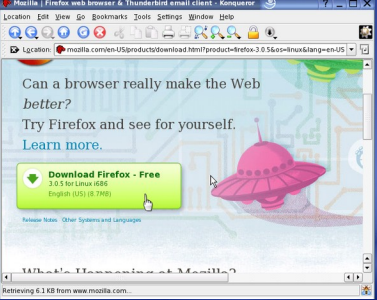
The **LibreOffice** Suite came from the **OpenOffice Suite** (... bought by Oracle).

- **Developer community took the OpenOffice open source software code and greatly improved it.**
- **It started as an exact duplicate, added many fixes and continues to improve at faster rate.**



LibreOffice Suite is also available for download to use on Windows and Macintosh systems. A good way to become comfortable with FOSS.

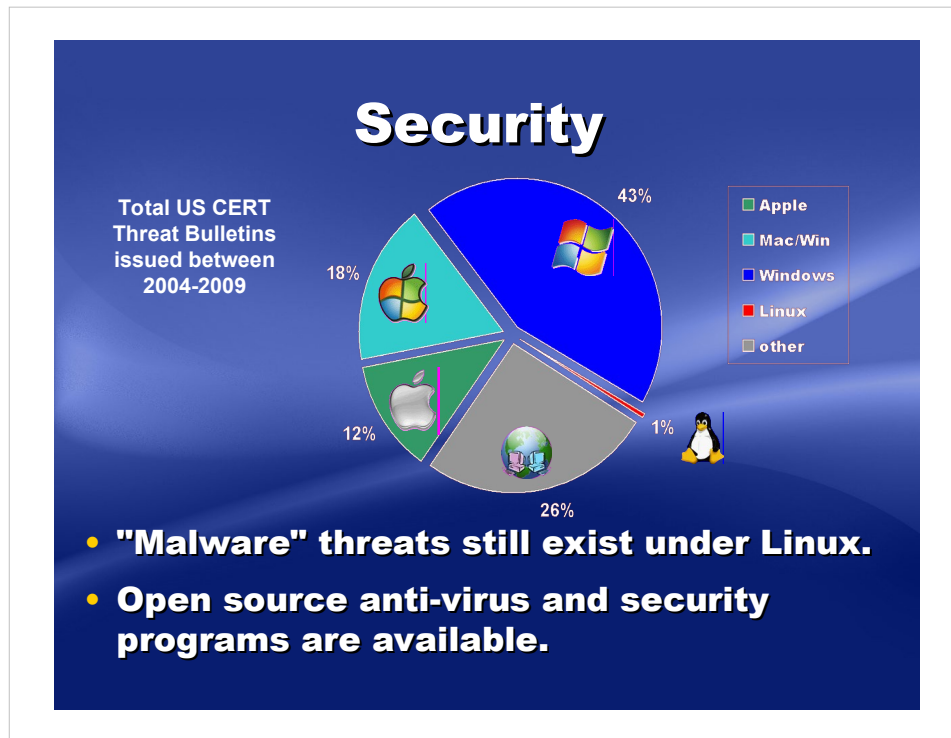
Program Downloads



The screenshot shows a Mozilla Firefox web browser window displaying the download page for Firefox 3.0.5 for Linux. The page features a green 'Download Firefox - Free' button and a pink satellite dish graphic. The browser's address bar shows the URL: mozilla.com/en-US/products/download.html?product=firefox-3.0.5&os=linux&lang=en-US.

- One of the “trade-offs” of using Linux is the relative lack of over-the-counter application software.
- Most distros provide many highly productive, recommended and useful applications.
- Also, Linux users can download and install nearly any kind of application software imaginable from the Internet.
- See <https://AlternativeTo.net/>

In addition, some open-source software distributors have made Windows and / or Macintosh versions of their open-source applications available for download.



System security also involves downloading *security updates* for the operating system itself. In their first year of release, **Ubuntu Linux** and **SuSE Linux** had more than 300 security issues >> EACH <<, addressed by updates. In its first year of release, **Microsoft Windows Vista** only had 65 security updates released.

Likely skewed numbers because many of the Linux distros include more applications than Microsoft

Need some kind of Security oriented slide that is way more current.

Resources

- **Original presentation came from MicroCenter**
- <https://en.wikipedia.org/wiki/Linux>
- <https://www.opensource.org>
- <https://www.distrowatch.org>
- <http://www.linuxscreenshots.org>
- <https://images.google.com>
- <https://www.linuxmint.org>
- <https://www.dedoimedo.com/computers/ubuntu-topic-mate.html>
- <https://newlug.sluug.org>



https://en.wikipedia.org/wiki/List_of_Linux_distributions

<https://alternativeto.net/>

Summary

- **Advantages of Linux:**

- *Inexpensive to buy, free to download*
- *Multiple versions, different features*
- *Safe "run Live" trial before installing*
- *Works on many PC and Mac Systems*
- *Can co-exist with original vendor OS*

- **Challenges (Trade-offs) of Linux:**

- *Less over-the-counter software*
- *Sometimes can require more complex installation of hardware and setup of peripherals*



STL! / unix / usr / group

SLUUG Sponsored Groups

Loosely affiliated special interest groups



STLLINUX ~ Saint Louis Linux Users Group
<https://stlinux.org>



SLACC ~ Saint Louis Area Computer Club
<https://slacc.org>



NEWLINUX ~ Newcomer Linux Users Group
<https://newlinux.org>

Intro to Linux

Questions

What are your questions?

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END CLINIC – Thank the attendees, open the floor for any final questions, and then proceed to any applicable demonstrations.