

Quick facts about Linux...

In 1998, IBM compared its fastest computer, Dip Blue, to a 64-nodes cluster running Linux...

The result is: The Linux cluster was about 4 times faster... for the quarter of the price.

They are not the only company to have made an actual Linux test, but the difference is that they published the result, and acted accordingly:

IBM invested

750 000 000 \$ in 1999
1 000 000 000 \$ in 2000
1 000 000 000 \$ in 2001

in the port of Linux on all its platforms, from the simplest to the mainframe.

They are now installing Linux as operating system in their largest customers back offices. Even WallStreet is using Linux those days !

Choose Linux to choose a highly professional system !

Quick facts about Linux...

Linux is multi-platform.

This means that by choosing Linux, you choose a portable operating system on which you can run or develop portable applications.

Linux runs on Sparc (Sun), Alpha (Compaq), Mips, ARM, x86 (Intel), PowerPC, 680x0 (Motorola), RS6000 (IBM), and so on...

So, when choosing Linux for your operating system, you open choices to you. You don't reduce your choices to no-other-choice-than Intel running IBM compatible PC !

**Choose Linux to choose
freedom of choice !**

Quick facts about Linux...

Linux is multi-user.

On a Linux box, several users can log-on simultaneously.

This means that you have the freedom to share the same computer among various tasks launched by various users. This means you can share the same program installation among various users. This allows you to

- Save license costs
- Save installation time
- Save back-up time
- Save upgrade time

This is only possible if the operating system is very stable and separates efficiently the data and code belonging to various users.

**Choose Linux because
it is multi-users !**

Quick facts about Linux...

Linux is open-source.

This means you have access to the code of the operating system. You can actually learn computer science, change the code and experience the result. You can even participate to the development code.

Linux is good for students. Other non open-source operating systems do not allow learning how a system works. They don't allow you neither to try new developments or experiment a -potentially genial- idea.

With non open-source systems, your role is reduced to license buyer.

**Choose the freedom !
Choose Linux !**

Quick facts about Linux...

Linux is multi-vendor.

This means that by choosing Linux, you choose to depend on a set of (more than 50) Linux distributors in the world, plus the open-source community.

This is definitely safer than depending on a unique vendor. It is also saner: prices -if any- are driven by the market, not by monopoly.

This means also that the distributors are fighting to give you the best service, the best documentation, the easiest installation procedures, the quickest updates, the best security updates, the smartest trainings, the most appropriate assistance, the most efficient help-desk... in order to keep you as customer !

**Choose Linux to avoid
monopolies !**

Quick facts about Linux...

Linux is stable.

It manages properly the memory, tasks, user rights, access to the I/O and hardware, so that some Linux hosts are running actively since more than 5 continuous years !

When does a Linux system stops ?

- When there is a hardware failure
- When there is a power outage
- When there is a system upgrade
- When it is shut-down by its owner

Linux development team started even the development of a system allowing upgrades without interruption of the services ! Compare this kind of stability with Win NT4: Microsoft recognized that an internal bug caused the system to crash after only 47 days ! Nobody notice, because Microsoft systems are always crashing anyway !

**Choose Linux to choose
stability !**

Quick facts about Linux...

Linux manages properly the memory.

Thanks the state of the art implementation of the research results in computer science coming from Unix, universities and other research centers, Linux properly manages the memory (demand paging).
The consequence ?

- . If a buggy software crashes, you don't need to reboot the computer
- . If a software ends, it does not leave unused memory (memory leaking) leading to "Low on resources" error message.
- . If a malicious code gets executed, it does not spread among the entire system memory.
- . Two users sharing the same computer at the same time can't corrupt the other user software memory.

**Choose Linux to increase your
productivity !**

Quick facts about Linux...

Linux gives you the choice !

Is there an office suite available on Linux ?

The right question should be "What office suite is the best choice for me, the best price/performance ratio, the most appropriate for the kind of work I must do with it ?"

On Linux, you have choice. Tenth of different office suites are available, for various prices, with various license models, open source or not, with various key possibilities.

Ex: StarOffice, OpenOffice, Koffice, ApplixWare, WordPerfect, Latex, ...

Same applies to mail readers, web browsers, ...

Linux is not a monopoly. You have choice !

**Choose Linux to keep your
customer choice !**

Quick facts about Linux...

Linux is European technology !

The creator of Linux, Linus Torvald, is European! Linux is now used throughout the world (Asia, Oceania, North and South America). Why not in Europe ?

Do we need to depend on technological matters on foreign countries, while we have the best technology in town ?

Are we plan to add to our regrettable energetic dependency the high-tech one ?

What might become Europe without techno-logical capability ? Our only resource is our brains. If we become technologically dependent of a foreign country, we are going to become a third-world country within the next decades.

**Choose Linux to maintain
Europe technological
independence !**

Quick facts about Linux...

Linux is cheap.

Linux, as operating system, is and will always remain free (in the sense of a free beer). There is no license to pay to anybody. More than that, Linux cost of ownership is very low because of:

- . You don't need expensive anti-virus software.
- . You don't need to maintain a license database.
- . You don't need to reinstall crashed/corrupted systems
- . You don't need to install expensive remote-management software
- . You harmed by very old well known bugs that have not yet been fixed
- . You can choose your operating system supplier (no monopoly)
- . You can choose between various equivalent softwares (alternative solutions exists on Linux)
- . You can adapt the system to your exact needs: you remain master of your software solution.

**Choose Linux because it's
cost effective !**

Quick facts about Linux...

Linux is efficient.

Oracle made a comparison between Oracle 9i running on a Windows 2000 and the same computer running Linux.

The result is 25-30% more efficiency with Linux...

The problem is that the Windows 2000 license prevents you (the licensee) to compare Microsoft software with other solutions... However, Oracle published the result because they claim that they don't compare Microsoft' ssoftware efficiency, but their Oracle implementation...

Nobody is faked: Linux is advised officially by Oracle as operating system of choice to run their relational database !

**Choose Linux because
it is efficient !**

Quick facts about Linux...

Linux is not under the control of NSA.

The NSA (National Security Agency, USA) and Microsoft recognized that two sets of secret keys were shipped with Windows in order to allow either Microsoft and NSA to enter any Windows running computer in the world.

Do we accept a foreign security agency to control our bank accounts, our official mails, e-mails, our justice records ?

Do we accept our armies to run such software ?

Linux is open-source. Anybody can check if there is such a back-door in it. NSA is working on a certificated secure version of the Linux kernel for USA use, because they know Windows is not secure. If USA chooses Linux for security, why not Europe ?

Use Linux because it's not controlled by foreign intelligence agency.

Quick facts about Linux...

Linux is not under the control of a software development company.

As software development company, you can choose Windows as preferred operating system, delivering Windows solutions to your customers. If you do that, you know that soon or later, you will lose your business in favor of Microsoft.

Why ?

Because as soon as Microsoft will identify your business as significant, they will use the same technique they used against Corel, Netscape, Borland, ... They will change the API such a way that your software will become unstable, inefficient and buggy. They will develop hidden API that only their software will be able to use, giving them unfair market advantage... And they will win: they are playing on their backyard... And it's you that choose to fight with them there !

A good counter-example is the success of Sony in the game market: their PlayStation II is NOT RUNNING Microsoft system. That's why they are still on tracks.

Choose Linux to not choose some competitor's controlled system for your developments.

Quick facts about Linux...

Linux is a standard-respectful platform.

When you develop on Linux, your software will likely use standardized APIs from standardized programming languages (Perl, Bash, Tcl/Tk, Java, Posix, Ansi-C, C++...) so that your software will be easily ported on other operating systems:

- . BSD
- . Mac OS-X
- . Solaris
- . HP-UX
- . AIX
- . True-64
- . Irix
- . Hurd
- . QNX
-

With a bit of care, it is even possible to develop directly pure portable code. So

**Choose Linux to develop
platform-independent code**

Quick facts about Linux...

Linux is a long-term platform.

Linux has no (marketing) reasons to become incompatible from releases to releases. Far from that. When you develop on Linux, you know that you are using long-term available development tools, APIs, languages... So that your software will last and will not require porting on new operating system flavor.

Ex: The bank software developed in 60' on Cobol is still usable on Linux.

What about availability of VB 4 on XP ?

What to do when an operating system provided by only one vendor is not maintained even less than 10 years after its first release ?

Can you rely on such a system for your business ?

Choose Linux because it's long lasting.

Quick facts about Linux...

Linux is multi-tasking operating system

What does this means ?

This means high productivity. You can at the same time print, work, download, write a CD, play music, compile, compute, back-up your system, and so on...

By the way, you may be even not the only user to do that on your system at the moment, because Linux is also multi-user...

Click twice on an icon. Linux will launch twice the application. Did you already tried to overload your system while writing a CD on a non multi-tasking system ? Your trash would be full of missed CDs...

Multitasking means that instead of using in average 25% of your CPU, with Linux, you can use 100% all the time.

**Choose Linux to use 100% of
your hardware !**

Quick facts about Linux...

Linux is multi-console.

Linux comes usually with 6 text-based consoles, plus 1 graphical one. On that graphical console, you have by default 4 virtual screens.

First users gets confused by so many "screens". Once used to it, systems providing only one desktop will look frustrating to you. Why should you be limited to only one desktop ? Why not launch the word processing tool in plain screen on one console, the web browser in an another one, and leave my preferred game paused on the third one ?

Soon, you will increase the number of such consoles to 8, 12 or 16... And surprise ! You will not even need to reboot to enjoy it !

**Choose Linux to increase your
working environment**

Quick facts about Linux...

Linux is a new technology !

Linux is modern: its development started in 1992 (only). Compared with other systems that are DOS-based (DOS comes from the 70's), it is strange to hear about "New Technology" when speaking about Windows...

So, Linux had no problem with the (unpredictable) year 2000 issue. Linux doesn't know 640KB or 64MB memory problem. Linux systems work with up to 4096 MB...

Linux has no problem with "8.3" file names (such as MYDOC~11.DIR or hard disks having more than 1024 cylinders...

Linux has no problem dealing with time zones or IPv6 because it's a modern operating system !

Choose Linux because it's new technology !

Quick facts about Linux...

Linux is the state-of-the-art for R&D

IETF (Internet Engineering Task Force) engineers the new protocols and applications for the world-wide Internet. It is the meeting point of all the R&D (Research and Development) teams in the world (Cisco, Nortel, Alcatel, Philips, Lucent, Nokia, Ericsson, IBM, Sun, ...). Their working groups are writing the RFCs: the standards for the Internet. They are mainly using

- . Linux
- . BSD
- . Solaris

for their prototype implementations, for their validations, their tests...

During meetings, half of the installed computers are running Linux. Only the employees of Microsoft are developing on Windows, because other have no access to the core of the system.

Choose Linux because it' s the state of the art at world scale !

Quick facts about Linux...

Linux runs on a Journalized File System (JFS).

What does this means ?

It means that in case of unexpected system crash (not a bug, we are speaking about Linux) as a power outage, the file system is not damaged. The next use of the file system (when the system will boot-up again, as example) will lead to a very fast (some seconds on very large file systems) recovery, with guaranteed rebuild of all the files, including the one that were opened at the crash instant.

This means no file corruption, no file loss, no system corruption (lack of DLLs....) and very quick system availability.

Some very well tuned Linux-based file server have recovery time of 25 seconds in case of system crash. This delay is perceived by users as a network overload, while actually the entire server rebooted !

Use Linux to save your data !

Quick facts about Linux...

Linux provides software RAID services.

What is RAID ?

RAID is a way to get protected from hard-disk failures. An example of RAID ? Let' s imagine the three directors of Coca-Cola company. If one of them knows the entire production secrets, he might build his own company. If each of them knows only the third of the secret, as soon as one dies, the product is lost. So, let's divide the product secret in three: part A, B and C. Director 1 knows secret A, director 2 knows secret B and director 3 knows secret C. For redundancy reasons, let's learn to director 1 the secret B too, to director 2 the secret C and to director 3 the secret A. In this case, none of them knows the entire production method, but any of them might die, the remaining knows what to learn to the newly hired director.

The only thing we know about hard-disks is: they will die. But no one's know when. If you want your data to survive your hard disk, use RAID (as Linux provides you for free). You will have the opportunity to replace your crashed hard-disk and see the system rebuild the missing data without even stopping you to work !

Use Linux to save your data !

Quick facts about Linux...

Linux proposes the state-of-the-art desktops environments.

Linux means freedom. Also freedom of choice: you can choose between several desktop, window managers, ... It's not only about customization: you really can choose between alternative solutions to manage your working environment.

- . Gnome
- . KDE
- . CDE
-

are various graphical environment available on Linux. They are not only curiosities: the well known Sun Microcomputers ships KDE and Gnome as desktops with its very famous Solaris operating system !

**Choose Linux to enjoy the
state-of-the-art working
environment !**

Quick facts about Linux...

Linux is the most used operating system in the world.

Because it is free (there is no license to pay), statistics usually show different numbers. Actually, the only way to have an idea of the amount of Linux boxes running in the world is by counting the operating systems used on computers connected to the Internet. Independent companies do that work, and since may 2000, Linux is the most represented operating system at world level. Here are the results:

**Choose Linux because
it' s the most used operating
system in the world !**

Quick facts about Linux...

The free software model is not really understood by most of us. However, let' s illustrate the business model of free software by the following example:

Brazil government was looking for a work-group software suite to administer the country. Having taken contact with commercial software vendors, they learned that it would cost them about 300.000.000 USD in license, for only one release, without maintenance, adaptation or future upgrades...

The Brazilian government looked at the free software pool, found something not too far away from what they needed. They adapted it to the country need. It cost them (only) 150 000 000 USD, paid as salary to national developers. The saved 150 000 000 USD has been invested in route building, countryside schools and agricultural watering. Now, Brazil owns its administration software. Not only license to use it. Brazil gained the right to adapt, correct, and even enhance it without paying large amount to foreign countries. What' s fair, is that Brazil gave the modified sources back to the free software pool, so that now other countries are following the same track.

What is abnormal is monopoly and huge unjustified profits. Not free software.

Use Linux because it' s free

Quick facts about Linux...

Linux is used in high-schools as learning platform.

Because of its price, open-source and free aspect, Linux is used in most American, French, Belgian, German universities for high grades.

It allows the student to actually have access to the kernel, compiler, libraries, software code. Learn how it has been written, even e-mail to their authors, try to enhance it.

Learning computer science on a closed system is equivalent to learn wine science with only Coca-Cola products at your disposal: you have no access to the prime material to learn your art. You will just learn to buy and sale inadequate finished products made by foreign company. You will loose your know-how and expertise and become 100% technologically dependent.

**Choose Linux
to learn computer science**

Quick facts about Linux...

Linux is not only a computer operating system.
It is also a powerful router.

A router is a computer having several IP addresses on at least one physical interface. It is the building block of large networks, such as the Internet. Linux gives you all router capabilities you can dream about:

- . Routing protocols (BGP, OSPF, RIP; EIGRP,...)
- . IP Tunnel (IPinIP, PPTP, SSH, GRE, ...)
- . Virtual Private Networks
- . Various protocols supports (Ipv6, IPX, AppleTalk, ...)
- . Cisco router configuration interface (Zebra)
- . Network sniffers
- . Network statistic (MRTG...)
- . Network management protocols (SNMP...)
- . Network address translation software
-

Use Linux as powerful router !

Quick facts about Linux...

Linux is not only a computer operating system.

It is also the system of choice for embedded applications.

Linux can run on computers having few memory (4MB...) no hard disk, no screen, no keyboard, no mouse, no graphical card, no floppy...

Smallest systems includes Linux running in a watch. Several embedded Linux projects exists, using Linux in phones, car radios, washing machines... The system is so cheap, efficient, stable, and open that it perfectly fits the requirements of such embedded systems. Linux has been elected by the association of American digital TV broadcasters as platform of choice for their set-top boxes.

**Choose Linux as embedded
operating system**

Quick facts about Linux...

Is Linux mature for actual use ? Yes !

An example: China is using Linux for the state administration !

If a system is enough to deal with 1 200 000 000 habitant country administration, it's enough to run even a pan-European scale company !

Linux can offer all services you can dream about:

- File client/server
- Mail client/server
- Web client/server
- Print client/server
- Software development environment
- Routing capabilities
- Clustering, load-balancing
- Embedded applications
- Real-time applications
- Multi-lingual support
- Editing/Authoring software
- Database/Data warehouse applications ...

**Choose Linux because
it is ready !**

Quick facts about Linux...

One key element in the total cost of ownership of an information management system is caused by its complexity. Especially the amount of different systems that the technical staff must know about.

More different systems exist, more knowledge the technical team has to have, and slower the global system will be fixed, in case of a problem.

What system can be used on palmtops, laptops, desktops, servers, real-time systems, clusters, middle-frame, mainframes as well as embedded systems, on (about) any kind of computer architecture and processor ?

You have the answer: Linux.

**Choose Linux because
it's the only global solution for
a whole
company information system**

Quick facts about Linux...

Linux is virus free.

Because of its proper memory management, because of the user application code is executed by the processor in non-privileged mode, because the access to I/O and hardware can't bypass the operating system control, Linux is virus free.

Despite Linux is the most used operating system in the world, virus developers still develops mainly for Windows. Why ? Because it is much simpler. Microsoft stated recently that "Microsoft products are not designed to prevent propagation of viruses"... Indeed: the way Microsoft software makes development and propagation of viruses a school boy game is a shame. Aside of that, Linux, using the results of tens of years of research in computer software, is almost virus free. So that MacAfee provides its anti-virus software on Linux... Not to clean Linux from viruses, but because it is safer to run the anti virus software on a virus-free platform !

Use Linux: it is virus-free !

Quick facts about Linux...

Linux is (quiet) a safe platform.

The famous ISS company (Internet Security System) selling Internet security tools advises officially during trainings the use of BSD or Linux as platform of choice to run their products.

They state that they had the possibility to check and/or amend the code of the underlying operating system to guarantee the security of the overall system, while they can't guarantee whatever about the security provided by their security software when running on non open-source operating systems, such as Microsoft's products.

Choose Linux because
it' s a(almost) safe platform

Quick facts about Linux...

Linux is used by the most prestigious companies in the world.

Sometimes, their leaders are not even aware, because they didn't had the courage of taking the right decision, so it is made without warning them.

Other companies wants to hide this, either because they are not proud of using free software for marketing reasons (as Rolls-Royce or Microsoft) or because they don't want their competitors to know about this leading technology, considering the use of Linux as a trade secret.

Some are no more free of taking the right decision: some commercial operating system vendors are share-holders, or they signed a commercial agreement... However, prestigious companies are using Linux, such as:

* Toyota * EDF * Deutch Bank * Boing * Alcatel * Nortel * IBM * NASA * France Telecom * P&T Luxembourg * AT&T * British Telecom * Pixar * Sun Microsystems * SES-Astra * Avis * ...

Choose Linux because
it' she choice of the largest
businesses in the world