

The Linux Distribution Game *

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<http://www.distrowatch.com>

Taipei, Dec 19, 2001

1 The Linux Challenge

A friend of mine accepted the challenge: “Boot into your Linux partition and stay there for one month. Do everything you normally do with your computer and report back on your experience. You are not allowed to boot into Windows during that month.” The friend called me 10 days later: “My Windows partition is gone!” I frowned, expecting a round of troubleshooting over the telephone. “No, don’t worry, I deleted it voluntarily ...” He continued, his voice full of excitement: “I don’t need Windows any more. I can do all my office work with StarOffice and Gnumeric. The Galeon browser is such a gem — I can hardly believe all the features it has. I didn’t think I could play encrypted DVDs in Linux until I tried Ogle — even menus work perfectly! I can burn CDs and listen to Internet broadcast. And as for my web site, it was hard at first without Dreamweaver, but once you get used to Quanta Plus, you can do things just as fast!” His final words on the subject were: “It is all in the way you work. Changing your routine is not easy at first, but after a month, I have adjusted completely. I no longer have a need for Windows!”

Forced upgrades, product activation, the ubiquitous Passport, the ever-spiralling cost of Windows and associated applications. The growing dissatisfaction with Microsoft policies have prompted many a user to consider alternatives to the Windows operating system. Thus, it is ironic and highly amusing that all these unpopular policies that have suddenly start-

ed pouring out of Redmond, coincide nicely with the time when the Linux operating system is approaching levels of unprecedented usability. This usability is no longer applicable to servers only, but also to the desktops of business and home users.

Fair enough, the friend of mine was not a complete novice to Linux — he has been dual booting for a while and has been through a Linux tutorial or two. But he could not shake off that safety net of Windows familiarity, which he had acquired over the number of years. Until now.

The **DistroWatch.com** web site has witnessed a sharp increase in the number of visitors over the last few months. Many experienced Linux users come to check out the rapid evolution of the various distributions as they are produced. But about 60% of visitors use Internet Explorer to access this site, indicating that a large number of visitors are Windows users, interested in change, dipping their toes into Linux waters. All of you are very welcome to use the resources at DistroWatch.com at your will. After all, we were all novices at one time and we all needed help and guidance.

Perhaps the biggest question of many users considering their first Linux installation is: “Which Linux? Which Distribution?” Numerous attempts to analyse and recommend have been made on many news sites. The quality of these articles ranges from excellent unbiased advice to poor attempts created by journalists who have obviously not installed most of the distributions they were actually giving advice on.

* This article actually talks about various GNU/Linux distributions — **FSM**

2 The Big Five

In the following paragraphs, I am going to present my own opinion on all popular Linux distributions. I promise to be as unbiased as possible. I also claim that I have installed and used all of the distributions mentioned in this article (although admittedly, some of them were just brief encounters) and most of them still occupy a partition on one of my hard disks. Like everybody else, I also have one or two favourite distributions, which I use on a regular basis. As an average user, I would imagine that many people have undergone the same process of choosing a distribution — I tried a few and decided on the one that gave me the best impression, the most trouble-free installation and hardware detection and the one that felt the most comfortable.

There are possibly hundreds of different Linux distributions available on the Internet. Because of the open and transparent nature of the Linux software, anybody can build a complete Linux distribution and release it for download. All you need is to get hold of the Linux kernel and perhaps a few dozens of other software packages, all of which are freely available and distributable. This is the reason why we have seen so many Linux distributions coming to existence over the past few years. Some of these have become strong and popular with time, while many of them have already disappeared, discontinued development or closed down completely.

First, I will look at the most popular distributions available and try to analyse the reasons behind their acceptance. According to various surveys and statistics (including the DistroWatch.com's page hit ranking), the "Big Five" of the Linux world are *Red Hat*, *Mandrake*, *SuSE*, *Debian* and *Slackware*. Next, we will briefly mention *Caldera* and *TurboLinux*, once popular but rapidly fading distributions. Finally, we will take a brief look at some smaller, but promising distributions, especially those that beg to differ; after all even the big ones were very small and insignificant in the beginning.

2.1 Red Hat Linux

For many, the name Red Hat *www.redhat.com* epitomises Linux, as it is probably the best-known Linux company in the world. Founded in 1994, Red Hat, Inc. has only recently started showing signs of profitability, due to services rather than the distribution itself. Yet, Red Hat Linux is a first choice for many professionals and is likely to be a major player for a long time. They wisely resisted any rapid expansion plans during the dot-com boom times in 1998 - 1999, concentrating on their core business. This type of prudent management, if continued, is likely to guarantee stability and dependability.

What is so special about Red Hat Linux? It is a curious mix of conservative and leading-edge packages put together on top of many knowledge-intensive utilities developed in-house. The packages are not the most up-to-date; once a new beta version is announced, the package versions are frozen, except for security updates. The result is a well-tested and stable distribution, the beta program and a bug reporting facility are open to public and there is a great spirit on the public mailing lists. Many mission-critical servers around the world run Red Hat Linux.

One other reason for Red Hat's success is the variety of popular services the company offers. The software packages are easy to update via Red Hat Network, a free repository of software and valuable information. A vast range of support services is available through the company and, while not always cheap, you are virtually assured of an excellent support by highly skilled support personnel. The company has even developed a certification program to further popularise its distribution — the RHCE (Red Hat Certified Engineer) training and examination are now available in most parts of the world. All these factors have contributed to the fact that Red Hat is now a recognised brand name in the IT industry.

2.2 Mandrake Linux

MandrakeSoft www.linux-mandrake.com is a company that has experienced an enormous rise in popularity since its first Linux release in July 1998. They have simply taken the Red Hat distribution, changed the default desktop to KDE and added an easy-to-use installer, breaking the myth that Linux is hard to install. Mandrake's hardware detection features and disk partitioning utilities are considered by many to be the best in the industry and many users found themselves running Mandrake where other distributions failed to provide the required usability.

Mandrake Linux has since matured to become a popular distribution among those new to Linux and among home users looking for an alternative operating system. The Mandrake development is completely open and transparent with new packages appearing in the so-called “cooker” directory on a daily basis. When a new release is entering a beta stage, a cooker snapshot is accepted as the first beta. The beta testing process is very short and intensive and new versions of packages can still be contributed until the first release candidate. The beta mailing lists are extremely busy, but you are still likely to receive a very fast response to any bug or concern that you report.

The result of this type of development is a leading-edge release — a highly up-to-date Linux distribution. As a trade-off, the users are likely to notice more bugs and perhaps less stability than with other distributions. Many people find this trade-off acceptable on their desktops — they get the very latest software and the occasional application crash is something they can live with. As soon as the development is completed, the software is available for free download from mirrors around the world.

2.3 SuSE Linux

SuSE www.suse.com is another company with the desktop focus, not very different from Mandrake in this respect. The distribution has received positive

reviews for its installer and configuration tools, called Yast, developed by SuSE's own developers. The documentation, which comes with the boxed product, has repeatedly been labelled as the most complete, thorough and usable by far. Linux Journal has recently awarded SuSE Linux 7.3 the “Product of the Year” title. The distribution has achieved a dominant market share in German speaking and some Eastern European countries.

However, SuSE has been suffering from lack of profitability, having been forced to close down their offices in the USA and reduce staff — due to high cost of development in Germany. Also, SuSE's development takes place completely behind closed doors and no public betas are provided for testing. The release cycle is more frequent (SuSE released three versions in 2001) and they have a policy of not making the software available for download long after the boxed versions are in stores. Even so, SuSE does not provide ISO images of their distribution, relying on packaged software for the vast majority of their user base.

2.4 Debian GNU/Linux

Debian GNU/Linux www.debian.org is a completely non-commercial project; perhaps the purest form of the ideals that started the free software movement. Hundreds of volunteer developers from all over the world contribute to the project, which is well managed and strict, assuring a quality distribution known as Debian.

At any time during the development process, there are three branches in the main directory tree — “stable”, “testing” and “unstable”, the last of which is often referred to as “sid”. When a new version of a package appears, it is placed in the unstable branch for first testing. If it passes, the package moves to the testing branch, which undergoes rigorous testing lasting many months. This branch is only declared stable after a very thorough testing. As a result of this, the distribution is possibly the most stable and reliable, albeit not the most up-to-date, suitable for

deployment on servers.

Debian's other main claim to fame is the reputation for being hard to install, unless the user has intimate knowledge about the computer's hardware. Compensating this failing is "apt-get", a convenient installer for Debian packages. Many Debian users joke that their installer is so bad, because they only need it once — as soon as Debian is up and running, all future updates of any scale can be accomplished via the apt-get utility. Take it from a person who has tried many distributions — once you have experienced the dependency headaches while installing software on any RPM-based distribution, you will stare in absolute disbelief at the painless and convenient process of installing and upgrading your Debian packages. You might even think that you have just entered paradise...

2.5 Slackware Linux

Slackware *www.slackware.com* is one of the oldest distributions around and it is very popular among experienced Linux users. It offers no bells and whistles, sticking with a text-based installer and no graphical configuration tools. Where other distributions tried hard to develop easy-to-use front ends for many common utilities, Slackware offers no hand-holding and everything is still done through configuration files. Because of this, Slackware is not recommended to novice users.

Nevertheless, Slackware has a magic appeal to many users. It is extremely stable and secure — very suitable for server deployment. Experienced Linux administrators find that the distribution is less buggy as it uses most packages in their pristine forms and without too many in-house enhancement which have a potential to introduce new bugs. Releases are infrequent although up-to-date packages are always available for download after the official release. Slackware is a fine distribution for those who are interested in deeper knowledge of Linux internals.

Perhaps the best characteristic of this distribution I have heard is this: If you need help with your Linux box, find a Slackware user. He is more likely to fix the problem than a user familiar with any other distribution.

3 Losing The Battle

3.1 Caldera OpenLinux

Caldera *www.caldera.com* has been through bad times in the last few months, suffering from severe drops in share prices and being forced to reduce staff. They have released a new version of OpenLinux in July 2001, surrounded in enormous controversy. The company has introduced "per-seat licensing" for business users, requiring users to purchase a separate licence for every workstation or server installed. This unprecedented move drew lots of criticism and prompted many users to switch to another distribution.

Caldera OpenLinux 3.1 is still available for non-commercial use as a free download. The reviews have been positive, branding the distribution as easy-to-install and very stable, suitable for heavy development work. It lacks the Gnome desktop environment and associated libraries, which means that some excellent GTK+ based applications, such as Galeon or Gnumeric, are not available.

3.2 Turbolinux

Turbolinux *www.turbolinux.com* announced in 2001 that they would discontinue sale of packaged products in the USA and concentrate on the more lucrative Japanese market. The recently released Workstation 7.0 can still be freely downloaded, but boxed sets with full documentation and support are only available in Japan.

Turbolinux is an experienced Linux developer. The product really shines in two areas — ease of installation and support for Asian languages. No other distribution comes even close to Turbolinux when it comes to input and output of Chinese, Japanese and Korean, the traditionally troublesome, multi-byte character sets, so if you need this ability, look no further.

On the negative side, the developers do not offer many product updates after the official release and no English documentation is available from the company web site. Additionally, the web site is riddled with broken links and corporate announcements, information totally irrelevant to end users. An excellent product suffering from poor marketing and the result is a serious drop in user base, at least outside of Japan.

4 The Small Fish

Now let me briefly mention a few smaller distributions. Interesting, promising, exploiting the curiosity of people who wish to differ.

Beehive Linux www.beehive.nu is a highly up-to-date and also highly technical distribution designed for experts. It strides to offer essential packages only, primarily for use on servers. The installation CD, which also serves as a recovery tool, contains a basic installation script and all post-install configurations are done manually. The author will personally reply to your support questions and he maintains many package updates after the official release.

JBLinux www.jblinux.net is an interesting distribution from Norway; very modern with ongoing development effort, it has received a lot of positive feedback. The author of the distribution will answer your e-mail and support questions personally — a very refreshing attitude and, for many, a perfect reason to go with a smaller, non-commercialised distribution.

Redmond Linux www.redmondlinux.org is another

new distribution just out of beta testing, designed for desktops. Many people seem to be attracted by the catchy name — the company offices are indeed located in Redmond, not far from Microsoft headquarters. We have yet to see some reviews of the final version of this product, although the first user comments indicate that Redmond Linux is indeed very easy to install and use, with a familiar Windows-like user interface and utilities.

Despite the enormous number of distributions available around the Internet, some people find it a great experience to build their own. The educational value of such a process is indisputable and having one's own operating system on the computer can certainly boost a person's ego.

Linux From Scratch www.linuxfromscratch.org is a project of exceptional value for those who seek a more intimate knowledge of Linux. The project provides a complete book in various formats together with about 80MB of essential Linux files and utilities. You need to have a working Linux system installed prior to building your own and the book will guide you through the creation of your own Linux operating system. The site offers a lively mailing list and the book is periodically updated, now in version 3.1. Highly recommended - you will not only learn a lot, you will enjoy doing it. Guaranteed.

5 The Final Words

There are many other distributions out there. Check out DistroWatch.com's main page for a more comprehensive list and also visit the links page leading to some other attempts to collect and list the many Linux distributions. If you have the bandwidth and a CD writer, download three or four, burn the images and install them. If not, get those \$2 CDs from LSL or CheapBytes. See which one detects your hardware the best and which one feels right. Don't abandon Linux just because the first installation was a failure!

The Linux development world-wide continues at high speed. The old perceptions that Linux is hard to install, has limited hardware support and requires the use of text-based tools are slowly falling apart and many users are discovering the wonderful world of free software. Not only it costs so much less than proprietary software, it also offers users the opportunity to see and modify the programs to satisfy individual needs. Linux is not hard to install. The hardware support has improved dramatically and many hardware component manufacturers provide Linux drivers alongside the traditional Windows drivers. The common tasks can be easily accomplished in point-and-click graphical interfaces not dissimilar to Windows.

Choosing a suitable distribution is one of the many decisions that need to be made before a person dives into the world of Linux. This in itself suggests availability of choices. It is perhaps a historical moment in software's own brief history — for the first time ever, the users have a real choice of the operating system running their computers. As the monopolistic software power houses start facing the reality of a competing product, the end users are more than likely to be declared overall winners.

Go ahead, get your Linux distribution and install it. You might just be amazed.

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system administrator and product manager at Linpus Technologies, a Linux development company in Taipei, Taiwan. He maintains a personal web site at <http://www.distrowatch.com>, which provides basic information and software package lists of many GNU/Linux distributions. He can be reached by e-mail: distro@distrowatch.com, or by snail address: No 40, Lane 79, Roosevelt Rd, Section 5, 2F, Taipei, Taiwan.

[Beijing Gov Adopts GNU/Linux] December 28, 2001, the Beijing Municipal Government selected among seven vendors to provide operating system, office automation (OA) and antivirus software for government PCs. Two GNU/Linux distributors, Red Flag and CS&S have jointly got portion of the bid for 2,801 units of operating system.

Noteworthy, Microsoft is also one of the bidders, but it was not selected. After the bid result announced, the local public media in China praised the government adopted a truly concrete step and action against the proprietary software companies.

Some foreign public media reported this news too. Slashdot cited this news and linked to a report from a journalist from Taiwan, that Microsoft's failure indicated the challenges for multinational companies should face to handle the bias of Beijing municipal government. But we at FSM watched the whole bid's process, and we think it is fair to any bidders, we at FSM could not understand why they got such conclusion. It presented again Slashdot is not so objectively on reporting events happened in China.

One problem appeared and we at FSM think really need to pay attention to — either Red Flat, or C-S&S, their technical support to Chinese information processing is still quite weak (though better than Microsoft's), users started to complain their distributions are hard to use.

— **FSM**
