

Introducing Linux

Why we MUST go to Linux

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Welcome

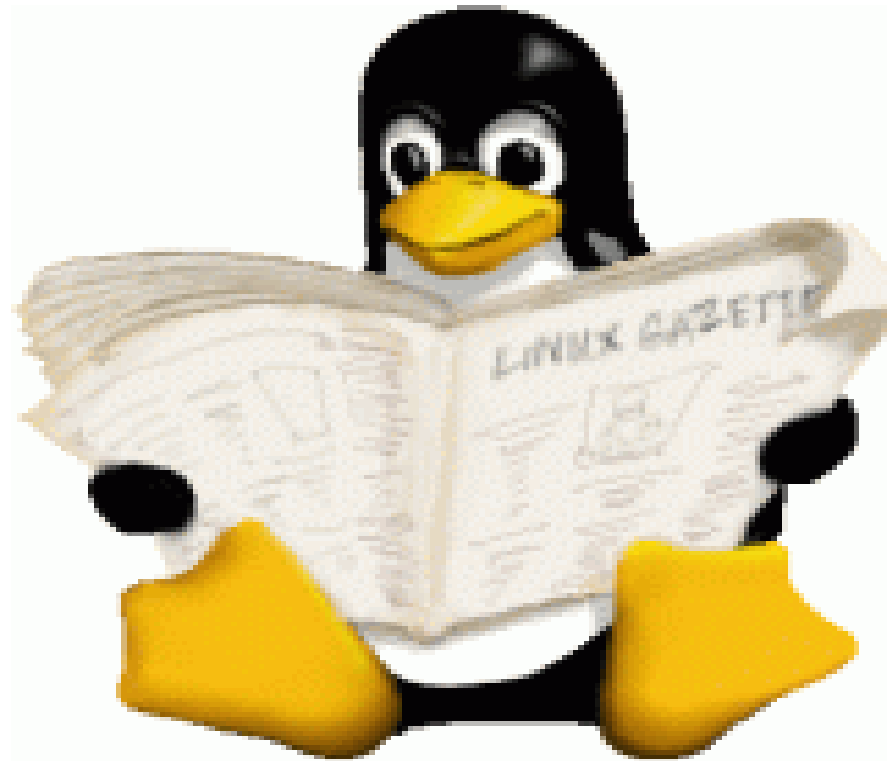
to the world of open source

Welcome

to the community of people committed to the
improvement of the operating system

Welcome

to a world in which our computers work with
reliability and without fuss



Minimum Requirements

- Some parameters based on the use of Mandrake
- Pentium Class computer
- 128 meg RAM
- Sufficient Hard Disk
- CDROM
- Internet access

excerpt from

US-Cert UNITED STATES COMPUTER EMERGENCY READINESS TEAM

Vulnerability Note VU#713878

Microsoft Internet Explorer does not properly validate source of redirected frame

Overview

Microsoft Internet Explorer (IE) **does not adequately** validate the security context of a frame that has been redirected by a web server. An attacker could exploit this vulnerability to evaluate script in different security domains. By causing script to be evaluated in the Local Machine Zone, the attacker could execute arbitrary code with the privileges of the user running IE.

Unix has been around since the 60's with unix-like-systems being developed since 1991.

The true **unix-like**-linux is reliable, easy to use and is totally unaffected by any viruses.

The applications included cover internet, office, accountancy and much more.

Quality

In industry we put an emphasis on quality

Who has heard of ISO 9001 ?

World Wide Involvement

Unix started with IBM, HP, AT &T in the 60s

The operating system has continued to mature ever since

Involvement in the universities has generated tremendous peer review and the fundamental aspects of quality software writing

Linus Torvalds

In 1991 a student from Helsinki started to create his own Unix compliant OS

“just a hobby” he wrote in a news group

This was then taken up with enthusiasm by the world wide community

And so began the principle of FREE software

Linus Torvalds

Linus is still at the heart of Linux and he released the 2.6 kernel late last year

Linux is very much his core activity and he retains the principle of FREE software

Free Software

- I need to make a point here.
- The Internet is Free ?
- IBM made the open standard (free) PC
- IBM support with \$M Linux (free) software

Free Software Foundation

Free, in this context means free and open to everybody, programmers and anybody who is interested, including hackers and virus writers

But, just because of the openness, peer review causes the software to be the best quality and any problems are quickly identified and removed

The Distribution

The Distro is the package of software provided by a company such as Red Hat, Suse, Mandrake, Debian, Slackware, Gentoo and so on

You can pay a small fee to support that company or you can download a reduced package for free

Free Software

Somebody, somewhere has to pay for the effort.

The Internet runs on advertising, originally we were going to have to pay for every page

Linux runs, or will run, many applications

Many companies directly sponsor and pay the distributors of Linux packages

Free Software

Now, a Linux distribution is little more than a collection of modules gathered from the w.w.web

I have tried several flavours, Red Hat, Suse and Debian as well as Mandrake (now on Mandrake 10 Official) and also using Mandrake 10.1 Official.

The User View

From a users point of view the Linux machine is little different from the Windows machine.

The differences are all at root / administration level

So in, for example, an internet cafe whether the machines run windows, mac, unix or linux really makes little difference

The User View

The browser looks very much the same

The email client is also very much the same

Yes, there are small differences, but I am certain
we can easily accept those differences

The real difference, for all to see, is the infinitely
better reliability and stability

The Crashed Application

When an application fails, like (for example) reading a CDROM : -

With windows there is the constant re-booting

But with unix or linux you just close the failed application and restart it.

You never have to re-boot with unix or linux

Quality

What do we mean by quality when applied to software ?

excerpt from www.iso.org

Welcome to ISO Online



ISO. The source of ISO 9000, ISO 14000 and more than 14 000 International Standards for business, government and society.

ISO. A network of national standards institutes from 148 countries working in partnership with international organizations, governments, industry, business and consumer representatives. A bridge between public and private sectors.



Quality

An operating system that we can trust

We can start up the computer and it just works

It never crashes

The mouse never freezes

It never requires re-booting

Does anyone here have a machine which complies
with ALL these points?

Quality

Additionally we can add software, remove software and still never re-boot.

We can leave the machine running and come back weeks, or months later and it is still running correctly.

Sound like a dream ?

Should we expect anything less ?

Quality

What is the longest time anyone here has managed to keep Windows running ?

I have managed 3 weeks

Of course we may need the UPS

Quality

Judge the quality by how frequently we experience a crash or frozen system which requires re-booting

We have all experienced the 'blue screen of death'

What is not so obvious is the habit of winXP which goes black and then comes back using the 'restore feature', such a disaster with winME

Quality

This is in fact a crash, but the use of the system restore hides the fact from all but the most discerning of us

In doing these evaluations I do use a UPS as in my street we do suffer a surprising number of mains glitches

Viruses and Hackers

It is vital if these problems occur that they have no access to be able to write to executables

With Unix there is NO access to the programs except with root privilege

The maximum conceivable damage that can be done is that some files, not executables, in a user profile can be damaged

Viruses and Hackers

Just why do viruses target MS ?

In the MS OS the user has write access to the executables

In particular I.E. is integrated into the kernel and, by design, is open to the world

So viruses which target I.E., Outlook and Outlook Express have easy access to the executables and so can easily damage the system

Viruses and Hackers

The real complaint about MS is that every patch introduced, brings with it some new, unexpected and unwelcome, vulnerabilities

Why do we go on like this ?

Peer review is the most powerful tool to sort out errors

By making the software totally open source, anyone can look at it, and make comment

Viruses and Hackers

In having the open source one needs some skill to be able to read it and yet more to make constructive comment

The final arbitrator of the software quality is the distribution skilled personnel, who are themselves worldwide enthusiastic engineers

But, anyone (you or I) can get involved

Errors

Recently I found an error

The Browser would crash with the Macromedia
Flash plug-in when navigated to a site that used
that

I reported the problem using Bugzilla

Within a very few days with some help from an
engineer in the Czech Republic we identified the
problem at root cause

Errors

The problem was specifically a Macromedia problem

I sent email to Macromedia with deafening silence as response

Then another engineer was able to add the emails of some macromedia personnel to the list

I added my information again and the problem was quickly solved with a new version (7) of Macromedia

Errors

- To complete the successful conclusion, I would add that this was all done with the installation of new software without re-booting
- Of course I did finally change the video card, in this instance, to verify the solution and when you change hardware you must power down

Hardware

A note on hardware

Not all hardware is supported with the very large selection of drivers present in the 'Distro'

The first test is to run the machine using MandrakeMove or another 'live' distro

If all goes well, including internet access, then we can go ahead and do a full installation with confidence.

Hardware

I have installed Mandrake 10 Official on quite a number of computers and the ones giving me problems are those using:-

Intel chipsets. But, Intel are supportive of linux

Pctel drivers. Pctel are not supportive of linux

Mandrake Version

I have already installed Mandrake 10.0 Official and Mandrake 10.1 Official on many machines

By now there are many enhancements and updates to Mandrake 10.0 and Mandrake 10.1

Now I am also using Mandrake 10.1 Official as well as Mandrake 10.0 Official

Hardware

The driver support within the 'Distro' is probably as comprehensive as that within XP

There are companies who provide drivers for linux, for example, Nvidia

But some companies will not provide drivers, nor are they supportive of the open source community

Most companies are supportive and make information available directly to the open source community

desmond's Home

floppy

removable

New Zealand

unix_books

Wastebasket

RealPlayer: BBC News

File Play View Content Help

real

take5

Clip info: BBC News

The RealPlayer window is centered on the desktop. It features a standard menu bar with 'File', 'Play', 'View', 'Content', and 'Help'. Below the menu is a toolbar with a 'real' logo, a play button, a stop button, a volume icon, and a full-screen button. The main video area is mostly black, with a large red shape on the left side and a small black dot in the center. At the bottom of the window, there is a 'take5' logo, a volume control slider, and a 'Clip info' section displaying 'BBC News'.

Linux

- The last slide was a typical screen shot.
- Yes I do use Linux and, have retired the windows machine quite some time ago. I do though keep the windows machine in working order as I require it for helping others who are not yet so fortunate as to be running linux

Install Structure

The installation consists of the system access to which requires root privilege

and

user profiles, the user only has access to his own profile

Programs

- Office Packages – OpenOffice
- Browsers – Mozilla
- Financial – Gnucash
- CD Burning - K3B
- DVD player – Totem
- Picture Manipulating – The Gimp

And in Conclusion

It is a major commitment to switch from the familiar to another system even if that other system does have a long pedigree

As you will have seen I am fully committed and I hope that I have convinced some of you to try the alternative operating system

1/ Linux in Easy Steps

Mike McGrath

ISBN 1-84078-275-7 Amazon £7.69

2/ LINUX Pocket Guide

Daniel J Barrett

ISBN 0-596-00628-4 Amazon £5.56

3/ LINUX in a Nutshell

Ellen Siever, Stephen Figgins & Aaron Weber

ISBN 0-596-00482-6 Amazon £19.95 (list £28.50)

4/ Running LINUX

Matt Welsh, Matthias Kalle Dalheimer, Terry Dawson & Lar Kaufman

ISBN 0-596-00272-6 Amazon £22.36 (list £31.95)