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http://WWW.VistaSolutions.Net



Linux Desktop Hands-On



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Seminar Agenda



Introduction

- Linux Desktop Startup
- Configuring the *gdm* Login Manager
- Finding Your Way Around the Desktops
- Desktop Customization: Wheee!
- Lab 1: Configuring Linux Desktop Settings
- Gkrellm
- Web Tools
- The Nautilus File Browser
- Ximian Evolution Organizer
- Xcdroast
- Lab 2: Useful Linux Graphical Tools
- Mounting SMB Shares
- Using OpenOffice
- Running MS Office Tools with Crossover Office
- Running MS Windows and Tools with VMware
- Lab 3: Microsoft ® Windows® Interoperability
- Questions and Wrap-Up

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Warning!

This seminar is intended for Linux desktop users who have little or no exposure to Linux. If you just spent a week in Linux boot-camp, or if you have years of experience with Linux, then this seminar will be too basic for you.

Introduction

- Linux Desktop Startup
- Finding Your Way
- Using VMware
- Using Crossover Office
- Using Open Office
- Desktop Tools





- The graphical desktops on Linux are all based on the X-windows system
- The implementation of the X-server is XFree86 from <u>http://www.XFree86.Org</u>
- There are several useful commands that you can use with the XFree86 X-server:
 - Ctrl-Alt-Backspace
 - Ctrl-Alt-Keypad+
 - Ctrl-Alt-Keypad-
 - Ctrl-Alt-F1 ... Ctrl-Alt-F12

Immediately kill the server Next video mode Previous video mode Switch to virtual terminal (Ctrl-Alt-F7 is default graphics)



• The good old X-windows stuff is still around!

• xdpyinfo

xset

xrdb

xinit and startx

•

- Give information about current display Set various X-windows options Set display and client resources Start up X-windows session
- So, if you want complete control, use "*xdm*", and your ~/*.xinitrc* file:
 - xrdb xsetroot xterm xconsole exec twm

-load \${HOME}/.Xresources
-solid gray &
-geometry -60+60 &
-geometry -0+0 &

Linux Desktop Choices



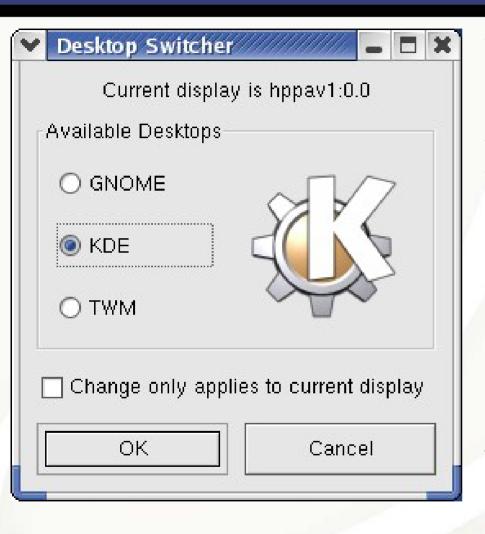
• There are *lots* of desktop choices on Redhat Linux:

- GNOME
- KDE
- Ximian GNOME (add-on, replaces "standard" GNOME)
- "Many, many more window managers and environments
- Three main environments are run out of the /etc/inittab file:
 - GNOME → GDM
 - KDE \rightarrow KDM
 - X \rightarrow XDM
- These are started by the following line in /etc/inittab:

x:5:respawn:/etc/X11/prefdm -nodaemon

Note that /etc/X11/prefdm is a script that checks for the existence of /etc/sysconfig/desktop which defines "DESKTOP=GNOME" if that was the primary system-wide default desktop selected during installation

Selecting Your Own Default Desktop With "switchdesk"



You can run "*switchdesk*" with no parameters, and it will graphically query for your choice.

You can also run the command in text mode: "*switchdesk kde*" will switch to KDE as your default desktop.

The command alters the ~/.Xclients file to use your ~/.Xclients-default to launch the proper desktop session manager. Other displays might get involved if there is a ~/.Xclients\${HOST}\${DISPLAY} file in your home directory.

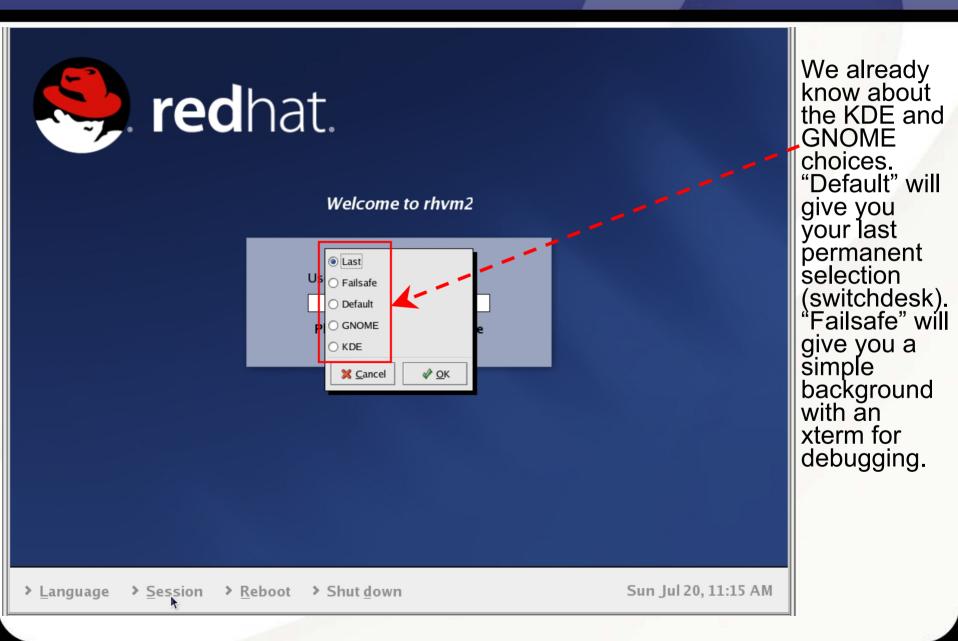
This is either *gnome-session*, *startkde*, or */usr/X11R6/bin/twm*. Other desktop environments might be used if they have been loaded (i.e. WindowMaker).

Login Screen



k	dhat. Welcome to rhvm2 Username: Please enter your username		The "Session" option at the bottom of the login screen will allow you to choose which desktop you run for the current login. You will be prompted to make the change permanent.
Language > Session	Reboot > Shut down	Sun Jul 20, 11:11 AM	l .

Login Session Options





- You will find a lot of the files involved in the X11 login process in the directory /usr/lib/X11
- Many of the files in /usr/lib/X11 are links to /etc/X11
- The "standard" Redhat 9.0 configuration uses gdm as the login display manager
- The configuration information for gdm is kept in /etc/X11/gdm/gdm.conf
- There is a graphical tool *"gdmconfig"* that will set up the options for you
- Underneath the /etc/X11/gdm directory are Init, PreSession, Session, and PostSession directories containing scripts that implement the desktop login and logout behavior

The gdmsetup Tool



The gdmsetup Tool

(continued 1)

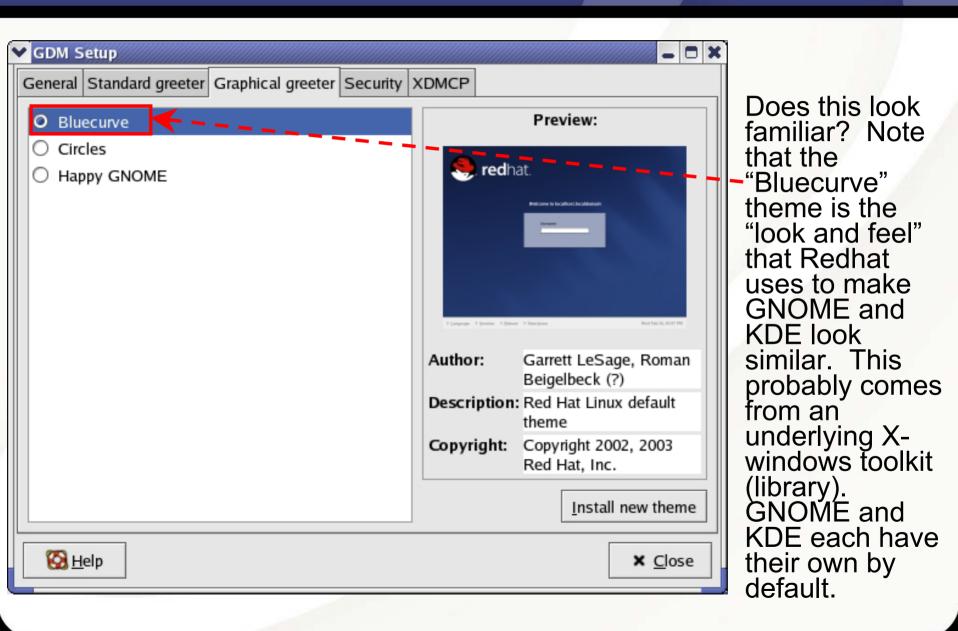


♥ GDM Setup	- • ×		
General Standard greeter Graphical greeter Secur	ity XDMCP		
Logo	Background		
	No background ○ Image ○ Color		
	✓ Scale background image to fit		
No Image	No Image		
✓ Browse Welcome string: Welcome to %n	Browse		
Miscellaneous	✓ Only color on remote displays		
Show choosable user images (<u>face browser</u>)	Background color:		
Sa Help	× <u>C</u> lose		

Remote login is not configured by default to use any graphical information.

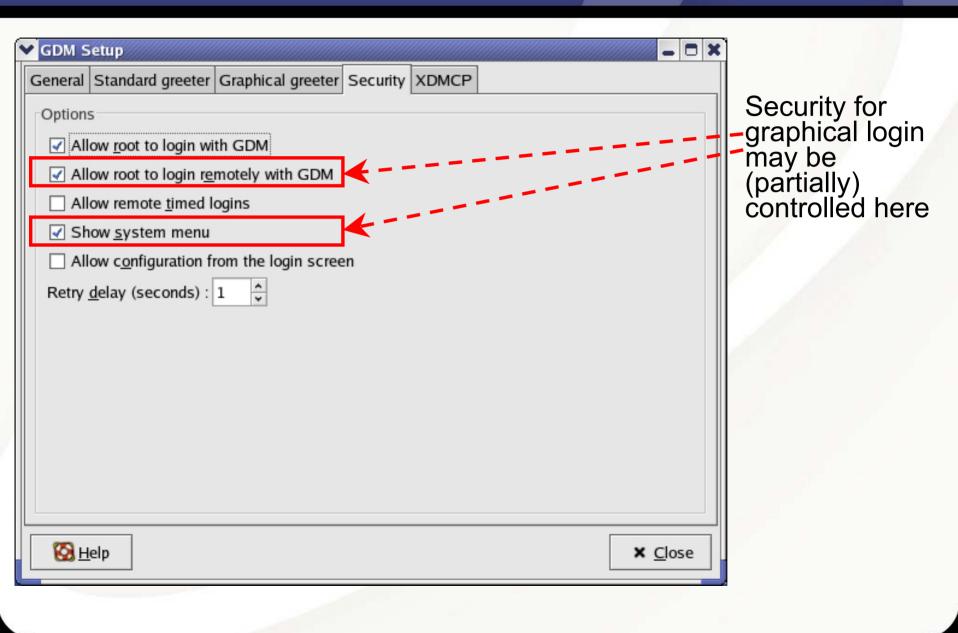
The gdmsetup Tool (continued 2)





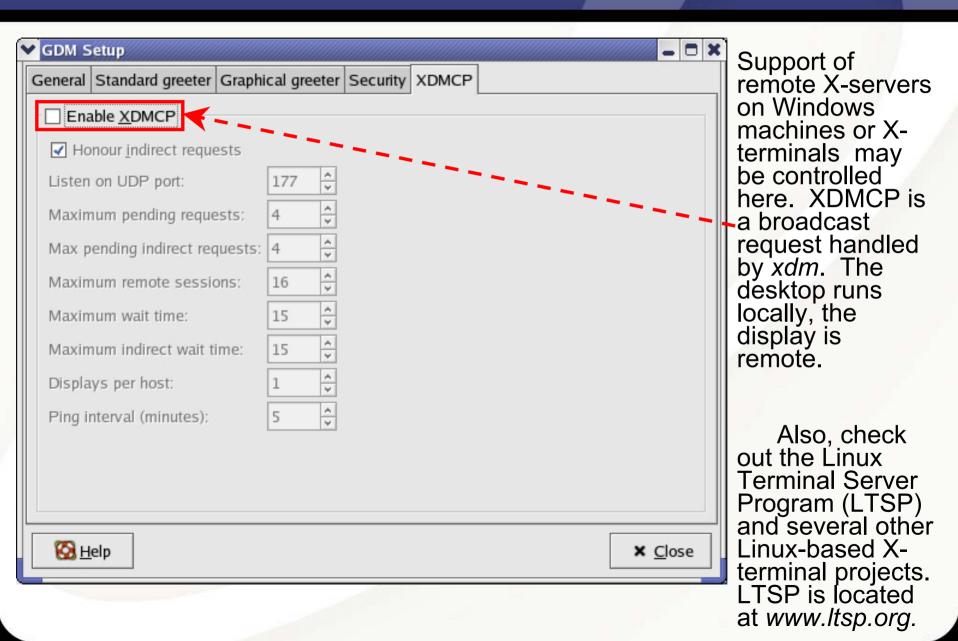
The gdmsetup Tool (continued 3)

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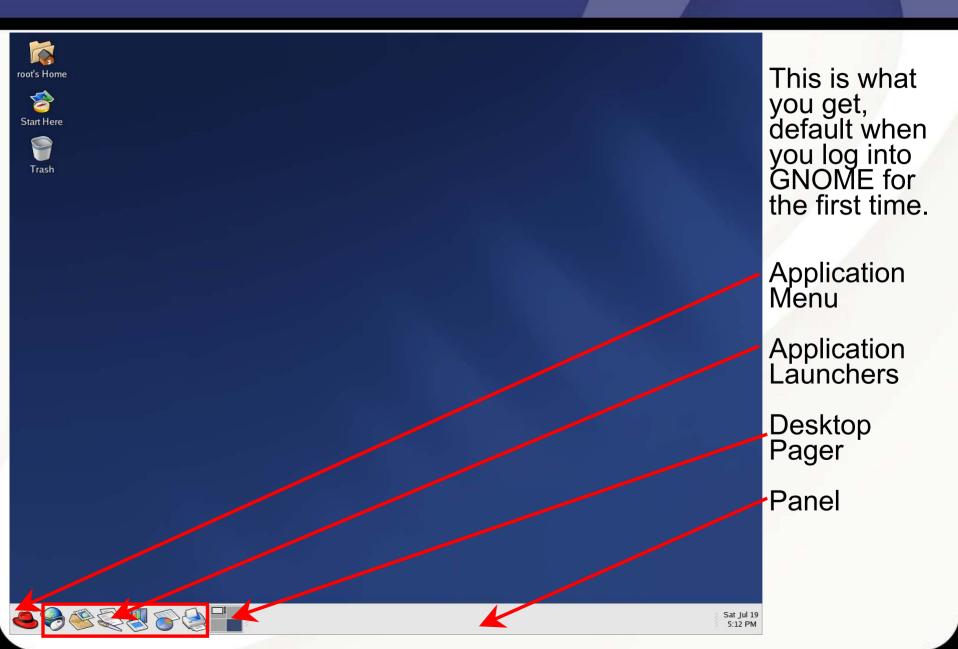


The gdmsetup Tool (continued 4)

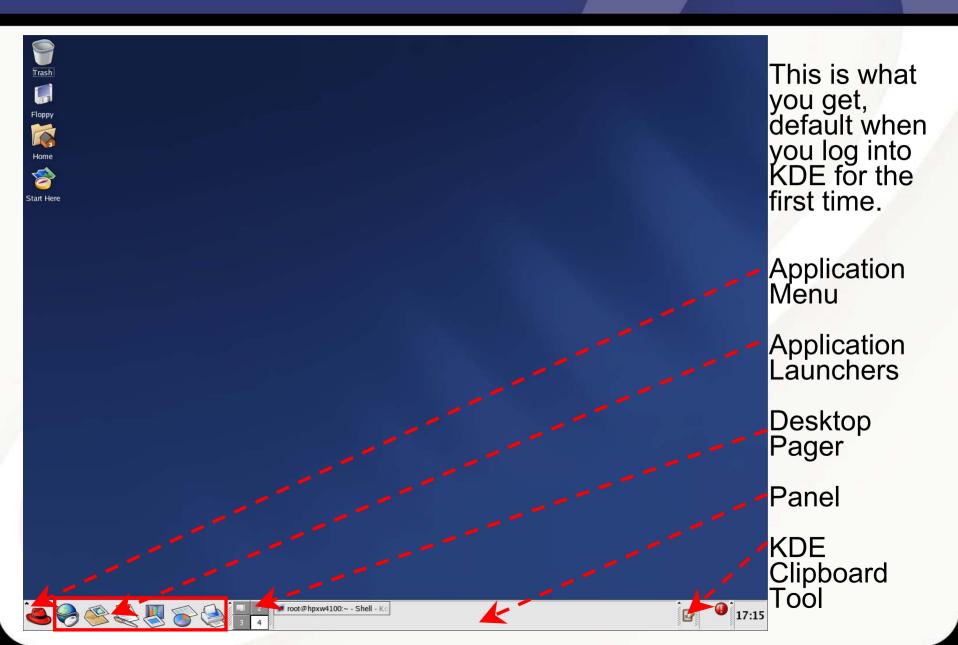
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GNOME Desktop (Default Configuration)



KDE Desktop (Default Configuration)

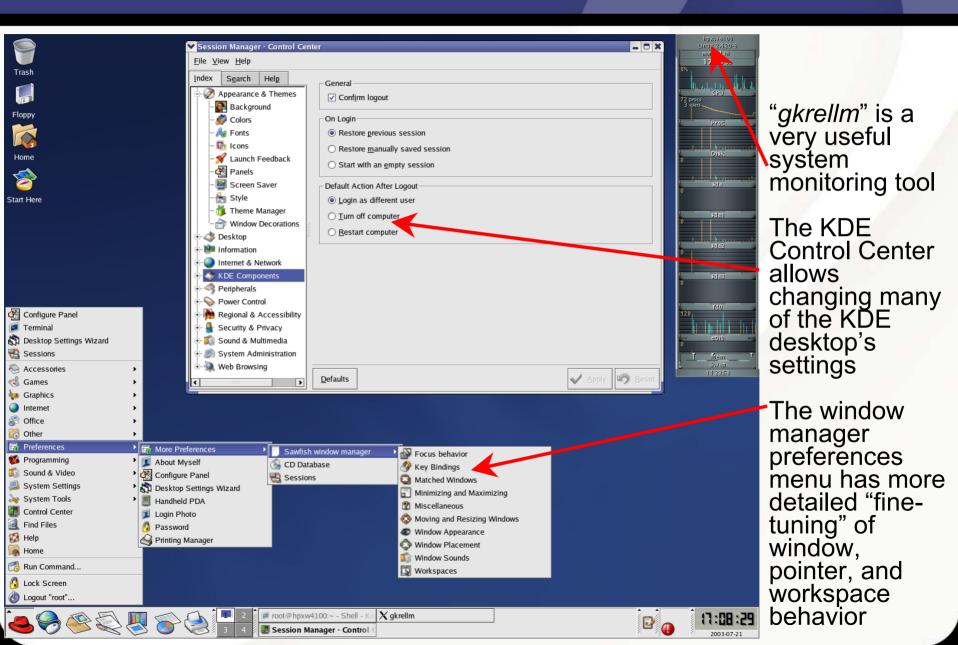




- Why, customization, of course!
- Both KDE and GNOME have control panels that allow you to customize:
 - Backgrounds
 - Mouse Behavior
 - Window Focus Behavior
 - Workspaces
 - And a whole lot more ...
- You can add additional panels
- You can add launchers to panels
- You can go nuts customizing your environment
- There are also window manager customizations
- Don't forget to set "save current setup" or to select it when you log out ...

KDE Control Center and Window Manager Preferences





Changing the KDE Desktop Background

✓ Background - Control Center Flopy Eile Yiew Help Index Sgarch Help Index Background Index Fonts Index Fonts Index Screen Saver Index Style Index Theme Manager Window Decorations Window Decorations	Pesktop 72 proc 421 - 11 - 11 - 11 - 11 - 11 - 11 - 11	Changing the KDE desktop background The KDE backgrounds are in /usr/share/wallpapers
 Information Internet & Network KDE Components Peripherals Power Control Regional & Accessibility Scurity & Privacy Sound & Multimedia System Administration Web Browsing * 	No wallpaper Single wallpaper Multiple wallpapers Mgde: Scaled Windows Wallpaper: /usr/share/backgrounds/images/default.png Browse Windows Setup Multiple. Setup Multiple Setup Multiple Setup Multiple Defaults Setup Multiple Setup Multiple Setup Multiple Image: Jpg Winter: Jpg Winter: Jpg Setup Multiple Image: Jpg Forbigg Setup Multiple Setup Multiple Image: Jpg Forbigg Setup Multiple Setup Multiple Image: Jpg Setup Multiple Setup Multiple Setup Multiple Image: Jpg Setup Multiple Setup Multiple Setup Multiple Image: Jpg Setupe Multiple Setup Multiple </td <td>Several configuration options are available from the right-click menu, including "Configure Desktop"</td>	Several configuration options are available from the right-click menu, including "Configure Desktop"
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GNOME Background Customization

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Preferences - - : Bookmarks File Edit View Go Help < Up Stop Reload Home Location: preferences:/// View as Icons 2 About Myself Accessibility CD Properties Control Center File Management na b. India Ctrl A 1 Background Preferences Login Photo File types levboard Keyboard Shortcuts Select picture: program You can drag image files file ec 6 into the window to set the work proxy Menus & T Password default.png Picture Options Screens M ♥ Please select an image Backgrou No Picture Wallpaper Centered Scaled Stretched New Folder Delete File Rename File /usr/share/backgrounds/images Background Style Vertical gradient Top Color: Bottom Color: Folders Files ladybugs.jpg 🙆 <u>H</u>elp X Close leafdrops.jpg space/ lightrays.png 1600 x 1200 lightrays-transparent.png raingutter.jpg New Window riverstreet_rail.jpg New Folder stone_bird.jpg New Launcher Selection: /usr/share/backgrounds/images New Terminal leafdrops.jpg Scripts 🖉 ОК 🔀 Cancel Clean Up by Name 🕸 Cu<u>t</u> Files Copy Files Paste Files Dis<u>k</u>s Preferences gkrellm 🖾 root@hpxw4100:/data/softwa 🖾 root@hpxw4100:~ Use Default Background Mon Jul 21 Background Preferences 5:21 PM Change Desktop Background bot@hpxw4100:~] Please select an image

Changing the GNOME desktop background from the Preferences window

Not intuitive, but click here to get the background menu

The GNOME files are in /usr/share/backgrounds/ images

The right-click menu makes "Change Desktop Background" available



root's Home

Start Here

Trash



Lab #1: Configuring Linux Desktop Settings

See Lab #1 Handout for details

System Monitor: gkrellm





The *gkrellm* tool is not loaded by default for some reason (unless you select it or "Everything" during installation. It has multiple skins (i.e. look and feel packages) and monitoring plug-ins.

Here we see CPU monitoring and network interface traffic, along with current system processes.

Information and *gkrellm* itself is available from:

http://www.gkrellm.net

Skins (themes) are available from"

http://www.muhri.net

Also can be run in client-server mode to collect and display data from remote systems



Web Browsers and Web Tools



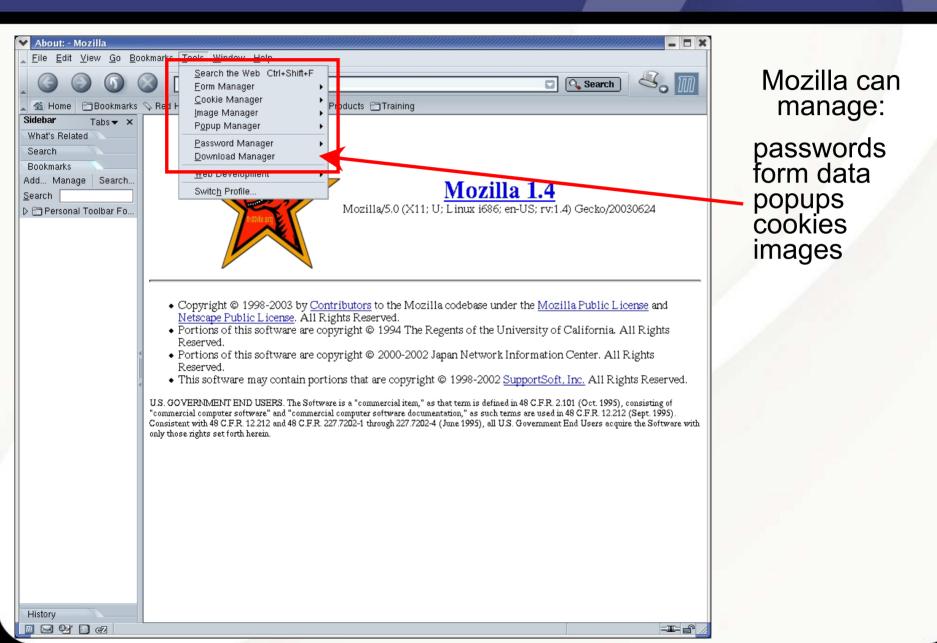
- There are a *lot* of web browsers and similar web tools available for Linux:
 - mozilla
 - mozilla firebird
 - netscape
 - lynx
 - opera
 - galeon
 - konquerer
 - wget/curl
 - privoxy

(open-source released by Netscape) (open-source next generation of mozilla) (modified Mozilla) (text-based browser) (downloadable) (based on Mozilla's gecko) (KDE browser) (command-line URL get) (privacy proxy filters ads and popups)

- The *mozilla* browser implements cookie management, pop-up controls, ad filtering, and numerous other privacy features (netscape removes these before releasing their version of the browser)
- By the way, the *mozilla* install "lives" in */usr/lib/mozilla-1.2.1* and the */usr/bin/mozilla* executable is really a script to set up the environment and launch the browser

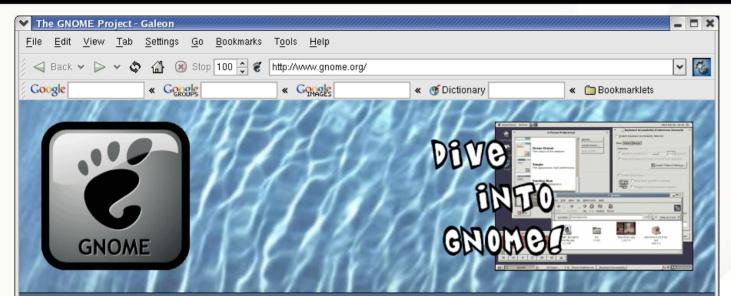
Mozilla





GNOME Galeon





In the Headlines

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The regional government of <u>Extremadura, Spain</u> has put 80,000 computers in schools, loaded with GNOME, Linux and other free software!



The <u>GNOME 2.2 Desktop & Developer Platform</u> has been released! Meanwhile, the <u>2.3</u> <u>development process</u> for GNOME 2.4 is in full swing - you can help!

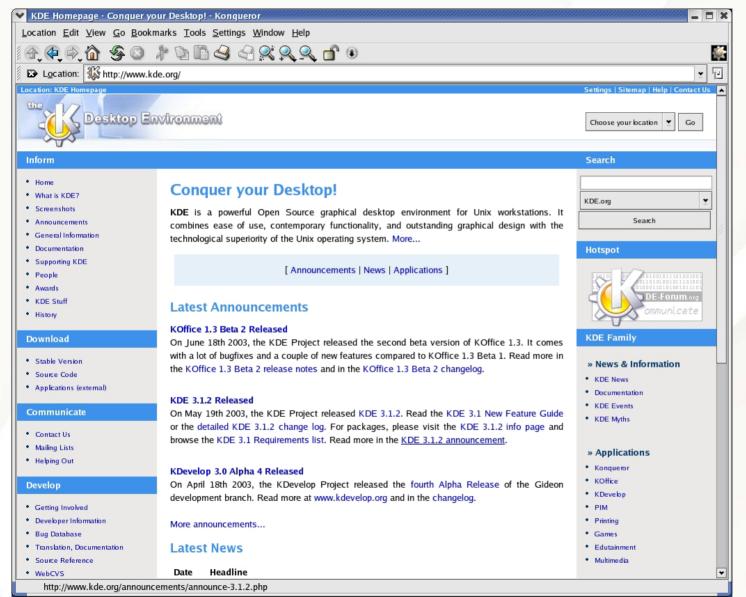


Now's a good time to say thanks for the best desktop environment on the planet by becoming a <u>Friend of GNOME</u> or by upping your current Friends level. All contributions are tax-deductible in the U.S. <u>Thanks</u> to our generous Friends. What is GNOME? Get Started! Community News Software Map Developers Foundation Press Contact The galeon browser is built into the GNOME environment in a number of places.

It is based on the same *gecko* rendering engine and network engine as the *mozilla* browser.

KDE Konqueror

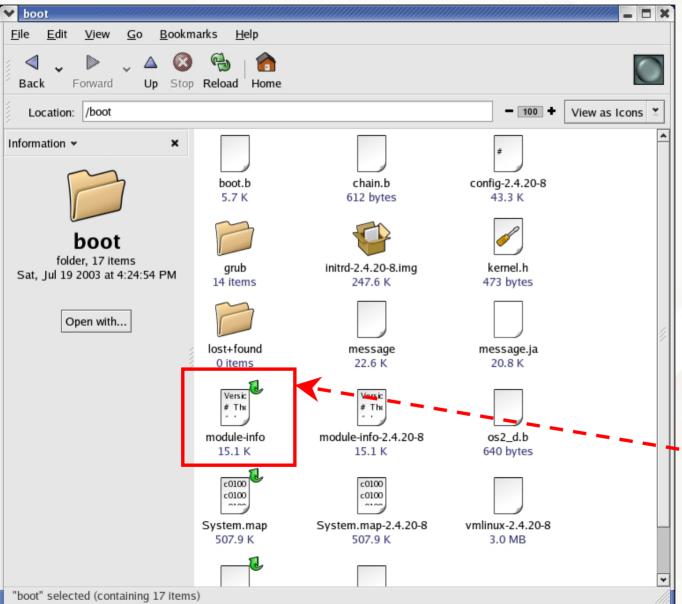




The konqueror browser is built into the KDE environment in a number of places, just like galeon is built into the GNOME environment

The Nautilus File Browser



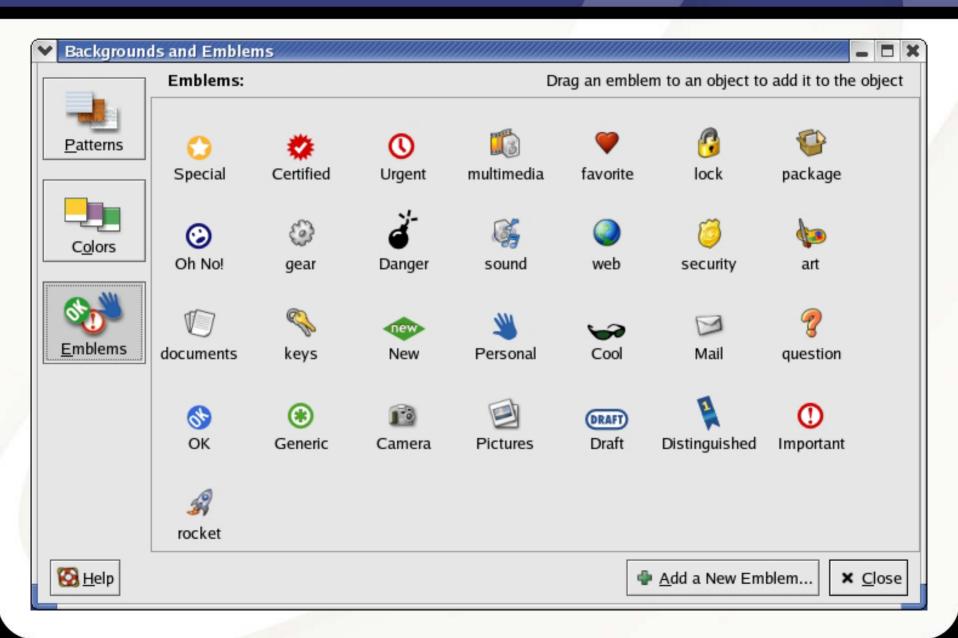


The nautilus file browser is used to show your home directory, the "Start Here" information, and other information like preferences. This is a lot like the Windows ® Explorer behavior.

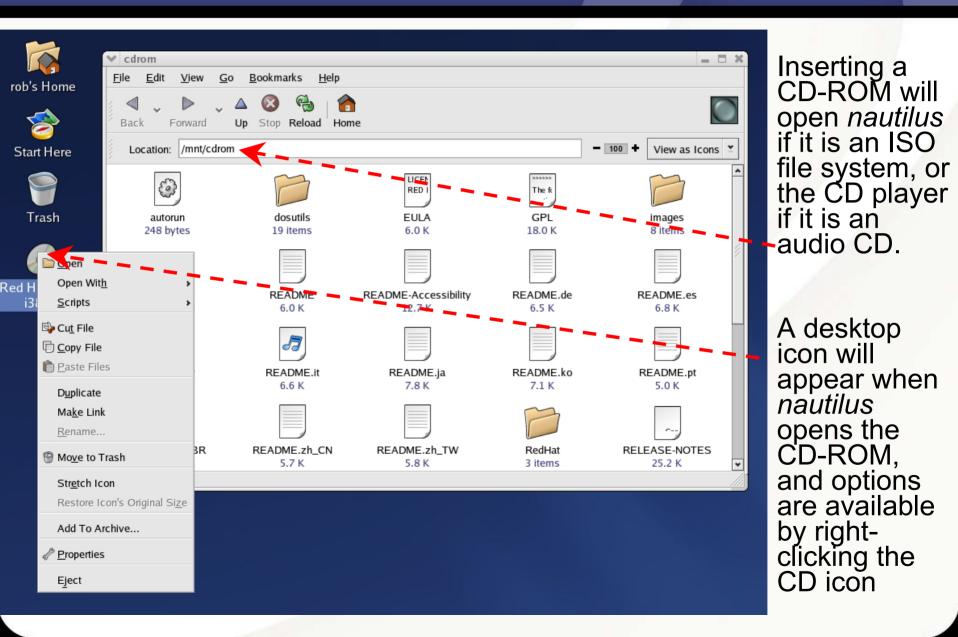
The icons describe the file type, may show the file contents, and have "emblems" that describe attributes like "executable".

The Nautilus File Browser Emblems





Inserting An ISO CD-ROM



Ximian Evolution Organizer Summary View



Summary - Ximian Evolution 1.	.2.2 [(1.2.2-4)]		×
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Few clo	uds 23.0 C	Inbox	0/0
Calendar			
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		No appointments	
<u>RHSA-2003:11</u> SHSA-2003:22	62-15: Updated Mozilla packages fix security vulnerability. 38-14: Updated 2.4 kernel fixes vulnerabilities 96-13: Updated Xpdf packages fix security vulnerability.		
● <u>BHSA-2003:2:</u> ● BHSA-2002:0:	26-04: Updated samba packages fix security vulnerabilities 97-12: Updated xchat packages fix "/dns" vulnerability		
BHSA-2003:2	29-13: Updated wget packages fix directory traversal bug 06-05: Updated nfs-utils packages fix denial of service vulnerability	Tasks	
Contacts	25-05: Updated LPRng packages fix psbanner vulnerability 28-04: Updated xinetd packages fix denial-of-service attacks and other bugs	\triangleleft	
		No tasks	

The Ximian Evolution Calendar



♥ Calendar	- Ximian Evolution 1.2.2 [(1	.2.2-4)]				_ X
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Inbox						
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Contacts	21	22	23	24	25	26
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	28	29	30	31	01 August	02
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Ximian Evolution Settings



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Creating Your Own CDs





Configuring Xcdroast CD-RW Drives



		Setup							
	Device-Scar	CD Settings	HD Settings	Miscellaneous Options					
	Туре	Bus,Id	Vendor	Model	Rev.	Description			
	e	[0,0]	SEAGATE	ST336607LW	HPS4	Disk			
		[ATAPI:0,0]	HL-DT-ST	DVD-ROM GDR8161B	0037	CD-ROM			
Save configuration									
Ok									
Cancel									



X-CD-Roast -									
	Setup								
	Device-Scan CD Settings HD Settings Miscellaneous Options								
	CD Writer Configuration								
	CD Writer Device: HL-DT-ST DVD-ROM GDR8161B [ATAPI:0,0]								
	CD Writer Mode: Autodetect								
	CD Writer Speed: 4× ///								
	CD Writer FIFO-Buffer-Size: 4.0MB								
Save configuration	CD Reader Configuration Primary Read Device: HL-DT-ST DVD-ROM GDR8161B [ATAPI:0,0]								
	Secondary Read Device: HL-DT-ST DVD-ROM GDR8161B [ATAPI:0,0] 👻								
	Audio Read Speed: 1× ///								
Ok	Sectors per request: 75								
	Sectors for overlap sampling: 0								
Cancel	Paranoia retries per sector: 20 ///								
	Use paranoia mode for audio								



My traceroute [v0.52]							:
Hostname mail.verizon.net			1	.00 🗘	Pause	Restar	Quit
Hostname	Loss	Rcv	Snt	Last	Best	Avg	Worst
192.168.0.1	0%	25	25	0	0	0	0
wbar1.sea1-4-5-000-001.sea1.dsl-verizon.net	32%	17	25	25	25	26	26
4.9.0.162	38%	15	25	26	26	27	38
ge-4-0-1.mp2.Seattle1.level3.net	34%	16	24	26	26	26	27
so-0-1-0.bbr2.Dallas1.level3.net	34%	16	24	66	65	66	66
POS10-0-100.crtntx1-br2.bbnplanet.net	34%	16	24	67	66	67	73
p2-0.crtntx1-cr10.bbnplanet.net	34%	16	24	67	66	67	74
p1-0.verizonol4.bbnplanet.net	34%	16	24	68	67	68	74
gigchannel9-012-0.core1.dfw-tx.vzlink.com	34%	16	24	68	67	68	74
vr1-res.asf.dfw-tx.vzlink.com	34%	16	24	68	68	68	76
res1.asf.dfw-tx.vzlink.com	34%	16	24	68	68	68	69
mta1pub.gte.net	34%	16	24	68	68	70	86

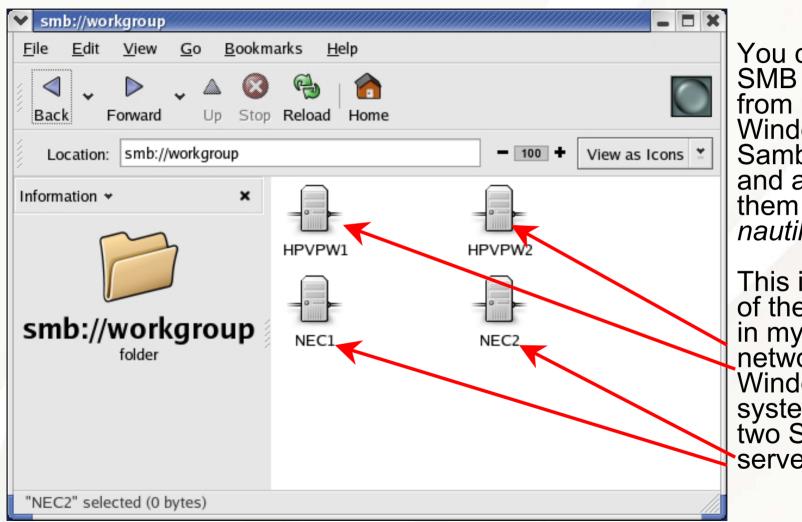


Lab #2: Useful Linux Graphical Tools

See Lab #2 Handout for details

Mounting SMB Shares





You can mount SMB shares from Windows® or Samba servers and access them through *nautilus*.

This is a map of the systems in my home network: two Windows systems and two Samba servers.

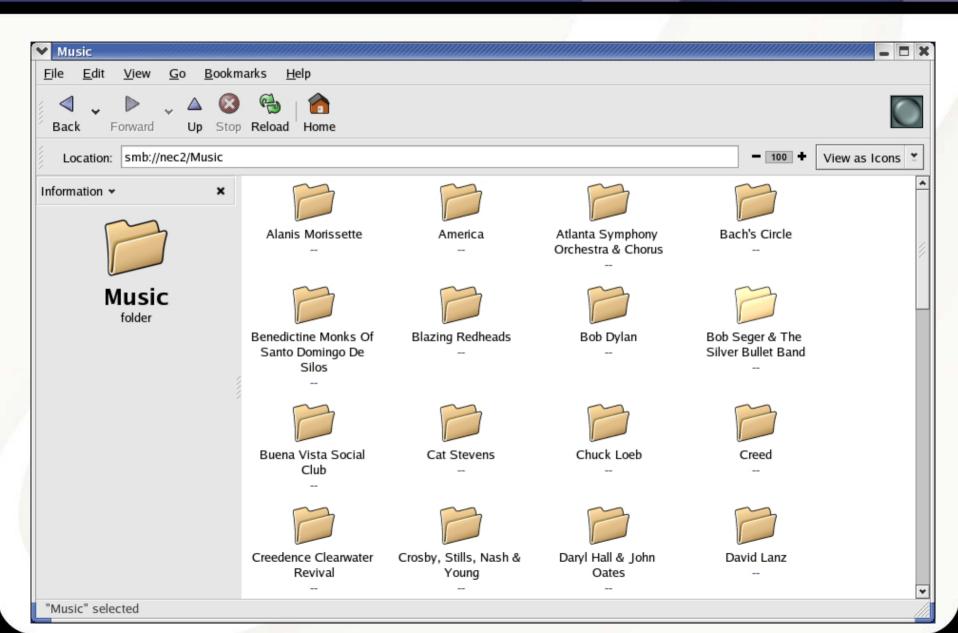
Viewing Individual Samba Shares



▼ smb://nec2			_ _ X
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>G</u> o <u>B</u> ookn	arks <u>H</u> elp		
Back Forward Up Stop	Reload Home		
Location: smb://nec2			- 100 + View as Icons 🖆
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	Backups 	ISOs 	Music
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folder	Pictures	Raid5	Rob
		e e e e e e e e e e e e e e e e e e e	
	Software	Teri	
"NEC2" selected (0 bytes)			

Music Share After Authentication

(Dear RIAA: Yes, I have purchased all of the music present here and do not share)





- The OpenOffice tools are an open-source version of the Sun StarOffice Suite
- The StarOffice tools are available for \$\$ from Sun
- The OpenOffice tools are available from http://OpenOffice.org

Announcement: OpenOffice.org 1.1 RC

OpenOffice.org 1.1 RC is ready for general use. It replaces our legacy build, OpenOffice.org 1.0.3.1, which lacks the new features making OpenOffice.org 1.1 revolutionary. OpenOffice.org 1.1 RC not only includes features introduced in 1.1beta, such as export to PDF, SWF, DocBook, and improved on-line Help, but also:

- Existing single-user installation update capability
- Integrated Bitstream Vera fonts
- Built-in proofing tools and hyphenation for many languages
- Better Microsoft Office filters

OpenOffice Calc Spreadsheet



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OpenOffice "*Calc*" runs natively on Linux, and can import and export files to Microsoft® Excel®

OpenOffice Impress

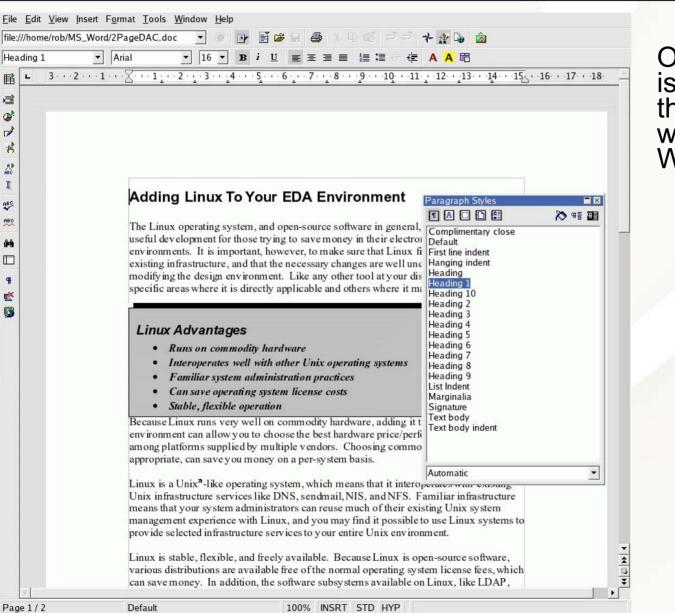


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23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	Presentation Image: Stide Layout Stide Design Duplicate Stide Duplicate Stide Presentation Styles Image: Stide Stide Image: Stide Image: Stide Stide Image: Stide Stide Image: Stide Stide Image: Stide Stide Image: Stide Stide Image: Stide Stide Image: Stide Stide Stide Image: Stide Stide Stide Stide Image: Stide
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OpenOffice *"Impress"* is a presentation tool that can import and export Microsoft® Powerpoint® presentations

OpenOffice Writer





OpenOffice "*Writer*" is a word-processor that can import and write Microsoft® Word® documents.

Crossover Office

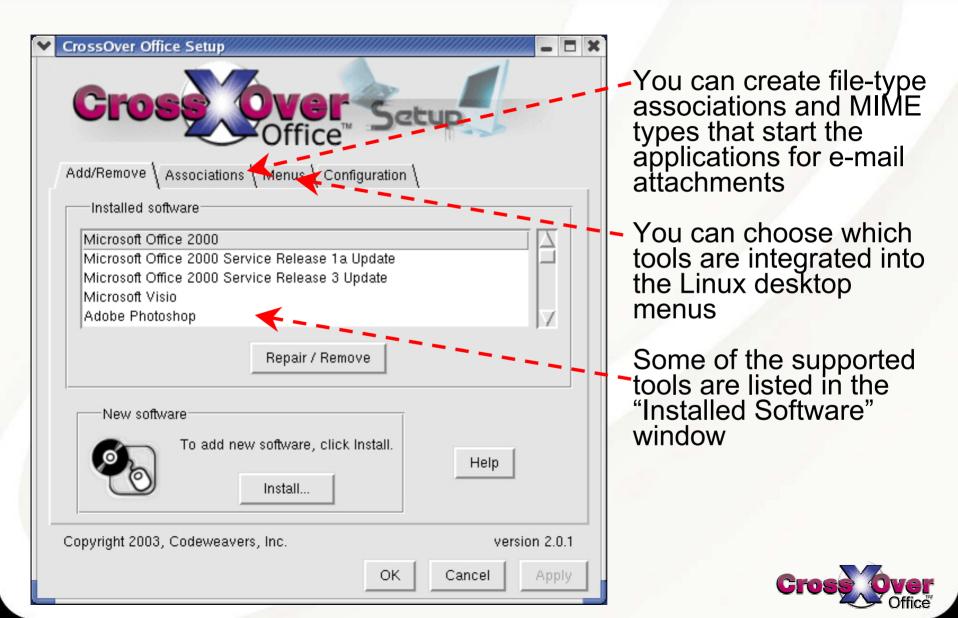


- Crossover Office[®], from CodeWeavers Inc. is a special version of WINE (Wine Is Not an Emulator) that can execute Microsoft[®] Office programs on the Linux Desktop
- Available for \$\$ from <u>http://Www.CodeWeavers.Com</u>
- You are required to purchase licenses for the Microsoft software, and then install it in the CrossOver Office environment
- The CrossOver Office environment integrates itself into your application menu and provides a pseudo-Windows disk arrangement
- The tools run quite well as long as you use supported versions of the Microsoft Office product: Office 98, Office 2000, and parts of Office XP
- There is no compatibility issues with the application behavior, because is *is* the same software



CrossOver Office Setup





CrossOver Office File Associations



Y	CrossO	ver Office S	Setup		///// _ 🗆 🗙					
Г	Crossover Setup Office Add/Remove Associations Menus Configuration									
	Icon	Extension	Mime Type	Application	Enabled					
		rtf	application/msword	winword.exe						
		pot	application/vnd.ms-powerpoint	powerpnt.exe	-					
		pps	application/vnd.ms-powerpoint	powerpnt.exe						
		ppt	application/vnd.ms-powerpoint	powerpnt.exe						
	Show common file types only									
	Help									
	Copyrigh	nt 2003, Cod	deweavers, Inc.		version 2.0.1					
			0	K Cance	I Apply					

Creating file type associations in the MIME database allows automatically starting the proper tool in response to clicking on an e-mail attachment

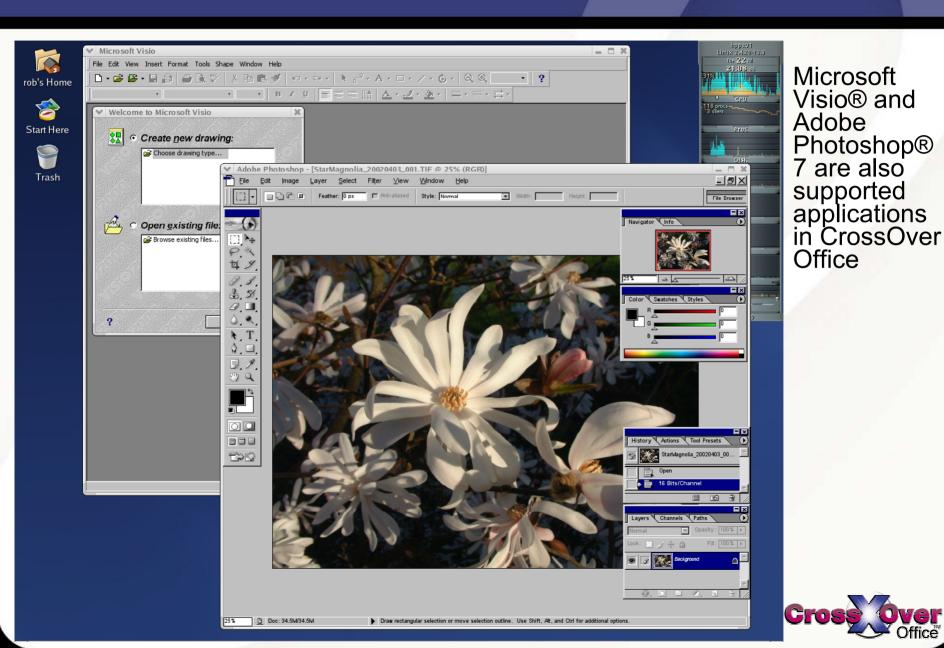
The associations are disabled by default



Example Desktop with Outlook and Internet Explorer 6

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Example Desktop Running ViSiO and Adobe Photoshop



Example Desktop with Microsoft Word and Excel

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An Example Launcher for CrossOver Office

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♥ Launcher P	roperties	
Basic Advance	ed	An
Name:	Microsoft Outlook	example
Generic name:		launcher
Comment:	Send and receive e-mail; manage your schedule, contacts, and tasks; and record your activities by using Microsoft Outlook.	for
Command:	/opt/cxoffice/bin/wine "2://Program Files//Microsoft Office//OUTLOOK.EXE"	Outlook
Type:	Application	
lcon:		
Si Help	Revert Close	

Note the path that is passed to *wine*. It is relative to the *.cxoffice/dotwine/fake_windows* directory in the user's home directory



Running Windows Inside a Virtual Machine

- D
- Another product that makes running Windows applications possible is VMware®, which provides a virtual machine to share the workstation's CPU
- The performance is that of the native hardware, minus a small percentage
- Think of the virtual machine as a "container" inside which a complete Microsoft Windows operating system environment exists, unaware that it is being treated like just another application on the Linux system
- The virtual machine's software interfaces with the Linux hardware to provide networking, sound, graphics, USB, and other support
- To the operating system and software running in the virtual machine, it is a fully compatible x86 PC
- To Linux, the virtual machine appears as a process (and some other auxiliary processes)
- Running multiple virtual machines on the same system is possible if you have enough resources (CPU and RAM)





- The virtual machine uses files in the Linux file system as "virtual disks"
- Virtual machine configurations are portable and can be cloned (and backed up with "*tar*" or other tools)
- The virtual machine can roll back changes to the virtual disk when it terminates
- Only the space actually used is allocated from the Linux file system (i.e. the virtual disks are "sparse")
- The interface to the VMware software is X-based on Linux (it also runs on Windows), and can be shared across the network like other X-windows applications
- You must have licenses for all software that you run in the virtual machine
- The "guest" operating system is not limited to just Microsoft Windows, you can run virtually (pardon the pun) any x86-based operating system

VMware Settings for Hardware



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	Device Summary Image: Memory 384 MB Virtual Disk (SCSI 0:0) Compact DVD/CD-ROM (IDE 0:C Using drive /dev/cdrom Virtual Disk (SCSI 0:0) Floppy Drive Using drive /dev/cdrom Image: Network Adapter Bridged Image: Network Adapter Host-only Image: USB Controller Present Image: Sound Adapter Using device /dev/dsp Image: Mouse autodetect	Memory Adjust the amount of memory allocated to this virtual machine. The guest memory size that you specify must be in multiples of 4 MB. Guest size (MB): 384 System total (MB): 1004 Recommended guest range (MB): 32 - 908 Total memory for all running virtual 908 machines (MB):
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A Linux "guest" operating system running on a Linux "host" operating system.

The control panel shows the hardware being provided to the virtual machine's operating system (384 MB of RAM, DVD, etc.)



VMware Network Device Configuration



Hardware Options Device Summary Memory 384 MB Virbual Disk (SCS10:0) Compact Vol/Co-ROM (DE 0:C Using drive /dev/Cdrom Connected power on Network Adapter Host-only Network Adapter Host-only Sound Adapter Using drive /dev/dev Mouse autodetect Mouse autodetect Add Remove OK Cancel	VMware Workstation File Edit Power Snapshot Wew Window Help Image: State of the state of t	
	Device Summary ■ Memory 384 MB ♥ Virtual Disk (SCSI 0:0) Compact ● DVD/CD-ROM (IDE 0:1 Using drive /dev/cdrom Using drive /dev/cdrom ● Floppy Drive Using drive /dev/for ● Network Adapter Bridged ● Network Adapter Host-only ● USB Controller Present ● Sound Adapter Using device /dev/dsp ● Mouse autodetect	 Connected Connect at power on Connect to the following network Bridged: Connected directly to the physical network NAT: Used to share the host's IP address Host-only: A private network shared with the host Custom: Specific virtual network
Language Session Reboot Shut down Tue Jul 22, 10:35 PM	> Language > Session > Reboot > Shut down	

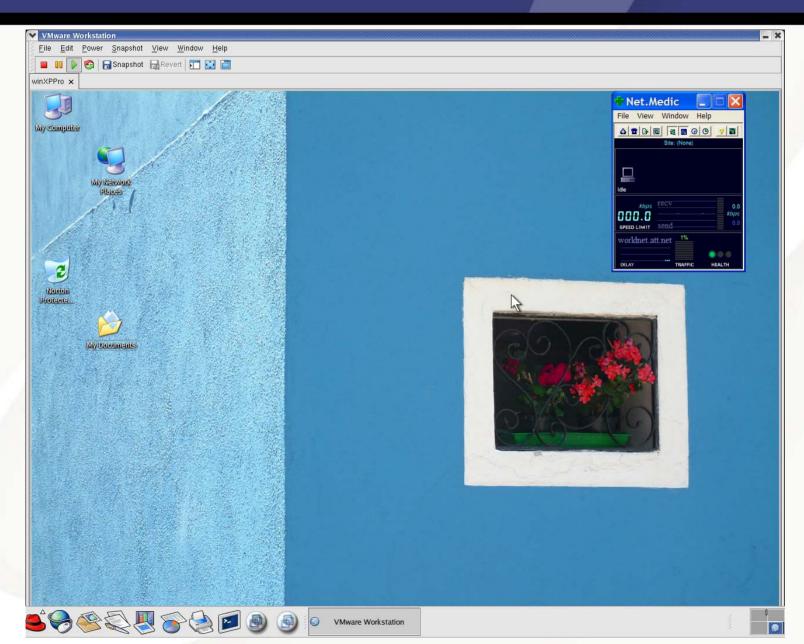
The VMware virtual machine is providing two network adapters to the guest operating system.

One is bridged to the host operating system's network (eth0) and the other is a "hostonly" connection to share the local file system with the virtual machine's guest operating system.

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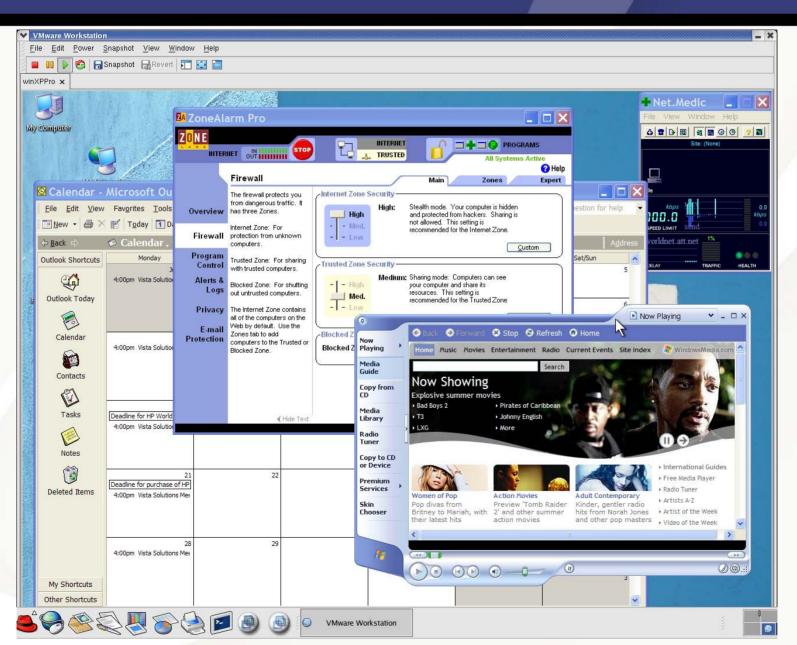
VMware Windows Guest on Linux Host





VMware Running Windows Applications







Lab #3: Microsoft ® Windows ® Interoperability

See Lab #3 Handout for details