"Linux Desktop Hands-On"
HP World 2004
Lab Exercises

Lab 1: Configuring Linux Desktop Settings

Objectives: Understand the structure of the Linux desktop(s), KDE and GNOME, and their menus and the options for personalizing the desktop environment. Learn some basic window handling operations and how to use workspaces.

Exercise 1: Starting with the GNOME Basics

Log in as your workstation's user, selecting a GNOME session from the **"Sessions >**" menu. Your home directory is on the lab's NFS server. Select "Yes" when asked to make GNOME your default session type. You should see the "default" desktop.

Select "**Applications > System Tools > Terminal**" (the application menu has the RedHat icon) to open a terminal session. Why this is not one of the default launchers is a mystery. It is, however already on the right-click menu for the workspace background. Point to the background, right-click, and select "**New Window**" to open another terminal session.

Let's take a quick look at your login rc file, **~/.bashrc**, just to make sure that things are set up to a very basic level. Edit the **.bashrc** file by executing "***vim ~/.bashrc***". Note that **vi** and **vim** (vi improved) are one and the same. They both will try to use color, so changing the background of your terminal sessions is a precarious thing to do. Add the lines "**alias ll='ls –al'**", "**alias is='ps –ef | grep'**", "**alias 'bdf=df'**", and "**alias lanscan='ifconfig'**". Some of these are for the HP-UX administrators in the audience… Note that the file sources **/etc/bashrc** if it exists, along with files in the **/etc/profile.d** directory if they end in the "**.sh**" suffix. Save the file after making the modifications. The default files in your home directory come from the **/etc/skel** directory (skeleton user configuration) and are placed there when your home directory is created by **adduser**.

If you examine the **/etc/bashrc** file, you will see that it does a bunch of mundane things like figuring out if your terminal session is interactive, etc. One thing that is interesting is that the file will execute "***shopt checkwinsize***", which is a **bash** built-in command that sets the shell option "**checkwinsize**". This option will automatically readjust the **LINES** and **COLUMNS** environment variables when the window is resized. Thank you, Linux.

The default "panel" at the bottom of your workspace is sort of a home base for launching applications. Let's add a "launcher" to the panel that will start a terminal window. Right-click the panel and select "**Add to Panel > Launcher frm Menu > System Tools > Terminal**". That will place a launcher, identical to the one in the menu, on the panel.

If you don't like where it was placed, right-click on the terminal icon and select "**Move**". Your mouse pointer will change to indicate that you are moving the launcher. You can now drag it to wherever you want it. Note that the other inhabitants of the panel move out of the way. When you get the terminal launcher where you want it, left-click.

Exercise 2: Setting Some GNOME Preferences

There are a lot of preferences that you can set for your desktop. We will not be able to cover all of them in these labs, there are just too many. We will skim over some of the more important ones.

Select "**Applications > Preferences > Control Center**" to open the preferences browser. Double-click the "***Windows***" icon in the preferences window. Choose your window focus preference. I tend to use "***Select windows when the mouse moves over them***", but that drives some people crazy. To keep from driving myself crazy, I select "***Raise selected windows after an interval***" and a value of 1.0 seconds for the interval. That way as you are pointing around, the windows will not raise until you have stopped in one for a second.

Note the "***Double-click the titlebar to perform this action***" is set to "**Roll up**". We'll use this in a minute, so don't change it. Click "***Close***" to save the changes.

Now point to the "***Preferences***" title bar and double-click it. What happened? This is "rolling up" your window. Double-click the title bar again to unroll the window. There are lots of options that control window placement, and window relationships. Explore a little.

Now double-click on the "***Mouse***" icon in the preferences window. You can set the pointer size, the mouse speed, and the other options to your liking. Click "***Close***" to save the changes.

Double-click the "***Background***" icon in the preferences window. If you click on the "***Select Picture***" box, you will see a file widget that will present some optional backgrounds. Also look in the **/usr/share/backgrounds/tiles/Propaganda/Vol*** directories, there are some cool images there. I like the **Vol2/15a.jpg** file, personally. You might need to change the "***Picture Options***" depending on whether you select a tile or a full image. Click "***Close***" once you make your background selection.

Back in the preferences window, double-click the "***More Options***" icon, then double-click the "***Sessions***" icon. I usually uncheck the "***Prompt on logout***" check-box and check the "***Automatically save changes to session***" box. Make sure you check this box for our lab.

Examine the "***Current Session***" information by clicking on that tab. The "***Order***" column determines which applications are started first when you log in. The lower values start first. This is a way that you can keep away from the Microsoft Windows "launch-everything-at-once-and-thrash" problem at login time.

We're going to start the **gkrellm** tool. Type "***gkrellm &***" in a terminal window. Click "Okay" to acknowledge the configuration information, but don't change anything just yet. Click "***Applications > Logout***" to leave your session.

Notice the error message from the GNOME session manager. The **gkrellm** tool did not answer the "save yourself" message from the session manager. Tools may be integrated into the environment, or not. This tool is not. Click "***Close***" to log off. It would be nice to have a timeout on the message(s). Oh, well, get out the source code …

Log back in, making sure you again select a GNOME session. Notice that **gkrellm** was restarted in spite of the message we got at logout. A bug? No, the session manager restarted **gkrellm** because it was running when we logged out. It made the assumption that the tool was not smart enough to save the data about its location. Not quite true.

Right-click on the top of the **gkrellm** window and select "***Configuration***". Select the "***Remember screen location …***" check-box, and set the "***GKrellM width***" to 100 (pixels) or a size of your choosing.

Next, click on the "***Built-ins***" arrow in the options to see a list of the available (by default) monitors. Most of these read information from the **/proc** file system. Explore the settings in **gkrellm**, making any desired changes, the click "Okay".

Exercise 3: Using GNOME Workspaces and the Pager

Notice the "pager on the panel, it contains the same title bar information as the windows on your current desktop. Right-click on the box in the pager containing the "***gkrellm***" text and select "***Put on All Workspaces***".

Examine the "switcher" right next to the pager on the panel. The switcher has four quadrants, by default, that represent the four workspaces available to you. Notice that there is now a small window represented for **gkrellm** in each of the four quadrants.

Right-click the switcher and select ***"Properties***". Select the "***Show only the current workspace***" check-box, and notice that the switcher shows a larger representation of the open windows in the current workspace. If you don't have a terminal window open, open one or two.

Pick one of the window representations in the switcher, and click on it. Note the window behavior. Clicking on one of the quadrants that is not the current workspace will enable that workspace. Switch to another workspace and notice that **gkrellm** is displayed there. Go back

and unselect the "***Show only the current workspace***" option and close the dialog box.

Select one of the open terminal windows and right-click on its title bar. Select the "***Move to workspace 3***" option. Make sure you have a terminal window open in the current workspace. Type "***ls –al***" in the windows, but do not type <Enter>. Highlight the text of the command, and right-click on it. Select "***Copy***" from the menu.

Move to the workspace containing the window you just moved, using the switcher. Point in the terminal window, right-click, and select "***Paste***". Note this is different from the "normal" X-windows behavior. Hit <Enter> or <Ctrl-C> to get a new prompt. Then middle click in the window. Notice the "normal" X-windows behavior with the clipboard text.

Exercise 4: Let's Try KDE

Log out of your GNOME session and log in again selecting a KDE session from the login "***Session >***" menu.

You will immediately notice a similar look and feel (this is the Bluecurve theme provided by Red Hat to make the two desktops remotely familiar). There the similarity ends for the most part.

Click "***Close***" to get rid of "***Kandalf's Useful Tips***" if it appears. You might leave the "***Show tips on startup***" checked if you want to learn obscure things about KDE each time you log in.

Right-click on the desktop and select "***Configure Desktop***". Click on the "***Behavior***" icon and click the "***Enable desktop menu***" option, then click "***Apply***". One difference already: you have the option to apply changes without exiting the dialog box.

Click "***Display devices on desktop***" the "***Apply***". Now click on the "***Background***" icon and select the "***Browse***" button. Select the **/usr/share/wallpapers/water01.jpg** file and "***Mode: Tiled***" then click "***Apply***".

Click on the "***Screen Saver***" icon and check the "***Require password to stop screen saver***" check-box then click "***Apply***". Browse the available screen savers and pick your favorite, or just leave the setting at the default, "***Random***".

Open two terminal windows using the "***Application > System Tools > Terminal***" menu item. Now right-click on the desktop and select
"***Windows > Unclutter Windows***" from the desktop menu. What happened to the terminal windows? Now select the "***Windows > Cascade Windows***" menu item. What happened?

Click "***Okay***" to close the "***Configure Desktop***" window. Right-click on the panel and select "***Configure Panel***" from the menu. Click on "***Layout***" and click the "***Hiding***" tab. Check the "***Hide automatically***" option box. Explore the options, then click "***Okay***" to close it.

Start a new terminal window, or use an existing one to type "***gkrellm &***". Notice that **gkrellm** starts at the same location as under the GNOME desktop. This is because the **gkrellm** program saves its state information in the **.gkrellm** directory in your home and is independent of whatever desktop you are running. The two desktops save their state in **.kde*** and **.gnome*** files and directories in your home directory.

Right-click on the **gkrellm** box in the pager (called the "task applet" in KDE). Select "***To Workspace > All Workspaces***" to make the window visible in all workspaces. Check the switcher (called the pager in KDE) to see that the window is visible in all workspaces.

Right-click on the desktop again and select "***Configure Desktop***. Click the "***General***" tab, and enable "***Desktop menu bar***" by selecting the radio button. Many of the desktop functions are now available at the top of your desktop window. You can disable this menu by selecting "***Desktop > Disable Desktop Menu***" from the desktop menu.

Right-click on the desktop and select "***Run Command***". Type "***konsole***" into the input line and click "***Run***" or type <Enter> to open a new terminal window. Right-click the desktop and select "***Run Command***" again. Click on the down-arrow next to the input box and notice "***konsole***" is there. Select it and click "***Run***". Pretty handy.

Exercise 5: KDE Control Center Options

Okay, we have seen the "***Configure Desktop***" option window. That is just scratching the surface, however with KDE. Select "***Applications > Control Center***" to open the whole world of KDE konfiguration (notice that everything starts with a "k" in KDE?)

Open the "***KDE Components > Session Manager***" option and set your session prompting and behavior. Then select "***Desktop > Window Behavior > Advanced***" and click the "***Active Desktop Borders***" option. Click "***Apply***". Now grab the title bar of the "***Control Center***" window by pointing to it and holding down the left mouse button. Drag the window to the right, off the screen. Watch the switcher, er, the pager when you do this. Notice that you are dragging the window into/onto the next workspace. Try dragging up/down, right/left to see what happens. This is just a behavioral option that can be very useful (once you get used to it). The edge-flipping sensitivity, of course, is configurable.

Right-click the panel and select "***Add > Applicaton Button > System Tools > Terminal***". Right-click on the launcher, er, "application button" and select "***Move***". Place it on the panel where you want it. At least some things are similar between KDE and GNOME … How many ways did you count to get a terminal window?

Now try double-clicking the title bar of a window. Notice that it rolls up like in GNOME, but of course it is called "shading" in KDE. Move your mouse pointer over the title bar and observe what happens. Move the mouse pointer away. Double-click on the title bar again and observe the change in behavior. This is called "shade hovering" and is configurable, of course.

Exercise 6: Using the KDE Klipper Tool

In the lower right part of the panel is an icon that resembles a clip-board. This is the icon for the KDE **klipper** tool. Right-click on the icon and make sure the "***Actions Enabled***" option has a check mark beside it. You can also toggle enabling/disabling the **klipper** actions by typing <Alt-Ctrl-X>. Right-click on the icon to open the "***Configure Klipper***" (Hey, why isn't that "***Konfigure Klipper***?" Check the "***Popup menu at mouse-cursor position***" option.

While we have the "***Configure Klipper***" window open, click on the "***Actions***" tab. Note the regular expression that reads "**^https?://.**", and click on the "+" next to it to open the sub-items. Take a look at the actions that are defined for the regular expression. What this is for will become clear when we use the tool. Click on the "***OK***" button to close the window.

Now go to a terminal window and type ***"http://www.hp.com"*** at the command line. Left-click and drag the mouse cursor to highlight the text. Notice the menu that appears. Select the "***Open with Mozilla***" option. This will start **mozilla** with the highlighted URL.

Any general action may be tied to a regular expression match on the clipboard with the **klipper** tool. Take a look at some of the other actions available and try them out.

Exercise 7: File Browsers – Konquereor and Nautilus

Since we are in KDE at the moment, we will take a look at the KDE file browser first. Click on the "***Home***" icon on your desktop to open **konqueror**, the KDE browser. I say browser, because **konqueror** is a web-browser and file browser all rolled into one. Note the current URL in the status window: **file:/<your_home_directory>**. If you don't have a "***Home***" icon (it is a configuration setting), double click the "***Start Here***" icon. Along the left side of the window that opens is a menu of locations, one of them is your home directory. Double click on the "***Home Folder***" icon to open the directory in the browser. If all else fails, open the **konqueror** browser manually and enter "**file:/<your_home_directory>**" in the URL input.

Click on the red folder icon in the far left window panel to open a view of the root directory. You might have to hunt for it. Try clicking on the **boot** and **etc** directories in the tree view of the file system. Note the icons being displayed for the various file types. Some of the icons will display the file contents after a short delay.

Click on the yellow star in the far left window pane. Note that it opens the "***Services***" view. Click on ***"Devices***" to see a list of the mount points. Click on ***"Harddisk (<disk>) mounted at /boot***" to see a view of the **/boot** directory. Note that the CD-ROM and floppy devices are included in the list.

Placing a CD in the drive will cause the device to be mounted. An icon for the CD will appear on the desktop, and the status of the CD-ROM drive in **konqueror's *"Devices***" list will change

to "***CD-ROM (cdrom) mounted at /mnt/cdrom***". Try this if you have a data CD-ROM.

A music CD will behave slightly differently. An item named "***Audio Browser***" will appear in the "***Devices***" list, in place of the "***CD-ROM (cdrom) …***" description. Under the "***Audio Browser***" will be "***By Name***", "***By Track***", "***dev***", "***Information***", "***Ogg Vorbis***", and "**<*CD_name_from_Internet_database*>**". You can play the CD-ROM with the built-in KDE player, **kaboodle**.

You can also use **konqueror** to browse the web. Enter ***"www.hp.com"*** in the "***Location:***" text box and type <Enter>. Notice that the web page is brought up in the right-hand display panel. This type of behavior is available in both desktop browsers: using URLs to access information. Both browsers have special URL conventions to allow display of local files, FTP sites, web-pages, CD-ROMs, and many more items.

Browse around and explore using **konqueror**.

For now, we are going to explore the GNOME file browser, **nautilus**. Log out of KDE and back into GNOME. You should know how to do this by now.

Double-click the "***Start Here***" icon on your desktop. This will open **nautilus** with a default "***Location:***" value of "**start-here:///**". Double-click the "***Home***" icon on your desktop. This will open **nautilus** with a "***Location:***" value of "**/<your_home_directory>**". Note the different desktop behavior between KDE and GNOME (single versus double-clicking).

Type "***/boot***" into the "***Location:***" box. Notice the icons and attached "emblems" for some files. The contents of some files is displayed, just like in **konqueror**. To see what the emblems mean, you can click the "***Information***" down-arrow and select "***Emblems***" from the menu. This will display a list of emblems and their meanings and change the menu name to "***Emblems***". Click the menu down-arrow again, and select "***Information***" to return to the normal display.

Now type ***"www.hp.com"*** into the "***Location:***" box and press <Enter>. Notice that the html is displayed, a difference between **nautilus** and **konqueror**. Click "***Open with Mozilla***" to open the page in a web browser.

If the lab has an external Internet connection, you can browse to the Red Hat software download site. Enter ***"ftp://updates.redhat.com/9/en/os"*** into the "***Location:***" box. You should see directories like **i386**, **athlon**, and **i686**. Select one and double-click it. . Select one and double-click it. You should see the available **rpm** files in the directory.

Time to return to class now.

Lab 2: Useful Linux Graphical Tools

Objectives: Experience some of the useful tools that are provided with the Linux desktop environment.

Exercise 1: Working With The GIMP

The Linux desktops provide the "GNU image manipulation program", **gimp**, otherwise called "The GIMP". We will get a little flavor for what this program can do. Anyone familiar with Adobe ® Photoshop ® will recognize some of the characteristics of "The GIMP".

Select "***Applications > Graphics > Gimp Image Editor***". Continue clicking "***Continue***" on the options dialogs, until the program starts. If you were setting up your own preferences, you might need to pay closer attention to the options. We can use the defaults. Click "***Close***" on the tips window to close it. This leaves you with the main window, which contains the tool box. Select "***File > Open***" from the main window's menu.

Open the file **/usr/share/backgrounds/images/space/apollo08_earthrise.jpg** using the file selection dialog. Right click on the image and select "***View > Nav. Window***" to open the navigation window. Move the slider in the "***Navigation Window***" to "***3:1***" or "***300%***" to see a section of the enlarged image. The navigation window's white rectangle displays which portion of the image is viewable in the work area.

Right-click on the image. Select "***Filters > Light Effects > SuperNova***" and click "***OK***" to apply the filter. Next right-click on the image again and select "***Filters > Artistic > Oilify***". Again click "***OK***" to apply the filter to your image. What a masterpiece, but don't give you your day job just yet.

Save the image as another file, if you like, browse and play, or just exit "The GIMP". You could spend weeks learning all of the features of this program. Continue on to the next exercise.

Exercise 2: Using Ghostscript and Xpdf

Some of the Linux documentation is in postscript format. This is fine if you have a handy postscript printer to use, but you can also display the information on your screen using the **ghostview** "***gv***" ghostscript interface. To try out **ghostscript**, execute "***gv /usr/share/doc/iprout-2.4.7/ip-cref.ps***" This will display the document on your screen. Exit from the document after trying some of the viewing buttons.

Most of the printing on UNIX is done with postscript as the printer language. This tool is very useful for viewing raw postscript output.

To try out **xpdf**, type "***xpdf /usr/share/doc/Samba-2.2.7a/docs/Samba-HOWTO-Collection.pdf***" exit from the document using the menu options. Of course, there is a version of the Adobe ® Acrobat ® reader available for Linux. You can download that for free or install it from one of the auxiliary Red Hat Linux CDs. Continue to the next exercise.

Exercise 3: Ximian Evolution Organizer

The Ximian® Evolution® organizer is listed under the menus as "***Evolution Email***", but it is much more than just an e-mail tool. It handles contacts, tasks, your calendar, and will connect to a Microsoft® Exchange® server with a special "connector" package that you can buy. We will cruise through the tool here.

We will set **evolution** up to receive mail on your local host.
Select "***Applications > Internet > Evolution Email***". Click "***Next***" in the "***Welcome***" screen if it appears. Fill in values for your identity in the "***Identity***" screen, then click "***Next***". In the "***Receiving Email***" screen, set "***Server Type***" to "***local delivery***" and click "***Next***". Set the "***Server Type***" to "***SMTP***" and "***Host***" to "***localhost***" in the "***Sending Email***" screen, and then click "***Next***". Click "***Next***" in the "***Account Management***" screen. Fill out the time-zone information and click "***Next***". Click "***Finish***" in the "*Done*" screen to finally enter the program. This setup may have been done for you prior to the class.

You will find yourself in the "***Summary***" page. Note that Boston, Massachusetts is where Ximian headquarters is located. The icons in the left window pane will select the major functions that are available in **evolution**. Click on the "***Inbox***" icon, and notice (of course) that it is empty.

Explore the "***Calendar***", "***Tasks***", and "***Contacts***" functions. Now select "***Tools > Settings***" from the main menu bar. Click on the "***Summary Preferences***" icon, which is toward the bottom of the list. This is where you can set up your email, news feeds, weather, and schedule options. Explore the settings. Notice the "***VFolders***" option in the "***Mail***" tab.

One of the unique features of **evolution** is called a "Virtual Folder".
You can select "***Search > Create Virtual Folder From Search"*** in the main tool bar. The **evolution** documentation says that "a virtual folder looks like a folder, acts like a search, and is set up like a filter." This lets you click on a folder representation to see email that is filtered from all of your email folders according to your criteria. We can't try this, unfortunately, because you don't have a lot of email in your folders.

You can work off-line with **evolution** by clicking on the connector icon in the lower left corner of the window. When the connectors are apart, you are off-line. Clicking on the icon again will connect you to the network servers that you use. Exit **evolution** when you are finished browsing around.

Continue to the next exercise.

Exercise 4: Miscellaneous Graphical Tools

Select "***Applications > Internet > More Internet Applications > gFTP***". This will open a graphical FTP application. In the "***Host:***" box, type "***updates.redhat.com***" and click the connection icon in the upper left corner (resembles two system monitors). You should see the directory listing show up in the left display pane (if there is a live Internet connection in the lab).

Examine the left display pane and notice that it is your home directory. You can drag and drop files from one pane to the other, depending on the direction of the transfer. When you are finished experimenting, exit **gFTP**.

From the "***Applications > Internet***" menu, select "***ethereal***". You will need to enter the root password to run this tool. Notice that the desktops have a way to ask for the root password for applications that require it, even though you are not logged in as root.

Select "***Capture > Start***" from the main tool bar. This will open a dialog box. For "***Display Options:***" select "***Update list of packets in real time***". Set the "***Stop capture***" option to 100 packets. Enable network name resolution and then click "***OK***". This will start capturing packets. Normally, name resolution will slow down packet capture and display. You can also optionally capture to a file or files and do the analysis later.

When the capture stops, scroll around looking at the packets that got captured. See how easy it is for someone to snoop your passwords or other non-encrypted data?

Try running "***Traceroute***" from the "***Applications > System Tools***" menu to see how many hops to your favorite web site. You will also need to enter the root password to run this tool. Enter the fully-qualified name of the site you want to access. Click "***Pause***" after several cycles. Examine the data, then click "***Quit***" to exit the tool.

Start and explore the **mozilla**, **galeon**, and **konqueror** browsers. Each has its strengths and weaknesses. I use **mozilla** (actually Firefox).

Last, but not least, check out the game offerings. There are a couple of good ones on the menus. 8^)

Time to go back to class now.

Lab 3: Microsoft ® Windows ® Interoperability

Objectives: Use some of the Linux tools available to interoperate with Microsoft Windows systems and data formats. Gain experience with the OpenOffice tools, CrossOver Office, and VMware.

Exercise 1: OpenOffice, Koffice, and Other Tools

Log into a GNOME session as your workstation's user. Three large icons in the panel will launch the OpenOffice tools: **Writer**, **Impress**, and **Calc**. Locate these launchers and the OpenOffice tools in the "***Application***" menu. Launch the **Writer** application.

OpenOffice will ask you to import your address book information from one of several sources, with the default being **Mozilla**. Click "***Next***" to import the address book. Select "***Personal Address Book***" as the source, then click "***Next***". Click "***Create***" to create the address book, then click "***OK***" to confirm.

Now choose "***View > Zoom > Page Width***" from the main tool bar menu. Type some text into the document. A 5000-word essay on why Linux is a good idea will do. Select "***File > Save As***" from the main tool bar. Enter "***mydoc***" for the "***File name:***" and select "***Microsoft Word 97/2000/XP***" for the "***File type:***" information. Click "***Save***", and then select "***File > Exit***" from the main tool bar. Answer "***OK***" to the dialog box about losing formatting. Notice all of the different formats that may be created, including the "***Export in PDF***" option.

Now start the **Impress** tool from the panel. Create a presentation. Have fun! Select "***File > Save As***" in the main tool bar and then select "***mypresentation***" for "***File name:***" and "***Microsoft Powerpoint 97/2000/XP***" for "***File type:***". Click "***Save***". Select "***File > Exit***" and answer "***OK***" to the formatting dialog box.

Follow the same procedure for **Calc**. Start the tool, then create a spreadsheet by entering three integer values in cells **A1**, **B1**, and **C1**. Click on cell **A3** and type "**=**'. Notice that the default function, **SUM()** appears in a display box. Hit <Enter> to select **SUM** for your formula. Note that the cursor is positioned between the parentheses. Point to cell **A1**, left click and drag the mouse pointer to highlight cells **A1** through **C1**. Note that the range should have been entered into your formula, which should read "***=SUM(A1:C1)***". Hit <Enter> and save the file as "***mycalc***" following the directions for the previous three tools and selecting "***Microsoft Excel 97/2000/XP***" for the "***File type:***".

Log out of GNOME and log into KDE. Select the individual **KOffice** tools, **KSpread**, **KPresenter**, and **KWord** to open the files you created under GNOME. You might find some format incompatibilities … The trick is to pick a common format like PDF that everyone reads and writes. Note that both sets of tools are available in both environments under the "***Applications > Office > More Office Applications***" menu. Select "***Applications > Office >***

More Office Applications > KOffice Workspace" to see an integrated workspace with all of the **Koffice** tools available. You will need all of your documents in the next exercise.

Exercise 2: Running MS Office with CrossOver Office

Up to this point, we have been using native Linux KDE and OpenOffice tools that read and write Microsoft Office format files. CrossOver Office from CodeWeavers is installed on your system. Select the "***Applications > CrossOver > Office Setup***" item from the menu. This will open a window that shows what software is installed under CrossOver Office. The tools include: **Microsoft Internet Explorer**, **Word**, **Outlook**, **Powerpoint**, **Excel**, **Visio**, and **Adobe Photoshop 7**.

Notice that you can set up MIME associations for the Microsoft file types in the Linux MIME database. The menu items for these programs have been created under "***Applications > Windows Programs > Programs***". Do not change anything in the "***Office Setup***" menu! Click "***Cancel***" to exit the window.

Try running these tools with the data files that you created with the Linux desktop office tools. Two notes: 1) the CrossOver office tools start up with their origin at the upper left corner of your desktop – you may need to disable the desktop menu until you have started them once, and 2) the MS Office tools all start out maximized (a hold-over from the Windows behavior) – you should change the mode so that they do not take up the whole screen. These steps will make things easier for you to get started.

For **Outlook**, set up your account by clicking "***Next***" to the setup wizard, then select "***no E-mail***", followed by "***Next***" to get started.

Try running **Adobe Photoshop 7** with some of the files from **/usr/share/backgrounds** as data.

In all of the tools, observe that they behave (mostly) as you would expect, because they are the original code. The libraries comprising the application are loaded and executed directly by the system's processor. WINE stands for "WINE Is Not an Emulator" for that reason. The performance is quite good on a fast-enough processor.

Exit any of the applications that might be running, and continue to the next exercise.

Exercise 3: Running the VMware Virtual Machine

Your system has the VMware software installed, and a pre-configured virtual machine with Windows XP installed in **/vmdata**.

To run the VMware software, execute "***/usr/bin/vmware /vmdata/WinXPPro/winXPPro.vmx***". If you want to add a launcher to the panel or the desktop, the icon for VMware is located in **/usr/share/icons/slick/32x32/apps/vmware.png**.

Some tips about VMware: 1) to release your cursor from the virtual machine window, type <Ctrl-Alt>, 2) you can put the virtual machine into full-screen mode (which is faster than a separate window) by typing <Ctrl-Alt-F8> and to return to "normal" display, type <Ctrl-Alt-F7> (this is the default virtual screen used by the X-windows server).

Your instructor will give you things to try based on how much setup he was able to complete successfully. The virtual machine should be configured to have a "bridged" network connection and a "host-only" network connection. The bridged network connection makes the virtual machine look like another PC on the network, it gets a DHCP address, but is "sharing" the host's network interface. The host-only network connects to a system-local network to allow sharing the host's file system with the virtual machine via SMB. This all takes some work to set up, and the lab environment may not allow it …

The virtual machine has a full version of Windows XP Professional, Microsoft Office XP, and numerous other tools installed. It is just like a real PC. On a dual-CPU machine, where one CPU can run Linux and the other can basically run the virtual machine (the VM actually just looks like a Linux process), this is a screaming setup for interoperability with Windows software.

Lab 4: Knoppix

Objectives: Introduce a disk-free desktop environment, Knoppix. Knoppix boots from a CD-ROM or DVD, and provides a full Linux desktop environment.

Your instructor will give you some suggestions for using Knoppix in the lab. Our exposure will depend on how much time is left.

That is the labs for today. I hope you learned a lot. Just being exposed to this information will make you better able to configure solutions for yourself or your users. Feel free to use remaining time to experiment. Thank you!