



## Mini White Paper

HP Linux Workstations

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# Access to Windows Applications and Formats from Linux

**Summary:** Linux users have several options to run Windows applications and read and write documents in Microsoft® Office® formats.

**Background:** Microsoft Windows applications – especially *Office* – have become the de-facto standard for information interchange in many businesses, even those with a strong Linux presence. Hence, many Linux users have the need to read (and sometimes write) documents in *Excel*, *PowerPoint*, and *Word* formats and to access *Exchange* email and calendar functions. The following strategies can provide this access on Linux:

- Run native Linux applications
- Run Microsoft Office applications directly
- Run Windows directly on a Linux system
- Run Windows on a remote system

**Details:** Running native Linux applications has the advantages that the software is free or low-cost, frequently open source, and sometimes already included in the Linux distributions. The main disadvantage is inconsistent compatibility with evolving document formats and Microsoft protocols.

*OpenOffice* and *StarOffice* provide a full Linux-native alternative suite of productivity applications. These packages are available on many operating systems and they offer good (albeit imperfect) import and export functions. The Gnome desktop provides the *gnnumeric* spreadsheet and *Abiword* document authoring tool; and KDE provides the *kspread* spreadsheet, *kpresenter* presentation software, and *kword* document authoring. Web browsers such as *Mozilla*, *Netscape*, *Opera*, and *Konqueror* are good alternatives to *Internet Explorer* (though you will still occasionally find web pages authored only to work well with I.E.). *Mozilla's* mail client and *Novell Evolution* provide access to Microsoft Exchange servers and the latter (with the *Evolution Connector* plugin) can handle Outlook calendar features, though there has been mixed success in connecting with various versions of *Exchange*.

Microsoft Office applications can be run directly using *Codeweaver's CrossOver*® products. *CrossOver* allows the Office applications to be run directly in an X window, hence compatibility is excellent. Two sub-products are supported: *CrossOver Plugin* allows read-only use of Microsoft's free viewer products and integrates into many browsers. *Crossover Office* allows the direct execution of the *Office* and *Outlook* applications (which much be purchased separately). In addition, it supports *Internet Explorer*, *Media Player*, *NetMeeting*, *Visio*, and other applications. Sometimes there is a delay between the release of a new version of *Office* and *CrossOver's* ability to support it.

By running Windows directly on a Linux system, an even higher degree of compatibility can be achieved, since the entire Windows O.S. is available to applications. However, the full Windows operating system must be purchased and – more importantly – maintained for the virtual machine, and there is no integration with Linux applications. *VMWare* allows the creation of virtual machines that think they're running the O.S. on a full set of generic x86 hardware, so almost any O.S. (both Windows and Linux), Service Pack, or update should install and run easily. Transitioning between the Linux desktop and a virtual O.S. desktop is simple and quick. *NeTraverse's Win4Lin* product is not quite as flexible: it supports only Windows 95/98/ME. But it also provides a high-fidelity Windows O.S. on a Linux desktop. Both *VMWare* and *Win4Lin* require hooks in the Linux kernel, and it can be challenging getting the right hooks if you use non-standard or frequently updated kernels.

Finally, it's also possible to run Windows remotely on a separate system and pipe the output to a Linux desktop. Mouse and keyboard events on the Linux side are sent back to the system running Windows. Obviously a separate Windows machine, with a licensed copy of both the Windows O.S. and the applications, must be maintained to use this solution. *HP Remote Graphics Software* provides unparalleled performance and functionality – especially in displaying 3D data. Also available in this area are *Microsoft Remote Desktop Protocol (RDP)* and *Terminal Services*, *AT&T Virtual Network Computing (VNC)*; *Citrix products*; *Symantec pcAnywhere*; and other choices.

**Links:** Microsoft Office: <http://office.microsoft.com/home/default.aspx>; OpenOffice: <http://www.openoffice.org/>; StarOffice: <http://www.sun.com/software/star/staroffice/>; Gnome: <http://www.gnome.org/>; KDE: <http://www.kde.org/>; Mozilla: <http://www.mozilla.org>; Netscape: <http://channels.netscape.com/ns/browsers/>; Opera: <http://www.opera.com>; Konqueror: <http://www.konqueror.org/features/browser.php>; Evolution: <http://www.novell.com/products/evolution>; CrossOver: <http://www.codeweavers.com/>; VMWare: <http://www.vmware.com/>; Win4Lin: <http://www.netraverse.com/products/win4lin/>; Remote Graphics Software: <http://www.hp.com/workstations/software/remote/>.