

VIRTUALISATION SOFTWARE

# VMware Workstation 5

With *Xen* waiting in the wings, **Graham Morrison** wonders whether the current stage darling still has star quality.

**BUYER INFO**

VMware has virtually sewn up the market for running multiple OSs on one PC, but you could try *CrossOver Office* for Windows apps, or *Xen* if you're brave.

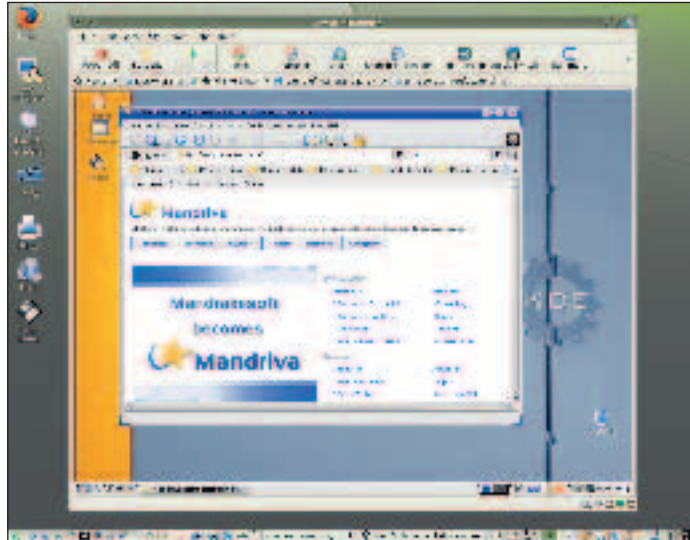
- **DEVELOPER** VMware
- **WEB** www.vmware.com
- **PRICE** \$189



The concept behind *Workstation* is straightforward.

To run a virtual machine alongside the host system, the software emulates the standard hardware components found in an x86 PC, things like the network and graphics card, motherboard chipsets, BIOS and sound hardware. CPU instructions are mostly passed unhindered to the host's own CPU, and the virtual filesystem can be either a physical disk partition or an image of the disk (stored locally or on a networked drive). This simple model hasn't limited VMware's imagination, and the company offers several tiers for its technology.

*VMware Workstation*, is intended for the desktop, and the company's publicity flags up working examples that will interest the developer who needs a testing bed for various environments and simulated circumstances. The ability to compile experimental libraries and test the security of a virtual machine without risking your actual hardware can make *Workstation* vital. But there are many other uses for the software, such as



You can tab between virtual running machines from the *GTK 2* interface.

running Windows applications, or even saving poor software reviewers from having to replace their system every time they want to try out a new distro.

Installation relies on modifying certain kernel modules – tricky, but as long as your version is supported, you should be fine. If not, there's a good chance the installation script will be able to compile the required modules from an installed kernel source tree. At last, *Workstation* works with the 2.6 kernel, and supported distributions include Red Hat Enterprise Linux 4, Mandrake 10 and SUSE 9.2, but we encountered no problems at all using the latest SUSE 9.3.

Host processors have been updated too. *Workstation* can now take advantage of 64-bit processors,

such as AMD's Opteron and Athlon 64, or Intel's EM64T. There's also support for the NX (no execute) bit on certain CPUs, locking down a machine's memory for either storage or code execution, which theoretically increases security. There's still extensive support for 32-bit processors, but it's a pity *Workstation* can't run a 64-bit operating system as a guest on either 32-bit or 64-bit platforms.

### Say cheese!

Performance has been tweaked, but this isn't version 5's main selling point. That particular award goes to the multiple snapshots feature. With *Workstation 4.5*, you could only take a single snapshot of the state of your virtual machine. This enabled you to return to the previous state at any point, right down to the position of the cursor or the last byte in your virtual machine's memory.

This has been expanded to include as many snapshots as you need, and keeping track of these snapshots is straightforward from the excellent Snapshot Manager window. This displays the snapshot hierarchy, clearly showing the points where you've branched from the original image.

Multiple snapshots make it easy to test systems, such as how a Windows installation manages a *DirectX* update, or installing custom compiled KDE and

Gnome libraries on top of a default distribution. If there's a previous snapshot, you can roll back your virtual machine very easily. There's also a degree of team-based functionality ported from VMware's more advanced products. You can now clone a virtual machine, either the whole thing or a linked version, and share these images with other people over a network.

### Negligible speed hit

Inevitably, there is a performance hit when installing and using applications on a virtual machine. The big CPU sink is still the filesystem, so running anything that's constantly reading and writing from the disk is going to feel slow. Having said that, performance is impressive, and *Workstation 5* still feels faster than the previous release. As long as you've got enough memory to cover the virtual hardware, typical desktop use is almost as fast as on the host system. This efficiency is achieved by installing *Workstation's* own drivers on the virtual machine.

Running more than one machine at a time requires far less memory overhead than before, and the user interface has been overhauled with a much cleaner *GTK 2*-based design. There are now thumbnails for both suspended machines, and for each state within the Snapshot Manager.

Overall, there's a lot in the release that makes the update worthwhile – and that's before you consider extended USB for webcams, limited support for some accelerated 3D *DirectX* applications and a command-line management utility. [LXF](#)

## TAKING SNAPSHOTS OF YOUR SYSTEM

Now that *VMware* can take a snapshot of the running machine state, there is an obvious need for a management tool. Taking a snapshot automatically inserts an icon and associated thumbnail into the Snapshot Manager, from which you can revert to that image at any point. The manager also takes account of when you've reverted to a previous image and gone on to save further snapshots, creating a branch. This can be seen right, where we've used a branch to install KDE 3.4 on to a Mandriva virtual machine.



Branch from a previous snapshot using the Snapshot Manager.

## LINUX FORMAT VERDICT

FEATURES	7/10
PERFORMANCE	8/10
EASE OF USE	6/10
VALUE FOR MONEY	6/10

This is still a great package with all kinds of uses. For such an advanced piece of kit, it works painlessly. VMware won't be upstaged by *Xen* just yet.

## RATING 7/10

