

# Two for the show

How virtual machines are expanding the power of the computer **Interviewed by Chelan David**

**A** virtual machine is a simulated computer inside a computer. In effect, this type of technology enables multiple operating systems, as virtual machines, to run concurrently on a single machine.

The uses for such a setup are plentiful. Companies are aided by virtual machines in the testing, production and development of software applications. Also, entities with extra space on their servers can use virtual deployment to set up multiple applications for their business.

While virtual machines have not reached the mainstream yet, Hormazd Dalal, president of Castellán Inc., believes that they will eventually make their presence felt.

"It's a technology that is more readily available as hardware costs have come down," says Dalal. "Also, there are many uses."

*Smart Business* spoke with Dalal about how virtual machines can help businesses, the costs involved, and why he believes virtual deployment will become the norm for certain types of companies.

## What is a virtual machine?

A virtual machine is a program designed to behave as if it is a physical computer, otherwise known as an emulator. It clones a computer and puts it on another piece of hardware. Thereby, it gives you the ability to have multiple computer operating systems and configurations running on one piece of hardware.

## How does this type of technology help businesses?

It has several useful applications. You can set up a 'spam' appliance and put it on the server so it functions as a virtual appliance. It's very good for testing because you can



**Hormazd Dalal**  
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have one piece of hardware doing multiple configurations.

In a production mode, it's useful for businesses that have the resources to purchase one large piece of hardware because they can have several applications or operating systems running on it.

In addition, it's very good for development. For example, if you need to develop something that will run on Windows 2000, but also Windows 2003, you can have them both running on one piece of hardware and then test them simultaneously.

## What are the costs involved with virtual machines?

VMware is currently being offered free of charge. The major outlay is the cost associated with obtaining high-end hardware with a lot of memory. If you have one server that needs two gigabytes of memory, and you're trying to emulate two servers on the same machine, then you will need four gigabytes of memory. It is important to provide the adequate resources such as pro-

cessing power and RAM (random-access memory) for the virtual machines that are in operation. Also, bear in mind that any virtual machine will run slightly slower than the actual computer that it is running on.

## What types of operating systems are virtual machines compatible with?

They are compatible with any operating system. You can run a Linux appliance on a Windows machine, you can run a Unix appliance on a Windows machine and you can run all of the Windows operating systems on any given machine. A benefit with virtual machines is that you can have one machine running with Windows 98, Windows XP, Windows Vista and a Linux appliance, which is helpful for testing purposes.

## Why do you believe virtual deployments will gain popularity in the upcoming years?

The fact that Microsoft has now come out with its free version of VMware, and has come into the marketplace with a VMware server, is one reason. I don't see it becoming mainstream for all companies, but those that do have one large server with under-utilized horsepower on it will be able to set up multiple applications running on that server. It will be embraced primarily by large companies and development shops.

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