

Hello. My name's Greg Wolff, from Sun Microsystems. Today, we've been talking to you about the virtual enterprise at Sun, and in this next ten minutes, I'm gonna be focusing in on how we use virtualization technologies to solve desktop computing problems.

Slide - Virtualization is Everywhere

Sun's virtualization offering is very broad and deep, ranging from products that solve problems in the data center with large servers, all the way to solving problems with thin clients, mobile devices and traditional desktop computers.

Slide - Problems We Hear from Customers

Before we get into talking some of the ways in which we address the challenges in the desktop space, I'd like to first talk about the problems that we hear from our customers. First and foremost, we hear that customers need to protect their data.

Security is at the forefront of business these days, everything must be very carefully protected and kept in a secure data center.

Disaster recovery plans - it's hard not to hear about the disaster occurring somewhere in the world these days, unfortunately, and it's important for businesses now to have a way to protect themselves from such disasters, whether that's a hurricane-type disaster or a disaster such as the avian flu.

Regulatory compliance - another key driver for many enterprises, being able to keep track of exactly what their enterprise employees are using or not using, and being able to give rights and take away rights instantly.

And then, of course, the growing popularity of working remote and working from home; or for that matter, even working across the globe. More and more, enterprises are needing to find ways to make work more convenient for their employees.

Finally, but certainly not least, lowering costs. And intricately tied with lowering costs is the need for greater choice. What you'll see in these next set of slides describing our desktop virtualization computing solutions, is that theme, the theme of giving the customer choice, and at the same time, lowering their costs.

Slide - Virtual Desktop Computing

Central to our approach is the architecture that we employ and it's a three-tier architecture, where we have applications living in a data center. These applications could be anything from a traditional Microsoft Office application like PowerPoint or Word, or some other type of enterprise application, for example, from SAP or Oracle. If we move all the way to the right, we see our client devices, and in this slide, we're showing the generic client device. In our solutions, we can service any type of client device, whether that be a mobile device, a thin client, a traditional desktop, of any kind of operating system of any kind of hardware type.

In the middle is an access tier, or what we call a tier that delivers virtual desktop computing. This tier connects to the application servers on the left, and delivers those applications virtually to any client device.

Slide - Delivery of Virtualized Applications

Let's take a little bit closer look on how this happens. Here again, we're showing the same three-tier architecture, where you've got applications on the left and clients on the right; and in the middle, we have this infrastructure tier or access tier, which delivers the virtualized applications to the client. The key product that we're talking about in this slide is the Sun Secure Global Desktop software. This was the software product that Sun acquired as a result of the acquisition of Tarantella.

On the application tier, or in the application tier, the Secure Global Desktop software connects to those servers, using standard protocols.

In the case of a Windows server running Windows applications, the Secure Global Desktop software connects to it using the RDP protocol. In the case of Unix, whether that be Linux or Solaris or some other flavor of Unix, we use the X11 protocol. Standard protocols are used to connect between the application servers and the Secure Global desktop software. The Secure Global desktop software then delivers those applications to the end user client device securely. That client device could be a Windows PC or a Mac desktop or any other kind of device that you can think of, including mobile devices.

So, the idea in this slide is to centralize applications, put those applications in a secure data center where they can be protected, and then to deliver those applications virtually to any client device. This is typically the first step that many of our customers want to take when it comes to virtualizing their desktop.

Slide - Delivery of a Virtualized Desktop

In this next slide, we're referencing back to the same three-tier architecture, where there are applications and applications servers running in the data center, and clients receiving those applications, and an access tier in the middle. However, in this case what we're showing is the Sun Ray device as the client device. The Sun Ray is kind of the ultimate, ultimate thin client. It's almost kind of a virtual display client, where everything that you see on a Sun Ray display comes from the network.

Again, the connection between the server in the middle is using the same standard protocols as mentioned before, such as RDP or X11. However now, those applications, instead of being published all the way to an end client device, are being published to this middle tier, where the Sun Ray software resides. And that combined desktop environment and published applications are all then delivered virtually to the Sun Ray client. This provides the ultimate in a security model, and the security in a mobility model, as we'll talk about later on.

Slide - Virtual Desktop Computing

So, let's compare - compare the traditional desktop computing environment with the virtualized desktop computing environment. In the traditional world, applications are installed on a device and are vulnerable. In the case of a virtualized desktop environment, applications reside in a data center, where they are secured and protected. In a traditional desktop environment, there's a very tight linking between the machine that you're using, the operating system that you're running and the application that's designed to run on that operating system.

In a virtualized desktop computing environment, those layers are completely uncoupled; any device can run any desktop environment, can run any application. The user really does have complete choice. There is no way that the device constrains the user of what they can do or not do.

Again, looking back at the traditional environment, users use their own device, they work from one location and frankly, who knows what the user's doing. In the virtualized desktop computing space, anyone can use anyone's device, and you can work from anywhere; yet the enterprise has complete control and complete ability to monitor and track usage.

Slide - Delivery Choice with Security and Mobility

Flipping to this next slide, this really captures our overall strategy for virtual desktop computing, and that is to deliver choice, to deliver that choice with security and with mobility. In this picture on the left, we're showing a traditional desktop PC running Windows; in the middle, we're showing a Mac computer; and on the far right, we're showing a Sun Ray device, which could be displaying either the Solaris or Linux operating system.

So, the idea here is that an end user can use whatever device they want, and enterprise has complete choice to pick the right device for the - for that particular user. Additionally, any application can run on any desktop environment, whether it's Linux on Windows, Solaris on a Mac OS, Windows on a Sun Ray, running Solaris or Linux - take your choice. The enterprise has complete flexibility, and they're getting this flexibility without giving up any security, because again,

the applications and the enterprise assets are secured in the data center.

Slide - Virtual Desktop Computing - Sun Offerings

So, to close, Sun's Virtual Desktop computing solution is part of Sun's bigger virtualization strategy. In the desktop space, what we're trying to do is offer the customer choice, and to offer them that choice without risk, and to enable them to have a more secure desktop environment. That means delivering applications of any type to their pre-existing clients, whether they be a Windows desktop, a Mac desktop, a mobile device, or any other type of device, as well as migrating to Sun Ray clients, the ultimate in secure computing.

My name's Greg Wolff. We hope this was helpful - thank you very much for your time.