



## An Overview of Endpoint Virtualization

General virtualization technology has become a mainstream staple in today's IT infrastructure. As more and more companies realize the benefits of virtualizing the datacenter, vendors have begun looking for additional ways to extend the advantages of virtualization deeper into the enterprise. The natural next step has been to look towards the various end-user devices scattered throughout the enterprise which branch off of the datacenter.

It is at these end-user devices where endpoint virtualization fits in to the IT infrastructure puzzle. Though endpoint virtualization in some form or another has been around for years, it has only been fairly recent that economic conditions and supporting technology, such as network speed and reliability, have aligned in such a way to bring the technology to the forefront of IT prioritization.



**Ken Berryman**  
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Ken Berryman is responsible for corporate development, strategy and emerging businesses at Symantec. In this role, Berryman directs Symantec's overall corporate strategy, leads Symantec's

### **What is endpoint virtualization?**

Endpoint virtualization is actually very simple. Virtualization in general is the separation of one system from another, one software application from another, one bit of information from another. A virtualized system is one which thinks it has hardware underneath, but actually what's running down there is just more software. On the endpoint, this means separating the applications, the real user experience, from the underlying device. Examples are application virtualization and streaming and desktop virtualization.

### **What benefits does endpoint virtualization offer?**

The important part of virtualization is separating the information that matters, the information that's truly valuable, from the underlying commodity systems. It's allowing the IT staff to focus on protecting completely, managing easily and controlling automatically the information that is separated from those systems rather than having to worry about all of the complexity of the IT environment. So, endpoint virtualization is all about doing that for the user's experience on desktops and laptops, allowing user information to be separated from the delivery of applications by the IT staff, making both the user data and the underlying system more secure and more manageable.

### **What challenges exist with endpoint virtualization?**

There are two primary hurdles that the industry is working on overcoming. The first of which is that there are not firmly established standards to accomplishing the many tasks of endpoint virtualization. This is becoming a major complexity issue for IT managers as the technology becomes more mainstream and vendors begin pitting their standards against those of other vendors.

The second hurdle is the lack of a unified management console that is capable of managing traditional and virtual environments.

mergers and acquisitions, corporate venture investing and strategic partnerships. In addition, Berryman's team leads several new businesses that include both early stage ventures and high growth, standalone businesses in dynamic new markets like virtualization.

Berryman was previously responsible for driving Symantec's overall endpoint virtualization business, including software virtualization and streaming solutions. He also led product development for the NetBackup Product Platform within the Symantec Data Center Management Group and was responsible for the NetBackup, PureDisk and Backup Reporter product lines.

Berryman joined Symantec from McKinsey & Company, where he was a partner in the Silicon Valley Office. During his ten years at McKinsey, he led the North American Software Practice, and was a well-known speaker at events such as Software and Enterprise 2007, and SIAA's Enterprise conferences. Berryman served clients across the high tech industry on a range of topics including strategy, operations and sales effectiveness.

Berryman holds both a master's and doctorate

Unfortunately, most management solutions that have been brought to market thus far are not capable of managing such hybrid environments. So, in order to effectively manage their infrastructures, IT administrators who have implemented endpoint virtualization have had to use a conglomeration of tools to keep all the environments in their infrastructure—traditional, virtual and hybrid—in check.

### **What is the industry doing to overcome these hurdles?**

Regarding the first hurdle, many of the major endpoint virtualization vendors are starting to realize the need for a standards-based approach to accomplishing such things as the formatting of application packages, and they are beginning to move in that general direction. A real movement toward standardization is also what will drive convergence in local computing and cloud-based services, allowing IT and end-users to have the best of both worlds, instead of being forced into a single, less than ideal, computing model.

At this point the industry cannot claim to provide a full solution to the second obstacle. However, preliminary steps leading towards this unified management console are already being taken. Many companies are signing on to support non-traditional approaches from vendors, such as packaging solutions that create virtualized applications. Some vendors are also including application virtualization, streaming and lightweight local virtual machine support in their larger management frameworks, in some cases by way of OEM agreements, while they determine their own long term strategies.

### **What is Symantec's endpoint virtualization strategy?**

There are three product lines currently represented in our Endpoint Virtualization Group. The first is Symantec Workspace Virtualization (SWV), a technology that arrived from the Altiris acquisition. On a Windows device, it allows you to separate the important information, the user's data, from the applications and the operating system.

The second is Symantec Workspace Streaming (SWS). We received this technology through the acquisition of a company called AppStream. It allows IT to move applications from device to device so a user can have access to those applications independent of which device they want to use.

The third is virtual workspace technology from a company Symantec recently acquired called nSuite Technologies. This technology, now called Symantec Workspace Corporate and Symantec Workspace Remote, allows a seamless workspace in which applications may be running locally or running remotely. That workspace can be set up to allow users to be as productive as they would like to be by customizing it to their own needs. The workspace then follows users around the enterprise from device to device.

The combination of these three technologies gives us our full endpoint virtualization vision of delivering a seamless workspace environment independent of the underlying hardware to make users more productive while driving the costs of delivering that experience down.

in physics from Stanford University as well as a bachelor's in physics from Harvard University.

In addition to these acquisitions, we're also continuing to work with a variety of different groups within Symantec to bring together all of our technologies in the context of Symantec's Open Collaborative Architecture. We're also continuing to work with the Endpoint Management Group to provide customers with the single management console and infrastructure for managing all endpoints, whether they are physical or virtual, that was previously mentioned.

**How has Symantec endpoint virtualization been received by the industry thus far?**

Very well. We actually have millions of users around the globe utilizing at least some part of the range of technologies within the Endpoint Virtualization Group. As we continue to bring the full portfolio together to create one easy-to-use overall suite, we expect even more enterprises to adopt the technology. As an example, we've seen some large financial institutions using the application virtualization abilities of SWV to lower application conflicts and to reduce the costs of managing those applications on the endpoint. We've also seen customers in the public sector start to use our streaming technology to deliver applications, on a regular basis, to tens of thousands of desktops, particularly in environments where students or workers that have come in on a contract basis need access to new or updated applications as they become available.

**What does the future hold for Symantec endpoint virtualization?**

We are focused on a number of opportunities for this new year. The most interesting of these is that we are announcing the release of a new suite of software called the Endpoint Virtualization Suite. This new offering brings all three of the technologies referenced above together into one unified package. In addition, the individual products being incorporated into this new suite that have previously been available will also feature some impressive updates. We're especially excited for this integrated offering as it represents Symantec bringing together the overall promise of endpoint virtualization to deliver unified virtualization technologies for the endpoint which will ideally allow users to improve their experience on the endpoint while helping IT staff lower the cost of delivering that experience.

**Where can I go to get more information about Symantec endpoint virtualization?**

Visit the Symantec Endpoint Virtualization webpage at [http://www.symantec.com/business/solutions/solutiondetail.jsp?solid=sol\\_infrastruct\\_op&solid=sol\\_endpoint\\_virtualization](http://www.symantec.com/business/solutions/solutiondetail.jsp?solid=sol_infrastruct_op&solid=sol_endpoint_virtualization).

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