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- Full range of VMware vSphere features
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- Run applications alongside IT services

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The results of the voting were hardly surprising, as VMware Inc. once again ran roughshod over all challengers by tallying the most votes in nine of the 14 categories.

“By innovative, I mean let’s think for the customer—what they might need—so we think sometimes for the customer, and in that sense we’re customer-driven.”

Ratmir Timashev, President & CEO, Veeam Software

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There’s one thing we never forget here at Virtualization Review: Readers rule, and this is your chance to reign supreme by rating the virtualization and cloud products that matter. We’ll hold up our end of the bargain by providing you with the most comprehensive guide to all those offerings.

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**Standards Group Releases Cloud ‘Roadmap’ for Government**

As Rutrell Yasin reported at the beginning of November 2011, “To encourage U.S. government agencies to adopt cloud computing technologies, the National Institute of Standards and Technology (NIST) has issued a ‘roadmap’ draft for public comment.”

NIST plans to issue the final “U.S. Government Cloud Computing Roadmap” as a three-volume work, with the first two volumes released on Nov. 2, 2011.

For more information about the roadmap, be sure to visit VirtualizationReview.com/Yasin1211.

**Updates to Microsoft Cloud Services**

With Office 365 increasing its adoption rate by eight times that of its predecessor, Microsoft Business Productivity Online Suite, the new service looks to become one of the fastest-growing offerings in Redmond history. The latest November update marks “the first major service update,” according to a Microsoft press release.

Find out what’s been enhanced: VirtualizationReview.com/Rama1211.
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The Merry Prankster of Storage

You might call Stephen Sicola precocious. As a teenager, he was the 1975 Colorado student of the year and a force to reckon with at Thornton High School, where he was valedictorian, editor of the school newspaper, and president of everything from Honor Society to the chess club. This self-professed “ul-teemo” nerd and Ferris Bueller wanna-be also had a part-time gig working hands-on with world-class physicists from the National Oceanic and Atmospheric Administration before he copped a full-ride scholarship to Stanford and blew town for Palo Alto.

After collecting a Bachelor of Science in Electrical Engineering at Stanford, he earned a Master of Science in Computer Architecture at Nanyang Technological University (NTU) while working at Digital Equipment Corporation (DEC). In addition to his stay at DEC, he toiled for Compaq/HP and the Advanced Storage Architecture Division of Seagate, where he and his team landed after escaping the upheaval of the whole DEC/Compaq/HP transition.

Now, after working with the same team for 32 years and obtaining some 40 patents on his own, along with another 10 with his mentor, Richie Lary, he finds himself working as CTO for XIO, which in August changed its name from Xiotech.

An affront against storage is an affront against Sicola, and he does not suffer such attacks gladly. When he’s asked what really gets his goat, he shoots back, “Spin. And lies, because that’s what this world is running on right now. The whole thing with people not caring about all the fundamentals of storage and just trying to add all these features and assume that everything is gonna be OK is absolutely crazy.”

When in his presence, you do not want to advocate deploying large numbers of SATA drives with distributed file systems containing many copies of data in the datacenter. Nor do you want to impugn the integrity of abused disk drives that are dying young, when they should have a mean time between failure in the millions of hours.

How about solid-state drives (SSDs)? “SSDs are not the panacea,” he asserts. “They have more ways to fail than a disk drive ever had. Do you realize that with an SSD, if you read a block, you can disturb other blocks? No one puts that out there.”

The serious side melts quickly away when the topic turns to his team and the pranks they play on each other. As he puts it, “I don’t care what level they are—senior VPs, CEOs or whatever, even the engineers. Everybody deserves a little Vasoline on their phone now and then.”

Even though his green chili cook-off winning streak ended in a final, molten blaze of glory around 1997, he still makes the stuff every year. “I make multiple versions called Pikes Peak Roto Rooter Chili, and it can take paint off cars if you make it really hot,” he declares. “The recipe’s got a flow chart in there with decision trees that ask if you want heartburn and bad gas.”
Veeam Software Chief Timashev
Opening Financial Kimono
Profitable firm aiming for $200 million in 2012 revenues.

By Bruce Hoard

VR: What are the market forces shaping Veeam’s product strategies?
Timashev: Virtualization is the most disruptive technology. Virtualization backup is the hottest spot of the hottest market, so our product strategy is to capitalize on this huge change that’s going on in virtualization, because IT is dramatically being transformed with virtualization, which is also the foundation for the cloud. So our product strategy is to stay on top of this technology.

VR: What are the biggest challenges you face in the data protection market?
Timashev: Our competitors have done a good job educating the market but, still, there’s a lot we have to continue doing in educating the people and the market about how to take full advantage of virtualization, especially in the backup space. Sometimes people ask me if virtualization makes IT less expensive—is virtualization backup less expensive than physical backups? My answer to this is a question: Is the iPhone less expensive than a regular cell phone? Probably not, but with the iPhone you can do 10 times more, and some things that were not even possible with a rotary phone, so virtualization—and specifically virtualization backup—is changing how things are done.

VR: How far away are we from a tipping point, where the cloud is actually going to be something that’s happening, as opposed to being fairly limited and something that’s still talked about more than it’s actually implemented?
Timashev: We have to wait a few years, at least two, three, four years until we reach the same point as we have already passed in virtualization. Many people look at the cloud as describing different things. For example, Salesforce.com is also described as cloud, but I think the true cloud is enabled by virtualization, where you can move the workloads more freely than Salesforce.com. So if in the cloud something is based on virtualization—the ability to flexibly move and use the computing power—we are far from the tipping point in that definition of the cloud.

VR: Veeam has no chief technology officer by name. Do you fill that bill?
Timashev: No, this function is performed by my partner, Andrei Baronov. He’s the chief technology officer, but by his nature he’s not a public figure. He’s the product visionary. I think he’s one of these unique people that combines a very brilliant technical mind with very strong common sense, and what he calls very strong pragmatism. He really truly understands what the people need, and what administrators of VMware really need, so he can create those products exactly.

VR: Describe how Veeam is customer-driven.
Timashev: That’s an excellent question. I just started reading an interesting article that discussed how sometimes you shouldn’t be customer-driven. Look at it this way, all sales people are trained to ask the question, “What is it that keeps
you up at night?” And the customer doesn’t know what keeps him or her up nights, so sometimes—even especially in virtualization—when there are many things that nobody has done before, you should be both, customer-driven as well as innovative. By innovative, I mean let’s think for the customer—what they might need—so we think sometimes for the customer, and in that sense we’re customer-driven.

**VR:** Why are you now offering Veeam Backup & Replication for Hyper-V?

**Timashev:** We think that Hyper-V will be a substantial market, especially in what we call the VS—very small—market, which is even below SMBs [small to midsize businesses] in size. Today, very small customers don’t do virtualization at all because they have between five and 25 servers, and they don’t see a lot of benefits in virtualizing. For them, virtualization is too expensive, not just from the licensing perspective, but more from the perspective of the time and energy required to run new technology, to buy the storage, and to implement more sophisticated things like shared storage and networking. So the VS user is managing maybe 50 servers in a small company with between 50 and 100 employees, and they don’t see a lot of benefit from virtualization. We think that in this VS market, Hyper-V will take a substantial market share, as it will in the SMB market, especially in the small segment of that market. This is because these very small and small users are familiar with the Windows environment that Hyper-V comes from. However, I would think that Microsoft has to simplify Hyper-V even more, but we think it’s ready today, that it’s good enough to take a substantial market share in VS and small markets.

**VR:** Is Veeam profitable?

**Timashev:** Very profitable.

**VR:** What are the pros and cons of taking the company public?

**Timashev:** First, we’re not thinking about taking the company public, because we can provide this liquidity internally to our employees and the founders through dividends and so on. As for more visibility in the industry, as I said, we can achieve that by providing the financial results openly, which we might just start doing at any point. However, nobody should dictate, or can dictate to us when we should do that because we’re still a private company.

“**Our competitors say Veeam is a niche vendor. We say, ‘Exactly. We want to be the niche because virtualization is the niche.’”**

Ratmir Timashev, President and CEO, Veeam Software

VR: Veeam products are designed for virtual infrastructures only. Why not cover physical environments as well?

**Timashev:** That’s an excellent question, and our competitors use against us because they say Veeam is a niche vendor. We say, “Exactly. We want to be the niche because virtualization is the niche. And this niche has become already the mainstream, the foundation.”

VR: What about the cons of going public?

**Timashev:** When it comes to the cons of going public, it’s more compliance, more regulations by the Security Exchange Commission, which means more rules and less flexibility in many things. Plus, these days it costs probably a few million dollars just to comply with all the rules and regulations. It would be some distraction for us, and we don’t need the pros that I mentioned. We don’t need to get on the cover of Forbes or Fortune. We don’t need the liquidity, because we can provide this liquidity internally to our employees and the founders through dividends and so on. For more visibility in the industry, as I said, we can achieve that by providing the financial results openly, which we might just start doing at any point. However, nobody should dictate, or can dictate to us when we should do that because we’re still a private company.

Bruce Hoard is editor in chief of Virtualization Review. He can be reached at bhoard@1105media.com.
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In most situations, the biggest bottleneck to implementing a virtual desktop infrastructure (VDI) is Input/Output Operations Per Second, or IPOS. Many organizations find themselves buying expensive storage-area network (SAN) systems to get enough IOPS for good performance, and in fact may purchase much more capacity than they need to get enough disks in an array to generate the required performance. At the same time, when implementing persistent clients, total storage consumed can also be a major issue, especially at the high cost of Tier 1 storage on SAN systems.

Atlantis ILIO addresses this issue by using a large amount of RAM to serve disk requests, enabling a VMware server to handle most disk requests from memory rather than from disk, thus creating a 10-fold improvement in performance. The system also deduplicates the storage used, which means persistent clients can be created that use no more storage than non-persistent ones, saving lots of storage space while keeping users happy with the ability to configure their client as they like.

2 Modes, 1 System
The system can work in one of two modes—as a virtual machine disk (VMDK) running on a VMware server to accelerate VDI running on that system, or as a top-of-rack system that can serve VDI storage requests for VMware, Hyper-V or Citrix storage. A typical scenario for the internal acceleration involves using four or more internal disks in the server, rather than an external SAN. Internal SAS disks or even SATA disks can provide sufficient performance in conjunction with the RAM caching, which reduces costs substantially versus a high-end SAN.

The top-of-rack model is intended to support larger numbers of clients than a single server may allow, or to support other types of VDI besides VMware. With the top-of-rack model, storage would typically be SAN-connected, or might be set up on a server with lots of internal disk storage. In either case, other than assuring that the overall IOPS and bandwidth will support the total number of clients, setup is little different than with an internal appliance.

The Atlantis ILIO system costs $120 to $150 per user for the software, plus the cost of the additional RAM (the minimum standard configuration calls for about 16GB of RAM, with the number increasing with the number of users to about 32GB for 100 users with multiple OSes). According to Atlantis Computing Inc., most of their customers see a 50 percent to 75 percent ROI because of the reduced requirement for high-performance storage, and the space savings produced by the deduplication function, along with more-responsive clients, which makes users happy.

Installation and Performance
For my testing, I first set up a vSphere 4.0 server with eight Windows 7 persistent clients, using a Synology...
1,000 Oracle/Sun clients recently upgraded. To IBM Power Systems.

Since 2009, over 1,000 clients have moved business to IBM Power Systems™ from Oracle/Sun. Some were swayed by the up to 60% drop in IT costs. Others by the 3x per core performance (per both TPC-C and SAP SD benchmarks). And some by both. Though all saw the strong business case for moving. We’d welcome the opportunity to show how IBM could help your organization, too.

ibm.com/facts
The top-of-rack model is intended to support larger numbers of clients than a single server may allow, or to support other types of VDI besides VMware.

The number of IOPS hitting the DS509+ dropped from 3206 IOPS to 290—the 10-fold improvement predicted by Atlantis. In addition, boot times for each client were reduced from an average of 126 seconds to 24 seconds. The total number of IOPS reported by IOMeter on the clients went up very slightly, indicating that this number was most likely limited by network bandwidth. Given that the data being moved to and from disk was random, this represents a worst-case scenario for cache, and still indicates that around 90 percent of disk requests were being served from the RAM on the server. In a real-world environment with normal user tasks, I'd expect the numbers to be better. Further latency on the clients went down substantially, with average time for disk requests dropping from 72ms to 26ms.

Deduplication also functioned as claimed by Atlantis. With eight clients installed, the total space used on the system for the eight clients was less than one gigabyte per client after the first client was installed. That is, the first client was set up with a 40GB disk, of which 22GB was in use with the OS, Microsoft Office and other applications, along with IOMeter, a 5GB folder for disk testing. The first client used 23GB of storage on the DS509+, and the second through eighth each used about 1GB of additional space, so that eight Windows 7 clients used a total of 30GB.

Once set up, Atlantis ILIO can be monitored through a Web console (see Figure 1, p. 8), which provides access to reports on disk and network usage, allowing you to start and stop NFS or iSCSI services, and to tune settings for caching. There's little that most users will need or want to do here, as the default settings will work fine, and other than initially setting the amount of RAM and network to use, nothing needs to be changed from the default. This is very much a drop-in appliance model that shouldn't need tuning unless you increase the number of clients you're supporting.

While I was unable to test with the hundreds of clients that Atlantis talks about in its case studies, extrapolating from the results I obtained confirms that the system should work as well at higher numbers of clients, and Atlantis has case studies of implementation of thousands of VDI clients to back up the company's claims.

Providing users with an experience as good as—or better than—they'd get with local PCs is critical to the long-term success of a VDI project. Atlantis ILIO provides a means to remove the storage bottleneck from the equation when creating a large VDI implementation, which should substantially reduce the cost to duplicate or improve on local desktop performance with a VDI system. In fact, by providing boot times substantially faster than even fast desktop systems, Atlantis ILIO could make a VDI system more attractive to users than having their own PCs.

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Logan Harbaugh is a freelance reviewer and IT consultant located in Redding, Calif. He’s been working in IT for almost 20 years, and has written two books on networking and a number of articles for different IT publications. You can reach him at logan@hharbaugh.com.
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The 2012 Virtualization Review
Readers Choice Awards
Ultimate Buyers Guide

There’s one thing we never forget here at Virtualization Review: Readers rule, and this is your chance to reign supreme by rating the virtualization and cloud products that matter. We’ll hold up our end of the bargain by providing you with the most comprehensive guide to all those offerings.  By Bruce Hoard
Welcome to the combined 2012 Virtualization Review Reader’s Choice Awards and Ultimate Buyer’s Guide issue. This is the place to peruse the virtualization and cloud products that interest you and see what your fellow readers think about them. This time around we hiked the number of products from 211 to 274, and the number of vendors from 106 to 177, in an effort to provide the maximum amount of useful information.

The results of the voting were hardly surprising, as VMware Inc. once again ran roughshod over all challengers by tallying the most votes in nine of the 14 categories. That’s the big story, but there’s also an interesting subplot to consider: the rise of Microsoft, which took first place in the increasingly important Virtualization Automation category, as well as four Preferred Product awards in Application Virtualization, Server Virtualization, Virtualization Management and Optimization, and Cloud Computing. VMware may not be shaking in its boots, but you can bet the company’s paying attention to developments in Redmond. And Microsoft wasn’t the only platform vendor to make a breakthrough. Oracle Corp. won two Preferred Product awards in the Server Virtualization and Thin/Zero Client Computing categories.

You’ll also notice the addition of awards for ISV Winners. We added them to the mix in an attempt to highlight some of the smaller vendors who are cranking out really cool and innovative products.

Regarding the Ultimate Buyer’s Guide, we spared no effort in finding and listing every vendor and product that seemed relevant to you, and I urge you to let me know how we did, so we can improve even more next year. Contact me at bhoard@1105media.com.

Application Virtualization

For the second year in a row, VMware Inc. beats Citrix—which most of the “experts” believe is stronger than VMware in this category due to its many years of application expertise. Perhaps the more intriguing story is the emergence of Microsoft, which is raising its virtualization profile in the eyes of the IT pros who go down in the trenches with this stuff every day. ISV Winner Spoon sports nifty technology that makes it easy to get started quickly and deploy apps in a wide range of environments.

Winner
VMware ThinApp 4.6.1 – VMware Inc.
$5,000; also bundled in View Premier for $250 per concurrent user
http://vmware.com • 877-4VMWARE • 650-427-5000

Preferred Product
Citrix XenApp 6 – Citrix Systems Inc.
Advanced Edition - $350 per concurrent user;
Enterprise Edition - $450 per concurrent user;
Platinum Edition - $600 per concurrent user
http://citrix.com • 800-424-8749

Preferred Product
Microsoft Application Virtualization (App-V) 4.6 SP1 – Microsoft Corp.
Call for price
http://microsoft.com • 800-642-7676

ISV Winner
Spoon Server – Spoon
Call for price • http://spoon.net • 877-223-3551

2X ApplicationServer XG 1 – 2X Software
$1,190 • http://2x.com • 866-970-6262

AccessNow – Ericom
Call for price • http://ericom.com • 888-769-7876

Application Jukebox - Endeavors Technologies
Call for price • http://endeavors.com • 949-833-2800

AppTitude 5.1 - App-DNA
Call for price • http://app-dna.com • 847-230-0020

AppZero 4.7 - AppZero
Starts at $500 per instance per year • http://appzero.com • 866-980-2770

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Invincea Browser Protection v2.4.0 - Invincea Inc.  
Called for price: http://invincea.com  703-392-7684

Invincea Document Protection v2.4.0 - Invincea Inc.  
Called for price: http://invincea.com  703-352-7684

LISA Platform - Service Virtualization 2011 - ITKO  
Called for price: http://itko.com  877-289-4856

Netuitive 5.5 - Netuitive Inc.  
Called for price: http://netuitive.com  877-492-9672

Oracle Secure Global Desktop 4.61 - Oracle Corp.  
$150 per named user for Windows applications only or $250 per user for Windows, Unix, Solaris, Mainframe, Midrange applications  
http://oracle.com  800-633-0738

rtoTScale - RTO Software  
Called for price: http://rtosoft.com  866-987-2900

Symantec Workspace Streaming 6.1 SP7 - Symantec Corp.  
Called for price: http://symantec.com  800-745-6054

**Server Virtualization**

Life, death, taxes and VMware finishing first in the Reader’s Choice Awards Server Virtualization category are all virtual certainties, as it were. While nobody builds a better virtualization environment than vSphere 5, Microsoft is still gaining a lot of traction with Hyper-V, which is making significant inroads based on its relative affordability and its future prospects with Windows 8. Oracle is another platform player making its presence felt in this core category, while underdog Red Hat continues to raise its performance bar while expanding its cloud ecosystem.

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**Preferred Product**

**VMware vSphere 5 - VMware Inc.**

Zero license cost. Support starts at $599 per year per server  
http://vmware.com  877-4VMWARE

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**Preferred Product**

**Windows Server 2008 Hyper-V R2 SP1 - Microsoft**

Called for price: http://microsoft.com  800-642-7676

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**Preferred Product**

**Oracle VM 3.0 - Oracle Corp.**

Zero license cost. Support starts at $599 per year per server  
http://oracle.com  800-633-1058

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**ISV Winner**

**Red Hat Enterprise Virtualization for Servers 2.2 - Red Hat Inc.**

$499 per socket for Standard support (12x5), $749 per socket for Premium support (24x7)  
http://redhat.com  919-754-3700

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**EnergyCenter v2.0 - Viridity Software**

Call for price: http://viridity.com  877-837-4357

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**PROMISE VTrak S3000 - 2010 - PROMISE Technology Inc.**

Starts at $36,000 in a 32TB, single node configuration. Also available in a dual node configuration  
http://promise.com  408-228-1400

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**Desktop Virtualization/Virtual Desktop Infrastructure**

Citrix must be wondering what it takes to overhaul VMware in this category, where it again falls short of VMware despite the plaudits it receives from the pundits. Maybe its enhanced version of VDI-in-a-box, which was acquired along with Kaviza, will push it over the top next year. In the meantime, Oracle is slowly becoming a player, and Nutanix is impressing users with its SAN-free approach to enhanced virtualization performance.

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**Winner**

**VMware View 4.6 - VMware Inc.**

Enterprise Edition: $150 per concurrent connection; Premier Edition: $250 per concurrent connection  
http://vmware.com  877-4VMWARE

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**Preferred Product**

**Citrix XenDesktop 5 - Citrix Systems Inc.**

VDI Edition: $95 per user or device and $195 per concurrent user; Enterprise Edition: $225 per user or device; Platinum Edition: $350 per user or device  
http://citrix.com  800-424-8749

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**Preferred Product**

**Oracle VM VirtualBox - Oracle Corp.**

Free and open source  
http://oracle.com  800-633-1058

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**ISV Winner**

**Nutanix Complete Cluster - Nutanix Inc.**

Call for price: http://nutanix.com  510-579-8883

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**AppSense User Virtualization Platform Version 8.1 - AppSense**

$119 per named user with license percentage for maintenance and support; license covers all desktop and application delivery mechanisms  
http://appsense.com  866-277-7367

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**AppTitude 5.1 - App-DNA [Recently Acquired by Citrix]**

Call for price: http://app dna.com  847-230-0020

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**Atlantis ILIO 2 - Atlantis Computing Inc.**

Starts at $150 per desktop  
http://atlantiscomputing.com  877-310-2224

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**BareMetal - MokaFive Inc.**

Call for price: http://mokafive.com  650-980-0960

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Protect all your VMware vSphere and Microsoft Hyper-V virtual machines with Veeam Backup & Replication™ v6.

With new support for Windows Server Hyper-V and Microsoft Hyper-V Server, Veeam provides capabilities not available from other Hyper-V backup tools, including:

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- Changed block tracking
- Built-in deduplication and compression

#1 Customer Satisfaction

"3.6Tb of data all back in its rightful place… I have the weekend off now ;)
"This purchase is about to pay for itself in saved time."
"Veeam Backup & Replication is way past WOW! This is what the backup world needs."

More than 25,000 customers use Veeam Backup & Replication to protect more than 2 million VMs.

Learn why nearly 1,500 organizations choose Veeam each month: go.veeam.com/why-chose-veeam-fmi.html

#1 Innovation

The list of Veeam firsts and Veeam exclusives gets longer with each new release.

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- U-AIR
- SureBackup Recovery Verification
- 1-Click File Restore NEW!
- Real failback NEW!
- 1-Click VM Restore NEW!

and more!

#1 Value

Veeam redefines what you should expect from backup—and what you should expect to pay for it.

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Wyse Technology is a company that just keeps on innovating when it comes to thin and zero client computing, which is why it’s such a sought-after business partner at companies such as Cisco and Citrix. The Citrix connection is especially significant because it brings the Citrix high-definition HDX technology to a wide variety of applications, devices and networks. Here’s another category where Oracle Corp. has a growing presence. For its part, Pano Logic Inc. is an up-and-comer that touts its zero client devices that contain no processor, OS, storage or moving parts.

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HotLink SuperVISOR for VMware - HotLink Corp.
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VMware vCenter Operations is critical to the company’s cloud quest because it’s an automated operations management solution that provides integrated performance, capacity and configuration management for highly virtualized and cloud infrastructures. Windows Azure, the Microsoft Platform as a Service (PaaS) offering, has made a name for itself with its cloud-based application development capabilities. Despite the cloud prominence of VMware, EC2, the first high-profile Infrastructure as a Service (IaaS) offering, has been synonymous with cloud computing since its 2006 beta. Not to be outdone, Eucalyptus claims to be the world’s most widely deployed software platform for private IaaS clouds.
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Lenovo Secure Cloud Access 2011 - Lenovo
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Netuitive 5.5 - Netuitive Inc.
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- From Wow to How-To: Virtual Desktops, Networking and the Cloud

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Xsigo Management System (XMS) 3 - Xsigo Systems Inc.
Starts at $5,000  •  http://xsigo.com  •  408-329-5600

xStream Platform Version 1 - Virtustream Inc.
Priced on a subscription basis  •  http://virtustream.com  •  240-252-1007

Zetta Data Protect 2.5 - Zetta Inc.
$0.45 per GB  •  http://zetta.net  •  877-469-3882

Business Continuity
Business continuity has been around for a long time as a mission-critical concept, and it has only become more important as IT operations have become extended beyond conventional boundaries. This is just one more essential piece in the VMWare puzzle. Veeam Software has won critical acclaim for its expertise in this area, and Acronis offers backup and recovery from a single console, which is a competitive requirement. AppAssure offers backup and recovery with fast local recovery and total bare metal restores from remote replication sites.

Winner
VMware vCenter Site Recovery Manager 4.0 - VMware Inc.
$13,613 for 25 VM pack plus support  •  http://vmware.com  •  877-4VMWARE, 650-427-5000

Preferred Product
Veeam Backup & Replication 5 - Veeam Software
Starts at $599 per socket  •  http://veeam.com  •  614-339-8200

Preferred Product
$1,799 per license  •  http://acronis.com  •  877-669-9749

ISV Winner
AppAssure Backup and Disaster Recovery 4.6 - AppAssure Software Inc.
Software agent-based pricing per physical machine or host. Off-site hosting also available. Call for pricing  •  http://appassure.com  •  703-547-8686

ActiveImage Protector for Hyper-V with ReZoom 3.1 - Rectifyh Corp.
$1,499 - Backup Hyper-V Host and all guest VMs  •  http://rectifyh.com  •  951-200-5911

ApplicationHA 5.1 SP2 - Symantec Corp.
$350 per license  •  http://symantec.com  •  877-294-5255

Arkeia Network Backup Version 9 - Arkeia Software Inc.
$2,000 per server; unlimited sockets and CPUs  •  http://arkeia.com  •  888-431-1319

Backup Exec 2010 R3 - Symantec Corp.
Starts at $995. Backup Exec Small Business Server starts at $895  •  http://symantec.com  •  877-294-5255

Citrix XenServer Backup and Recovery Solution - PHD Virtual Technologies
Call for price  •  http://phdvirtual.com  •  866-710-1882

Cloud Recovery Enterprise Edition - Geminare Inc.
Approximately $400 per month per server plus setup fees. Sold exclusively through channel partners  •  http://geminare.com  •  888-593-4443

Double-Take Availability - Vision Solutions Inc.
Call for price  •  http://visionsolutions.com  •  888-674-9495

FalconStor Continuous Data Protector (CDP) Version 7.0 - FalconStor Software
Starts at $3,000. Available as a Virtual Appliance, a preconfigured integrated Storage Appliance, or a Gateway Appliance for use with certified SAN Storage  •  http://falconstor.com  •  866-669-3252

Novell PlateSpin Forge by NetIQ 3.1 - NetIQ Corp.
Starts from as low as $39,395  •  http://netiq.com  •  800-529-3400

Novell PlateSpin Protect by NetIQ 10.1 - NetIQ Corp.
Starts at $1,495 per workload  •  http://netiq.com  •  800-529-3400

Quest vRanger Version 5.2 - Quest Software Inc.
$999 per socket  •  http://quest.com  •  949-754-8000

Rapid Response Version 2 - iland
Call for price  •  http://iland.com  •  800-697-7088, 713-868-2267

rCloud - Doyenz Inc.
Call for price  •  http://doyenz.com  •  206-707-8250

Scout 6 - InMage Systems
Call for price  •  http://ingham.com  •  800-646-3617

ShadowProtect Virtual 04/01/2005 - StorageCraft Technology Corp.
$995 for 3 licenses - virtualization bundle  •  http://storagecraft.com  •  801-545-4705

Stratus fTServer - Stratus
Call for price  •  http://stratus.com  •  800-787-2887

SunGard Business Continuity Management Software - SunGard Availability Services
Call for price  •  http://sungardas.com  •  800-468-7483

Symantec NetBackup 7 - Symantec Corp.
Starts at $7,595 for complete VMware protection; includes Enterprise Server and Enterprise Client licenses  •  http://symantec.com  •  800-745-6054

Symantec System Recovery 2011 - Symantec Corp.

vContinuum 1.2 - InMage Systems
Call for price  •  http://ingham.com  •  800-646-3617

VMware vSphere ESXi / ESX Backup and Recovery - PHD Virtual Technologies
Call for price  •  http://phdvirtual.com  •  866-710-1882

Zerto Virtual Replication (ZVR) Version 1.0 - Zerto
Call for price  •  http://zerto.com  •  781-478-6806

Methodology
This year’s Virtualization Review Reader’s Choice Awards survey was sent out to approximately 20,000 of our readers on Sept. 15 and they had two weeks to vote. Job titles for that group ran the gamut from C-level executives to help desk technicians. Vendors were not allowed to vote for themselves, nor to solicit votes. We carefully examined the voting results, and nullified illegal votes that were cast in an effort to stuff the ballot box.

—B.H.
Virtualization Automation

In the new, virtualized world of IT, there’s no time for human error and intervention. That’s why Microsoft acquired IT process automation software maker Opalis in December 2009. Now System Center Opalis has become a major cog in Redmond’s management suite. Despite its travails, Novell also saw the value of automation, as did Tripwire. Reflex Systems is gaining recognition by integrating various IT tools into a single configuration.

Winners

- Opalis 6.3 - Microsoft
  Opalis is licensed only as part of the suite. You can only download and use this software if you’re a licensed holder of a qualifying license. Qualifying licenses must have active Software Assurance coverage on or between Dec. 10, 2009, and April 30, 2012. Call for qualifying licenses • http://microsoft.com • 800-642-7676

- Novell PlateSpin Migrate by NetIQ 9.1 - NetIQ Corp.
  Starts at $235 per workload • http://netiq.com • 800-529-3400

- Tripwire VIA - Tripwire Inc.
  Call for price • http://tripwire.com • 503-276-7500

ISV Winners

- Reflex vProfile 2.16 - Reflex Systems Inc.
  In the enterprise pricing model, the Reflex VMC platform can be purchased with any combination of modules—vWatch monitoring, vTrust security and vProfile configuration; pricing for each module is about $595 per socket • http://reflectionsystems.com • 888-696-5725

- AppTitude 5.1 - AppDNA [Recently Acquired by Citrix]
  Call for price • http://aptdna.com • 847-230-0020

- Arista EOS with VM Tracer - Arista Networks Inc.
  Call for price • http://aristaneetworks.com • 866-497-0000

- GaleForce - Gale Technologies
  Call for price • http://galetechnologies.com • 408-213-4900

- UC4 Automation Engine - UC4 Software GmbH
  Call for price • http://uc4.com • 877-284-2121

- V-Commander 4.0 - Embotics Corp.
  Starts at $399 per socket per year • http://embotics.com • 877-599-0494

Storage Virtualization

Say what you will about the costs and complexity of EMC storage products, the company’s VNX and VNXe Series Unified Storage systems for both small to midsize businesses and enterprises don’t seem like they’re all that hard to digest by Virtualization Review readers. Once again, NetApp finished in a not-unfamiliar position—just a hair behind the market leader. Based on the strength of its storage hypervisor approach, DataCore finished a respectable third, while Tintri has been opening a lot of eyes with its focus on network storage within virtualized datacenters.

- ISV Winner
  NetApp V6200 Series / V3200 Series - NetApp
  Call for price • http://netapp.com • 877-263-8277

- Preferred Product
  SANsymphony-V 8.1 - DataCore Software
  Starts at under $5,000 for two redundant SANsymphony-V nodes. The price scales up for midrange and large enterprise environments • http://datacore.com • 877-780-5111

- ISV Winner
  Tintri VMstore T445 - Tintri Inc.
  Call for price • http://tintri.com • 650-209-3900

- Actifi o Protection and Available Storage (PAS) - Actifi o
  Call for price • http://actifi o.com • 877-282-5373

- AssuredUVS Datacenter - Dot Hill Systems Corp.
  Call for price • http://dothill.com • 800-872-2783

- AssuredUVS Standard - Dot Hill Systems Corp.
  Call for price • http://dothill.com • 800-872-2783

- Cloud Storage Assurance (CSA) 2.0 - Geminare Inc.
  Approximately $3–$4 per month per mailbox plus storage as per vendor of choice. Sold exclusively through channel partners • http://geminare.com • 888-593-4443

- Coraid EtherDrive SRX Version 5.2 - Coraid Inc.
  Starts at under $600 per TB • http://coraid.com • 877-548-7200

- Coraid EtherDrive V5X Version 1.3 - Coraid Inc.
  Call for price. Priced per appliance with no limit on the number of SAN appliances under management • http://coraid.com • 877-548-7200

- F5 ARX1500/ARX2500 - F5 Networks Inc.
  For price • http://f5.com • 206-272-5555

- FalconStor Network Storage Server (NSS) Version 7.0 - FalconStor Software
  Starts at $3,000 - available as a Virtual Appliance, a preconfigured integrated Storage Appliance or a Gateway Appliance for use with certified SAN Storage • http://falconstor.com • 866-669-3252

- GlusterFS 3.3 - Gluster Inc.
  $4,000 to $5,000 per server per year • http://gluster.com • 800-805-5215

- Hitachi Virtual Storage Platform (VSP) Version 1 - Hitachi Data Systems
  Starts at $232,000 for a single Hitachi Virtual Storage Director pair controller with 16 FC host ports, 48GB of cache, no disk capacity and Basic Operating System software, which includes Hitachi Dynamic Provisioning software and Device Manager. Software support for 12 months is also included • http://hds.com • 888-234-9601
Network Virtualization

Cisco is all over virtualization in its own backyard, and with a growing number of like-minded business partners, so this victory comes as no surprise. Ditto Citrix Systems Inc.’s Preferred Product Award for the venerable NetScaler. F5 Networks can celebrate its award along with its announcement that it surpassed the $1 billion mark in FY 2011 sales. Filling out a stellar victory comes as no surprise. Ditto Citrix Systems Inc.’s Preferred Product Award for the venerable NetScaler. F5 Networks can celebrate its award along with its announcement that it surpassed the $1 billion mark in FY 2011 sales. Filling out a stellar field, Riverbed is a proven company with a solid reputation.

Winner

Cisco Nexus 1000V 4.2 - Cisco Systems
$695 per CPU • http://cisco.com • 408-526-4000

Preferred Product

Catbird vSecurity – Catbird Inc.
Call for price • http://catbird.com • 866-682-0080

Preferred Product

Big-IP Local Traffic Manager Virtual Edition 11 - F5 Networks Inc.
Call for price • http://f5.com • 206-272-5555

Virtualization Security

There’s no way that VMware wouldn’t have a significant number of its highly talented engineers working on security, and its runaway victory here underlines that fact. Juniper Networks Inc. is targeting security in the cloud and mobile Internet markets, while veteran Check Point Software Technologies Ltd. offers a broad line of security gateway appliances. Catbird Inc. offers security services for virtual, cloud and physical environments.

Winner

VMware vShield Suite 5 - VMware Inc.
Winner

VMware vShield Suite 5 - VMware Inc.
Call for price • http://vmware.com • 877-4VMware

Preferred Product

vGW Virtual Gateway 5 - Juniper Networks Inc.
Starts at $2,000 per CPU. Annual IDS and AV subscriptions are additional to the base cost • http://juniper.net • 866-296-6428

Preferred Product

Check Point Security Gateway Virtual Edition (VE) R71 - Check Point Software Technologies Ltd.
Starts at $2,000 • http://checkpoint.com • 866-488-6631

ISV Winner

Barracuda Spam & Virus Firewall - Barracuda Networks Inc.
Call for price • http://barracudanetworks.com • 888-268-4722

Deep Security v7.5 - Trend Micro Inc.
Starts at $150 per VM for agentless anti-malware at 500 VM band. Additional security modules cost extra • http://trendmicro.com • 877-218-7363
Virtualization Training

TrianSignal has assembled a crew of topflight instructors who have developed vSphere video training tools at a time when such tools are sorely needed by IT pros who are considering or have developed vSphere video training tools. At a time when TrianSignal has assembled a crew of topflight instructors who developed vSphere video training tools.

Virtual PC

The VMware desktop virtualization product fully supports Windows 7 and Windows XP Mode VMs, along with 3-D graphics. The Wyse PocketCloud app enables users to securely access any physical or virtualized infrastructure anytime, anywhere from their iPhones, iPads, iPod Touch or Android devices.

Virtualization Review
There's nothing like good analyst quotes to perk up a story, and here are five of the best from the cover stories I've written this year.

TAKE 1

Chris Wolf, Research Vice President, Gartner Inc. (April-May Issue) Mark Templeton’s a great CEO. He gets the market extremely well. He said several years ago that the desktop space is Citrix’s to lose. He thought that they were a bit ahead of their time with some of the technologies Citrix had built historically, and now, Citrix’s core value-add is becoming mainstream, and in some places, the de facto option for new desktop deployments. Acquiring XenSource and getting the hypervisor, of course, was extremely important for Citrix in the long term, and they’ve done a nice job of starting to build the ecosystem for XenServer and making the case to get XenServer in the datacenter, mostly as the backend for XenDesktop workloads.

TAKE 2

Simon Bramfit, Founder and Principal Analyst for Entelechy Associates (April-May Issue) There’s a lot of doubt in my mind that Microsoft really is doing anything more with desktop virtualization than the barest minimum. [Their] own desktop virtualization solution is excessively complex; it doesn’t meet the needs of anything but the smallest percentage of Microsoft customers, and their unwillingness to support any level of innovation when it comes to service delivery is a little disappointing. They were basically pushed into a corner with desktop virtualization through VMware’s early initiative around [Virtual Desktop Infrastructure] and have been spinning ever since.

TAKE 3

Dave Bartoletti, Senior Analyst and Virtualization Lead, Taneja Group (June-July Issue) I do have to give credit to Microsoft because they have absolutely realized the importance of virtualization, and they didn’t throw it out like a market-killing technology. They threw it out as a competitor. They listened to their customers and they’re making it better. I think if you talked about this three years ago, a lot of analysts in the community thought that Hyper-V was just a way to kill virtualization while they figured out how to lock us all into Windows [OSes] for the rest of our lives. Give it away for free just like the browser wars, right?

TAKE 4

Mark Bowker, Senior Analyst, Enterprise Strategy Group (August-September Issue) The thing that VMware is doing right is they’re innovating amazingly. I think from an overall technology innovation perspective, they’ve built a community, and they’ve got that community to really align with what they can offer. I hear very few, if any, complaints about VMware—the technology or the company. I think their biggest challenge is taking where customers are today and advancing them. We’ve seen a massive wave of people achieving that first 20 percent to 30 percent level of virtualization, but that 20 to 30 percent isn’t necessarily going to double in the next 12 months. That doubling is going to take a long time.

TAKE 5

Jon Toigo, CEO of Toigo Partners International (October-November Issue) What I’ve seen in the marketplace around mainframes is that maybe five years ago, just about everybody that I visited who had a mainframe was thinking about migrating off of it. They were concerned about the dearth of folks to manage them going forward and the high cost of software and so forth. But now it’s turning out that what the cloud guys and the virtualization guys have done is underscore the real value proposition of mainframes, and many companies that were considering migrating their x86 workloads off mainframes are actually migrating x86 workloads onto there instead.

What was the most interesting quote about virtualization you came across this year? Bruce Hoard can be reached at bhoard@1105 media.com.
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