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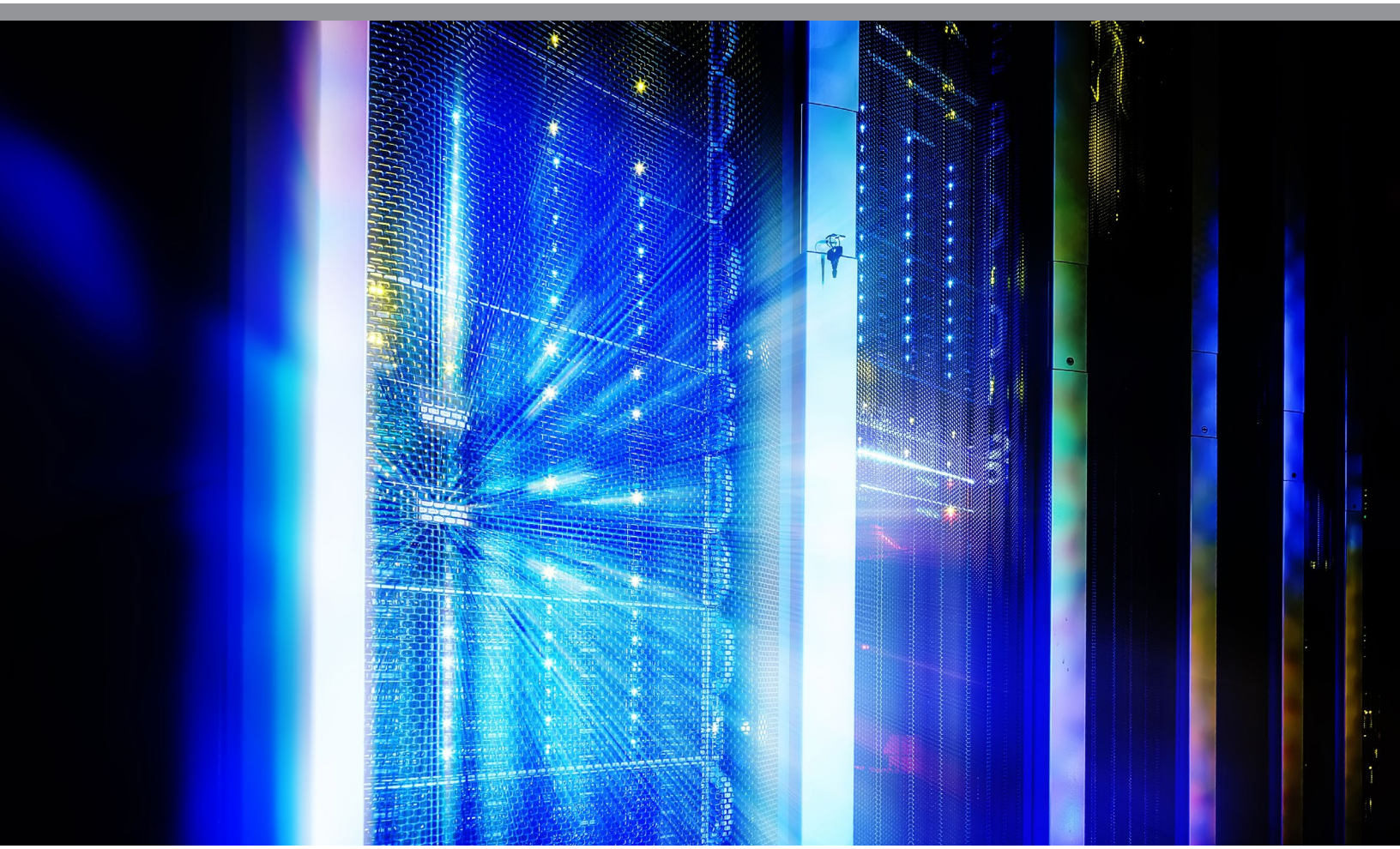

HOW TO ACHIEVE FLEXIBLE DATA PROTECTION AND AVAILABILITY WITH ALL-FLASH STORAGE

Fast applications and workloads need fast data protection (and recovery)

VEEAM

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Based on a Fireside Chat webcast featuring Brian Maher, Senior Alliance Product Marketing Manager for Veeam Software, Craig Halliwell, Head of Emerging Alliances at Pure Storage, and moderated by Greg Schulz, founder of independent IT Analyst firm Server StorageIO™.

Flash storage gives you options for both data protection and availability for the always-on enterprise. Since not all applications are created equal, this is especially important for apps with a need for speed, which can take advantage of all-flash storage for faster protection and restoration.

"Fast applications have to have those fast resources and if you need that speed you also need to be able to recover, to restore, to restart, to resume, just as quickly," explained Greg Schulz of Server StorageIO. All-flash solid state technology has a role in IT that goes beyond data protection and storage, he told the Fireside Chat audience. He argued that using all-flash solid state technology is not just an overindulgence item but is a business enabler that can be used to simplify and reduce complexity, and boost productivity while lowering cost. It can be deployed as well to address aggregation of workloads.

FAST APPLICATIONS NEED FAST PROTECTION

First things first, today's high-speed apps deployed in e-business and e-commerce applications that are often accessed via mobile devices, need fast protection, explained Craig Halliwell of Pure Storage. Recovery timeframes that were acceptable in the past are no longer workable in the new business environment.

"What we've seen in the market for the last four or five years is that businesses don't have the luxury of going down for a certain period of time, pulling their backup back and then going through a recovery process," he told the Fireside Chat audience. "Companies that are doing things like Software-as-a-Service or rapid IT need to be up all the time."

Where business apps need to be always on and always fast, flash provides an edge in several ways.

"First of all," Halliwell explained, "on the frontend where they are using flash for production workloads, the ability to use snapshots, snapshots based on flash technology, means the snapshots are taken basically instantaneously so there's

speed in that case with the snapshot being taken. The other piece though, is because of the way that Pure Storage in particular manages our snapshots, they are all metadata based. You can take an incredible number of snapshots, thousands stored on one array, so you have super granular recovery points with not a lot of storage added. That's on the front side, the production side. On the protection side, we're also deploying all-flash as a backup target. So, the backup copies that are written to that all-flash storage array incredibly fast. But maybe most importantly, is the restoration speeds. We're seeing restoration speeds that are 10 and 20 and 30 times faster than what users are seeing on disk. It is really changing the business for them."

The speed of flash storage and the availability of snapshots are revamping the traditional concept of backup and restore to the point where the restoration would happen at such high speed, the end user would not experience any noticeable disruption in an application.

"How fast can you restore?" asked Brian Maher, Senior Alliance Product Marketing Manager for Veeam Software. "Maybe in some cases you don't even restore at all, you use the snapshot image and you bring up that virtual machine right away and use it as production while you're restoring in the background."

With the fast pace of today's computing, almost everything is happening faster. When natural disasters or human-caused outages occur flash can help keep the wheels of e-commerce and e-business turning. Frequently the need to restore is not caused by a hack attack but by an employee making an honest mistake like deleting something that should have been kept.

"Fast mistakes need fast repairs, fast fixes. Faster faults and failures are going to occur quicker and you need to have a fast, almost a reverse gear, to get yourself out of that trouble," Schulz said. "A lot of people talk about flash and flash storage just from that performance aspect, but there's this other attribute, which is productivity."

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BEYOND SNAPSHOTS

Snapshots using flash help make it possible for businesses to backup quickly enough to satisfy business and consumer demands for an always-on enterprise. But as Schultz pointed out other technology is required. This is at the heart of the Pure Storage partnership with Veeam Software. The data protection solution provided by Veeam can use the snapshot copies from the all-flash array and securely store them on disk or in the cloud for complete data protection.

Maher explained that with flash storage you can have a total production image that can be used in a number of ways beyond recovery.

"Now that you have that production image, what can you do with it?" he asked rhetorically. "What kind of business value can you extract out of it? It is one thing to backup and restore, but it's another thing, since I have the information to do something else with it."

As an example, he said the production image could be used for data analysis that would produce business intelligence and identify trends that could help in business planning. The production image could also be used to identify security holes to help develop ways to thwart ransomware or other hack attacks. Business value can be gained because flash creates not just a copy of data but a point-in-time copy of an environment.

Maher said a key to getting the most out of flash technology is to make it simple to use.

"You can have the most elaborate tools and the greatest flash array on the face of the planet," he said, "but if they are complex to set up or hard to manage, or cause a lot of operational overhead, you're going to shoot yourself in the foot. You've got to design it to be really simplistic to allow for a repeatable processes and to make sure you can keep that information up and running and you can extract the value of the information."

Schulz pointed out that simplifying technology has business bottom line value.

"Simple equals savings, complex equals cost," he said.

The integration of Veeam and Pure Storage also provides the business with a wealth of metadata, which can be used in business analysis.

DATA PROTECTION

While flash is opening the way to things like business analysis and may put companies on the threshold of implementing Artificial Intelligence, Schulz emphasized that the first order of business is data protection.

Maher agreed: "I see so many customers buy these incredible arrays that are lightning fast like with Pure Storage but then put on this antiquated protection scheme that puts all the data at risk, or even worse, slows down the flash array." In its partnership with Pure Storage, Veeam makes sure its technology does not impact flash performance. Veeam is cognizant of the fact that customers invest in flash to speed transaction rates.

"The last thing you want to do is, hey, stop the world, I want to get this snapshot, I am going to stall the whole flash array and ruin production," Maher said. Veeam makes sure the snapshots for recovery are done in a timely way so the customer can roll back to almost current status if there is a disruption and can quickly recover. However, that is done in a way that does not interfere with the performance of applications. So customers have both fast backup and recovery and high performance.

"You can have everything," Maher said. "You can have it all now because of that tight integration between our two companies. It ends up being transparent. Pure Storage continues to perform at lightning

speeds and we can take multiple points and copies because we leverage the snapshots. We can go off and do these great things and you keep production up and running and you can also take as many points as you want to make sure you can recover quickly and not lose transactions."

that can be available, up and running, 24/7/365, just like your storage is and just like your application is."

For new deployments of its flash technology or replacements for legacy storage technologies, Pure Storage works with Veeam to create a new paradigm by

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It is important for companies to move beyond old processes when adopting new technology like flash, Schulz added. For new technology to be successfully implemented, IT departments need to adopt new ways of thinking about procedures for things like upgrades.

Halliwell agreed: "At Pure Storage we have this unique business model called Evergreen. One of the aspects of the Evergreen business model is non-disruptive upgrades which means for the life of the array, we can at certain intervals come in and provide upgraded controllers and upgraded flash drives and all of this happens while the array is still running and more importantly your application is still running. So, what this means is the new paradigm is you're not taking the system down to do upgrades, and relying on a backup copy that may have been taken a few hours ago. You now have to have a new protection product

also providing modern backup and data protection at the same time, Halliwell explained. This avoids the problems companies can encounter when they implement all-flash storage array but continue protecting it with the existing legacy backup software that they've had for five or 10 years.

Pure Storage and Veeam are working to help companies move beyond outdated solutions by helping customers rethink their whole production as well as availability and environment by bringing in a modern protection product like Veeam along with their all-flash array.

"So they're not just bringing in the new Veeam software and bringing in the new Pure Storage," Halliwell said. "They're also bringing in new thinking about when they're going to protect, how they're going to protect, what they're going to protect so they can spend less time waiting for restoration."

THE ALWAYS-ON ENTERPRISE

Together, Pure Storage and Veeam enable the Always-On Enterprise™ to meet service level agreements (SLAs) for all applications and data.

The Pure Storage data platform powers virtualization by allowing administrators to consolidate workloads without sacrificing performance and to achieve 100 percent virtualization with confidence. Pure Storage enables scale from hundreds to thousands of VMs without disruption, and is completely managed inside vCenter.

Pure Storage FlashArray provides fast and reliable block storage for your production data, as well as local snapshots for rapid restore. FlashBlade, a highly dense all-flash data platform designed for big data and concurrent workloads, enables you to store large data sets in a small data center footprint and restore them rapidly.

Veeam Availability Suite™, which includes Veeam Backup & Replication™, leverages virtualization, storage and cloud technologies that enable the Always-On Enterprise to achieve recovery time objectives (RTOs) and recovery point objectives (RPOs), or (RTPO™), of <15 minutes for All applications and data. Veeam simplifies IT operational management, mitigates risk, and dramatically reduces capital and operational costs.

HOW PURE STORAGE AND VEEAM WORK TOGETHER

Veeam Availability Suite combines the industry-leading backup, restore and replication capabilities of Veeam Backup & Replication with the advanced monitoring, reporting and capacity planning functionality of Veeam ONE™. Veeam Availability Suite delivers everything you need to manage and protect your VMware vSphere and Microsoft Hyper-V application workloads and data, to achieve Availability for the Always-On Enterprise.

Pure Storage integration with Veeam Availability Suite provides a cohesive data protection strategy allowing Veeam to protect workloads running on Pure Storage's all-flash array — then directing those backups to a repository of your choice.

To prevent data loss on your primary FlashArray, Veeam offers built-in features like Backup Copy Jobs (with optional WAN acceleration) that automates the movement of backup copies to short-term storage repositories like FlashBlade, to enable rapid data and application recoveries, while leveraging the cloud or high-density tape for long-term archival and DR storage.

Find out more

Pure Storage and Veeam Partner Solution:
https://www.purestorage.com/company/technology-partners/veeam.html