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The Right Spin

Managing your data center just got a whole lot easier

by John Stetic

Business moves faster every day. To keep up, organizations need an agile IT infrastructure that immediately responds to changing business conditions. IT needs to be a strategic productivity center rather than a rigid cost center. However, new levels of infrastructure complexity and heterogeneity make it more difficult for IT to respond to its business users' requests.

Historically, every time the business user needed a new service, the solution was to provision a new physical server with a single application or purpose. This practice is an inherently expensive, rigid and inefficient approach. Virtualization has emerged to offer new efficiencies and represents another powerful tool in the CIO's arsenal; however it is not, in and of itself, the silver bullet.

Virtual infrastructures must coexist with new and legacy physical infrastructures, creating a new set of management challenges, including cross infrastructure management, security, provisioning and IT chargeback. To solve these emerging challenges, you need to answer several key questions:

1. How do I find existing physical workloads that would be better served running in a virtualized environment?
2. How do I find virtualized workloads that are consuming a disproportionate amount of shared resources and should be moved to a physical server?
3. How can I easily assemble and move workloads between physical and virtual infrastructures?
4. How will I manage the entire lifecycle of workloads and ensure sufficient resource capacity to accommodate current and future business needs?
5. How do I deliver the right business services and align IT to the business?
6. How do I allocate IT costs in the shared resource environment that virtualization enables?
7. How do I control and manage growth of the data center? Provisioning virtual machines eliminates the need to purchase new hardware; yet it often leads to virtual infrastructure sprawl and management headaches.
8. How do I change process and policies founded on principles of the static, physical-only data center to accommodate the new flexibility of virtualization? How do I build a new data center that includes both a physical and a virtual infrastructure?

Data center agility requires more than holistic management of the data center. Greater agility in desktop and server provisioning, change control, and access management is also required to serve the needs of the business. Different solutions are needed to plan and execute change projects, whether for server consolidation and virtualization, hardware migration or entire data center relocation initiatives. Organizations embark on all of these initiatives with the goal of reducing costs and improving efficiencies. Sadly, many suffer critical delays and unnecessary risks because of insufficient planning or the lack of solution-focused products to assist them.

The Ideal Solution Framework

By helping dissolve the bonds between software and hardware, virtualization encourages organizations to see the data center in a different way—not as a collection of static servers, but as a set of portable workload units. At the most basic level, a workload encapsulates the data, applications and operating systems that reside on a physical or virtual host.

A next-generation infrastructure management solution that meets the following criteria is needed.

- It's equally at home in both physical and virtual environments;
- It helps data center managers and architects choose the best environment, whether physical or virtual, without vendor lock in;
- It's a unified solution that can assess your workloads, tell you which environment is best, easily provision, relocate, protect and optimize that environment throughout its lifetime.

Announcing PlateSpin

With some 5,000 customers worldwide including nearly half of the Fortune 500, Toronto-based PlateSpin has focused on cross-platform functionality and interoperability throughout their product portfolio. Its solutions offer enterprises the ability to separate server workloads from underlying hardware. They make it possible to profile, deploy, move, copy, protect and replicate these workload units anywhere in the data center across physical and virtual boundaries. PlateSpin has successfully completed more than 700,000 server workload migrations—the most of any player in the virtualization market. PlateSpin technology enables IT professionals to gain a workload-based view of the heterogeneous data center, providing new ways for organizations to achieve operational efficiencies and cost savings.

What PlateSpin shares with Novell is a pragmatic vision of driving down the cost, complexity and risk associated with a complex, heterogeneous IT infrastructure. This shared vision makes the combination of PlateSpin and Novell a natural fit. Together, PlateSpin and Novell empower customers with an extensive solution that includes a powerful integrated virtualization platform and a best-in-class management solution for balancing workloads between the virtual and physical worlds.

By acquiring PlateSpin, Novell makes the heterogeneous data center a reality. The combination of products make it easy to move physical workloads to Xen-based virtual machines running on SUSE Linux Enterprise as well as other virtual platforms provided by VMware, Citrix, Microsoft and Virtual Iron. The combination of Novell and PlateSpin technology will solve many of the data center challenges that customers commonly face today, including:

Relocation

Solution: PlateSpin provides a completely integrated product suite that automates the assessment and migration phases of data center initiatives, including:

- server consolidation
- data center relocation
- hardware upgrades

Results: Customers reduce costs, power consumption and floor/rack space in the data center.

Protection

Solution: PlateSpin's consolidated disaster recovery solution offers affordable workload protection that leverages virtualization technology to protect both physical and virtual workloads in the data center.

Results: Improved security and business continuity.

Provisioning

Solution: Using PlateSpin technologies, customers will have a single approach to imaging and configuring physical and virtual workloads regardless of platform.

Results: Manual install process is eliminated and the time it takes to provision new server workloads is drastically reduced. Customers can also address changing resource requirements at peak demand times and in test lab scenarios.

Ongoing Optimization and Management

Solution: Novell and PlateSpin optimize the balance between the physical and virtual infrastructure. Together they automate monitoring and make infrastructure adjustments based on server availability and workload demand.

Results: By automating the rebalancing process and increasing the visibility into how workloads use physical and virtual resources over time, customers will increase server utilization. Thus they are able to optimize their data centers by better addressing common workload movement challenges.

PlateSpin Product Drill Down

PlateSpin offers a unified suite of solutions for workload relocation, protection, provisioning and ongoing optimization. At the core of these products is PlateSpin's workload profiling and portability technology which:

- monitors server workloads across the data center
- provides visibility into how resource demands change over the workload lifecycle
- enables network-based movement of server workloads to the physical or virtual host where they will run most efficiently.

PlateSpin has three key product offerings; they are discussed in detail below.

PlateSpin PowerRecon

PlateSpin PowerRecon is a software product that provides visual analysis, modeling and forecasting for consolidating, protecting and optimizing workloads in the data center. PowerRecon collects hardware, software and services inventory with zero manual effort. It then remotely gathers workload utilization statistics for a clear and concise picture of the application services running in the data center, showing how their resources are being used. Companies use PowerRecon for ongoing workload monitoring and optimization, and to take the guesswork out of capacity planning, server consolidation and disaster recovery projects. PowerRecon also provides IT chargeback and virtual machine growth reporting. (See Figure 1.)

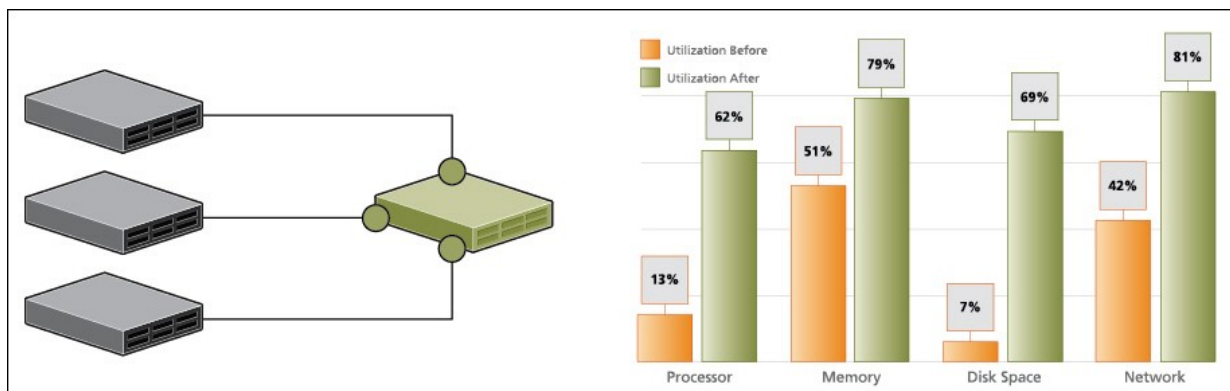


Figure 1: PlateSpin PowerRecon provides scenario modeling, forecasting and planning capabilities to take the guesswork out of server consolidation, disaster recovery, capacity planning and virtual infrastructure management.

With unprecedented data collection scalability and broad multiplatform coverage, PowerRecon provides a true enterprise-scale workload optimization, planning and analysis solution for enterprise data centers.

Key Features of PowerRecon

Workload and Resource Utilization Forecasting—PowerRecon enables organizations to better plan for infrastructure investment and server consolidation. By creating reports and charts, it accurately shows how one or a group of server workloads will use resources in the future based on historical trend data. Forecasted values for CPU, disk, memory and usage trends ensure that server consolidation projects can accommodate future growth.

Enterprise-Level Scalability—A single instance of PowerRecon supports robust data collection, analysis and planning for up to 2,000 servers in the network. Multiple instances of PowerRecon can run together in the data

center, enabling the solution to scale well beyond 2,000 servers. The enterprise-class scalability puts PowerRecon in a category all its own when it comes to support for large-scale data center consolidation projects.

Broad Multiplatform Support—Customers with multiplatform environments can inventory, analyze and report onsite in the data center using a single data collection and analysis solution. Windows, Linux and UNIX physical systems are supported, as well as virtual platforms provided by VMware, Citrix, Microsoft and Virtual Iron.

Flexible IT Chargeback Reporting—Because virtualization creates a pool of computing resources, it can be difficult to manage and monitor how virtual resources are being used and by whom. PowerRecon allows organizations to effectively allocate and share virtual resources across various business units and departmental owners. PowerRecon’s flexible chargeback reporting capabilities improve virtual infrastructure management and financial accounting by allowing organizations to calculate IT costs based on actual resource usage.

VM Growth Reporting—Virtual machine growth reports monitor the proliferation of virtual machines and avoid the administrative headaches associated with virtual infrastructure sprawl.

Power and Cooling Analysis—You can compare and contrast potential power and cooling cost savings and ROI derived from different consolidation scenarios. Custom fields allow power and cooling requirements for major hardware platforms to be maintained in a central database, enabling organizations to analyze and cost-justify green computing initiatives.

PlateSpin PowerConvert

PlateSpin PowerConvert is an anywhere-to-anywhere Workload Portability solution that provides the flexibility to configure and optimize the data center. It streams workloads over the network between physical servers, blade infrastructures, virtual hosts and image archives. PowerConvert remotely decouples whole server workloads—data, applications and operating systems—from the underlying server hardware and streams them to and from any physical or virtual host with a simple drag and drop. (See Figure 2.)

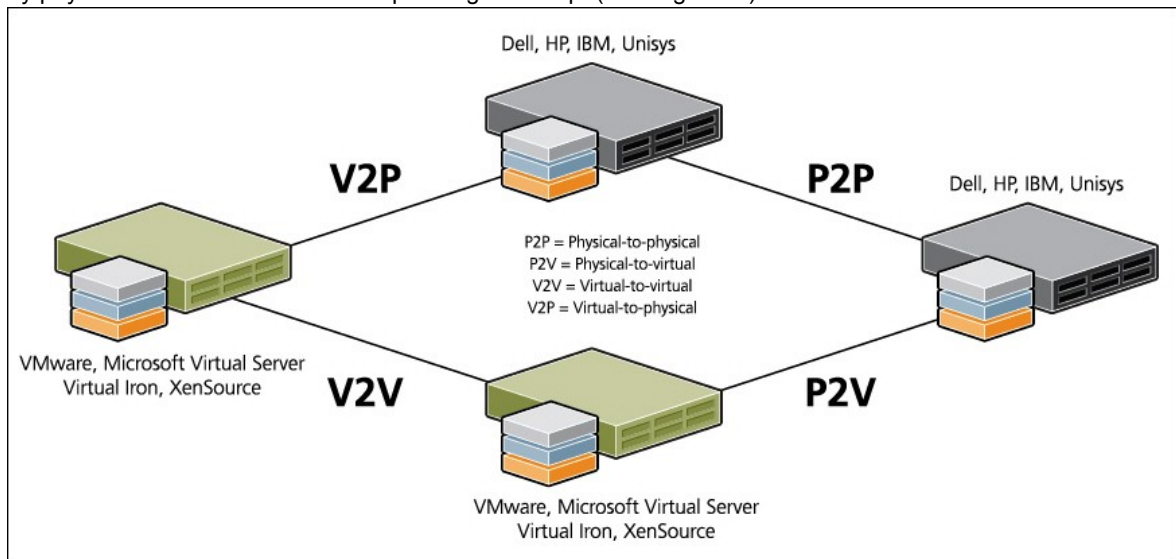


Figure 2: With PlateSpin PowerConvert, enterprises can perform anywhere-to-anywhere server workload migrations across heterogeneous IT infrastructures spanning physical and virtual hosts.

PowerConvert removes the dependency between a data center’s infrastructure layer and the business applications that run on it. Therefore, organizations can continually match service level requirements with available resources by rapidly reconfiguring, relocating and optimizing servers. All this from a single point of control without having to be in physical contact with source or target servers.

Key Features of PowerConvert

Anywhere-to-anywhere Workload Migrations—Server workloads are freed from the underlying hardware so you can move or copy them to and from physical and virtual hosts or images on demand. PowerConvert automatically configures the server workload to operate on the target environment, making driver, kernel and other necessary changes.

Live Transfer—PowerConvert Live Transfer enables the migration or image capture of active Windows servers without taking the source servers offline or having to reboot. It reduces system downtime during migration or creates regular backups of production systems. Concurrent live transfers are managed through a central administration point and help accelerate consolidation efforts.

Server Sync—You can greatly reduce the risks associated with workload relocation projects such as server consolidation and data center relocation. Perform an initial transfer to the target site or host, test the workload in the new location while continuing to run the source, and then perform a final sync before cutting over the workload. Server Sync also helps when the source and destination are geographically distributed. Removing the necessity for a full system replication can dramatically accelerate workload migrations over the wide area network.

Task-Based Wizards and Drag-and-drop Interface—With intuitive built-in workflows, PowerConvert reduces learning curves and simplifies workload relocation, protection and provisioning activities. Use the drag-and-drop interface to move, copy, protect, capture or deploy workloads. Intuitive task-based wizards for common actions and advanced job configuration capabilities make the process of configuring jobs easier and more reliable. Job reporting may be used to easily create the reports required for regulatory compliance or to qualify for utility rebates for power and cooling reductions and green computing initiatives.

On-the-fly Configuration—With PowerConvert, you can reconfigure and right-size CPU, disk, memory and network resources on-the-fly during the workload migration. You can also change critical parameters on restore and right-size the target server to match workload demands.

PlateSpin Forge

PlateSpin Forge is a consolidated recovery hardware appliance that protects both physical and virtual server workloads by using embedded virtualization technology. In the event of a production server outage or disaster, workloads can be rapidly powered on in the PlateSpin Forge recovery environment. There, workloads continue to run as normal until the production environment is restored. The PlateSpin Forge appliance ships with prepackaged storage, consolidated recovery software and virtualization technology that is ready to go out-of-the-box. The standard configuration protects 25 server workloads for up to a total of 2.5 terabytes of data. For larger implementations, multiple appliances can be deployed. (See Figure 3.)

PlateSpin Forge puts workload protection and recovery within reach for small and medium-sized enterprises as well as departments and branch offices within larger enterprises. The benefits of dramatically reducing the time and specialized technical resources required to plan, provision, deploy and test a recovery environment is invaluable. With PlateSpin Forge, organizations can begin reliably protecting their physical and virtual workloads in a matter of hours as opposed to months.

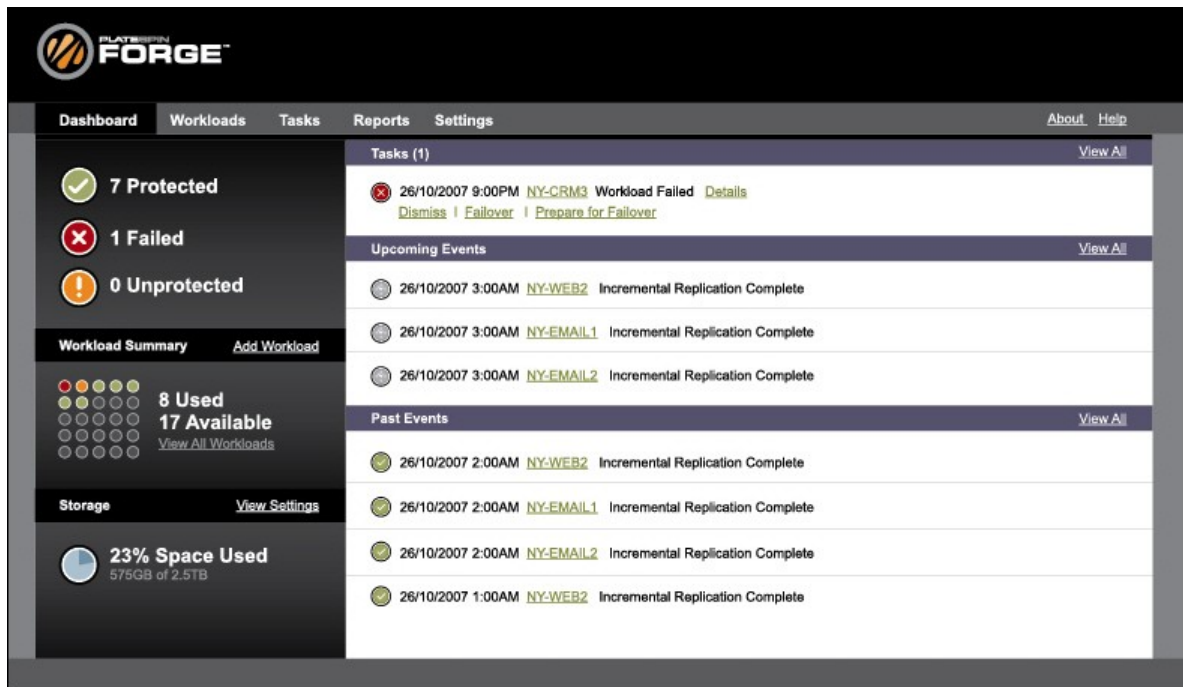


Figure 3: The PlateSpin Forge recovery hardware appliance provides an ever-present Web-based dashboard that enables IT operations specialists to view the status of server workload protection at all times.

Key Features of PlateSpin Forge

Whole Workload Replication—PlateSpin Forge enables data centers to protect the entire server workload including data, applications and operating systems within a single bootable recovery environment. In contrast to data-centric recovery approaches, whole workload protection provides a context for recovered data and allows organizations to avoid the common hassles of manual system rebuilding and disjointed system and data restore. Organizations can affordably protect physical and virtual workloads with a single technology investment. Workloads can be protected locally or remotely across a wide area network to facilitate off-site recovery in the event of a site disaster.

Rapid One-Click Failover—In the event of a disaster, recovery time is just a matter of powering on PlateSpin Forge's virtual standby workload. Upon receiving a failure alert by e-mail, Blackberry or within the Web-based user interface, the administrator can rapidly recover workloads with a single mouse click.

Failback Flexibility—Leveraging PlateSpin's multiplatform Workload Portability technology, PlateSpin Forge provides flexible restore options. Workload failback can be rapidly executed to any physical or virtual host regardless of manufacturer, make or model.

Simple Web-Based Management—PlateSpin Forge includes an intuitive Web-based interface for managing, monitoring and reporting on all aspects of workload protection and recovery. An ever-present dashboard enables users to view the status of their protection plan at all times. The Web-based interface is extremely easy to use, dramatically reducing the time, effort and training required to ramp-up and remotely administer the recovery solution.

Easy Test Failover—Unprecedented one-click test failover allows the data center user to rapidly test the integrity of workload replication. With a mouse click, the user can take a virtual snapshot of the recovery workload, power it on within a private internal network and quickly validate the recovery plan. Because the failover test is fenced off from the production network, the user can work freely without having to be concerned about conflicts or the integrity of the production environment.

Want More?

If this high-level overview of PlateSpin's offerings piqued your curiosity, visit platespin.com for more information about the products described in this article. Below is a sampling of white papers and Webinars that are also available; check them out!

A Unified Approach to Workload Lifecycle Management *Workload Profiling and Portability Transforms Data Center Operations*

platespin.com/Campaigns/Campaign.aspx?id=40881568

Find out how new workload profiling and portability technologies are helping organizations achieve new operational efficiencies and cost savings, and why your organization should consider adopting a unified approach to managing workloads in the data center.

PlateSpin Forge Webinar Replay (Original air date January 22, 2008) *Introducing PlateSpin Forge*

platespin.com/Campaigns/Campaign.aspx?id=88547310

Learn How to Plug In and Protect 25 Servers Using Virtualization. Are the majority of servers in your data center adequately protected in the event of a disaster? When was the last time you tested your recovery plan? Join us to learn how virtualized recovery provides a quicker, smarter and more economical way to deploy, test and manage a disaster recovery environment.

PlateSpin and Forrester Webinar (Originally aired September 6, 2007) *Transform Your Data Center with Unified Workload Management*

platespin.com/Campaigns/Campaign.aspx?id=17631201

Join Forrester and PlateSpin to learn about the impact virtualization is having on the data center. You'll hear about the importance of data center automation and workload awareness, and how unifying the approach to workload management gives organizations the opportunity to shape, optimize, move and protect their data center assets with unprecedented levels of flexibility, efficiency and ease of use.

PowerRecon 3.1 Webinar Recording (Originally aired October 17, 2007)

Take control of your virtualized data centers

platespin.com/Campaigns/Campaign.aspx?id=72871532

Virtualization is transforming the data center, but how can you make the most of your virtualization investments through effective management of your virtual environment? Join John Stetic, PlateSpin's senior director of Product Management, for a guided tour of new features in PowerRecon 3.1 Virtual infrastructure Edition that help organizations take control of their virtualized data centers. Participate in a product demo, walkthrough and Q&A to discover first-hand how PowerRecon helps virtualized data centers automate chargeback reporting and avoid virtual infrastructure sprawl.

PlateSpin and Novell: A Unified Suite of Data Center Solutions

PlateSpin products ease data center pains by enabling organizations to unify their approach to solving common workload lifecycle challenges. The freedom to drag and drop workloads onto the physical or virtual host where they will run most efficiently enables organizations to improve the speed and quality of server consolidation, hardware lease migration, data center relocation and disaster recovery.

Novell and PlateSpin can turn your IT organization into a competitive weapon by offering complete workload lifecycle management and optimization for Windows, UNIX and Linux operating systems in both the physical and virtual data center. Whether you're filling a need for a full solution stack with a powerful virtualization platform or a best-in-class heterogeneous management solution that leverages existing investments in physical or virtual infrastructure, Novell and PlateSpin deliver an unrivaled product portfolio to manage workloads throughout their lifecycle, from provisioning and protection to relocation and optimization.

The combined Novell and PlateSpin solutions will deliver superior value by helping you reduce costs, improve service levels and respond to fluctuating business requirements. Enterprises of all sizes can use the power of Novell and PlateSpin technologies to make their virtual and physical environments work together. By deploying these solutions, you can:

- lower costs by reducing the time and effort required to provision, protect, relocate and optimize server workloads throughout their lifecycle.
- gain the flexibility and agility to provision virtual or physical workloads dynamically and automatically.
- respond more rapidly and flexibly to business requirements for new IT resources.
- increase server utilization by allowing multiple applications to coexist on one physical server.
- reduce power and cooling requirements through virtualization and consolidation.

Summing Up

Hopefully this high-level overview of PlateSpin products has aroused your curiosity about how they can be deployed in your IT environment to improve the speed and quality of your data center initiatives. To learn more about PlateSpin and to download, try or buy PlateSpin products, visit platespin.com. **N**