

# Transforming Business Continuity with VMware Infrastructure and Eaton

## Current Business Continuity Challenges

Implementing plans to ensure business continuity for key IT services and business critical applications is an essential requirement for organizations today. Downtime of important applications is a costly proposition and extended downtime can even be fatal—industry research finds that a significant number of companies that experience extended interruption to IT services soon go out of business.

While most organizations recognize the importance of business continuity, their ability to provide high availability and disaster recovery for key applications in a physical (non-virtualized) environment is often constrained by the following challenges:

- **High costs.**  
Many solutions require significant investment in additional hardware, software and services. Disaster recovery plans in particular often require duplicating datacenter infrastructure, resulting in a proliferation of underutilized servers.
- **High complexity.**  
Most traditional business continuity solutions add significant complexity to datacenter environments. Acquiring and managing additional servers, use of complex cluster tools, implementing and maintaining specialized software and processes all contribute to this complexity.
- **Failure to meet recovery time and availability goals.**  
Due to the cost and complexity of business continuity solutions, organizations are often forced to compromise on solutions that are unlikely to meet goals for availability and recovery time objectives.
- **Insufficient reliability.**  
Testing existing complex business continuity solutions is challenging and requires significant equipment, expertise and personnel resources. The complexity of these specialized solutions also makes them difficult to maintain.

## Higher Availability with VMware Infrastructure

Industry-leading VMware® VMotion™ technology allows IT administrators to move running virtual machines from one physical server to another without downtime. This capability makes it possible to conduct zero-downtime hardware maintenance by simply using VMotion to move running applications to other physical servers as needed.

VMware Distributed Resource Scheduler (DRS) can reduce unplanned downtime by automating the process of using VMotion to migrate running applications away from servers that

cross utilization thresholds or moving virtual machines non-disruptively to servers that have the needed compute resources.

VMware High Availability (HA) provides easy to use, cost effective high availability for applications running in virtual machines. In the event of server failure, affected virtual machines are automatically restarted on other physical servers that have spare capacity.

## Better Disaster Recovery with VMware Infrastructure

VMware virtual machines are hardware-independent so any physical server can serve as a recovery target for any virtual machine. Organizations can significantly reduce the cost of hardware for disaster recovery by repurposing underutilized existing servers for recovery targets and disaster recovery testing.

VMware Infrastructure also simplifies and accelerates recovery, helping IT organizations meet their time-to-recovery targets. Complex multi-step procedures using specialized software for baremetal recovery and operating system recovery can be simplified to single-step file recovery because virtual machines are completely encapsulated in a small number of files and can be restored to any hardware.

Finally, VMware Infrastructure simplifies testing of disaster recovery plans and makes training personnel in disaster recovery procedures easier.

## Benefits of VMware Business Continuity Solutions

Customers who use VMware Infrastructure to improve their business continuity plans experience numerous benefits, including:

Downtime reduction by eliminating planned downtime due to maintenance, or reducing un-planned downtime through economical sharing of fault-tolerant hardware features, and automated rapid restart of virtual machines.

Lower costs by implementing better business continuity at a lower cost, eliminating the need for additional hardware and specialized software.

Simplified processes by removing the complexity of maintaining duplicate physical systems for disaster recovery.

# Eaton's total power solution enhances availability, continuity in virtualized environments

Gain exceptional manageability, flexibility and protection in a cost-effective solution

## Industry Overview

Eaton power quality solutions offer exceptional protection and significant cost savings to IT managers seeking to safeguard critical systems and data. By facilitating high availability and providing continuous clean power, Eaton solutions protect against the costly and potentially devastating effects of unplanned downtime. By gracefully shutting down servers during prolonged power outages, Eaton's power management software ensures data integrity, for virtual machines. Our comprehensive line of power quality solutions also enhance the benefits of virtualization by improving ROI, decreasing capital equipment expenses and slashing operational costs through reductions in power and cooling.

## Solution Overview

Eaton's virtualization solution—comprised of a UPS, supervision software, protection software and a network interface card—monitors connected power devices and facilitates automatic, graceful shutdown of virtual and physical servers in the event of an extended power failure. From any location with network access, Intelligent Power® Manager supervisory software provides the ability to monitor and protect power devices connected to the UPS. NetWatch and Network Shutdown Module protection software are compatible with VMware vSphere™ as well as VMware ESX™ and VMware ESXi™. This lightweight software can be loaded directly onto any server. During an extended power outage, the protection software suspends each virtual machine sequentially before shutting down the host server. In this manner, all work-in-progress is protected, ensuring data integrity and saving potentially hundreds of thousands of dollars.

## Solution Benefits

Eaton's virtualization solution enhances business operations by offering exceptional flexibility, ease of manageability and significant cost savings. Unlike competitive offerings, Eaton's is a lightweight application that installs easily on any PC or server, with only one shutdown solution per physical server. Running with reduced code, the solution does not require the Java Runtime Environment. In addition, Eaton's solution operates without a separate, proprietary console—an additional appliance that competitive offerings require. Furthermore, Eaton's software is bundled free with their UPSs, while competitors charge for comparable offerings. The software also enhances manageability since it is browser accessible and enables mass configuration.

## VMware and Eaton

Eaton's virtualization solution for vSphere and ESXi 4.0 provides financial security and peace of mind to businesses by ensuring protection against downtime and data loss.

Our supervisory and protection software enables IT managers to monitor and supervise power products within the datacenter—even monitoring competitors' power equipment. Eaton's protection software sequentially shuts down all servers—even virtual—as required during an extended power outage. The total solution lowers TCO and enhances ROI by preserving data integrity and increasing overall availability in the datacenter.



VMware, Inc.

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