



# Transforming Business Continuity with VMware Infrastructure and FalconStor Software

## 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 data center infrastructure, resulting in a proliferation of under-utilized servers.
- **High complexity.** Most traditional business continuity solutions add significant complexity to data center 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<sup>®</sup> VMotion<sup>™</sup> 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 bare-metal 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.

## Learn More

To learn more about VMware solutions and products, visit <http://www.vmware.com> or call 1-877-4VMWARE.



FalconStor Software, Inc.  
www.falconstor.com

### Overview

FalconStor Software, the premier provider of TOTALLY Open™ Data Protection, delivers the industry's most comprehensive data protection and storage virtualization solutions.

### Key Business Needs

Today's organizations are adopting virtualization to help consolidate resources, simplify management, and minimize overhead. In order to fully capitalize on virtualization technology, they need to treat virtual environments as they would physical ones, protecting them in a cost-effective way to ensure data availability and rapid recovery. FalconStor makes this possible.

### Key Business Benefits

FalconStor provides TOTALLY Open Data Protection solutions that integrate seamlessly with VMware environments to enable you to create a centralized virtual storage infrastructure. These include solutions for business continuity/disaster recovery, backup optimization, and storage virtualization.

### Business Results

- Business continuity through fast, granular protection and recovery of critical databases, files, and systems
- Supports offsite replication for remote DR
- Eliminates backup windows without impact on the local network
- Manages, allocates, and protects VMware environments
- Minimizes physical storage requirements and associated energy expenditures
- Slashes network traffic by over 95%

### VMware and FalconStor

Integrated, comprehensive FalconStor solutions complement VMware technology to protect all of your data with 100% transactional integrity, delivering the most rapid local and remote recovery.

### FalconStor Products

- FalconStor Virtual Tape Library (VTL) Virtual Appliance for VMware Infrastructure
- FalconStor Continuous Data Protector™ (CDP) Virtual Appliance for VMware Infrastructure
- FalconStor Network Storage Server (NSS) for VMware Infrastructure
- FalconStor Disaster Recovery (DR) Automation Solutions for VMware Infrastructure

## Optimize backup using high-speed VTL with integrated deduplication

### FalconStor® Virtual Tape Library (VTL) Virtual Appliance for VMware® Infrastructure

#### Industry Overview

The rapid growth of business data increases the time required to perform backup. Traditional tape backup has become increasingly difficult to accomplish within today's narrowing backup windows. Longer backup times can lead to longer recovery periods, leaving more room for media and mechanical failures. Furthermore, today's data centers manage large, heterogeneous storage environments, often with numerous servers running various operating systems and applications, driving several petabytes of data. This makes backup and recovery operations very complex and time-consuming, to the point where some organizations struggle to complete backup in the necessary time.

#### Solution Overview

The FalconStor® Virtual Tape Library (VTL) Virtual Appliance for VMware Infrastructure is a preinstalled, preconfigured, and ready-to-run software application package bundled into a virtual appliance that brings the market-leading VTL technology with data deduplication to VMware environments, helping to solve the backup challenges associated with tape. Developed for quick and easy deployment, the solution reduces infrastructure costs and complexity while maximizing the value of storage investments. The FalconStor VTL Virtual Appliance vastly improves the speed, reliability, and manageability of backups while optimizing storage and bandwidth efficiency for disaster recovery (DR) and continuous data availability.

Since identical data often exists in an organization, FalconStor VTL Virtual Appliance provides integrated data deduplication to eliminate redundancies. After data is backed-up, the built-in deduplication engine scans for blocks that have been backed-up previously and preserves only one instance of each block, reducing storage capacity needs.

Compression further reduces the amount of data stored. This enables the fastest and highest backup performance while minimizing storage overhead.

#### Solution Benefits

FalconStor VTL Virtual Appliance provides high-performance enterprise-level disk-based data protection and integrated global data deduplication to optimize storage efficiency. When deployed at remote sites with FalconStor VTL at the data center, it enables global deduplication, minimizing bandwidth requirements. FalconStor VTL Virtual Appliance can automate data export to tape, enabling existing backup software to export virtual tape cartridges directly to physical tape devices in the background without impacting backup servers. This process is much faster than copying data to tape from the backup server. Robust media management simplifies tape management and enhances tape security.

#### VMware and FalconStor

FalconStor is the only VTL vendor to offer fast backup, data deduplication, enterprise-wide replication, and tape integration in one integrated solution, without requiring changes to the existing environment. The FalconStor VTL Virtual Appliance features a TOTALLY Open™ architecture, which allows it to integrate readily with VMware environments and technologies. Its built-in data deduplication feature automatically and transparently eliminates redundant data in backup and minimizes network traffic associated with offsite replication. As a result, the FalconStor VTL Virtual Appliance reduces infrastructure costs and backup complexity, and maximizes return on investment (ROI) in virtual environments.

To learn more about FalconStor solutions, please call 1.866.NOW.FALC or visit [www.falconstor.com](http://www.falconstor.com)

