5 Ways to Improve Business Continuity

Simple steps to protecting your IT infrastructure with VMware.

HIGH AVAILABILITY

DATA PROTECTION

DISASTER RECOVERY

vmware®
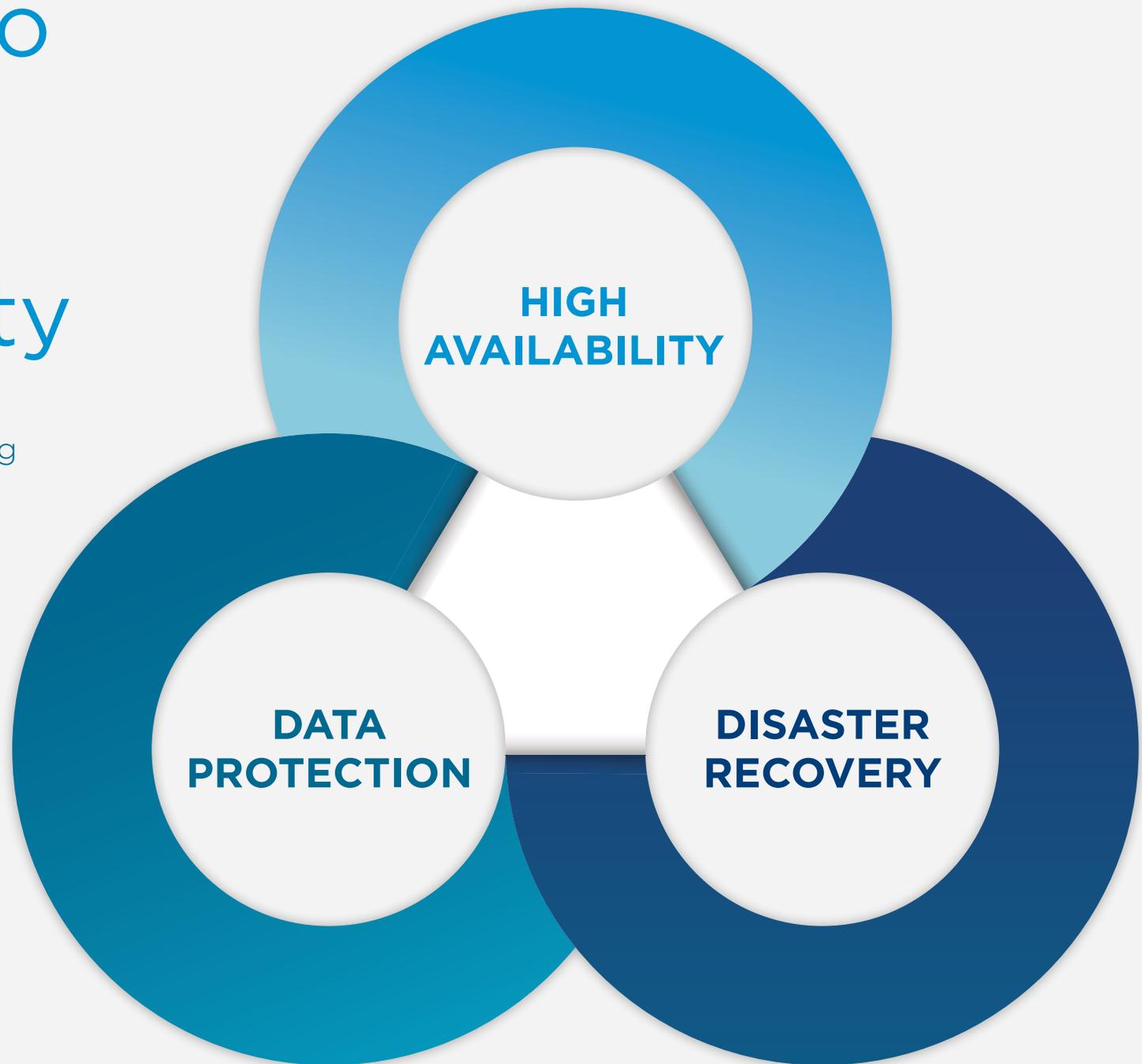
Introduction

IT infrastructure is a host to applications and services that enable employee productivity and drive revenue for your business. Your IT infrastructure is critical to the health of your business and an outage can have negative impact with long lasting or, in some cases, permanent damage.

Virtualization not only helps drive down cost across your IT organization, but can also improve availability for applications and services critical to your business. VMware provides a holistic approach to protecting your IT environment from a variety of factors that can cause application downtime, including unplanned events like a server failure and even planned events, such as server maintenance.

The following outlines five ways VMware technology can help you improve availability of your IT and in turn protect the health of your business.

DATA PROTECTION

Ability to preserve information privacy, which is the relationship between the collection and dissemination of data, technology, the public expectation of privacy, and the legal issues surrounding private data.

HIGH AVAILABILITY

Tools and technologies, including backup hardware and software resources, that enable a system to recover quickly from a crash.

DISASTER RECOVERY

The process, policies and procedures related to preparing for recovery or continuation of technology infrastructure critical to an organization after a natural or man-made disaster.

1. Simplify backup and recovery

Backup and recovery are fundamental parts of every IT process and critical components in any business continuity plan. Without the right solution, an IT failure could mean hours or even days to rebuild and recover. In some cases, data could be lost forever. All of this translates to downtime that impacts project schedules, revenue and even company reputation.

Traditional solutions, like writing data to tape, are expensive, slow and complex to restore. By contrast, VMware solutions provide fast backup to disk and dependable recovery. These advanced technologies ensure your backups can handle massive growth in data volumes and keep costs down. In addition, VMware backup solutions offer application-specific agents that move only changed blocks to help protect certain business-critical applications.
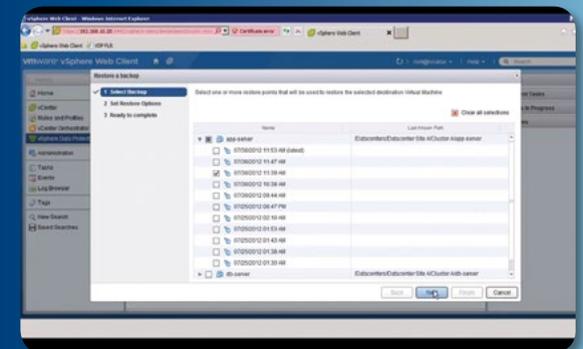
VMware vSphere Data Protection and vSphere Data Protection Advanced

VMware vSphere® Data Protection™ is a backup and recovery solution integrated with VMware vSphere® and powered by EMC® Avamar. Its proven technology simplifies management with backup and recovery run from the same vSphere console as the entire virtual infrastructure. Requirements for backup storage are drastically reduced through industry-leading de-duplication. Backup and recovery times are shortened using changed block tracking, which only sends altered data to virtual appliances. Combined with application awareness using specific agents for Microsoft Exchange and SQL, VMware provides consistent and easy-to-use backup and recovery across your virtualized environment.

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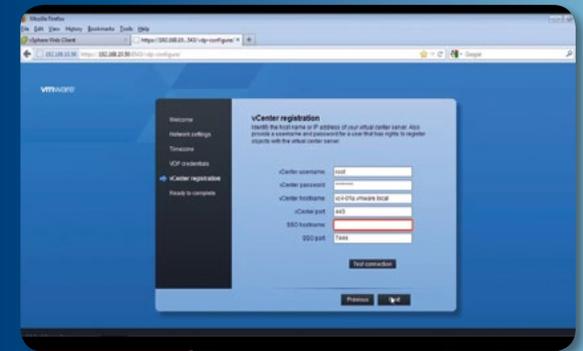
Install and configure vSphere Data Protection »

VM and File Level Restore with vSphere Data Protection »

2. Protect against hardware and software failure

Despite years of technology advancements to improve resiliency, server and operating system (OS) failures are inevitable events in many unvirtualized IT environments. It can be just a matter of time before a hardware component fails or an unknown bug at the OS level causes a crash. Protection from these undesirable events can range from physically rebooting servers to complex and expensive automated clustering solutions. The quicker IT teams become aware of and respond to – or even proactively prevent – a failure in the IT environment, the more they can minimize the impact on their business.

Traditionally, the cost and complexity of application-level clustering means that only a few applications are protected against unplanned downtime. By contrast, VMware solutions provide simple and cost-effective availability for all applications running on vSphere.
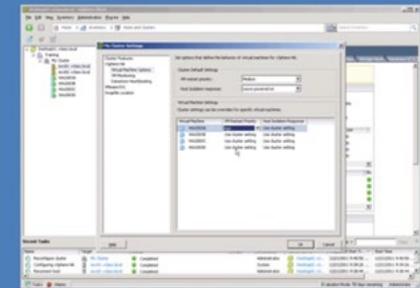
VMware vSphere High Availability

VMware vSphere® High Availability (HA) protects your entire virtualized environment from failures at the physical server or OS level. In the event of a software failure, vSphere High Availability can automatically restart the workload on the same server or another production server with spare capacity. In addition, vSphere App HA minimizes downtime by isolating individual applications so when a failure occurs at the application level, there is no need to restart an entire virtual machine, further minimizing downtime.
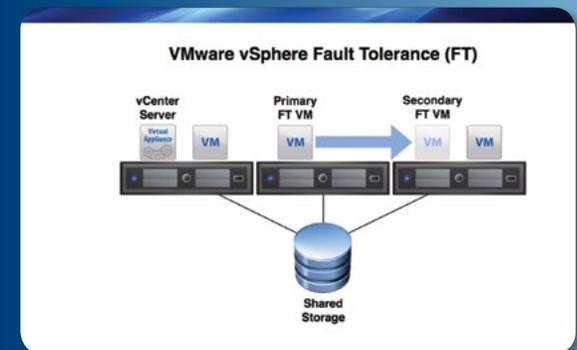
VMware vSphere Fault Tolerance

VMware vSphere® Fault Tolerance ensures continuous availability for applications in the event of server failures by creating a live shadow instance of a virtual machine that is always up-to-date with the primary instance. vSphere Fault Tolerance enables instantaneous failover between the two instances in the event of hardware failure, eliminating even the smallest chance of data loss or disruption.

LEARN MORE:

How to use vSphere High Availability to protect virtual machines »

Enable vSphere Fault Tolerance for vSphere »

3. Protect your business from site-level failures

There are a number of factors that can cause a site-level failure, ranging from natural disasters to man-made activities (configuration error, DoS attack, overwhelming service demand). Failures that take down an entire site can be catastrophic requiring hours, days or even weeks to recover. With failures of this magnitude, the impact to productivity, revenue and company reputation may not only have short term effects but also cause long term, unrecoverable damage to your business.

Traditional solutions to protect from these events are not optimized for virtual environments. As a result, they can be complex to implement and difficult to test, leaving your business vulnerable. VMware offers a complete solution to simplify and automate your disaster recovery plans and let you test them in a non-disruptive manner.

VMware vSphere Replication

VMware vSphere® Replication helps to protect your business from disasters, like site-level outages, by replicating virtual machines from a primary site to a secondary site. In the event of a site-level failure, the virtual machines in the secondary site can take over to minimize downtime. vSphere Replication replaces storage-based replication and provides several benefits, such as simplified configuration management, lower solution costs and the flexibility to adjust Recovery Point Objectives (RPOs) to ensure out-of-date content is not replicated.

LEARN MORE:
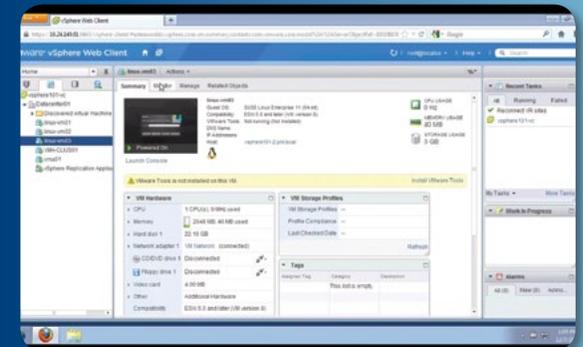
Replicating and recovering a virtual machine with vSphere Replication »

VMware vCenter Site Recovery Manager

VMware vCenter™ Site Recovery Manager™ provides a reliable, automated disaster recovery solution for virtualized environments for fast and highly predictable recovery point objectives (RPOs) and recovery time objectives (RTOs). vCenter Site Recovery Manager leverages vSphere Replication or third-party storage-based replication to provide centralized management of recovery plans, enable non-disruptive testing, and automate site recovery and migration of virtual machines to a secondary site. With this built-in automation, you can eliminate traditional error-prone run books and allow non-disruptive testing to simplify execution of your recovery plans and ensure protection for your business.

VMware Disaster Recovery to the Cloud

Customers who do not manage their own secondary site for disaster recovery can use vCenter Site Recovery Manager with Disaster Recovery to the Cloud services offered by VMware service provider partners. With this solution, virtual machines are replicated to the service provider environment, which will host and run the virtual machines in the event of a primary site failure.

LEARN MORE:

vCenter Site Recovery Manager Bootcamp »

4. Perform maintenance with zero downtime

Upgrading and patching hardware and software are just some of the many responsibilities of an IT department. To perform maintenance on your IT infrastructure more often than not means taking an application offline for a period of time. If impacting application availability is not an option for the business, IT teams can be left with a compromised infrastructure or have to sacrifice their own time, coming in after hours or on the weekend to perform maintenance.

With the VMware solutions below, you can eliminate planned downtime and perform system maintenance any time you require — reducing the burden on IT without impacting performance or user productivity.

VMware vSphere vMotion

VMware vSphere® vMotion® allows live migration of running virtual machines from one physical server to another, ensures zero downtime, continuous service availability and provides the confidence that the integrity of the data is maintained for every transaction. With this capability, you can perform IT maintenance without impacting application availability, giving your IT teams the agility and flexibility they need to support other areas of the business. vMotion is a key enabling technology for creating the dynamic, automated and self-optimizing data center.

VMware vSphere Storage vMotion

VMware vSphere® Storage vMotion® enables live migration of virtual machine disk files within and across storage arrays. With Storage vMotion, you can move virtual machine disk files while maintaining continuous service availability and complete transaction integrity in support of a truly agile and flexible IT maintenance model.

LEARN MORE:
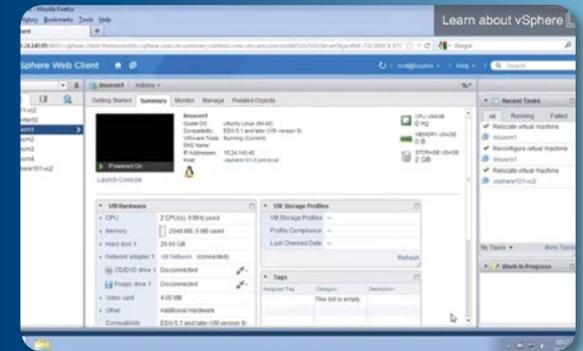
Overview of virtual machine migration with vMotion and Storage vMotion »
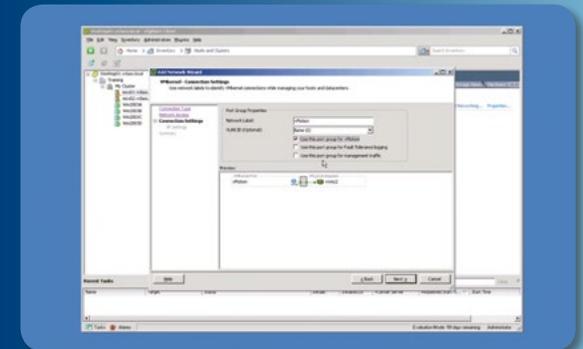
A detailed look at migrating virtual machines with vMotion »

5. Improve visibility across your virtualized environment

As new hardware and software is acquired and deployed across the IT environment, there are many different tools that come with these solutions. There are separate elements to monitor performance, check capacity, detect issues and so on. In the absence of a single view, it is challenging to manage and monitor this disparate collection of tools and the multiple metrics they produce.

For example, with several tool types running on separate platforms, it is difficult to troubleshoot issues across a multi-tiered environment or look at capacity consumption trends to plan for the future. Problem resolution is time-consuming, downtime is increased and it's hard to detect or roll back unwanted changes that are out of line with best practice and regulatory requirements.

VMware vCenter™ Operations Management Suite™ provides the advanced operations management tools you need to monitor performance, capacity, configuration, compliance and more across virtual, physical and cloud environments. It is also now available as a core part of VMware vSphere® with Operations Management™ in order to help you comprehensively manage your vSphere environment.

VMware vCenter Operations Management Suite

VMware vCenter Operations Management Suite provides visibility into health, resource utilization and capacity consumption across your entire virtualized environment. With vCenter Operations Management Suite, you can identify and resolve issues faster, enable proactive troubleshooting, optimize the utilization of resources and intelligently plan for growth before you run out of capacity. Using patented analytics and an integrated approach, vCenter Operations dramatically simplifies management tasks to proactively ensure health availability and efficiency across your IT environment. vCenter Operations Management is a critical component included with vSphere with Operations Management Acceleration Kits and vCloud® Suite editions.

LEARN MORE:
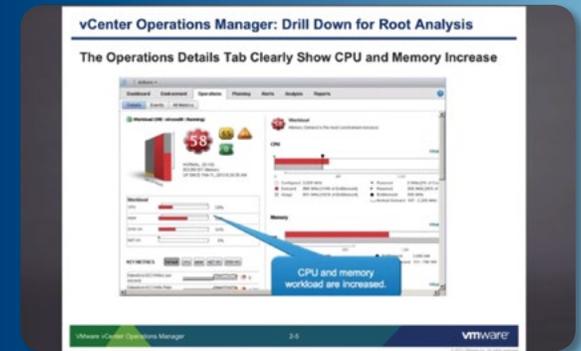
Operational insight through drill down actions »

Determining and planning for capacity »

Improving business continuity with VMware

Exponential data growth and growing regulation on protecting personal information across industries are increasing the pressure on IT to protect critical applications and infrastructure against disruption.

The consequences of failing to effectively protect your IT infrastructure are significant: 93% of companies where the data center was not operational for 10 days or more filed for bankruptcy within one year.*

Running all your applications on vSphere, the industry leading virtualization platform, can help you avoid these consequences with its comprehensive approach to business continuity. When making plans to maintain uptime and ready for a disaster, consider the benefits that automated solutions from VMware provide:

Advanced data protection – with non-disruptive backups and simple recovery in a single operation.

Higher availability – to meet the service levels that users expect and improve business continuity.

Easier disaster recovery – with the most reliable, cost-effective and simplified disaster protection for all virtualized applications.

* U.S. National Archives and Records Administration

To find out more on how you can improve business continuity with VMware, follow the links below:

Business Continuity Benefit	Product	Features
Data Protection	• vSphere with Operations Management • vCloud Suite • vSphere Data Protection Advanced	• vSphere Data Protection
High Availability	• vSphere with Operations Management • vCloud Suite	• vSphere High Availability • vSphere App HA • vSphere Fault Tolerance • vSphere vMotion • vSphere Storage vMotion • vCenter Operations Management Suite • vSphere Replication
Disaster Recovery	• vSphere with Operations Management • vCloud Suite • vCenter Site Recovery Manager • Disaster Recovery to the Cloud	