Is Your Disaster Recovery Plan Disaster Ready?

Many organizations today find that their disaster recovery plans lack a sound, end-to-end strategy to minimize risk, minimize downtime, and control costs. Yet fundamentally, good disaster recovery principles are a necessity to good business practices. After all, man-made or natural disasters, even for a brief period of time, can bring businesses to a halt—and even destroy crucial data and public trust.

Companies find it difficult to achieve adequate levels of disaster recovery protection for a number of reasons. Traditional disaster recovery strategies involve manual, step-by-step setup and implementation, requiring significant IT and financial resources. Once implemented, they’re extremely difficult to test, given the breadth of systems that companies try to protect. Consequently, only a portion of important systems end up with adequate protection, and those scattered protective mechanisms are laborious and costly to maintain.

While any system downtime can be painful, extended downtime can be severe or disastrous. Productivity nosedives, companies can lose business, and for some companies, survival is at stake.

**VMware vCenter Site Recovery Manager with IBM System Storage™ DS5000:**

Delivering Automated, Affordable Disaster Recovery

**IS YOUR DISASTER RECOVERY PLAN DISASTER READY?**

Many organizations today find that their disaster recovery plans lack a sound, end-to-end strategy to minimize risk, minimize downtime, and control costs. Yet fundamentally, good disaster recovery principles are a necessity to good business practices. After all, man-made or natural disasters, even for a brief period of time, can bring businesses to a halt—and even destroy crucial data and public trust.

Companies find it difficult to achieve adequate levels of disaster recovery protection for a number of reasons. Traditional disaster recovery strategies involve manual, step-by-step setup and implementation, requiring significant IT and financial resources. Once implemented, they’re extremely difficult to test, given the breadth of systems that companies try to protect. Consequently, only a portion of important systems end up with adequate protection, and those scattered protective mechanisms are laborious and costly to maintain.

While any system downtime can be painful, extended downtime can be severe or disastrous. Productivity nosedives, companies can lose business, and for some companies, survival is at stake.

**Disaster Recovery by IBM and VMware:**

- Accelerate recovery by automating execution of failover
- Simplify the creation and management of recovery plans
- Improve the reliability of recovery plans by simplifying recovery and testing
- Improve compliance with disaster recovery documentation and testing requirements
TAKING THE WORRY OUT OF DISASTER RECOVERY

Today, you have a much better option for protecting your data center than past approaches to disaster recovery. IBM® and VMware bring you an automated, end-to-end disaster recovery management solution that leverages the cost-effectiveness and efficiency gains of virtualization with the performance and reliability of a proven storage solution. VMware vCenter Site Recovery Manager, in conjunction with IBM Storage System DS5000™, delivers everything you need to enable reliable, affordable, and manageable failover and recovery—so that you can protect your business-critical applications. Together, they take the worry out of disaster recovery.

Site Recovery Manager integrates easily with VMware Infrastructure, VMware vCenter Server and IBM System Storage DS5000 Enhanced Remote Mirror software. The result is a robust, comprehensive disaster recovery solution with advanced capabilities, including:

- **Centralized disaster recovery management** – Create, update, test, execute, and manage your recovery plans for your virtual environment, monitor the availability of the remote site, and alert users of possible site failures directly from vCenter.
- **Simplified setup and integration** – Easily allocate and manage resources at the recovery site, integrate Site Recovery Manager and DS5000 replication and recovery technologies, and send key virtual datacenter operating system information to the recovery site to be kept current.
- **Non-disruptive, comprehensive testing** – Greatly simplify and improve your disaster recovery testing with storage snapshot capabilities that perform recovery tests without losing replicated data, automate your recovery plan testing, customize recovery plan execution for testing scenarios, and automate cleanup of testing environments after testing.
- **Rapid recovery through automation** – Specify the recovery process in advance of a disaster event through an intuitive interface, enable complete and reliable recovery via automated testing, and depend on rapid, automated recovery processes—executed from vCenter with a single button—in the event of a site failure.

- **Broad, reliable recovery** – Significantly expand the scope of your disaster recovery plan to more systems, protect any workload in a virtual machine with minimal incremental effort, and increase recovery reliability by eliminating failures that can result from traditional disaster recovery.
- **Advanced replication technology** – Replicate your data remotely with the DS5000 Enhanced Remote Mirror technology, which is supported by Site Recovery Manager with automatic failover for your virtual machines and their databases. IBM Enhanced Remote Mirror offers synchronous and asynchronous modes in order to meet your recovery-time, recovery-point, and cost objectives.
- **High performance** – Leverage high-performance DS5000 storage that scales with the virtualized infrastructure to support the demands from virtual machines and applications, including Site Recovery Manager; deliver balanced performance with the DS5000, which supports concurrent mixed workloads, such as databases, data warehouses, file...
servers, and e-mail.

- **Affordability** – Eliminate the need for a dedicated physical recovery site, idle recovery hardware, and dependencies on a physical infrastructure, and greatly reduce the management costs associated with maintaining your disaster recovery plan; maximize your disaster recovery site servers and run other applications when they’re not performing disaster recovery tasks. The DS5000 offer one of the lowest TCO storage solutions available: Enhanced Remote Mirror software is licensed by storage system and there is never a separate software maintenance charge.

**IB**

**IBM SYSTEM STORAGE DS5000:**

- High-performance storage that scales with your virtual datacenter operating system and offers sustained, balanced application performance as well as headroom for advanced data replication features.
- One of the best response times in the industry as proven by SPC and ESG the mixed-workload tests — delivers an outstanding end-user experience for concurrent mixed applications in a virtual environment.
- DS5000 Storage Management software — easy-to-implement and easy-to-use management software that’s common across the product line and included with every system.
- Dynamic features that enable non-disruptive VMware vCenter ConfigControl of storage system capacity expansion, RAID levels, segment sizing, and ERM mode-switching, to meet the varying application needs of your virtual datacenter operating system.
- High-availability design, including intuitive online administration, top/down – bottom-up cabling, switched drive enclosures, and redundant hot-swappable components.
- One of the best values for mid-range storage in the industry — high-performance and high-efficiency capabilities, plus bundled software maintenance charges deliver outstanding TCO.

**SITE RECOVERY MANAGER ON DS5000: INTELLIGENT, RELIABLE DISASTER RECOVERY**

By expanding the benefits of virtualization and consolidation with Site Recovery Manager integrated with DS5000 storage, you’ll be able to develop a complete disaster recovery response for a data center, single building, entire campus or remote site, with automated failover for individual components. So, for example, if your ceiling fire sprinklers turn on in one data center, you won’t have to declare a disaster for your entire site. And when your virtual machines power back up in the event of a failure, they’ll do so automatically according to the specific order you assigned to them in your recovery plan.

Testing is a crucial component of any disaster recovery plan. With this combined solution from VMware and IBM, you can easily test any large-scale disaster recovery plan that includes every one of your virtual machines—an impossible task in a physical environment with hundreds of servers. With a single click, you can test your entire disaster recovery response from start to finish and verify that it actually works. In addition, you can test failover without interrupting or disturbing the existing replication that is already taking place. If something doesn’t function as planned, you can use a sophisticated playback feature to identify failure points and develop solutions for them.
THE END-TO-END SOLUTION:
- IBM System x and/or IBM BladeCenter x86 servers
- VMware Infrastructure
- VMware vCenter Site Recovery Manager
- IBM System Storage DS5000 with Enhanced Remote Mirror and FlashCopy enabled
- VMware Site Recovery Adapter (SRA) plug-in for DS5000

KEEPING YOUR BUSINESS UP AND RUNNING
With this centralized, automated, end-to-end disaster recovery management solution from IBM and VMware, you can expand the scope of your disaster recovery plan while reducing typical disaster recovery costs. Through simplified disaster recovery setup, comprehensive disaster recovery planning, and your ability to conduct non-disruptive, enterprise-wide testing, you can prevent the kinds of disasters that can result from traditional approaches to disaster recovery. Site Recovery Manager on virtualized DS5000 storage can greatly enhance the availability of your hardware and software—so you can keep your business up and running.

ESG & IBM DS5000 PERFORMANCE BENCHMARKS
The DS5000 demonstrates balanced, real-world performance with the industry’s first mixed-workload storage test in a virtual environment:
- Concurrently delivers e-mail (up to 17,512 Microsoft Exchange mailboxes), database (9,164 Oracle ORION IOPS), Web server (4,551 IOPS), and backup job (425 MBPS)
- Peaks in throughput from e-mail and database didn’t impact other workloads
- Delivers superior response times (up to the maximum number of drives): less than 6 ms response time for database and less than 16 ms response time for e-mail (Exchange)

FOR MORE INFORMATION
- VMware and IBM solutions: www.vmware.com/go/ibm
- VMware vCenter Site Recovery Manager: www.vmware.com/products/srm/
- IBM virtualization: ibm.com/virtualization/vmware
- IBM Systems Management: ibm.com/systems/management/