



Improving Business Continuity with VMware vCenter™ Site Recovery Manager and F5

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 deliver effective protection for important applications is limited 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.** 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.
- **Unreliable solutions.** 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.

Ensuring Availability with VMware Virtualization

VMware vSphere™ makes it possible to reduce both planned and unplanned downtime without the cost and complexity of alternative solutions. Organizations using VMware can slash planned downtime by eliminating most scheduled downtime for hardware maintenance.

VMware VMotion™ technology, VMware Distributed Resource Scheduler (DRS) maintenance mode, and VMware Storage VMotion make it possible to move running workloads from one physical server to another without

downtime or service interruption, enabling zero-downtime hardware maintenance.

Delivering Effective Disaster Recovery

Traditional disaster recovery solutions are costly, complex and frequently do not meet recovery objectives. Ensuring the fastest and most reliable recovery with traditional solutions requires fully duplicating production infrastructure—and its costs—in order to avoid failures due to hardware dependencies. Traditional recovery plans also require complex manual processes that are slow and prone to error. As a result, organizations find themselves unable to provide sufficient disaster recovery protection for more than a few privileged systems.

Organizations are turning to VMware software and technology to address these challenges because it enables effective disaster recovery for both physical and virtualized servers. Physical servers can be recovered to virtual machine recovery targets in a “physical-to-virtual” recovery scenario. Even greater benefits can be realized in a “virtual-to-virtual” recovery scenario, where virtual machines in production are recovered to virtual machines.

Using VMware products and solutions, organizations can effectively meet core requirements for disaster recovery

Key Benefits

Customers who use VMware software and technology 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.
- VMware software makes it possible for companies to implement better business continuity at a lower cost by slashing the need for additional hardware and specialized software over 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.



F5 Networks, Inc.
www.f5.com

ISV Overview

F5 provides solutions that enable customers to improve the performance, availability and security of their application traffic.

Key Business Needs

VMware® vSphere™ and SRM brings unprecedented flexibility to the datacenter. However, applications running on vSphere still depend heavily on and place an increased strain on the network, which can affect application performance, create risks of new storage bottlenecks, and increase management complexity. To work successfully, virtualized environments need a network that is intelligent and flexible enough to handle the advanced features of that new infrastructure. F5 solutions address these challenges and enable virtualized environments to optimize performance, availability and cost savings.

Key Business Benefits

F5 is the only application delivery controller vendor that provides an open architectural framework, along with:

- F5 TMOS®, the shared product platform that adds intelligence and complete control to application delivery.
- F5 iRules™, the event-driving scripting language that customizes how application traffic is delivered.
- F5 iControl®, the open API that helps automate communications.
- DevCentral, a business-driven social networking site of more than 35,000 users.

Business Results

- Application continuity and uptime metrics — meet or exceed SLAs.
- Reduced datacenter downtime in the event of a failure.
- Improved user experience with fewer application failures.

VMware and F5

F5 is the only application delivery controller vendor that provides an open architectural framework, offering IT organizations new ways to deliver services that generate true business value.

VMware Products

- VMware® vSphere™
- VMware vCenter™
- VMware vCenter™ Site Recovery Manager
- VMware vCenter™ AppSpeed

F5 Products

F5 BIG-IP Global Traffic Manager

VMware vCenter™ Site Recovery Manager and F5 Global Traffic Manager

Dynamically manage application traffic failover between your datacenters

Industry Overview

Despite the automation of VMware vCenter™ Site Recovery Manager (SRM), the DNS server must be manually configured to re-route incoming traffic to the new site. It is difficult to fully automate the process, and can result in delays and mistakes during failover. This ultimately can translate into missed Service Level Agreements (SLAs) and, depending on the application, lost revenue or client satisfaction.

The F5 solution addresses the need to dynamically and automatically re-route inbound application traffic between a primary and failover site (for example, in a disaster recovery situation). Network, application, and server administrators as well as IT architects can benefit from the F5 solution.

Solution Overview

F5 BIG-IP® Global Traffic Manager™ (GTM) is a high-performance hardware appliance that provides a more intelligent way to respond to DNS queries. BIG-IP GTM does more than just simple load balancing among multiple datacenters, and distributing end-user application requests based on business policies, datacenter conditions, network conditions and application performance. BIG-IP GTM gives users holistic control of their global traffic to ensure high availability and maximum performance for applications running across multiple, dispersed datacenters. The result is better application performance, less downtime, and simplified management.

F5 BIG-IP Global Traffic Manager (GTM), BIG-IP® Local Traffic Manager™ (LTM), and VMware Site Recovery Manager, provides a complete solution for automated disaster recovery between two datacenters.

In the event of a disaster or site outage, SRM automatically orchestrates the failover of virtual machine (VM) guests and virtual infrastructure between the two sites, while BIG-IP GTM redirects all incoming client application traffic to the secondary site.

Solution Benefits

A dynamic global traffic management solution enables customers to move failover applications to a secondary site, and automatically redirect all incoming client application traffic without any downtime, combining the site recovery automation of SRM with BIG-IP GTM DNS failover automation. Benefits include:

- » Meeting SLAs
- » Avoiding site downtime
- » Automating all aspects of the failover for accuracy and speed, preventing manual mistakes

BIG-IP GTM has the unique ability to take automated instructions from SRM on how to redirect traffic. Because BIG-IP GTM sits in both the source and target sites, failover can happen automatically even if one device suddenly disappears.

Furthermore while waiting for suspended VMs to come online, BIG-IP GTM can respond back to clients with a custom HTML page.

Finally, in the event that the first site is overloaded, and the second site comes online, BIG-IP GTM can begin to split inbound traffic between the two sites to improve performance levels of the applications.

F5 is the only vendor to solve a multi-service application challenge as well as provide organizations with a programmatic approach to traffic distribution.

VMware and F5 Integration

BIG-IP GTM can be easily integrated via its API with VMware vCenter or Site Recovery Manager. This enables the device to take automated traffic instructions from these VMware products.

This automation ensures that application traffic can be managed and changed without the risk of manual changeovers.