Protect Your Data from a Disaster

With Cisco HyperFlex native replication

Protection

- Protect your business-critical data with native replication.

Scalability

- Cisco HyperFlex™ systems deliver greater flexibility and scalability to meet your business needs.

Ease

- Our virtual machine-based replication is easy to use, fast, and efficient to perform and recover.

Every day there are disasters in the news: fires, earthquakes, hurricanes, floods, and tornadoes, plus ransomeware attacks, operation problems, and power outages, which are the most common "disasters."

To keep your business running, you must protect your business applications and minimize data loss. With Cisco HyperFlex™ Data Platform native replication as the foundation of your disaster-recovery and business-continuity strategy, keeping your business running is easy.

Simplify your hyperconverged infrastructure

With traditional hyperconverged solutions, disaster-recovery deployments require an exact mirror of your data center configuration at a location distant enough to ensure that it won't be affected by whatever disaster might befall your primary data center. Often you need to deploy dedicated virtual appliances for replication that are difficult to scale as your cluster size increases. This approach can be expensive both in capital expenditures (CapEx) for the infrastructure and in operating expenses (OpEx) for the power, cooling, floor space, staffing, and support resources. But disaster recovery doesn't have to be this difficult or expensive to deploy. Cisco HyperFlex native replication makes disaster recovery easy and cost effective.

Ransomware attacks are increasing and becoming more sophisticated.

"These criminals have evolved over time and now bypass the need for an individual to click on a link. They do this by seeding legitimate websites with malicious code, taking advantage of unpatched software on end-user computers."

James Trainor
Assistant director,
FBI Cyber Division

FBI: Incidents of Ransomeware on the Rise, April 29, 2016

Cisco HyperFlex systems

Cisco HyperFlex systems, powered by the latest Intel® Xeon® Scalable processors, deliver a new generation of more flexible, more scalable, enterprise-class hyperconverged solutions. We deliver a complete solution based on a next-generation data platform—one that smoothly integrates into the data center you have today. Our solution includes an integrated network fabric and powerful data optimization capabilities that unlock the full potential of hyperconvergence for a wider range of workloads and use cases, including your business-critical applications. Our solution is fast to deploy, simple to manage, easy to scale, and ready to provide a unified pool of resources to power applications as your business needs dictate. You harness these resources with simplified, centralized management. Cisco HyperFlex systems integrate into the data center you have today without creating management islands. You can deploy our solution wherever you need it: from central data center environments to remote locations and edge-computing environments (Figure 1).

Protect your business-critical data

No matter what your hyperconverged workloads are, Cisco HyperFlex native replication is an excellent choice as the foundation of your disaster-recovery initiative. You can create a point-in-time copy of your business-critical application data at a remote site without the need for matching infrastructure at both sites, saving costs. Your remote site can be a smaller, simpler version of your primary site. In fact, you can use all-flash storage at your primary site and hybrid storage at your remote site. This approach reduces complexity as well as costs while protecting your data.

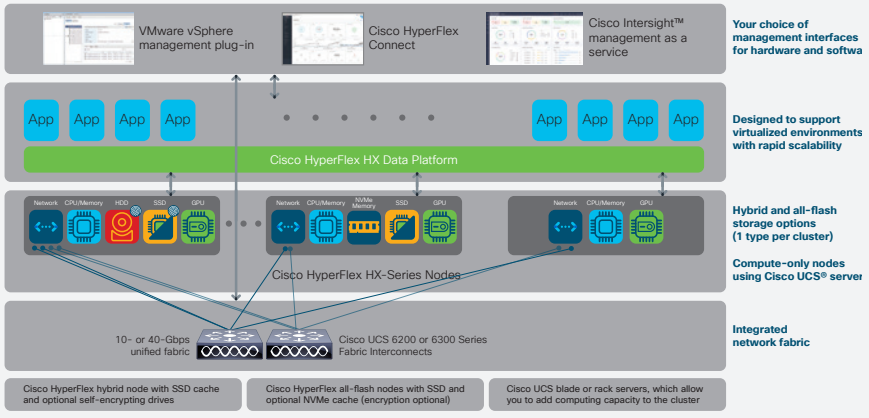

Figure 1 Only Cisco HyperFlex systems deliver a combination of essential features in a single solution

Virtual machine–based replication

Hyperconverged infrastructure was developed to provide a faster, simpler, and more integrated way to deploy applications in virtualized environments. With Cisco HyperFlex native replication, you can protect a single virtual machine or sets of virtual machines through protection groups using Cisco HyperFlex Connect. To define the data to be replicated, you set the policy in the protection groups to manage the way that periodic snapshots are performed. You can choose the interval at which replication occurs, which can range from 15 minutes to 24 hours (Figure 2). Replication can also be bidirectional, so you can protect source virtual machines at the destination, and destination virtual machines at the source. This capability is especially useful if your remote location is also an active production site.

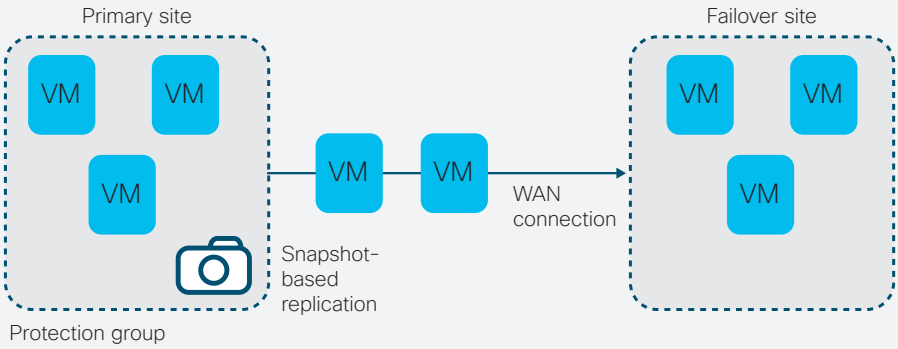

Figure 2 Cisco HyperFlex Connect enables you to define protection groups down to the virtual machine level and choose the replication frequency

Our native replication capability works with VMware technology to maintain consistent snapshots and optionally quiesce the virtual machine. Recovery is performed at the virtual machine level. After the initial data has been transferred, only block-level changes are replicated in subsequent operations. Data that is replicated is also compressed, further saving valuable WAN bandwidth and reducing incremental update times.

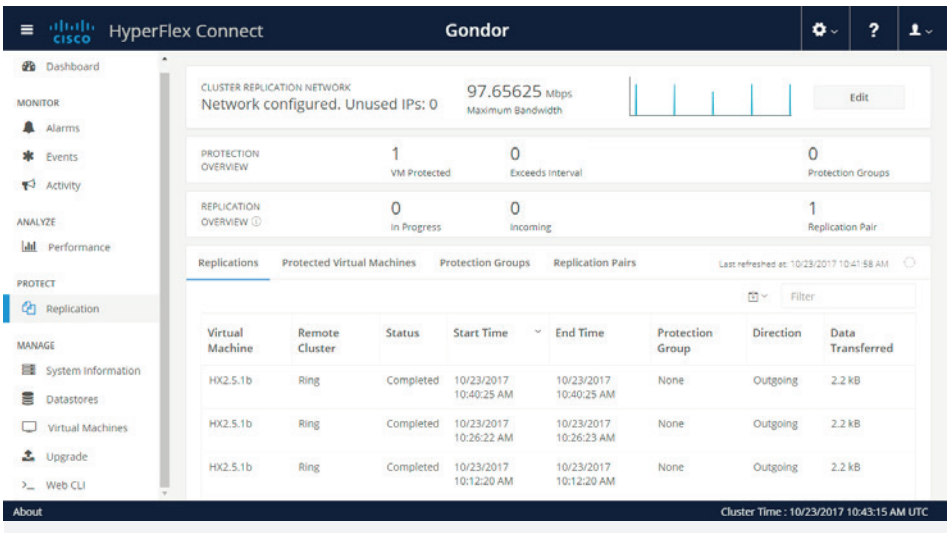

Figure 3 Setup is easy, and you can easily verify that replication has completed correctly

Extremely simple to use

Set it up once and leave it. It doesn't get any simpler than that.

We support both planned and unplanned recovery operations. Using Cisco HyperFlex Connect, you can select virtual machines to protect individually or as part of a protection group. The use of protection groups provides a convenient way to apply the same replication settings to a set of virtual machines. Virtual machines can be added or removed from protection groups. These groups can be created ahead of time with virtual machines added later, or they can be created at the time you select a virtual machine to protect. Using the replication dashboard in Cisco HyperFlex Connect, you can quickly verify that replication has been completed (Figure 3). Our API is integrated with disaster-recovery orchestration products

Are you prepared?

The Disaster Recovery Journal surveyed more than 500 C-level executives and IT professionals. Its report:

"... revealed an alarming disconnect between C-level executives and IT professionals when it came to how prepared their organization was to truly handle a disaster. While nearly 70 percent of C-level executives feel their organization is 'very prepared' to recover from a disaster, less than half of IT pros at those same organizations shared this view. The survey also uncovered how compliance requirements, and the use of hosted solutions, contributed to an organization's overall confidence in its disaster recovery capabilities."

Disaster Recovery and Business Continuity in the Workplace, June 19, 2017

to help you build runbooks to perform recovery operations and test recovery operations.

Fast and efficient

Rather than streaming data through a single control node, Cisco HyperFlex native replication streams data from each node at the primary site to all the nodes at the recovery site for fast and efficient data transfer (Figure 4). This approach to moving data also helps prevent hot spots at the replication site because the replication workload is automatically distributed evenly across all the data nodes. In addition, the data is compressed and moves in larger blocks to more efficiently get your data to your secondary site. The solution also offers configurable bandwidth management features, enabling you to control the volume of data traversing the wire so that it doesn't overwhelm your network.

Recovery

Our native replication solution gives you a wide range of recovery options. You can configure your recovery-point objective (RPO) to as low as 15 minutes. You can recover one virtual machine at a time or the entire protection group. You can test failover in a safe and controlled way using the failover test mechanism and a sandbox at the remote site. In addition, you can manage site failover through either the command-line interface (CLI) for the Cisco HyperFlex system or the REST API. With Cisco HyperFlex native replication, your recovery-time objective (RTO) also can be very low.

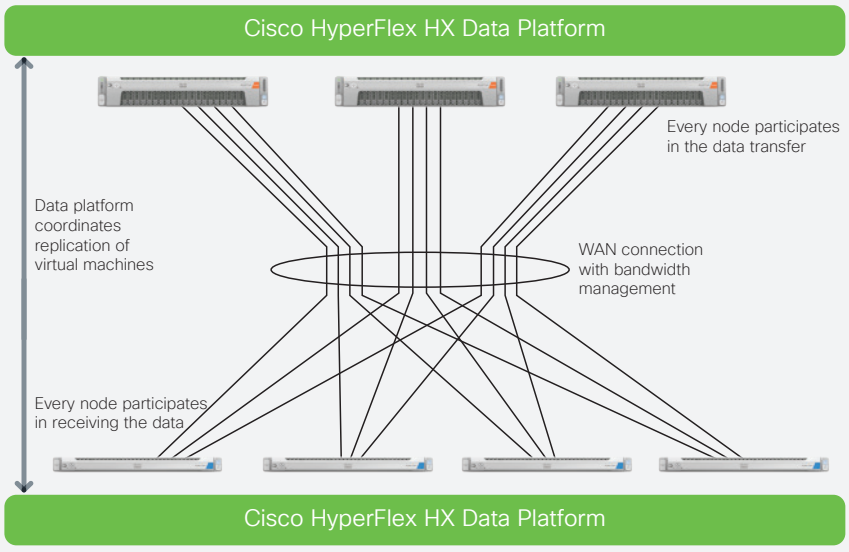

Figure 4 Cisco HyperFlex native replication streams data from each of the primary site nodes to quickly and efficiently transfer data to all the nodes at your secondary site

Learn more

For more information about Cisco HyperFlex systems, visit http://www.cisco.com/go/hyperflex.

When you run the failover recovery command, the Cisco HyperFlex HX Data Platform will do the following:

- It will use the copy of the virtual machine data to create a virtual machine. In addition to this data, it will use any other configuration details you provided: for example, new network details for the failover site.
- It will register the new virtual machine with VMware vCenter at the failover site.
- If you have enabled the command-line option to power on the virtual machine, it will power-on the virtual machine.
- If you did not enable the power-on option as part of the command, all the other steps will be performed, but the virtual machine will not be powered on.

Consider Cisco HyperFlex systems

We offer the first hyperconverged platform that is designed as an end-to-end software-defined infrastructure. We designed the Cisco HyperFlex Data Platform to support a broad range of applications and workloads in data centers, remote locations, and edge-computing environments. This new-generation technology extends the ease of hyperconverged system deployment, management, and support beyond your central data center to enhance your business security through disaster-recovery capabilities. This powerful adaptive infrastructure lets you integrate your existing infrastructure. The result is a cluster that can be deployed easily in an hour or less, that scales resources independently to closely match your application resource needs, and that enables native replication to protect your vital business data.

LE-62902-00 01/18