Datasheet

NetApp MetroCluster

Maintain continuous data availability for mission-critical applications at up to half the cost and complexity of competitive solutions

Key Benefits

- Active-active array-based clustering that provides continuous availability for critical applications and virtual environments
- Zero change management through automatic replication of changes to user, configuration, and application data
- Zero unplanned downtime and rapid transparent recovery from data center failures caused by hardware, network, and environmental faults or metropolitan disasters
- Zero planned downtime through nondisruptive upgrades for storage hardware and software
- Single system administration through "set it once" functionality that is simple to deploy, with no scripts or dependencies on the application or operating system
- Lower cost, no host-based clustering required, and added efficiency

The Challenge

Enterprise-class customers must meet increasing service-level demands while maintaining cost and operational efficiency. As data volumes explode and more applications move to shared virtual infrastructures, the need for continuous availability for both mission-critical and other business applications dramatically increases.

With highly virtualized infrastructures running hundreds of business-critical applications, the enterprise would be severely affected if these applications became unavailable. If that happens, it is the infrastructure that is critical, requiring zero data loss and recovery within minutes rather than hours. This point is true for both private and public cloud infrastructures, as well as for the hybrid cloud infrastructures that bridge the two.

The Solution

NetApp® MetroCluster™ software is a solution that combines array-based clustering with synchronous replication to deliver continuous availability and zero data loss at the lowest cost. Administration of the array-based cluster is simpler because the dependencies and complexity normally associated with host-based clustering are eliminated. MetroCluster immediately duplicates all your mission-critical data on a transaction-by-transaction basis, providing uninterrupted access to your applications and data. And unlike standard data replication solutions, MetroCluster works seamlessly with your host environment to provide continuous data availability while eliminating the need to create and maintain complicated failover scripts.

Continuous Availability

NetApp MetroCluster enhances the built-in high availability and nondisruptive operations of NetApp hardware and ONTAP® storage software, providing an additional layer of protection for the entire storage and host environment. Whether your environment is composed of standalone servers, high-availability server clusters, or virtualized servers, MetroCluster seamlessly maintains application availability in the face of a total storage outage. Such an outage can result from loss of power, cooling, or network connectivity; a storage array shutdown; or operational error. This is because MetroCluster is an array-based active-active clustered solution, eliminating the need for complex failover scripts, server reboots, or application restarts. In fact, most MetroCluster customers report that their users experience no application interruption when a cluster recovery takes place.

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Flexible Deployment Options

True high-availability data center

NetApp MetroCluster is ideal for organizations that require 24/7 operation for critical business applications. By synchronously replicating data between NetApp All Flash FAS (AFF) and or FAS hybrid systems that are collocated in the same data center, between buildings, or across a campus, MetroCluster provides a zero-touch continuous availability solution. This solution guards against faults both inside and outside the array. Third-party storage systems are also supported with NetApp FlexArray® software.

Campuswide and metrowide protection

NetApp MetroCluster can also significantly simplify the design, deployment, and maintenance of campuswide or metropolitanwide high-availability solutions, with distances up to 300km between sites. During a total site disruption, data services are restored at the secondary site in a matter of seconds with an automated single command, with no complex failover scripts or restart procedures.

Your choice of protection

Achieve new levels of flexibility and choice for business continuity. When deployed with ONTAP 9 software, MetroCluster enables you to scale from a two-node to an eight-node cluster* (four nodes on each end of the replication), even with a mix of AFF and FAS hybrid controllers. You can even choose which storage pools or aggregates to replicate, so you don't have to commit your full dataset to a synchronous disaster recovery relationship.

WAN-based disaster recovery

If your business is geographically dispersed beyond metropolitan distances, you can add NetApp SnapMirror® software to replicate data across your global network simply and reliably. NetApp SnapMirror software works with your MetroCluster solution to replicate data at high speeds over WAN connections, protecting your critical applications from regional disruptions.

Single System Administration: "Set It Once"

Most array-based data replication solutions require duplicate efforts for storage system administration, configuration, and maintenance because the replication relationships between the primary and secondary storage arrays are managed separately. This duplication not only increases management overhead, but it can also expose you to greater risk if configuration inconsistencies arise between the primary and secondary storage arrays. Because NetApp MetroCluster is a true clustered storage solution, the active-active storage pair is managed as a single entity, eliminating duplicate administration work and maintaining configuration consistency.

A Complete End-to-End Continuous-Availability Solution

NetApp MetroCluster has been tested and proven with leading server virtualization, application, and host clustering technologies from VMware, Microsoft, Oracle, Symantec, IBM, and many others. Our strong industry partnerships mean that MetroCluster integrates smoothly into your IT environment, enhancing the high-availability and recovery features of those products.

Enhance Your VMware Environment with MetroCluster

The combination of a VMware infrastructure and NetApp MetroCluster resolves a number of customer challenges from both the server and the storage perspectives. The VMware infrastructure provides a robust server consolidation solution with high application availability. MetroCluster provides continuous access to your data in a data center, across a campus, or in a metro area. When MetroCluster is combined with SnapMirror software, data can be protected at a regional level as well.

Protect All Your Data Without Doubling Your Storage Costs

Traditional data replication solutions require that the backup array have storage capacity that is the same as or greater than that in the primary array, doubling storage costs and administration overhead. NetApp data reduction technologies, including deduplication and compression, offer space savings across all storage tiers: primary data, backup data, and archival data. NetApp data reduction technologies are included with all NetApp AFF and FAS systems, are application and protocol agnostic, and require no additional hardware or software licenses.

Partner for Success

When you partner with our Professional Services and Customer Success Services teams, you gain access to our extensive storage expertise, innovative technologies, and best practices. You can accelerate the return on your infrastructure investments and get the most business benefit from them. We respond quickly to your problems, no matter where in the world they occur. And because we offer one of the most flexible support programs in the industry, you get just the support you need for your unique IT and business requirements.

* Eight-node MetroCluster support is currently limited to NAS workloads. Unified (NAS and SAN) and SAN-only workloads are supported with two- and four-node configurations.

About NetApp

Leading organizations worldwide count on NetApp for software, systems and services to manage and store their data. Customers value our teamwork, expertise and passion for helping them succeed now and into the future.

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