



Overview

ONTAP 9

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Beginning with ONTAP 9.8, you can use SnapMirror Business Continuity (SM-BC) to protect applications with LUNs, enabling applications to fail over transparently, ensuring business continuity in case of a disaster. SM-BC is supported on AFF clusters or All SAN Array (ASA) clusters, where the primary and secondary clusters can be either AFF or ASA. SM-BC protects applications with iSCSI or FCP LUNs.

Benefits

SnapMirror Business Continuity provides the following benefits:

- Provides continuous availability for business-critical applications
- Ability to host critical applications alternately from primary and secondary site
- Simplified application management using consistency groups for dependent write-order consistency
- The ability to test failover for each application
- Instantaneous creation of mirror clones without impacting application availability

Typical use cases

Application deployment for zero RTO or Transparent Application Failover

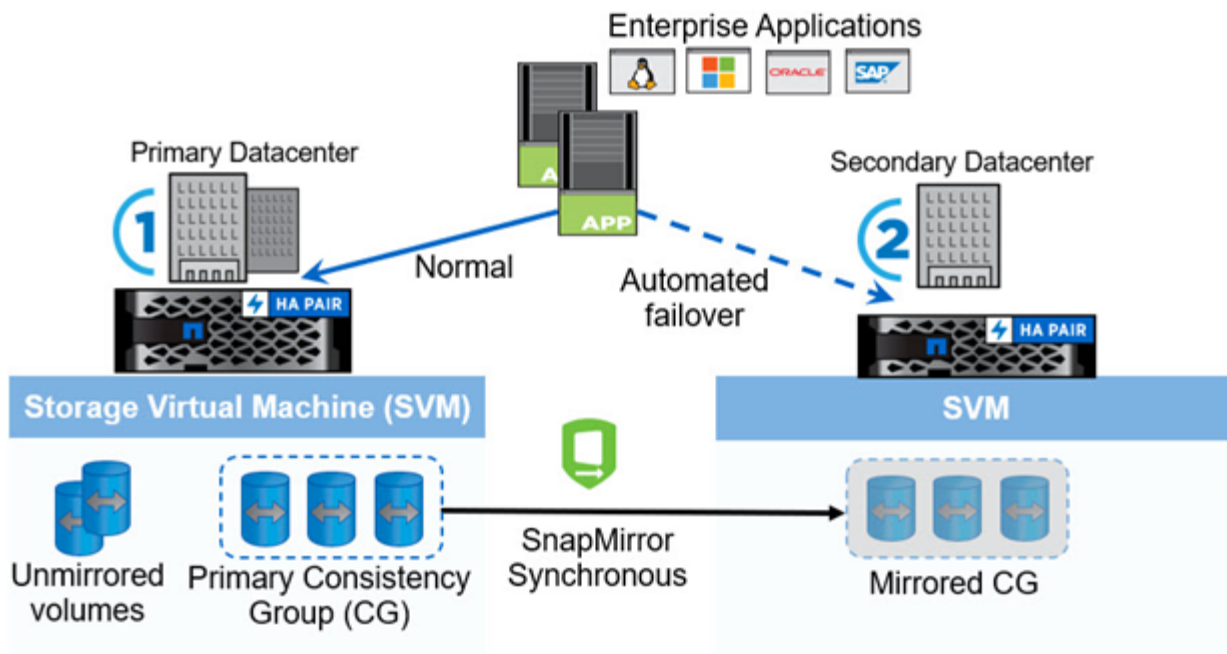
Transparent Application Failover is based on host multipath I/O (MPIO) software-based path failover to achieve non-disruptive access to the storage. Both LUN copies, for example, primary(L1P) and mirror copy(L1S), have the same identity (serial number) and are reported as read-writable to the host. However, reads and writes are serviced only by the primary volume. I/Os issued to the mirror copy are proxied to the primary copy. The host's preferred path to L1 is VS1:N1 based on Asymmetric Logical Unit Access (ALUA) access state Active Optimized (A/O). Mediator is recommended as part of the deployment, primarily to perform failover in case of a storage outage on the primary.

Disaster scenario

The site hosting the primary cluster experiences a disaster. Host multipathing software marks all paths through the cluster as down and uses paths from the secondary cluster. The result is a non-disruptive failover to the mirror copy for LUN L1. L1S is converted from a mirror copy to an active copy of LUN L1. The failover happens automatically when an external Mediator is configured. The host's preferred path to L1 becomes VS2:N1.

Architecture

The following figure illustrates the operation of the SnapMirror Business Continuity feature at a high level.



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