

PURE STORAGE® MAKES ZERO DOWNTIME A SNAP FOR MICROSOFT® SQL SERVER®

Pure Storage Purity ActiveCluster™ makes real the dream of a simple high-availability solution.

Microsoft SQL Server is one of the most widely deployed relational database servers among enterprises in recent years, propelled by its reputation for ease of use, a well-established support community, excellent tooling, and impressive performance.¹ Given the database server's popularity, it's not surprising that many enterprises store mission-critical databases that require high availability (HA) on the SQL Server platform.

The Challenge of Zero Downtime

Achieving business continuity with zero downtime is easier said than done. Disasters happen, for example, that can wipe out entire sites, not just individual arrays. If certain databases are truly critical to your organization, you need redundancy stretched across multiple storage racks, and preferably across multiple sites.

Configuring HA for SQL Server typically requires AlwaysOn Availability Groups or failover cluster instances, neither of which is easy to configure across multiple sites, especially if you are designing for a recovery-point objective (RPO) and recovery-time objective (RTO) of zero. And don't forget that with the built-in HA features in SQL Server, only one copy (replica) of a database can ever be read/write (active). The others are read-only (passive).

Pure Storage Purity ActiveCluster

Pure Storage Purity ActiveCluster provides a simple business-continuity solution for SQL Server. ActiveCluster is a fully symmetric, active/active, bidirectional replication feature of Pure Storage FlashArray™ that provides synchronous replication for RPO zero and automatic transparent failover for RTO zero. Unlike the active/passive HA implementations native to SQL Server, ActiveCluster serves input/output (I/O) on the same volume from all sites simultaneously.

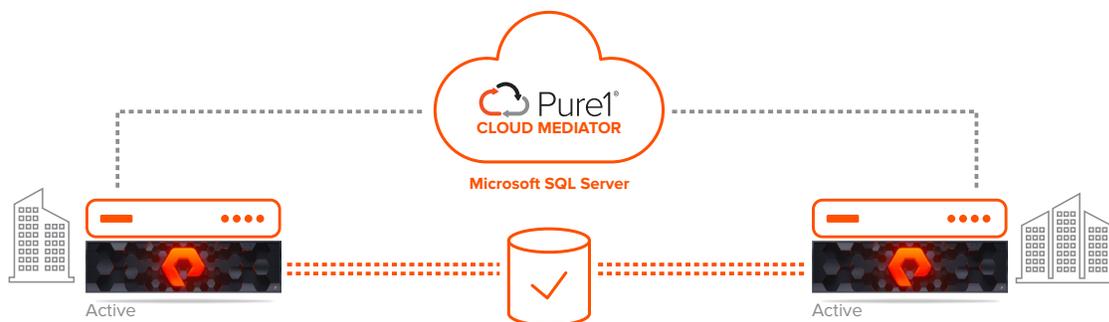


Figure 1. The Purity ActiveCluster feature of FlashArray enables active/active multi-site HA for SQL Server

Simple and Effective HA for SQL Server

Managing an ActiveCluster stretch cluster is as simple as managing a single array: snapshot and clone operations can be performed from either array, and volumes and snapshots are synchronously maintained on both arrays. Failovers are transparent, and the arrays automatically resynchronize.

ActiveCluster offers both uniform and non-uniform configuration options to allow you the flexibility to design your solution to suit any environment. In a uniform configuration, both SQL Server hosts connect to both local and remote FlashArray storage, and you don't have to worry about the complexity of deploying an underlying failover cluster instance to provide automatic failover. SQL Server instance affinity to a site is also automatically configured. Application latency is automatically optimized with reads served locally.

And regardless of whether you choose a uniform or non-uniform configuration (in which the SQL Server hosts connect directly only to local FlashArray storage), you don't have to bother with configuring any SQL Server Availability Groups. Data protection is provided at the storage level, not the database level, which simplifies configuration.

Finally, Purity ActiveCluster uses the same simple and easy storage-management model as the rest of FlashArray. It in fact takes only four short steps to set up: connect the arrays, create a stretched pod (a type of management object), create a volume, and connect the hosts.

SQL Server and Pure Storage: Better Together

SQL Server is a feature-rich and easy-to-use database server that has become the data platform of choice for many organizations. The ActiveCluster feature of FlashArray delivers a remarkably simple and effective way to provide RTO zero and RPO zero for your SQL Server deployments, with the additional advantage of read/write database replicas on multiple sites. With easy-to-implement ActiveCluster, your SQL Server databases run faster than ever, and when disaster strikes, they stay up and running without a hitch.

LEARN MORE

To learn more about Pure Storage Purity ActiveCluster for SQL Server, contact a sales representative at sales@purestorage.com or visit www.purestorage.com/resources/type-a/Pure_Storage_for_Microsoft_SQL_Server.html.

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¹ DB-Engines. "DB-Engines Ranking – Trend Popularity." April 2019. https://db-engines.com/en/ranking_trend.