FlexPod®

FlexPod with Microsoft SQL Server 2022 Failover Clustering Solution Brief

Reinforced redundancy at the application level

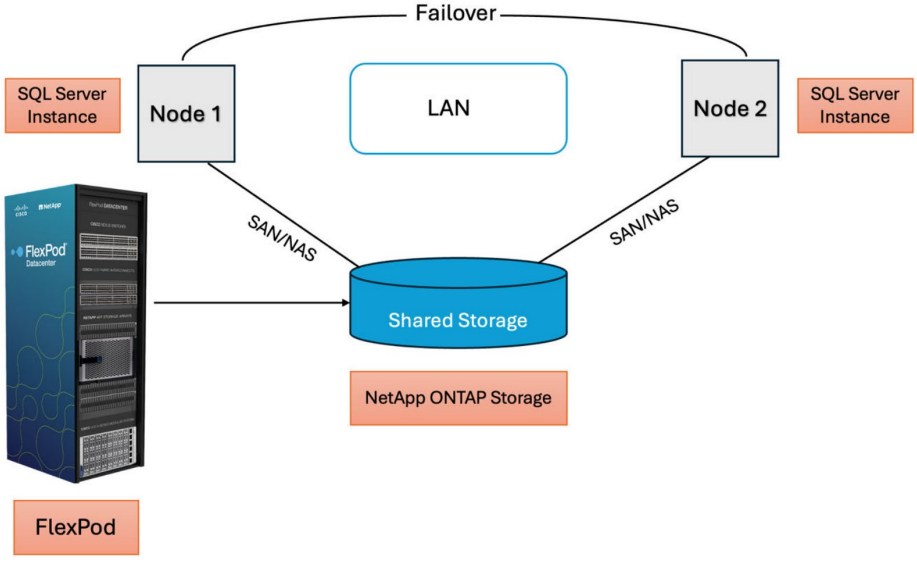
Cisco and NetApp have spent over a decade building out fully redundant, highly available FlexPod® designs to serve various applications and workloads. The FlexPod team previously published a Cisco Validated Design (CVD) covering the deployment of Microsoft SQL Server 2022, demonstrating how to design and deploy databases on a scalable, reliable architecture. Our engineers have been hard at work developing the next phase of this redundancy: A technical report that covers Windows Server Failover Clustering.

Engineered for resilience

Powered by fourth-generation Xeon Scalable Processors, Cisco x210c M7 compute nodes provide up to 120 cores and up to 8TB of RAM per server. The technical report validates the NetApp® AFF A400 all-flash storage system, with iSCSI storage provided directly to the virtual machines. Joining the compute and storage are the latest Cisco Nexus 9000 series switches and Cisco UCS 6500 series fabric interconnects. This combination provides the performance and infrastructure redundancy that Microsoft SQL requires.

Instance-level availability for applications

Database availability is crucial to business success. The CVD covered how FlexPod addresses availability and uptime at the storage, networking, and compute layers. The Failover Clustering technical report adds another layer of redundancy at the application level. By using guest-level iSCSI storage, Windows Server virtual machines have access to the shared storage necessary to enable Always On Failover Clustering instances. These instances can be configured for automatic failover, which helps protect against application and virtual machine failure. This approach helps to safeguard database availability and



integrity with minimal disruption to end users.

Availability is our middle name

Failover clustering is the perfect complement to FlexPod. With redundant storage controllers, switches, and compute nodes, FlexPod is designed with uptime in mind. Windows Server Failover Clustering takes application uptime even further. This dual-layered approach has been documented to help create a resilient architecture that not only protects your data but also serves as a catalyst for growth and innovation.

To read more about how FlexPod with Microsoft SQL Server 2022 Failover Clustering can benefit your business, check out the technical report.