



# Clusters for SQL Server in Amazon Cloud Environments

## Key Benefits

### Enables Clustering in the Cloud

- Makes cluster failover protection in cloud environments possible by eliminating the need for shared storage.
- Fully integrated with Windows Server Failover Clustering (WSFC)

### Protection for Applications and Data

- High availability and disaster protection in a cloud environment.

### Ease of Use

- Intuitive console for easy ongoing monitoring and management.

Through a joint effort with Amazon, SIOS provides a proven, highly efficient data replication solution that protects your SQL Server applications and data in an Amazon cloud while simplifying your environment and lowering your total cost of ownership. SIOS SANless software enables you to create a cluster without the need for shared storage. It keeps real-time copies of data synchronized across multiple nodes and enables failover across Amazon EC2 Availability Zones (AZs) for availability and disaster protection.

## Microsoft SQL Server Failover Protection

Microsoft SQL Server Failover clusters provide failover protection for your business critical databases. However, unlike other applications, SQL Server is typically deployed in a single Amazon Availability Zone, making it susceptible to outages within the Availability Zone. While SQL Server Always On Failover Cluster Instances and Always On Availability Groups provide some failover protection, they do not provide the benefits of a complete cluster solution. For example, Always On Failover Cluster Instances (FCI) require the use of a shared storage, excluding their use in a cloud environment.

SIOS SANless clustering software works with Always On Failover Cluster Instances to provide the best of both worlds with an optimized and cost effective high availability solution in an Amazon Cloud. SIOS SANless software integrates easily with Always On Failover Cluster Instances and enables deployment of a high availability environment in Amazon Cloud and other environments where shared storage cluster solutions are impossible or impractical.

SIOS software makes it simple to deploy a high availability solution in an EC2 environment that delivers reliable and efficient failover for SQL instances within and across Availability Zones. It also works with SQL Server Standard Edition and provides replication for data other than SQL.

## Optimal efficiency and cost savings.

SIOS software replicates data volumes at the block level to use significantly fewer system resources, make more efficient use of the available bandwidth and to transfer more data faster across both WANs and LANs than file-based replication alternatives. SIOS software delivers incredibly fast replication speeds—without hardware accelerators or compression devices.



SIOS software replicates both data files and critical storage metadata information such as data access permissions. Block level replication easily transmits encrypted files, open files and other formats that challenge file-level replication solutions while controlling access to the backup environment, preventing unauthorized or inadvertent update access, protecting against data corruption.

Get high availability and disaster protection for your business critical SQL Server databases in a cost-efficient, flexible Amazon Cloud environment.

## About SIOS

SIOS delivers innovative software solutions that provide application availability and disaster protection for Windows and Linux environments.

### Clusters Your Way.™

An essential ingredient in any cluster solution, SIOS SAN and SANLess clustering software provides the flexibility to build clusters your way to protect your choice of Windows or Linux environment – and any configuration (or combination) of physical, virtual and cloud (public, private, and hybrid) storage – without sacrificing performance or availability. SIOS provides unique SANLess clustering software that eliminates both the cost and the single-point-of-failure risk of traditional SAN-based cluster solutions.

Founded in 1999, SIOS Technology Corp., is headquartered in San Mateo, California, and has offices throughout the United States, United Kingdom, and Japan.

	SIOS DataKeeper Powered Failover Cluster	AlwaysOn Failover Cluster Instance	AlwaysOn Availability Groups
Protection Level	Instance	Instance	Database
Storage Type	Non-shared	Shared (Single Point of Failure)	Non-Shared
Protection Resources	Server, Instance and Database Server	Instance and Database	Database Only
Supported Versions of SQL	2005, 2008, 2012	2005, 2008, 2012	2012 Only
Supports Distributed Transactions	●	●	○
Protects System Databases	●	●	○
Protects Unlimited Databases	●	●	○
Protects Data Outside Databases	●	○	○
Protects SQL Server Agent Jobs	●	●	○
Protects SQL Logins	●	●	○

