Elevator Pitch:

SIOS clustering software provides the flexibility to build clusters in your choice of Windows or Linux environment – and any configuration of physical, virtual, cloud, and hybrid storage – without sacrificing performance or availability. SIOS software enables traditional shared-storage clusters as well as *unique SANless clustering that eliminates both the cost and the single-point-of-failure risk of traditional shared-SAN storage.*

Key Value Propositions - Business

70% Lower SQL or Oracle Application Licensing Cost with More Clustering Functionality

- Use DataKeeper Cluster Edition with Windows Server Failover Clusters for robust clustering without the need to upgrade to SQL Server Enterprise Edition or Oracle Enterprise Edition.
- Supports Unlimited Databases
- Protects Master, MSDB, and other System Databases
- Provides both HA and DR configuration options

Avoid/Eliminate Complexity

Eliminate the cost and single point of failure risk of shared storage

70% Lower Cost than FSX or FSX on Tap

- Use DataKeeper Cluster Edition with Windows Server Failover Clusters for robust clustering without the need to upgrade to SQL Server Enterprise Edition or Oracle Enterprise Edition.
- Supports Unlimited Databases
- Protects Master, MSDB, and other System Databases
- Provides both HA and DR configuration options

Value Propositions – Technical

- Automated Switchover Reduces Downtime – HA Cluster continuously monitors, detects and recovers from failures, reducing downtime
- Configuration Flexibility – Add DR node in cloud or DR site easily. Mix physical, virtual, cloud nodes. Provides complete support for more than physical, virtual, cloud and hybrid environments
- More SQL Server Functionality without Added Complexity
  - Supports Unlimited Databases
  - Protects Master, MSDB, and other System Databases
- Enables HA Clustering & DR Protection Where Not Otherwise Possible
  - In public cloud environments where shared storage is not available
  - Protection for Older (& latest) Versions of SQL Server

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SIOS DataKeeper Battlecard

Why Sell SIOS DataKeeper?

- Easy to Sell – Simple add-on for HA
- Great Margins
- Channel-First Sales
- Sales Support, Marketing Opportunities
- Proven Technology
- 20 Years as High Availability Leader
- 97% Customer Satisfaction
- World-Class Technical Support Team

Target Customers:

Enterprise customers in a wide range of industries, including:

- **Healthcare**
- **Education**
- **Manufacturing**
- **Financial Services**
- **Entertainment**

Proof Points:

- High Availability Cluster Protection for 70% Less than SQL Enterprise Edition
- 20 Years as High Availability Leader
- Leading enterprises trust their critical applications to SIOS.
- Protection for Older (& latest) Versions of SQL Server
- Protection for Master System Databases (Master, MSD)
- Enables HA and DR configurations on all cloud platforms

SQL Server Basic Availability Groups	
Weakness	**Messaging**
Only available on SQL Server 2016 or later	Basic is similar to what you had back in 2008 with database mirroring – (1 Database – 1 target).
Maximum of 2 Node Cluster	Would you want the option to replicate to a third node for DR? If you are using this for DR, what about HA? If you are using this for HA, what are you using for DR?
Can only replicate 1 DB per AG from 1 server to another	Are the DBs you want to replicate dependent on one another running on the same server?
Doesn't protect system databases	How are you protecting system databases (Master, MSDB) - agent jobs, user accounts, passwords are stored there.
No readable secondary node	(DK SANless clusters can have a snapshot) e.g: snapshot that can be mounted from an instance of SQL Server to run reports.
No ability to group DBs together - Significant added complexity.	If you create multiple Availability Groups, one may failover and the other not – breaking all dependencies. Each AG needs its own client listener (virtual computer name, virtual IP address) = COMPLEXITY
Cloud limited IP addresses	You'll need one load balancer per database in Azure and Google (not AWS).

SIOS DataKeeper Battlecard

SQL Server Failover Cluster Instances with Shared Storage	
Weakness	**Messaging**
Single-site solution only	What if you have a site wide failure or a cloud outage? DataKeeper lets you geographically separate nodes on-premises and within the cloud (Availability Zones) for DR.
Requires shared storage (SAN)	SANs are expensive, a single point of failure & require SAN admin expertise. What if you could have a cluster without the need for a SAN or SAN admin?
SQL Performance issues on SAN	With SIOS DataKeeper, you can get really fast performance with flash storage on your servers – instead of a SAN.
S2D for SQL Server Failover Cluster Instances	
Weakness	**Messaging**
Doesn't run on: Windows 2012 R2, Windows Server 2016 Standard or Linux	SIOS DataKeeper supports all of these versions in Windows and SQL Server Standard and Enterprise Editions plus many older versions of SQL that S2D and other clustering software does not. DataKeeper also works on Linux.
Doesn't co-exist with Always On Availability Groups	DataKeeper allows you to use the cluster protection that works best for you – it can be used alongside AOAG.
Doesn't support clusters across regions or AZs	DataKeeper allows you to create a cluster with nodes in different regions and AZs to support DR.
SQL Server Always On Availability Groups	
Weakness	**Messaging**
Requires costly SQL Server Enterprise Edition	You can save as much as 70% on software licensing costs and get enterprise-class clustering features by using SQL Server Standard Edition with SIOS DataKeeper.
Only supports a limited number of databases	How many databases are you looking to protect? You'll need to keep track – Microsoft has only tested 100 databases and 10 AGs – "mileage may vary depending on hw"
Supports only 2 nodes in SQL 2014 & earlier. Supports only 3 nodes in SQL 2016 & earlier	DataKeeper gives you the flexibility to create a multinode cluster without a limit to the number of failover nodes.
Cloud limited IP addresses	You'll need one load balancer per AG in Azure all addressed by 1 IP address.

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SIOS DataKeeper Battlecard
Partner Internal Use Only

FSx	
Weakness	**Messaging**
Costly Storage An FSx deployment aiming for a storage capacity of 1 TB, when accounting for minimal deduplication of SQL Server data, yields an effective provisioned storage capacity of 1024 GB per month and a total monthly cost of **$2,035.52,** including storage capacity and throughput capacity charges.	**SIOS DataKeeper Is significantly more cost-effective solution** than FSx for Windows File Server, especially in multi-zone deployments. SIOS DataKeeper setup aiming for a storage capacity of 1 TB using GP3 EBS volumes costs ust $193.84 per month. Intrazonal data transfer costs are just a small percentage of the overall cost and with DataKeeper's built-in compression costs can be minimized even further.
Failover Control Limitations The transition of the FSx file share from the primary to the secondary zone is solely at AWS's discretion, triggered by the unavailability of the primary *zone. There is no way to guarantee that both the application (e.g. SQL Server) instance and its storage reside in the same availability zone at all times.* Having your application running in one AZ and your storage in a different AZ can result in serious performance/latency issues.	**Controlled Failover Ensures Performance Efficiency** SIOS manages failover in a way that ensures the application and storage stay together in failover scenarios, ensuring efficient performance and less complexity. DataKeeper uses replicated EBS block storage, overcoming limitations of FSX's SMB storage for SQL Server FCIs.
Risk of 3X Higher Latency Single zone failover latency has been measured at 3 milliseconds. When failover results in application and storage in different AZs, latency is nearly 10 milliseconds.	**Consistent Low Latency** SIOS DataKeeper delivers consistent low-latency and maintains application and storage in the same AZ.
Cross Regional Disaster Recovery Constraints Cross-regional data replication cannot be done with FSx. To mitigate regional disaster risk, additional DR will be required, such as log shipping, availability groups, or alternative backup solutions.	**Protection from Regional Disasters** SIOS DataKeeper enables data replication both across availability zones and regions, thus facilitating more comprehensive high availability and disaster recovery protection without the need for additional DR strategies.
Incompatibility with SSAS & other clustered applications FSx does not support clustered applications such as SQL Server Analysis Services (SSAS) and certain other clustered applications, that require block storage solutions	**Protects Clustered Applications** SIOS DataKeeper that provide the requisite block storage for SQL Server Analysis Services (SSAS) and certain other clustered applications

SIOS DataKeeper Battlecard

NetApp onTap	
Weakness	**Messaging**
Costly Storage FSx NetApp ONTAP deployment aiming for a storage capacity of 1 TB, when accounting for minimal deduplication of SQL Server data, yields an effective provisioned storage capacity of 1024 GB per month. This translates to a total monthly cost of **$857.08,** including storage capacity and throughput capacity charges.	A comparable SIOS DataKeeper setup using GP3 EBS volumes for 1 TB storage capacity has an effective price tag of just **$193.84** per month, it is clear that DataKeeper provides a more economical alternative for multi-zone deployment, without compromising on the IOPS to GB ratio or the throughput efficiency. Factoring in the intrazonal data transfer costs is just a small percentage of the overall cost and with DataKeeper's built-in compression it can be minimized even further.
Failover control limitations - The transition of the storage access from the primary to the secondary zone is solely at AWS's discretion, triggered by the unavailability of the primary zone. There is no mechanism to guarantee that both the SQL Server instance and its storage reside in the same availability zone at all times.	**Controlled Failover Ensures Performance Efficiency** SIOS manages failover in a way that ensures the application and storage stay together in failover scenarios, ensuring efficient performance and less complexity.
Risk of 3X Higher Latency– Single zone failover latency has been measured at 3 milliseconds. When failover results in application and storage in different AZs, latency is nearly 10 milliseconds.	**Consistent Low Latency** SIOS DataKeeper delivers consistent low-latency and maintains application and storage in the same AZ.
Cross Regional Disaster Recovery Constraints NetAPP OnTAP does not enable real time cross-regional data replication, requiring the use of additional disaster recovery strategies, such as NetAPP SnapMirror, log shipping, availability groups, or alternative backup solutions, to mitigate the risk of regional outages.	**Protection from Regional Disasters** SIOS DataKeeper delivers data replication both across availability zones and regions, thus facilitating more comprehensive high availability and disaster recovery configurations.
Risk of 3X Higher Latency – In FSx for NetAPP ONTAP storage tested with the SQL Server cluster distributed over different availability zones, the latency in a significantly increased to over three times the latency of the single-zone configurations.	**SIOS DataKeeper with Synchronous Replication** SQL Server Failover Cluster Instance (FCI) with SIOS DataKeeper, which used synchronous replication of GP3 EBS volumes across availability zones. Typical IO latency remaining under 3 milliseconds, demonstrating DataKeeper's effectiveness in tightly coupled availability zone configurations.
IO Latency in Cloud Environments For applications sensitive to IO latency, such as SQL Server FCIs, the increased latency of cross-zone operations could be a determinative factor in choosing a solution that aligns with performance requirements.	**Consistent Low Latency** SIOS DataKeeper delivers consistent low-latency and maintains application and storage in the same AZ.

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SIOS DataKeeper Battlecard
Partner Internal Use Only

VMware HA	
Weakness	**Messaging**
No Automatic Failover for application failures	VMware doesn't monitor the application, so if the application hangs up, it won't take any action to recover operation. Implementing a guest based cluster will detect and automatically recover from application level failures.
Might require complex raw device mapping depending on ESX server RDM = giving up key VMware features such as vMotion	Are you aware that if you use RDM to create your cluster, you may have to give up vMotion, VMware HA and snapshot and other related features? DataKeeper is a lot easier to implement and lets you continue to use all of the VMware features you value.
Does not eliminate planned downtime for maintenance within the Guest OS	DataKeeper allows rolling updates minimizing the downtime associated with planned maintenance.
Backup Vendors: Veeam, Zerto	
Weakness	**Messaging**
RTO/RPO	Backing up data is important. You should use a backup solution to protect your data from corruption and malware issues. Backups can't provide RTO of about a minute or less and RPOs of minimal to no data loss.
No monitoring and automatic failover capability	Not an HA solution. If downtime occurs when no one is available, RTO and RPO can be very long.

Questions that Grow Margins

- What application or database do you want to protect?
- Walk me through your recovery process for your critical application.
    - Biggest Challenges? Business Consequences?
- What is your DR strategy? Do you have target RTOs and RPOs?
- If you could have simple, cost-effective enterprise-class high availability, would you prefer to stay on SQL Server Standard Edition?
- Do you plan to use more than 2 nodes in your cluster?
- Do you have applications other than SQL Server that are critical to your business? (SAP, Oracle)

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