

A Comparison of How StorageCraft and Rubrik Deliver on the Cloud Data Protection Needs of SMEs

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PRODUCTS

StorageCraft OneXafe

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Rubrik Cloud Data Management—Various HW Platforms

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A small and midsize enterprise (SME) evaluating converged infrastructure platforms purpose-built for data protection may quickly find itself first needing to articulate its cloud strategy. Platforms from StorageCraft and Rubrik were designed to emulate general-purpose public clouds and natively offer features once found only in those clouds. The challenge for an SME is to identify which cloud features it needs the platform to possess to meet its business requirements while staying within its budgetary constraints.

Two tiers of cloud features exist on these platforms:

- One tier encompasses cloud-like features that an SME will utilize on-premises. These include backup, recovery, DR, storage scalability, and software licensing, among others.
- The other tier covers the platform’s ability to manage cloud features available from general-purpose cloud providers such as Amazon, Google, and Microsoft as well as from purpose-built data protection cloud providers.

It is critical for an SME to clearly define how or if it intends to use these two tiers of cloud features. This understanding should certainly influence its evaluation of the products available from StorageCraft and Rubrik, two leading providers of converged infrastructure platforms purpose-built for data protection.

Commonality in Cloud-like Features

The StorageCraft OneXafe and Rubrik Cloud Data Management platforms share some commonality in their cloud-like features that include:

- **Backup software** that an SME can use to protect applications in its environment.
- **Connectivity to general-purpose public clouds** for off-site data retention and archive.
- **Data reduction and security options** to minimize data stores as well as protect them from unauthorized access and ransomware attacks.
- **Foundation for disaster recovery (DR)** to include replicating data off-premises as well as options to automate DR with cloud providers.
- **Rapid application recovery** to include hosting applications and data on its converged infrastructure platform should the production host or environment be unavailable or inaccessible.
- **Scalable storage** that provides a simple mechanism for an SME to quickly and easily add more storage capacity to the platform.

It is only when one drills into their respective features that their distinct differences emerge. (Figure 1.)

A Fast ROI Using a Converged Infrastructure Platform as a Backup Target

An SME can quickly show an ROI using a converged infrastructure platform for its file services and scalable storage features. Ideally, it can immediately deploy this platform as a target for backup software it already owns and then introduce the platform’s other features as appropriate. (Figure 2.)

These two platforms do share some commonality in file services. They both support the NFS and SMB protocols so an SME may use either platform as a backup target but not in every use case as the two platforms differ in how they each deliver their respective file sharing features.

StorageCraft OneXafe always has deduplication turned on. In this way, whether the SME uses it for

FIGURE 1: High Level Feature Summary

	StorageCraft OneXafe	Rubrik Cloud Data Management
Backup Software	✓	✓
Cloud Archive & Tiering	✓	✓
Compression & Deduplication	✓	✓
Data Security	✓	✓
DRaaS	Private Cloud	Public Cloud
File Services	✓	●
Replication	✓	✓
Scale-out Storage	✓	✓

FIGURE 2: File & Storage Services Feature Comparison

	StorageCraft	Rubrik*
File Protocols	NFS, SMB	NFS, SMB
Deduplication	Always On, Inline Fixed, Inline Variable	Off
Max Capacity on a Node (Raw)	204TBs	40TBs**
Max Nodes per Cluster	7	No Theoretical Maximum
Minimum Nodes	1	4
Node Configuration	All-HDD (4400), All-SSD (5410)	Hybrid (HDD/SSD Mix)
Disk Drive Mgmt	Add Drives Individually	Add Fully Populated Node

* Hosts its Cloud Data Management software on various hardware platforms from Cisco, Dell or HPE.
** Based on the largest Cisco or HPE node.

file sharing or as a backup target, it deduplicates all data inline using fixed-length and variable-length block algorithms.

Conversely, Rubrik’s file sharing services may only be used as a backup target if using NDMP when backing up other file servers. Further, Rubrik’s file services do not deduplicate data. While Rubrik does offer inline deduplication, it only deduplicates data when backing up data using its Cloud Data Management software.

The platforms also vary in the amount of storage capacity their nodes support and the way they scale. StorageCraft OneXafe supports up to 204TBs in a node and up to seven nodes in a cluster with each node configurable as all-flash or all disk. Rubrik supports up 40TBs in a single hybrid node (mix of flash and disk). It has no theoretical maximum in the number of nodes in its cluster.

Finally, these platforms differ in how their clusters scale. StorageCraft OneXafe only requires the deployment of a single node with the required amount of capacity, though a OneXafe cluster can scale up to seven nodes and 1.4PB (raw) of capacity, more than sufficient for most SME requirements. To each node in the cluster, one can add storage capacity granularly, as little as one HDD or SSD at a time. A Rubrik cluster requires a minimum of four nodes to deploy. An SME must start with a minimum of 96TB (raw) of capacity and then scale the cluster by adding one or more fully populated nodes to it.

Key questions to ask:

- Which is your greatest need – more storage capacity for backups, new backup software, or both?
- How much time do you currently spend managing the storage associated with your backups?
- Which applications need more storage capacity to use as a backup target?

- Do you need to deduplicate backup or file data?
- Have you considered using the same platform for both backup and production data?
- Do you need a consolidated storage solution for unstructured data (archives, backups, file data, etc.)?

Delivering on Backup, Cloud, and Recovery Services

Both platforms offer backup, disaster recovery as a service (DRaaS), instant recovery, and access to public cloud services that an SME can and should look to utilize in short order. These services ultimately deliver the full value that these platforms offer.

Rubrik’s Cloud Data Management name may create the impression it offers more capabilities than it does. In short, it offers backup and recovery services with options to manage many services found in general-purpose public clouds. However, to infer that Rubrik manages all cloud-like features across production and secondary on-premises, public, and purpose-built clouds would be incorrect. (Figure 3.)

FIGURE 3: Backup, Cloud and Recovery Feature Comparison

	StorageCraft	Rubrik
Backup Software	OneXafe	Cloud Data Management
Apps/Databases*	Exchange, Oracle, SAP HANA, SQL Server	Exchange, OneDrive, Oracle, SharePoint, SQL Server
Cloud Apps	Office 365, Google G Suite	Office 365
Cloud DRaaS	StorageCraft Cloud	Public Cloud
Global Metadata Search	●	☑
Hypervisors	Hyper-V, Linux KVM, vSphere	ESXi, Hyper-V, Nutanix AHV
Instant Recoveries	VirtualBoot	Storage vMotion
Physical Machines	Windows, Linux**	AIX, Linux, Solaris, Windows
Public Clouds	AWS	AWS, Azure, GCP
Public Cloud Services Managed	Object Storage	Block Storage, Compute, Object Storage
Windows Desktops	☑	●

* Granular application and database support provided using partner applications.
** Linux support available Q2 2019.

Both StorageCraft and Rubrik protect physical and virtual Windows and Linux servers. They differ in that StorageCraft protects Windows desktops while Rubrik offers options to protect the AIX and Oracle Solaris OSes more commonly found in large enterprise shops.

For instant recoveries, both platforms can host and recover VMs before migrating them back to the production environment. However, they do differ in how quickly and efficiently they recover.

If Rubrik recovers a VM on its platform, it relies on storage vMotion to move the VM and its data to a production host. Using storage vMotion adds time to the recovery and may be disruptive to the application. Conversely, StorageCraft uses its own VirtualBoot to initiate a recovery on OneXafe. VirtualBoot boots the VM from OneXafe and then seamlessly moves the VM's data over to production storage while the application runs. VirtualBoot moves data back to higher performing production storage more quickly without necessitating application downtime that storage vMotion may require.

Third, both offer DRaaS options. StorageCraft's DRaaS offering recovers applications and VMs in StorageCraft's private cloud, where an SME can host there for up to 30 days per year at any time. Rubrik automates DRaaS via scripts that an SME can use to recover VMs and applications with a public cloud provider in 3 minutes or less per Rubrik's claims.

An area where Rubrik has an edge is in its ability to manage services in public clouds and with AWS specifically. Rubrik can manage block and object storage as well as compute in the cloud. StorageCraft primarily treats public cloud storage as an archive.

Key questions to ask:

- Which applications and operating system do you anticipate using this platform to protect?
- How easy and fast is it to restore VMs and applications?
- Do you have a DR plan? Do you test it? How well does it work?
- If planning to recover in a purpose-built or public cloud, do you understand the costs?

Securing Against Ransomware Attacks

The scourge of ransomware puts a premium on recoverable backups. Adding to this challenge, the latest versions of ransomware may compromise backups in the following ways:

- Delete or encrypt backup repositories
- Gain administrative access to the backup software
- Infect backup stores over time to make them unrecoverable

Both StorageCraft and Rubrik offer similar capabilities to secure backups from ransomware. (Figure 4.)

Both offer multifactor authentication (MFA) as an option. MFA asks a user to authenticate any time he or she attempts to access the backup software, or wants to perform an advanced task such as deleting backup data.

Both products also take immutable snapshots of files (backup or otherwise) hosted on their platforms. These immutable snapshots preserve the original copy of the data and prevent the ransomware from deleting or encrypting it.

FIGURE 4: Data Security Comparison

	StorageCraft	Rubrik
Multifactor Authentication	✓	✓
Snapshot Immutability	✓	✓
Data Encryption	At-rest, In-flight, AES-256	At-rest, AES-256

Taking immutable snapshots and retaining them for days, weeks, months or even indefinitely positions an SME to use analytics software to track changes to the data and look for anomalies.

Key questions to ask:

- Have you ever been affected by ransomware?
- Are you aware that malware now targets disk-based backups and backup repositories?
- Can you recover your current backups in the event of a ransomware attack?

The Impact of Licensing and Support on the Final Buying Decision

The costs associated with product licensing and ongoing product support frequently impact a final product decision. Both StorageCraft and Rubrik generally follow the broader industry trend of making all-inclusive licensing available though they implement it differently. (Figure 5.)

StorageCraft licenses its services on a per-node basis. Once an SME licenses a service on a node, there are no additional charges. StorageCraft licenses individual services per node or via a single all-inclusive SKU that includes all the services that StorageCraft offers.

FIGURE 5: Licensing and Support Comparison Summary

StorageCraft	Rubrik
• All-inclusive licensing SKU per node available	• All-inclusive licensing
• All services licensed per node	• Licensing by TB
• Option to bring your own HDDs	• Pay as you grow
• Perpetual licensing option	• Cloud services licensed from 3rd parties
• Capacity in StorageCraft cloud licensed per TB	• Next business day HW part replacement
• 7 x 24 hour support with onsite hardware service available	• Rubrik GO evergreen subscription

Rubrik recently introduced its GO evergreen subscription. This option licenses all its offerings (software, hardware, support, and evergreen refresh) for a 3-year period. It also continues to offer a pay as you grow model. For every additional TB of capacity used, charges increase accordingly.

Both providers differ in their delivery of on-site support. StorageCraft makes onsite hardware support available within a 4-hour window for those SMEs that need it. Rubrik currently only guarantees next day support by 3 PM for hardware parts replacement.

Key questions to ask:

- Does your budget account for increases in monthly licensing costs as your storage capacity grows?
- Is it best to buy all features when you acquire the appliance?
- What is the initial entry cost to deploy the platform?

Best Use Case for the StorageCraft OneXafe

Both StorageCraft and Rubrik have experienced success in recent years with their respective decisions to create and deliver converged infrastructure platforms purpose-built for data protection. But for each one, use cases exist where one platform is a better fit than others.

StorageCraft OneXafe exemplifies what a platform built for deployment in Windows and Linux centric environments looks like. Of these two platforms, only OneXafe gives an SME the breadth of features and support that it needs to function as a backup target for all its enterprise data. An SME can then move to adopt OneXafe as its preferred backup software for its entire Windows and Linux environment and may even look to use OneXafe more broadly for all its file services needs.

By giving an SME the option to start with as little as one node with only the storage capacity that it needs, OneXafe's initial costs should come in at a substantially lower price point than Rubrik. Further, as an SME grows its deployment, OneXafe's total cost of ownership should remain lower as OneXafe licenses its software by node, rather than by TB. Equally important, StorageCraft offers the key cloud benefits that an SME needs now: automated data archival in the cloud and a DRaaS solution that provides offsite, turnkey recovery. By choosing OneXafe, an SME obtains the comprehensive, next generation converged infrastructure platform that it needs to simplify its operations at a price that should stay within its budgetary constraints initially and over time. ■

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