



▶ 10 Benefits to Using a Scale-Out Infrastructure for Secondary Storage

ESSENTIAL TIPS TO PROTECT, ACCESS AND USE DATA ACROSS ON-PREMISES AND CLOUD LOCATIONS

As organizations seek to implement web-scale IT features for their secondary workloads, including data protection, they need to be able to expand, contract, modify their infrastructure quickly and with minimal effort. What's more, they must be able to deliver expected outcomes reliably and at a lower cost.

Scale-out infrastructure is a new solution rising to meet these challenges. Offering a single platform for shared compute and storage resources, a scale-out infrastructure simplifies storage for high-volume secondary data and processes enabling organizations to deliver expected outcomes reliably, with greater scalability, and at lower cost. Consider these ten reasons to take a unified approach for your data protection and secondary storage and discover a more agile way to protect, access and use data across your on-premises and cloud locations.



Today's enterprises are actively seeking new ways to drive greater efficiency, agility and scale. For some primary workloads and applications, the cloud is the ideal solution, delivering a consumption-based economic model and dynamic elasticity. But what about secondary storage and workloads, such as backup and recovery?

It's true, secondary workloads and storage can be massive consumers of infrastructure capacity. In fact, by some estimates, a secondary storage footprint can be between two and three times that of primary data copies.¹ That means that strategies that can deliver greater efficiencies for secondary storage and workloads have a more rapid, yet less disruptive, impact on infrastructure transformation.

But, secondary storage transformation doesn't mean you have to forego the web-scale benefits that are so compelling for the public cloud. Scale-out infrastructure solutions that have been purpose-built for secondary workloads can retain all the benefits of the cloud, while enabling IT to keep their secondary storage on-premises within their own datacenter. Whether the application was not built for the cloud, too costly or complex to move to the cloud, or requires more stringent controls and policies you can realize greater cost efficiency, resiliency and availability. How? With a unified approach to data protection that leverages scale-out infrastructure to protect, access and use data across both on-premises and cloud locations.

Consider the following ten benefits you can realize with a scale-out infrastructure for secondary storage.

1 Simplify Storage Management. Storage management complexity has been a growing bane for IT for decades. Compliance requirements, mobility demands, rapid cloud adoption and growing security threats have all added to the challenge. Without a unified data protection approach, the complications of storage management can be difficult to overcome using traditional scale-up technology where every component must be configured, upgraded and managed separately. With so many moving pieces, aligning policies, applying controls and assuring desired service levels across disparate elements can become a monumental and time-consuming challenge.

Instead, scale-out technology delivers a complete hardware and software solution in one, easy-to-use package. Compute, storage and network hardware are seamlessly integrated with data protection, operating system and virtualization software so that multiple management touchpoints are reduced to one. This minimizes staff and management costs, stalls copy data sprawl and simplifies the application of policy and security controls so that you can more easily meet service level agreements (SLAs).

2 Lower Infrastructure Costs. Not only is traditional data protection infrastructure comprised of multiple layers of hardware for compute, storage and networking, many organizations have applied point product data protection hardware and software solutions for specific application workloads. The resulting infrastructure requires frequent forklift

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upgrades tied to the life of very expensive hardware and often the overprovisioning of storage to accommodate for anticipated growth. The ongoing costs can become simply unmanageable and unpredictable.

As an alternative, scale-out technology relies on general purpose server-based storage nodes that don't require expensive storage controllers or dedicated media servers. Point products can be eliminated, with data protection software unified into a single solution to support all applications, on-premises and across clouds, further lowering both CapEx and OpEx costs. Finally, using a unified data protection approach, scale-out infrastructure can also eliminate the unknown budget variables common with scale-up infrastructure approaches. Instead, operating expenditure pricing models can improve budget forecasting and predictability.

3 Achieve Greater Resiliency and Availability. Eliminating multiple layers of hardware and software infrastructure can also minimize downtime risk and improve data availability. By cutting out the multiple layers of infrastructure, you're dramatically limiting the potential points of failure. Scale-out infrastructure often uses erasure encoding which will ensure that data is available, even when drive or node failures occur. And, for disaster recovery (DR) implementations, scale-out infrastructure will support WAN optimized replication and geo-dispersed clustering so that data is consistently available when and where it's needed.

4 Enhance Operational Efficiency. Unlike traditional, or scale-up, approaches to data protection operations, scale-out implementations feature storage nodes that can be easily expanded, replaced or repaired without service disruption. Featuring an evergreen storage pool that supports the dynamic addition or replacement of nodes as needed, scale-out infrastructure can simplify management and support dynamic scalability. Storage pools can start out small and expand easily, as needed, to 10s of petabytes. For a future-proofed infrastructure, multiple generations of hardware, and even different storage vendor products, may be mixed into a single pool so that you can easily take advantage of new technologies and drive densities as they become available.

5 Proactive Monitoring and Central Policy Management. Uniting data protection and secondary storage operations into a single, unified solution can help overcome the monitoring and policy management challenges so common with operations that rely on multiple point-product solutions or siloed data sets. Instead, an entire infrastructure – even one that's distributed across multiple locations, both on-premises and in the cloud – can be managed from a central management framework. This helps to proactively detect issues before they arise and manages SLA and governance policies with the consistency demanded by increasing compliance regulations.

6 Fully Integrate with Public Cloud. No data protection strategy would be complete without considering its reach into those workloads retained in the public cloud. In fact, recent studies have reported that by 2020, 92 percent of workloads will be processed by cloud data centers.³ The best scale-out infrastructure can support tiering to all major public cloud storage providers for offsite storage and long-term retention. This means that you can transform on-premises workloads into public cloud instances and protect cloud-native workloads all from a common platform. If needed, you can also replicate data back to on-premises storage, or to other cloud providers, and even provision policies to spin cloud resources up or down on demand. Performing these operations with point-based software solutions and traditional scale-up infrastructure would not only be exceptionally complex and costly, but without reliable accuracy or true recovery assurance.

7 Automate Complex Tasks. Data protection can not only be complex, it's often very tedious and time consuming. It can take hours and a lot of skilled resources away from more strategic projects. Scale-out infrastructure that relies on a unified data protection platform can automate and orchestrate complex tasks, improving efficiency and minimizing the risk of human error. Again, when working with a diverse stack of scale-up infrastructure, task automation can be exceptionally difficult to implement with multiple breaking points. Instead, a unified, scale-out infrastructure can accommodate programmable workflow automation with ease so that time consuming operations can be streamlined into seamless, efficient processes and even automated.

8 Assure SLAs with Confidence. Many factors come into play when considering how best to assure SLAs, including recovery time objectives (RTOs) and recovery point objectives (RPOs). The more moving pieces in your infrastructure and manual processes within and across departments, the more risk to your SLA guarantees. By using a unified, scale-out approach for your data protection operations you can minimize failure points and reduce process times for a more resilient environment. Plus, the best scale-out solutions offer pre-defined SLAs and plans to support a range of RPO and RTO SLAs so that you can customize your service levels based on business, or application need.

9 Simplify Support. Nothing is worse than experiencing a downtime event only to have to endure hours of vendor finger-pointing to uncover the root of the problem you must solve – is it a storage hardware failure, a controller issue, outdated software? The chain of support calls can become exasperating. Not so when you rely on a unified, scale-out appliance for your secondary storage and workloads. Here, one call will deliver you directly to the vendor responsible for every element of the solution stack, so you can get to a resolution right away. Plus, installation, integration, patches and updates are all performed via the same vendor, so you don't experience any maintenance inconsistencies or risk security exposure.

5 Ways to Reduce TCO with a Data Protection Appliance

Learn how to minimize operational complexity and cost with a scale-out infrastructure.

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<http://bit.ly/2jxBakV>

³ Cisco, "Cisco Global Cloud Index: Forecast and Methodology, 2015-2020." 2016

10 Gain Instant Data Access. Let's face it, no one stores data just to retain it. Your users want to be able to access it, and fast. In traditional scale-up environments, data access can be a very complex and time-consuming operation. First you must identify where it's stored, a process in some environments that can be a challenge all unto itself. Then you must recover it. Often, this can take hours if not days. Most users simply don't have the patience for such a lengthy process and demand options where they can serve themselves.

Self-service is an inevitable evolution. Gartner says that, "Digital business requires speed and agility, both to trial and advance new ideas, but also to continually enhance digital business products and services. A cloud style of computing provides speed and agility through the use of cloud services — which become available to a broader set of users (also called cloud consumers) through a self-service interface."⁴ If you are not able to deliver the data access your users demand, you might lose control over the security and chain of custody of your organization's data assets. Using advanced scale-out infrastructure solutions you can deliver data self-service, so users can get to data in an instant, with restore-less access to data copies by users and applications using standard interfaces from all managed copies – even in the cloud. This self-service data access means that you can keep your users happy while minimizing the impact of data access processes on IT staff and keeping organizational data compliant and secure.

Scale-out infrastructure is providing new ways for organizations to protect, access and use data with greater efficiency, reliability and availability – regardless of where the data lives now, or in the future. By using a unified approach to data protection, you can have the best of all worlds in your own data center, while ensuring elasticity to the cloud when and where you need it.

⁴ Gartner, "What CIOs Need to Know and Do to Exploit Cloud Computing." June 27, 2017

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