

COHESITY

Reduce the cost of your
Data Domain backup
infrastructure with a
scale-out data protection
solution



Data Domain based its architecture on standalone, scale-up appliances. As your backup infrastructure grows, you need larger and more numerous appliances. Data Domain’s performance scalability depends on Intel’s CPU performance and Moore’s law. Controller performance effectively doubles every two years, but the catch is that you’ll need a forklift upgrade to benefit from it. It was the right bet for Data Domain as a business, but not as much for their users over time. The focus of this brief is to help you understand the limitations of a Data Domain investment strategy and how to effectively reduce your backup infrastructure costs with an infinitely and linearly scalable architecture from Cohesity.

Data Domain’s Value Proposition:

To better understand Data Domain’s value proposition, it is important to revisit the major IT pain points and market conditions during the early years of Data Domain. In the early part of the 2000’s, customers were;

1. Grappling with slow recovery from tape
2. Unable to complete backups within the available time window
3. Containing growing backup costs in the face of data proliferation

Data Domain’s solution provided: improved recoveries when compared to tape, enabled backups to be completed faster with in-line dedupe and showed that the cost of disks is comparable to tape with deduplication. It’s VTL interface enabled non-disruptive roll-out into existing backup infrastructure, and DD BOOST enabled source side dedupe and performance, which helped accelerate solution adoption.

Data Domain Strengths:

Data Domain is the industry leader in the Purpose Built Backup Appliance (PBBA) space with roughly 65% market share today based on revenue. Data Domain Appliances are optimized for write performance and can ingest multiple TBs of data in an hour. Data Domain BOOST enables source side dedupe, which in return provides a better logical throughput for the appliance and reduces ingest bandwidth usage.

Differences between Scale-Out and Scale-up	
Scale-Up	Scale-Out
<ol style="list-style-type: none"> 1. Expansion constrained to individual controllers 2. Controller is a single point of failure 3. Disruptive upgrades 	<ol style="list-style-type: none"> 1. Each node provides additional compute, network and storage 2. No single point of failure 3. On-line hardware & software upgrades

Current Market Challenges

Fast forward 15 years; customers are no longer concerned about recoveries from tape. Tape has been relegated from recovery media to retention media. Nightly downtime windows are no longer possible for production apps, and fulls are no longer the norm.

The Data Center has evolved. Call it a private cloud, public cloud or a Managed Service Provider, businesses now require the agility to support any workload in all these environments. Along the way, data centers have moved away from layered servers, storage and networking to converged infrastructure first, and now to hyperconvergence.

The Data Protection world too has moved from weekend full backups to Change Block Tracking (CBT), enabling incremental-forever backups. You have come to expect instant access to your data no matter how big the dataset is. More

importantly, dedupe has become a mainstream feature. You seek data protection solutions that provide increasing business agility without increasing costs.

Hyper Converged Secondary Storage:

Cohesity’s Hyperconverged Secondary Storage solution is designed with simplicity and scale in mind. It reduces the critical planning required to pick the right hardware and allows the customer to scale linearly and move to a pay as you grow model, directly reducing TCO from day one. It’s scale-out architecture eliminates single point of failures, and maintains high availability natively. With each node, it brings more compute, storage and network bandwidth to scale and meet the growing demands of the enterprise, bringing resilience to the enterprise.

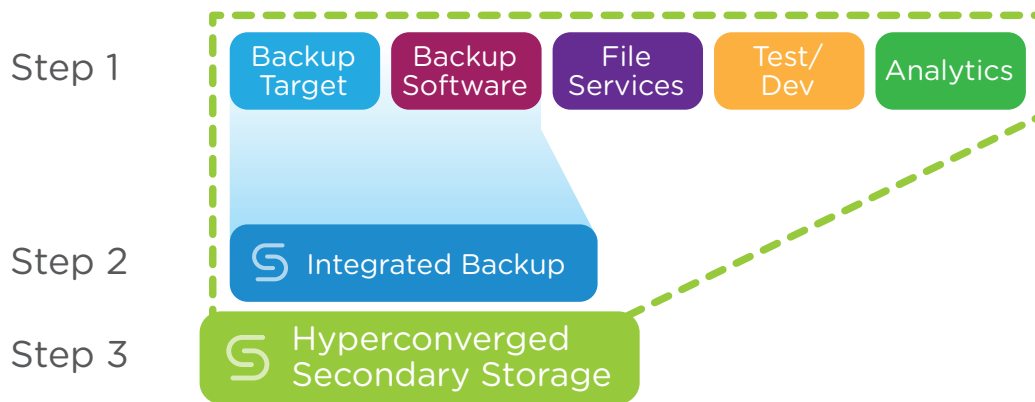


Figure 1: Simplify Secondary Storage

“As a leading provider of medical case management and cost-containment services, Genex relies on world-class IT infrastructure to service customers 24x7, said David Dietz, Genex Services IT manager. “Cohesity’s intelligent data platform brings a new level of efficiency to our secondary storage, allowing us to simplify our backup information, including images, and rapidly provision dev/test systems. We appreciate the cost effectiveness of Cohesity’s products which allows us to consolidate our VM and database backups and dev/test instances into a single, protected, web-scale system that automatically deduplicates, compresses and encrypts our data.”

- David Dietz, Manager, Systems Technical Services / IT, Genex

Data Protection Challenges with Data Domain:

Data Domain innovation wheel has slowed and the focus now is interoperating with other EMC storage products. Data Domain ProtectPoint solution ties Data Domain to EMC block storage leveraging other EMC technologies like RecoverPoint. Data Domain now relies heavily on the customer’s data growth to sell more units and keep EMC solutions intact.

- Data Domain’s deduplication is limited to the data behind each controller. As customer environments grow, and additional controllers are deployed, they cannot reap the benefits of global deduplication.
- Data Domain’s controller based architecture does not allow for capacity sharing across appliances. Administrators must over-provision each appliance to ensure they are covered for growth, which directly increases TCO.

- Data Domain effective price per TB varies by model. The larger the appliance the more you pay per TB. As environments grow, enterprise customers pay more for their Data Domain storage.
- As environments grow and more storage is required, moving to larger Data Domain appliances requires fork-lift upgrades, which increases risk and complexity, as well as downtime.
- Data Domain lacks the functionality to become the complete backup solution for the enterprise. It's only a backup target. It cannot schedule, manage, catalog, initiate restores or provide visibility into your backups.

Data Protection with Cohesity

Cohesity was founded with the vision of eliminating fragmentation in the secondary storage and bring simplicity and agility to businesses. Architected from the ground up, and built on top of Commodity Of The Shelf (COTS) hardware, Cohesity Data Platform is a scalable appliance which provides a single pane of glass approach to management to secondary storage use cases. The Cohesity Data Platform is commonly leveraged as a backup target with leading backup solutions allowing customers to easily deploy within their existing backup environments and improve their TCO right away. The TCO accelerates when the solution is deployed for additional use cases such as data protection, file services and analytics.

Cohesity's scale-out architecture and global Deduplication coupled with non-disruptive upgrades provides customers scalability and high availability with lower TCO. It's fully hydrated snapshots allows fast restores without eliminating the need for reconstructing the data blocks from fragmented backup/dedupe copies.

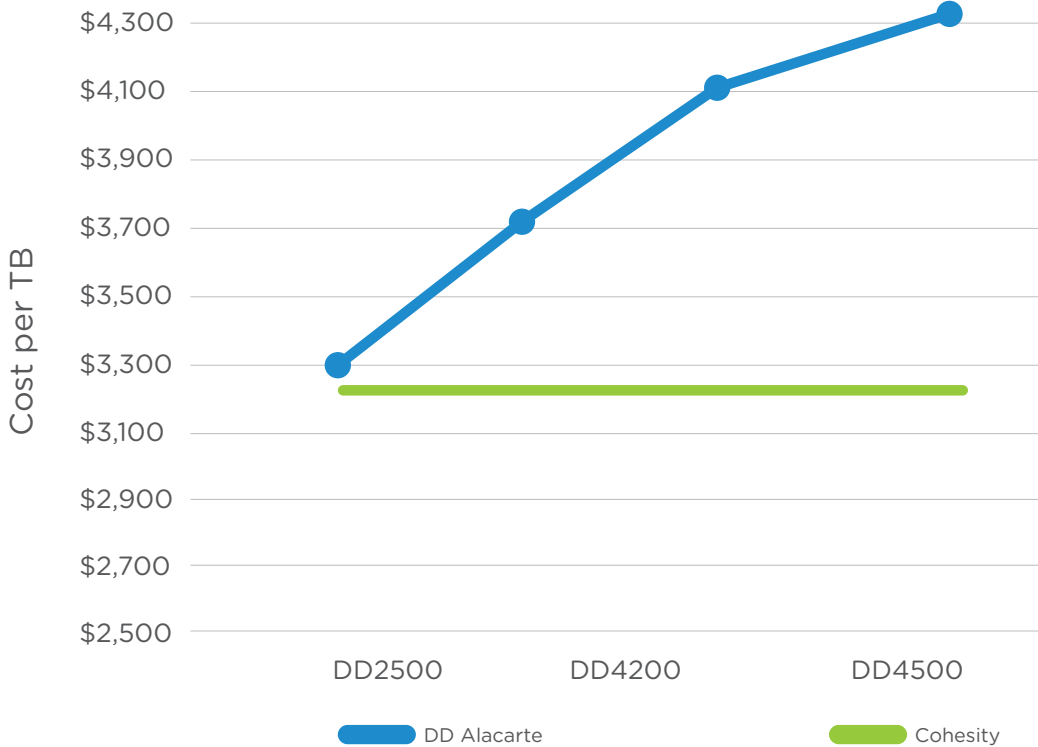


Figure 2: Cohesity's Linear pricing vs Data Domain's pricing (Price per TB, list price)

Cohesity Differentiators

Cohesity DataPlatform lowers complexity around planning, budgeting and execution. It's consistent pricing allows customers to grow linearly from cost point of view with its price per TB consistent across any number of nodes in use. Growth doesn't have to translate to complexity and multiple clusters to manage. Growth is no longer a pain or challenge to manage with Cohesity, you no longer have to pay more per TB as your data grows and you can manage environments large or small from a single pane of glass.

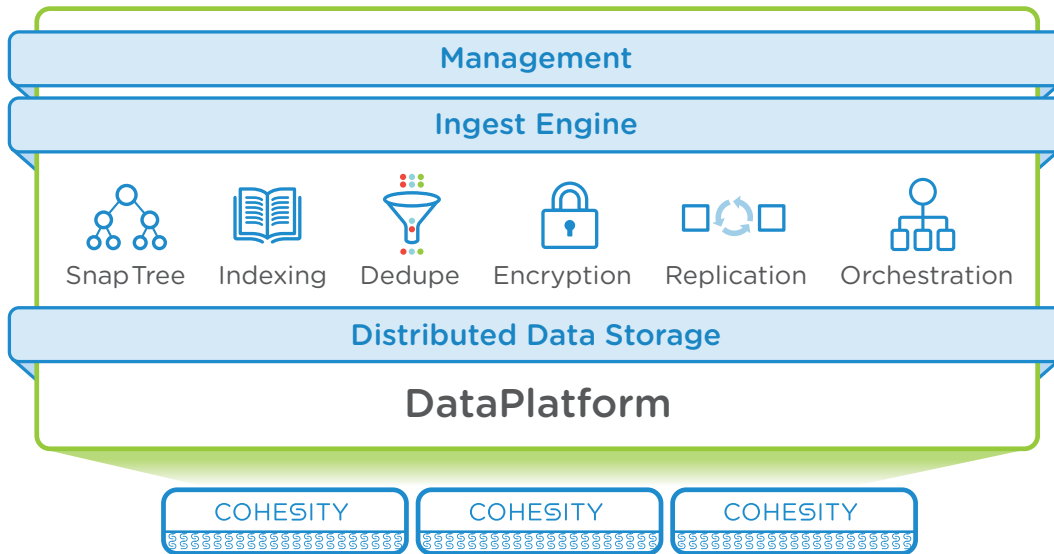


Figure 3: Cohesity DataPlatform Architecture

Cohesity DataPlatform manages both traditional and big data workloads with instant access to data. Cohesity DataPlatform can start as a data protection target at first and then with the addition of DataProtect becomes the backup solution of choice, accelerating TCO savings. When combined with its DataProtect software, it shrinks the RPOs with fully hydrated snapshots and eliminates RTOs with instant access to data, anytime, anywhere.

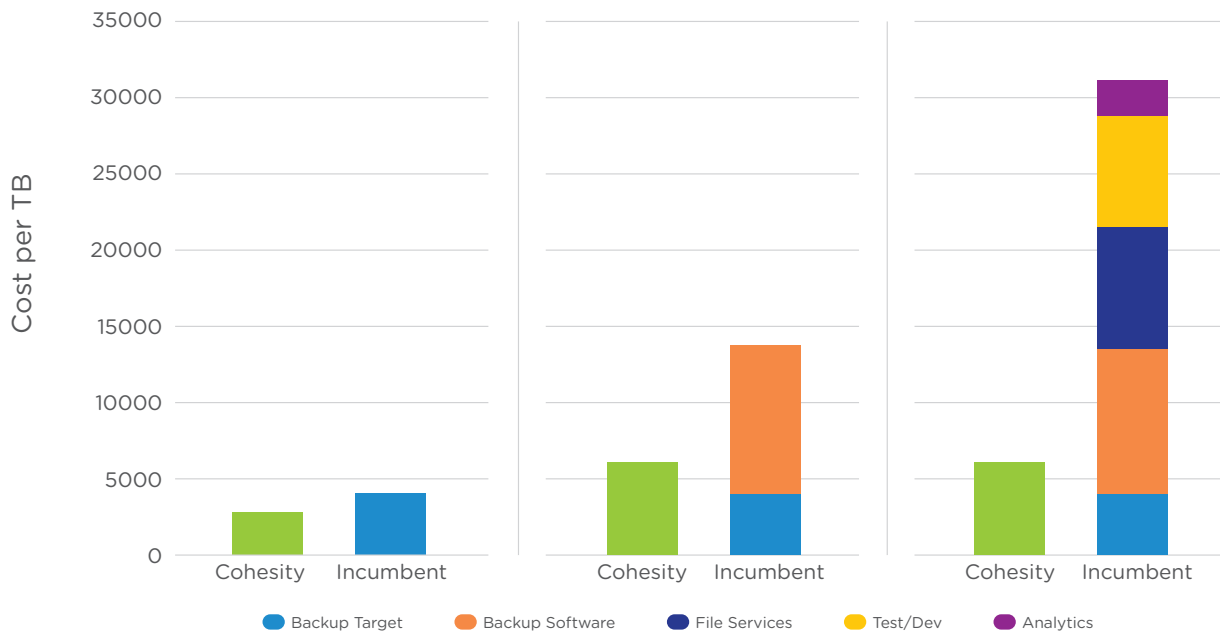


Figure 4. TCO for Secondary Storage Use Cases Cohesity vs Standalone Solutions

Cohesity, The Data Protection Platform of Choice

Designed for modern private data centers, Cohesity brings simplicity and agility to enterprises. Cohesity enables customers to realize cost savings from the point of initial installation. It eliminates over-provisioning, simplifies deployment and management and directly lowers the total cost of ownership. The addition of DataProtect software not only accelerate cost savings, but provides instant access to your data. It's time to move away from fork-lift upgrades and hyperconverge with Cohesity.