

TCO Case Study

The Elephant in the Room: Archival Storage Costs

Featuring

HPE/SUSE Storage/iTernity iCAS Solution

Dell EMC Centra Compliance Edition

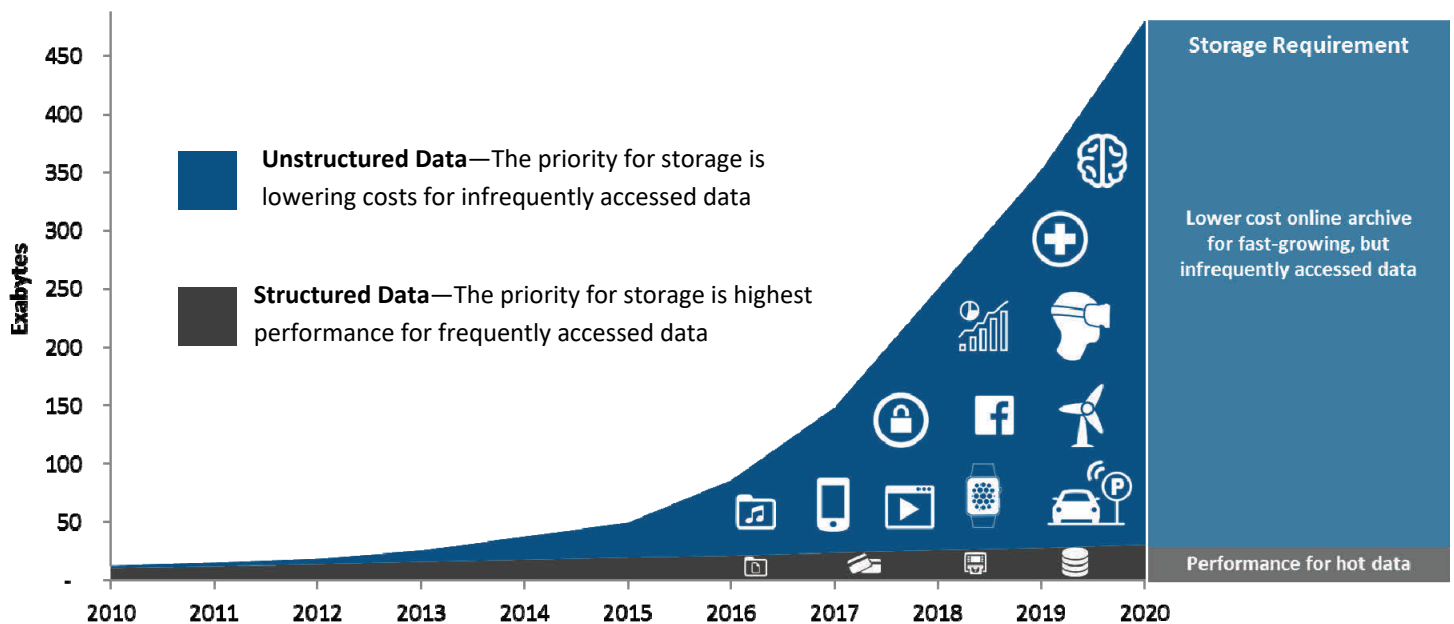
Catalyst For A New Class of Compliance Archive

The Explosive Growth of Unstructured Data

Data that is neatly organized in a database management system is commonly referred to as structured data, while data that is not managed with a database is often referred to as unstructured data. Data storage priorities are being changed by billions of new internet connected device such as sensors, watches, smartphones, and cameras, which are spewing trillions of unstructured data files.

Although the unstructured data is hardly ever accessed, if at all, an offline backup copy is not good enough. The data must be stored online because it is grist for the mill of big data analytics engines inside today's business intelligence applications and tomorrow's machine learning applications. The result is IT organizations are being tasked with keeping mountains of cold data in online archives. The priority for application environments using unstructured data is to minimize storage costs while meeting the growth in requirements for capacity.

The Growth of Unstructured Data & Requirement for Online Archive

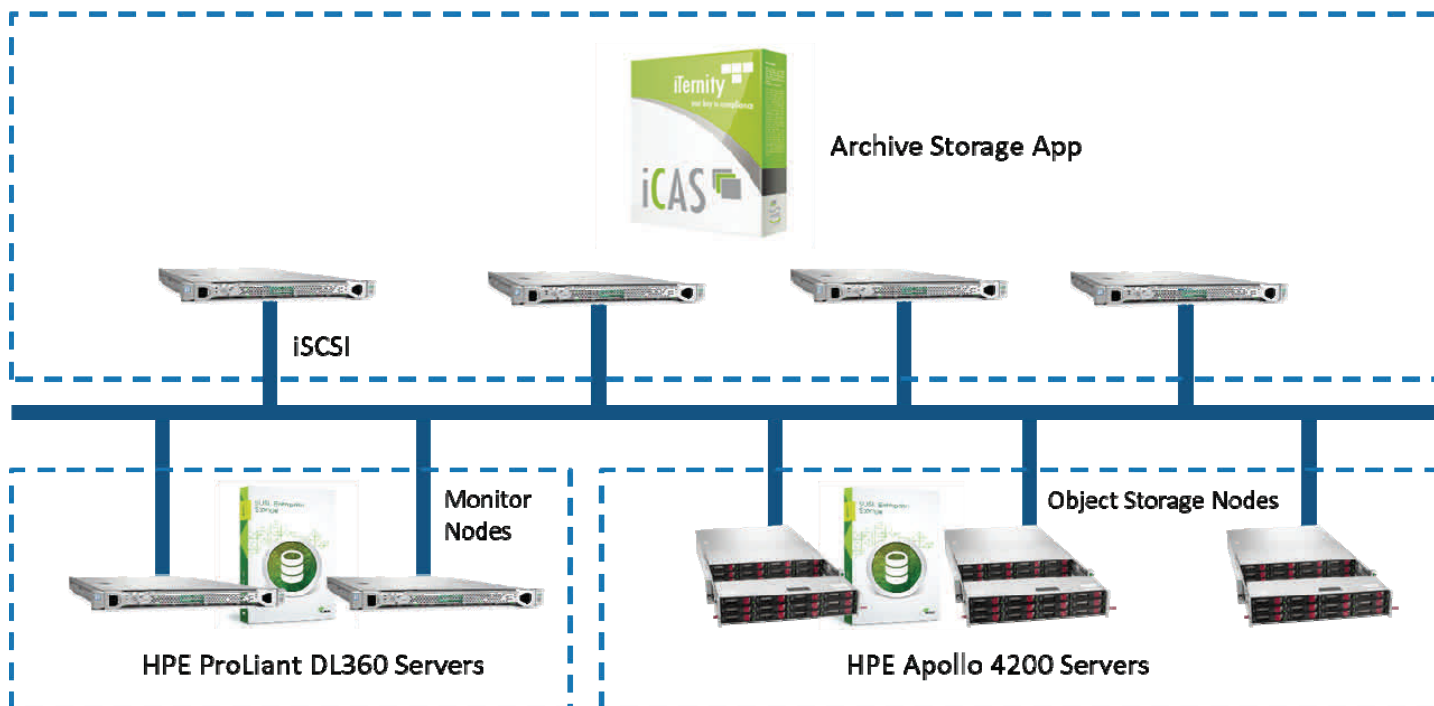


Object Storage Compliance Archives

Based on Industry Standard Servers & Software

Compliant data archiving is a type of storage that must adhere to compliance regulations such as GxP Data (Pharma), SEC17a4 (Banking), HIPAA, patient record (Healthcare), and product liability (Automotive). A new class of compliant archive solutions (CAS) are emerging which are based on industry standard servers and object software defined storage. The new generation of solutions are far more open and scalable than previous generations of CAS that were closed and high centralized. This case study will reveal if they are more cost-effective.

Modern Compliance Archive Architecture



Both solutions evaluated in this report incorporate an architecture which uses object storage and industry standard servers. The iTermity iCAS solution shown above uses SUSE Enterprise Storage OSD and monitor nodes running on HPE industry standard servers.

Two Leading Compliance Archive Solutions

Dell EMC Centera and HPE/SUSE Storage/iTernity CAS

This TCO case study compares the costs of two pioneering products. Centera is one of the first enterprise-class archive solutions, which has recently incorporated long overdue support for industry standard servers and software defined storage. The delay in the Centera refresh has put customers at a crossroads and this analysis provides pricing data which may be useful in helping them choose a direction.

The second solution with products from HPE, SUSE Storage and iTernity, is one of the first “open” archiving solutions that also supports industry standard servers and scale-out storage.

Dell EMC Centera Compliance Edition	HPE/SUSE Storage/ iTernity iCAS
EMC Centera is a Content-addressable storage (CAS) platform for data archiving. Centera provides content authenticity, governance and compliance, long-term retention, and high availability with maximum efficiency and low total cost of ownership (TCO).	iTernity Compliant Archive Software (iCAS) is an open, flexible, and expandable long-term archiving solution for securing and protecting your business data. The patented CSC technology of iCAS offers enormous flexibility and an easy integration into existing IT infrastructure.
EMC Centera Compliance Edition meets the most stringent of regulated business environments with EMC Centera Compliance Edition Plus, enabling you to: Capture and preserve original content, ensuring complete, reliable integrity for the life of your archived information Enforce organizational and application policies for information retention and disposition intrinsic in storage, thus completing the information chain of custody Ensure corporate accountability and reduce the cost of legal discovery and litigation support—with easy manageability	Data is archived into Content Storage Containers (CSC), which are secured against manipulations and deletion. The CSCs are stored on SUSE Enterprise Storage running on HPE Hardware. Additional options to encrypt and compress data offer more security and space optimization. HPE, SUSE and iCAS combine the advantages of iTernity CSC technology, with the agility of SUSE software defined storage, and the high quality of HPE servers.

Dell EMC Centera Compliance Edition

All New Infrastructure, Same High Price

Like a vintage muscle car, Centera Content Addressable Storage (CAS) from Dell EMC has been retro-fitted with a modern interior consisting of industry standard servers, scale-out object storage and cloud interfaces. What venerable Centera did not get was new pricing for hardware, software and service that will help IT organizations achieve economies of scale.

Highlights

Centera provides content authenticity, governance and compliance, long-term retention, and high availability. Introduced in 2003, it is integrated with over 300 archiving applications to manage email, file, medical imaging, content management, videos, and voice archiving on a single archiving platform.

Why it Wasn't the Lowest Cost Solution

I would have expected mature Centera software to command the biggest premium, but the biggest difference in absolute dollars between Centera and the HPE/SUSE/iTernity solution was in the cost of hardware, service and support. Given that both products are more similar than different, it is difficult to rationalize why overall, customers are expected to pay over twice the price of the HPE solution.

Five-Year Cost of Ownership: \$685,146

Dell EMC Centera	Year 1	Year 2	Year 3	Year 4	Year 5
Server & Storage Hardware	\$ 223,109	\$ 15,940	\$ 20,520	\$ 24,184	\$ 28,396
Compliance & Storage Software	\$ 144,750	\$ -	\$ -	\$ -	\$ -
Maintenance & Support	\$ 57,146	\$ 38,380	\$ 41,682	\$ 44,100	\$ 46,940
Total	\$ 425,005	\$ 54,320	\$ 62,202	\$ 68,284	\$ 75,336
Cumulative Total	\$ 425,005	\$ 479,325	\$ 541,527	\$ 609,811	\$ 685,146

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SIMPLE, AFFORDABLE, SECURE DATA ARCHIVING



HPE/SUSE Storage/iTernity iCAS Solution

The Right Product at the Right Price

The promise of software-defined storage is to get costs under control by leveraging industry standard hardware and open source software. HPE and SUSE fulfill that promise in this solution while providing a trusted platform for the enterprise-class but affordable iTernity iCAS application.

Highlights

The combination of HPE servers, SUSE Enterprise Storage, and iTernity iCAS provides an open, flexible, and expandable long-term archiving solution for fast-growing unstructured data. The solution also addresses a wide variety of regulatory compliance requirements spanning automotive, financial and healthcare industries.

Why it is the Lowest Cost Solution

The Dell EMC CAS solution is 2x more than the comparably configured HPE/SUSE/iTernity iCAS solution because the hardware is 47% more expensive, the service & support costs 354% more, and the software is 97% higher than Centera. Clearly, much of the lower cost of industry standard servers and open source software is passed on to customers with the HPE/SUSE Storage/iTernity solution.

Five-Year Cost of Ownership: \$336,271

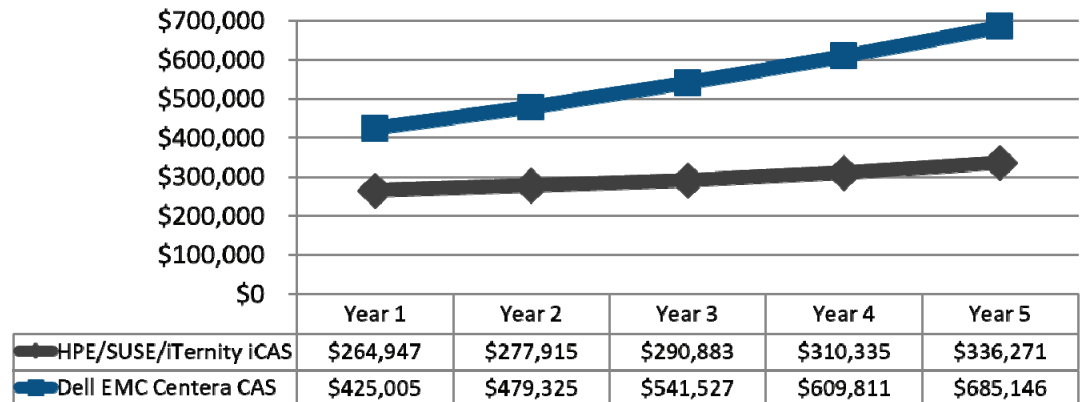
HPE/SUSE Storage/iTernity iCAS	Year 1	Year 2	Year 3	Year 4	Year 5
Server & Storage Hardware	\$141,323	\$12,968	\$12,968	\$19,452	\$25,936
Compliance & Storage Software	\$73,300	\$-	\$-	\$-	\$-
Maintenance & Support	\$50,324	\$-	\$-	\$-	\$-
Total	\$264,947	\$12,968	\$12,968	\$19,452	\$25,936
Cumulative Total	\$264,947	\$277,915	\$290,883	\$310,335	\$336,271



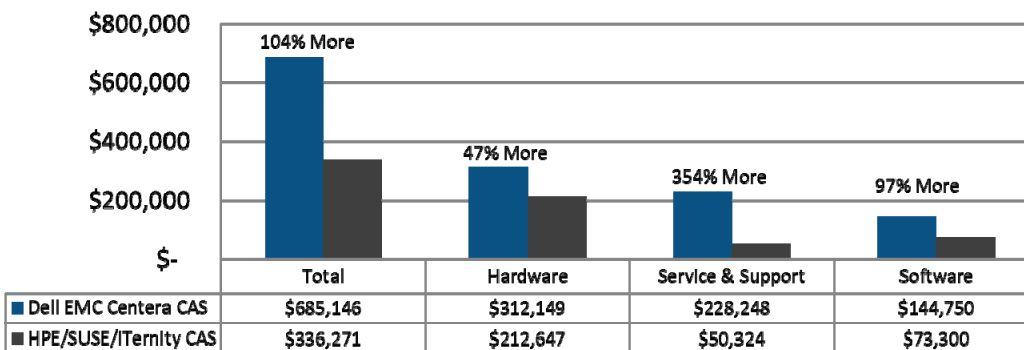
Side-by-Side Comparison

Cumulative Five-Year Cost of 600TB Growing at 25% Per Year

In year 1, the cost of the Dell EMC Centera CAS solution was almost \$200,000 and twice the price of the HPE/SUSE Storage/iTernity iCAS solution. At the end of the 5 year period, the TCO of the Centera solution was \$350,000 more and over double the cost of the HPE solution.



Cost of Hardware, Software, Service & Support

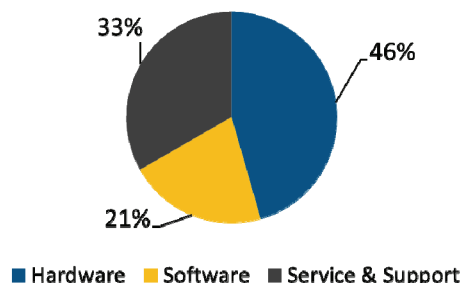


The costs in this analysis were grouped into hardware, software and service & support. The HPE/SUSE Storage/iTernity iCAS solution was at least 40% less than Centera in every category, and 74% less in the software category.

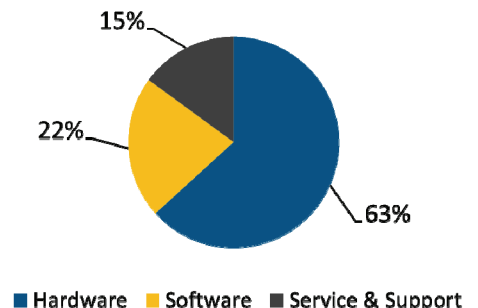
Cost of Hardware, Software, Service & Support as a % of Total

Modern server, storage and networking infrastructure is instrumented for remote monitoring and management to lower the cost of operation, service and support. In spite of this trend, Centera stands out with an extraordinarily high 33% of its TCO going to service and support.

Dell EMC Centera CAS



HPE/SUSE/iTernity iCAS



The Bottom Line

HPE/SUSE Storage/iTernity CAS Solution Addresses the Elephant in the Room

The IT industry is experiencing unprecedented velocity in the generation of unstructured data, and the growth is accelerating. The best enterprise storage for fast-growing unstructured data is disk-based online archive which should scale much more cost-effectively than flash-based solutions built for high performance. The bottom line for this TCO case study is Centera from Dell EMC retains the high cost of its proprietary past, while the HPE/SUSE/iTernity CAS solution offers new economies of scale which address the elephant in the room, the high cost of compliant archive storage.

Related Links

[HPE iTernity Solutions](#)

[iTernity iCAS Software](#)

[SUSE Enterprise Storage](#)

[Dell EMC Centera](#)

[IT Brand Pulse](#)

The Author



Frank Berry is founder and senior analyst for IT Brand Pulse, a trusted source of data and analysis about IT infrastructure, including servers, storage and networking. As former vice president of product marketing and corporate marketing for QLogic, and vice president of worldwide marketing for the automated tape library (ATL) division of Quantum, Mr. Berry has over 30 years experience in the development and marketing of IT infrastructure. If you have any questions or comments about this report, contact frank.berry@itbrandpulse.com.

About TCO

Total Cost of Ownership Case Studies

IT professionals know the cost of owning servers, networking and storage equipment is more than the purchase price of the hardware. The total cost of IT equipment also includes installation, software licenses, service, support, training, upgrades, and other costs related to a specific product or situation.

TCO case studies are designed to provide busy IT Pros with vendor-independent data about the total cost of specific products. This case study examines a pair of comparably-equipped Compliance Archive Solutions. It turns out one of the vendors stands-out with lower TCO based on industry standard hardware and attractively priced software licenses with support included.

TCO Components

Below are the components used to calculate the total cost of owning a compliance archive solution over a five-year period:

Hardware Product Cost - The purchase price for storage array chassis, servers and HDDs.

Recurring Software License Fees - Annual license fees for software, if applicable.

Recurring Annual Service & Support Fees - The cost of a service agreement providing on-site service and spare parts, with next business day response time.

Training - The cost of certifying one network engineer for this class of product (not applicable in this report).

Spare Parts - The cost of on-site spare power supplies and SFPs (not applicable in this report).

Total Cost of Ownership - The sum of the hardware product cost, software license fees, service and support fees, training, and spare parts over a five-year period.

Getting the Cost Data

The product pricing (cost) data used in this case study comes from on-line resellers and solution providers who responded to a request for quote (RFQ) from IT Brand Pulse.

Apples-to-Apples Comparison

The hardware, software and service products used in this case study were selected based on their similarity to each other. Differences in the products and services are described in the product overviews.