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Introduction

Enterprise class, business critical applications require high performance and the lowest possible latency. For this reason, organizations have been moving the block level data that powers these applications to solid state storage on either all-flash arrays (AFAs) or to hyperconverged infrastructure (HCI systems).

While an ideal solution for mission critical data, organizations generally do not migrate their unstructured data to AFA or HCI systems – even though unstructured data makes up 90% of their stored information and is experiencing the highest growth rate. This is largely because flash, while ideal for mission critical tier zero and one data, is simply too costly for tier two or three application data.

The result is that enterprises are still using legacy NAS filers to store their unstructured data. While once the standard for storing data, the significant management overhead, complex backup and disaster recovery policies, lack of global sharing, and costly refresh cycles make legacy NAS systems too complex and costly for the high volume of unstructured data that is being created today.

To address this challenge, many organizations are looking to cloud storage. With virtually unlimited capacity and low cost this would seem to be an ideal choice. However, the inherent performance limitations of object storage make it unsuitable for enterprise applications.

The good news is that organizations with existing AFAs and HCI systems in place can use a small, affordable portion of their flash storage to completely replace their legacy NAS systems, transition their unstructured data to the cloud, and still deliver users the performance of a local file share. This can be done by combining existing flash media and an intelligent hybrid cloud storage platform. The result is a small amount of flash storage turning into a significantly larger amount of unstructured data in the cloud.
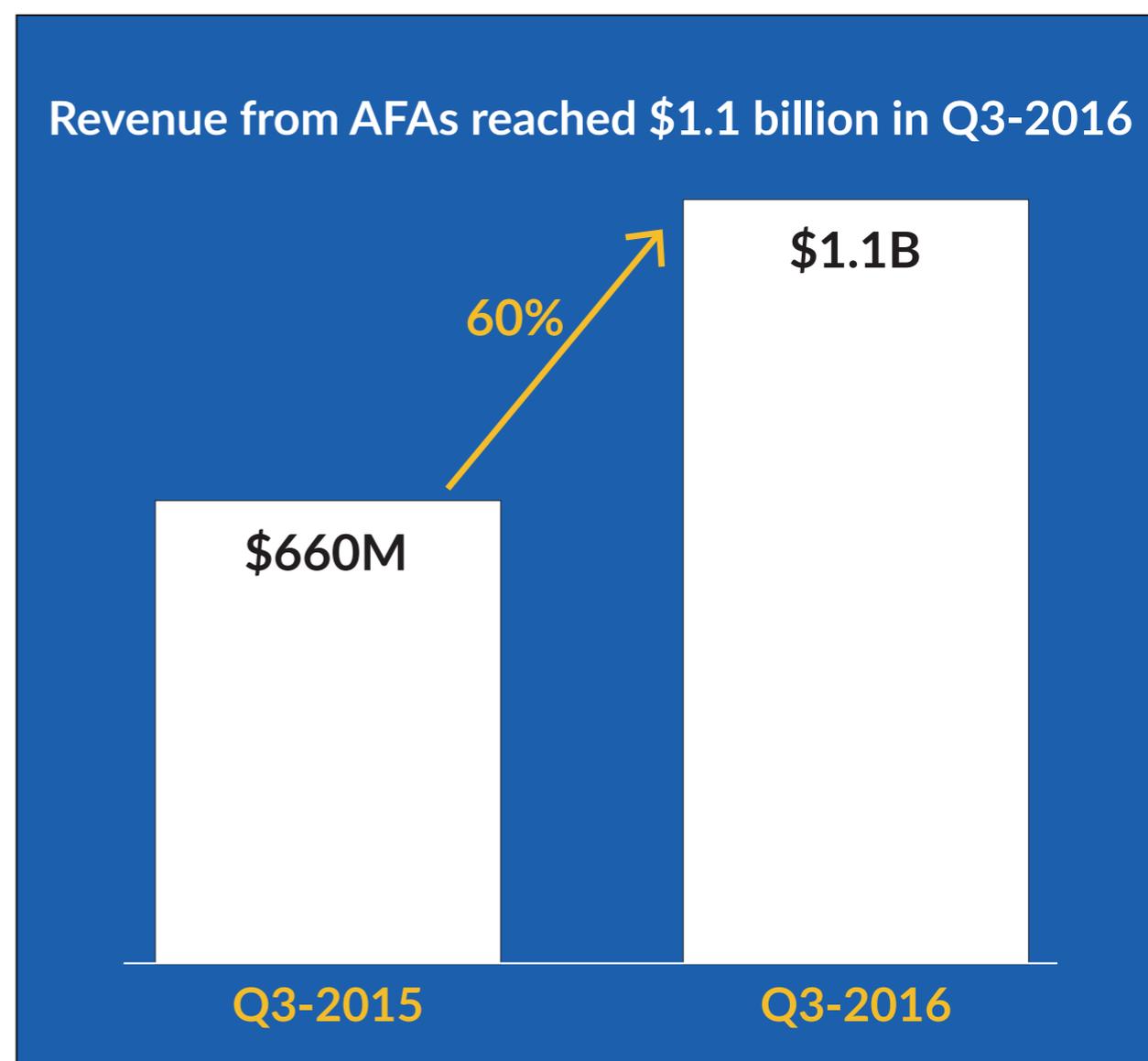
In this eBook, we present three undeniable facts that are driving enterprises to manage their unstructured data in the cloud while leveraging high performance flash storage, and how you can do the same.

"While an ideal solution for mission critical data, organizations generally do not migrate their unstructured data to AFA or HCI systems – even though unstructured data makes up 90% of their stored information and is experiencing the highest growth rate. "

Fact #1: Enterprises are rapidly upgrading their block level data to flash storage

Tier zero and tier one storage have been moving from spinning disk to solid state storage to take advantage of the high performance and low latency it offers. This transition has been swift. Revenue from AFAs reached $1.1 billion in Q3 2016 – over 12% of the total enterprise market – at a growth rate of over 60% versus the same quarter the previous year[1].

Of course, AFAs don't deserve all the fanfare. The popularity of HCI systems is growing rapidly as well. According to Gartner, "HCI systems will be the fastest-growing segment of the overall market for integrated systems,

Revenue from AFAs reached $1.1 billion in Q3-2016

$1.1B

60%

$660M

Q3-2015   **Q3-2016**

[1] https://www.forbes.com/sites/moorinsights/2016/12/29/five-things-to-watch-in-enterprise-storage-in-2017/#1dfdfe863f8f

reaching almost $5 billion, which is 24 percent of the market, by 2019."[2] In the same press release, Gartner stated that: "Despite high market growth rates, HCI systems use cases have so far been limited, causing silos with existing infrastructure, according to Gartner. Its progression will be dependent on multiple hardware and software advances, such as networking and software-defined enterprises."

One of the reasons HCI systems can cause silos within existing infrastructure is that even though they use virtualization, they are still based on on-premise hardware.
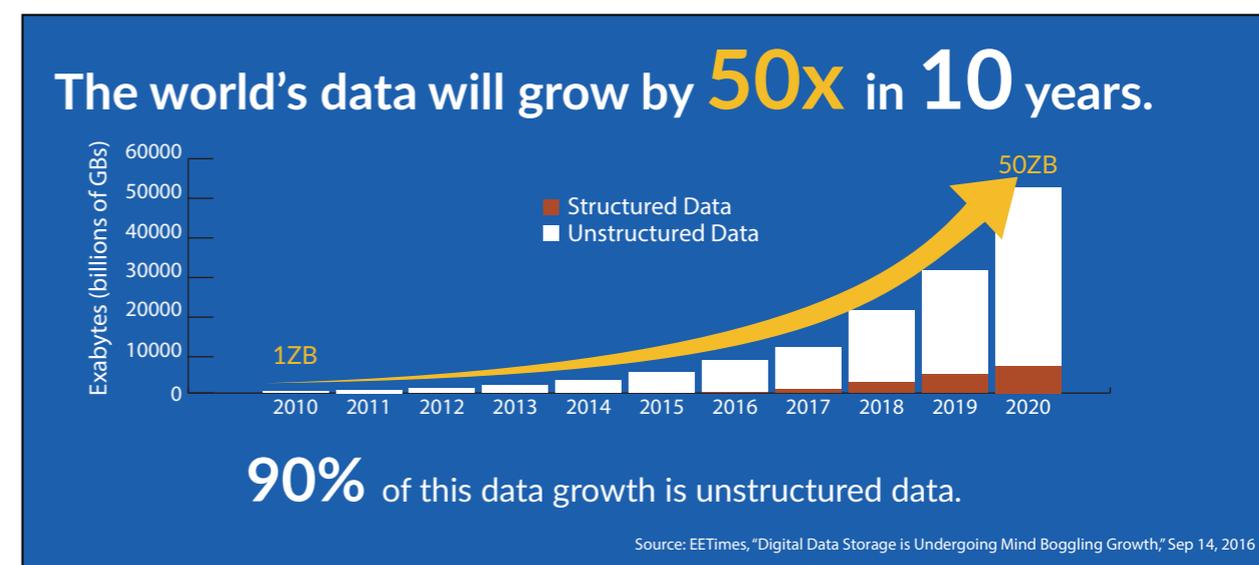
[2] http://www.gartner.com/newsroom/id/3308017

Fact #2: Unstructured data growth is out of control and legacy NAS can't keep up

IDC reports that the amount of unstructured data in the world will increase 50x from 2010 to 2020. In order to handle this amount of unstructured data growth with legacy NAS, enterprises are creating complex and costly storage infrastructures that include WAN optimization, MPLS switches, tape, and replication.

This kind of infrastructure requires significant overhead. And, its complexity has to be replicated at every site. It won't scale at the pace that is needed to keep up with the explosive growth of unstructured data.

This infrastructure can be simplified by transitioning unstructured data to the cloud and managing it there. An intelligent hybrid

The world's data will grow by 50x in 10 years.

Exabytes (billions of GBs)

60000
50000
40000
30000
20000
10000
0

1ZB

50ZB

■ Structured Data
□ Unstructured Data

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

90% of this data growth is unstructured data.

Source: EETimes, "Digital Data Storage is Undergoing Mind Boggling Growth," Sep 14, 2016

cloud storage platform can consolidate primary NAS storage, automated backup, DR processes, and data archival. Combined with cloud data protection and advanced data services such as global deduplication and compression the result is the complete replacement of legacy NAS and the reduction of storage costs by up to 70%.

Fact #3: You can run a VM on existing infrastructure to manage unstructured data in the cloud

Although AFAs and HCI systems can't affordably store unstructured data on their own, there's good news. By combining an AFA or HCI and intelligent hybrid cloud storage you can create a solution that will replace legacy NAS and manage unstructured data in the cloud with the economics, scalability, and durability cloud object storage is known to deliver.

Unstructured data growth becomes a problem of the past when using this approach. The result of this approach is not limited to the replacement of legacy NAS, but a solution that allows IT to dedicate 10 TBs of flash to a virtual machine on which an intelligent
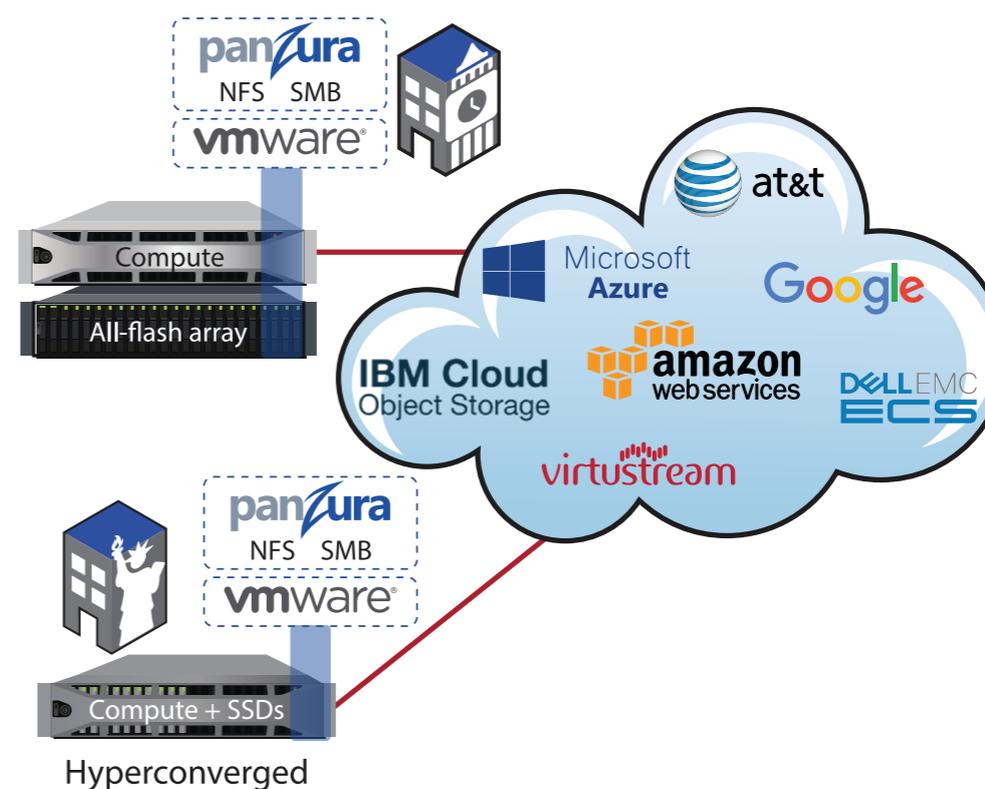
hybrid cloud storage solution can run. This solution can turn 10 TB of flash into 1 PB of storage in the cloud.

Case Study: Sheppard Robson Eliminated an Entire Data Center using Panzura, AWS, and Nimble

Sheppard Robson is an award-winning architecture firm headquartered in London, United Kingdom. The company came to Panzura because they knew they needed to make a change to their aging storage infrastructure. That change involved moving their unstructured data to the cloud.

The problem: Complex, costly, and outdated IT infrastructure

Sheppard Robson was unable to do backups, applications used across their five different office locations were crashing, and – to make matters worse – they suffered from a lack of

bandwidth. These problems repeated across their five locations and was complex and costly to fix with existing technologies.

The solution: Unstructured data management in the cloud

» **Panzura Freedom:** Data center performance, consolidation of unstructured data, simplified backup, global file collaboration, disaster recovery, and archive

» **VMware:** Dynamic resource allocation and Vmotion availability

» **Nimble:** An existing hardware investment providing high-performance block level data storage

» **AWS:** Cloud storage economics, scalability, and durability

The result: Data center performance with the economics, scalability, and durability of the cloud

After deploying Panzura Freedom, Sheppard Robson successfully:

» Eliminated traditional backup and disaster recovery

» Eliminated NetApp filers

» Eliminated complex data management

Key Takeaways

» Replacing legacy NAS by combining AFAs or HCI systems with the Panzura Freedom intelligent hybrid cloud storage platform is an economical, scalable, and durable means of storing unstructured data in the cloud. In fact, by the end of this year, 40% of Panzura customers are expected to be leveraging our virtual deployment[3]. The solution has been tested with AFAs including Nimble, Pure, Simplivity, Tintri, and Tegile or HCI systems like Nutanix.

» Panzura Freedom is purpose-built for the cloud and offers tight integration with VMware. When an enterprise runs it on AFAs or HCI systems using VMware, it can dynamically scale VM resources as users and applications change.

» Combining an AFA or HCI system and Panzura Freedom creates a program that can turn 10 TB of flash storage into 1 PB of unstructured storage in the cloud. The end result is an unstructured data storage solution that eliminates legacy NAS and saves enterprises up to 70%.

[3] http://searchstorage.techtarget.com/news/450422222/CEO-predicts-Panzura-storage-shift-to-software-deployments

Gain the Economics, Scalability, and Durability of the Cloud Without Sacrificing Performance

Visit Panzura.com/Demo to set up a 15-minute demo with our hybrid cloud storage experts.

Replace Legacy NAS with Panzura Freedom