MAXIMIZING
Storage Density
conserving Valuable rackspace
REAL ESTATE

Presented By
Chaz Stevens
Director of Marketing
Solving the Storage Density Problem

Today’s data storage centers face an ever increasing dilemma when tackling the issue of needing to expand storage capacity with limited rack space or real estate.
Human beings create massive amounts of information that must be stored somewhere every single day. Data is predicted to grow at least 75%.

- # Emails sent every second: 2.9 million
- Data used by each day per home: 375 megabytes
- Videos uploaded to YouTube per minute: 20 hours
- Videos processed per day by Google: 24 petabytes
- Tweets per day: 50 million
- Minutes spent on Facebook per month: 700 billion
- Data sent & received by mobile internet users: 1.3 exabytes
- Products ordered on Amazon per second: 72.9 items

Data is predicted to grow at least x75%
Data Demand Continues to Grow

**STORAGE DENSITIES**
are growing each year by **20%**

enabling organizations to fit more capacity in less space

**STORAGE CAPACITY DEMANDS**
are growing each year by **40-60%**

Outpacing density growth
Data Demand Continues to Grow
Data Demand Continues to Grow
Our Solution!

Aberdeen provides our customers with the customization options they demand, while reducing the amount of physical space required to store their data.

• Reduce acquisition cost for our customers who are seeking a better cost per TB.
• Provide completely customized solutions with the most density in the market.
• Provide the best high capacity, power efficient, and reliable storage in the market.
Enterprise HDD Capacity Increases

As drive capacity has increased over the past few years, the size of Aberdeen storage appliances has decreased, reducing the amount of rack space needed.

- **4TB HDD**
  - Industry Standard
  - 2013

- **6TB Ultrastar® He6 Ships**
  - Nov. 2013

- **2nd Generation HelioSeal HDD**
  - Announced: 8TB
  - Sep. 2014

- **World’s 1st 10TB HDD**
  - Dec. 2015

- **2016 Data Storage Innovation Conference.**
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Aberdeen Now Shipping 10TB Drives

Aberdeen is pleased to announce its broad implementation of the new 10TB Ultrastar® He10, hermetically sealed, helium hard drive from HGST.

- **Highest Capacity**: 10TB HDD, drop-in ready for mainstream enterprise
- **Lowest Power**: 56% more efficient than air-filled drives for lower TCO
- **Most Reliable**: Best-in-class reliability rating of 2.5M hours MTBF

**Applications/Environments**
- Enterprise and data center applications where capacity density and power efficiency are paramount
- Massive scale-out high-density data centers (MSO)
- Bulk storage using object storage
- Centralized video surveillance
- Drop-in ready for all mainstream enterprise capacity applications
Dramatic Reduction in Hardware Size

From 1PB in 37U Rackspace to ¾PB in Only 4U of Rackspace.
AberNAS N49

The AberNAS N49-Series 4U features Intel® Xeon® E5 v4 processors, 1TB maximum memory and 12Gbs/s SAS as standard features. The AberNAS N49 is top-loaded and double-sided, and it provides an incredible 78 data storage hot swap bays in a 4U chassis.
AberNAS N49

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- Highest HDD Density
- Rackmount Storage Server
- Toolless Drive Installation
- IPMI w/KVM over LAN for Remote Server Management
- Support for 10TB HDD for maximum storage capacity
- Intel E5-2600v4 Series Support
- 1TB Memory Support
- iSCSI Target Capable
AberNAS N49

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- Two PCI-E 3.0 8x Slots
- Intel® I350 Dual Port Gigabit
- Optional 10GbE Mezzanine (SFP+ or RJ-45)
- 3rd Generation OS featuring streamlined and intuitive web-based GUI
- RAID 0, 1, 5, 6, 10, 50, 60 configurable
- Automatic drive insertion / Removal Detection and Rebuilding
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- Choice of Operating System
- 780TB Total Capacity
- Built-in Controller
- Unlimited Client Access
  - No Client Access or License Fees
- Off the Shelf Enterprise Level Drives
  - No Hidden Fees on Drives
AberNAS N49 – Embedded OS Recovery

Aberdeen is pleased to offer you the confidence and peace-of-mind of knowing your NAS Operating System is protected. We have embedded our recovery feature into our AberNAS products so that it cannot be lost, corrupted, or repurposed.

• OS Recovery to Factory Default OS Image from a Separate Embedded Flash Memory
• Quick and Easy Recovery from an OS Drive Failure or OS Corruption
• Return to Factory Defaults to Recover from Configuration Mishaps
AberNAS N49 – 12Gb/s SAS

With 12Gb/s SAS technology, Aberdeen provides a new performance class of storage tier that encompasses the full spectrum of server deployment from those with solid state drives to hyper-scale datacenter scale-out architectures.
# AberNAS N49 vs. HP Equivalent

<table>
<thead>
<tr>
<th></th>
<th>AberNAS N49</th>
<th>HP StoreEasy 1650 Expanded + HP Smart Array P441 Controller + HP D6000 Disk Enclosure</th>
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</thead>
<tbody>
<tr>
<td>Rackspace</td>
<td>4U</td>
<td>7U (2U+5U)</td>
</tr>
<tr>
<td>Processor(s)</td>
<td>Dual E5-2630 8Core</td>
<td>Single E5-2609 6Core</td>
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<tr>
<td>Memory</td>
<td>32GB</td>
<td>16GB</td>
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<td>Operating System</td>
<td>Windows Storage Server 2012 R2</td>
<td>Windows Storage Server 2012 R2</td>
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<tr>
<td>Warranty</td>
<td>5 Years</td>
<td>3 Years</td>
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<tr>
<td>Price</td>
<td>$66K</td>
<td>$167K</td>
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Confidence in Our Quality and Reliability

Since 2001, Aberdeen has proudly delivered our industry leading **5 Year Warranty** with all of our fully configured rackmount servers and storage. We offer this with complete confidence in the unparalleled quality and reliability we deliver with every server and storage device.

Aberdeen is pleased to introduce you to our revolutionary server and storage purchasing paradigm, the Aberdeen CARES program.

Under the Aberdeen Custom Assembled Rackmount Evaluation Service (CARES) program, we will provide a completely configured server and/or storage free for a 30 day trial assessment for qualified customers.
Conclusion

Aberdeen will custom configure your server or storage product to your exact specifications. We will satisfy your demand for the best high capacity, power efficient, and reliable servers and storage in the industry.

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