



DATA STORAGE EVOLVED

From Snake Oil to Strategic Infrastructure

A Conversation with ASCDI/NATD
Introducing StorONE

Thanks for having me back...

- San Francisco was great!
 - Wonderful having the opportunity to opine...
 - Thanks for giving me the opportunity to introduce you to a couple of software-defined storage vendors
 - Happy to hear that some of you had success in joint sales with DataCore
 - DataCore is under new management and back to figuring itself out
- This year, a new venue and a new introduction...
 - A familiar face, but with a new set of technologies...
 - Aimed at adding value to server and storage hardware, regardless of workload, hypervisor, or hardware bezel face plate...



The story thus far...

- For about ten years, the blush has been off the rose of “legacy storage”
 - Complaints about cost and complexity
 - Lies and disinformation about impact on virtualized workloads
 - Drive capacity improvement has slowed, WD is closing HDD factories, flash pushes ahead...
- Analysts and vendors pushing combination of software-defined storage (SDS), hyper-converged infrastructure (HCI) and all flash arrays (AFAs) as the “shiny new thing” ...

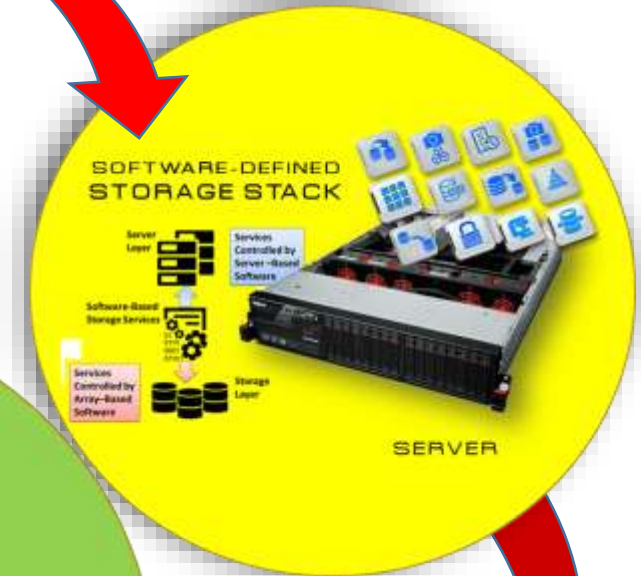


SDS, HCI in a nutshell...

1 **Legacy Storage Array:**
*Commodity Hardware
With Value-Add Software
On-Array Controller*



2 **Software-Defined Storage:**
*Value-Add Software moved to
Commodity Server operating
against Direct-Attached (or
Internal) Commodity Storage Kit*



3 **Hyper-Converged Infrastructure (HCI):**
*SDS "productized" by hardware
vendor – an SDS appliance*



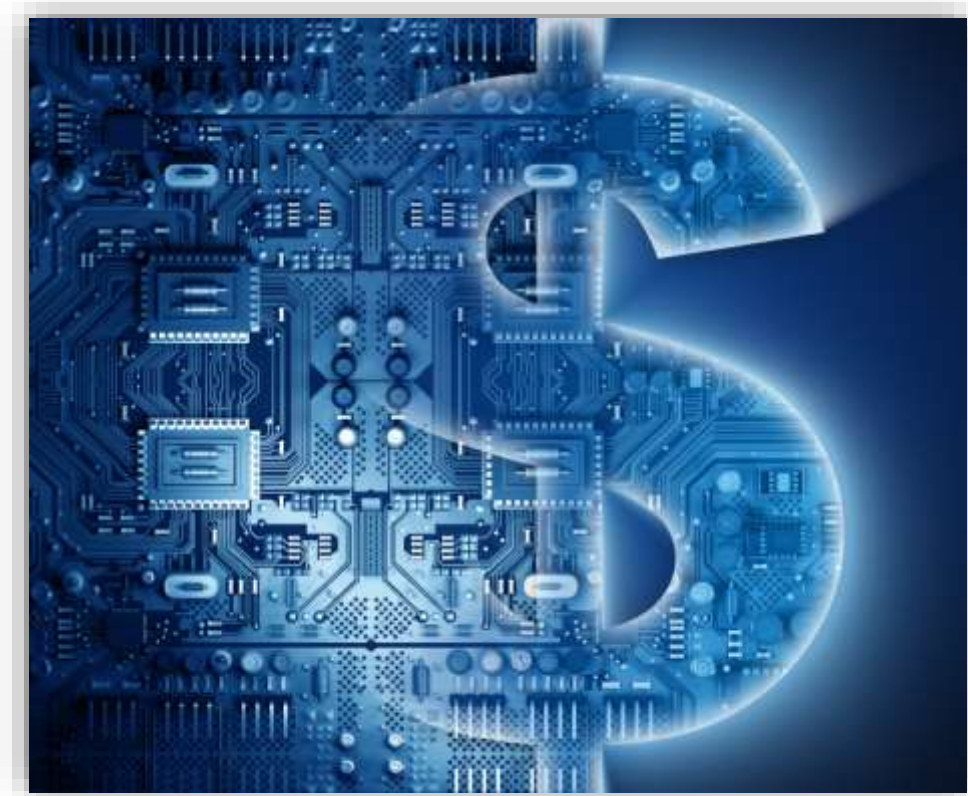
Several challenges have arisen...

- Hypervisor vendors used SDS “revolution” to create proprietary silos of technology featuring
 - Over-configured servers
 - “Certified” server and storage gear
 - Expensive nodal licenses
- Vendors using “brute force” of SSDs to improve response times of VMs
- Enterprise storage infrastructure 10% LESS efficient than legacy SAN storage at a time when data is growing to zettabyte levels
 - Sharing capacity between silos problematic
 - Managing multiple silos problematic
 - HCI appliance scalability problematic



Fixing the problem will require

- Inclusive, not exclusive, software-defined technology
 - Capable of using “legacy” and “tech nouveau” hardware
 - Simple resource management
 - Simple service management (data protection, preservation and **privacy – aka security**)
- Hypervisor/workload agnosticism
- Cost competitive with cloud storage and other delivery models



Fixing the problem...

**FIXED
HARDWARE
MODEL**

**SINGLE HYPERVISOR
WORKLOAD SUPPORT**

- Dedicated to single hypervisor virtualized workload
- Designated hardware for server/storage deployments



**MULTI-HYPERVISOR
WORKLOAD SUPPORT**

- Shareable infrastructure for multiple hypervisor workloads
- Designated hardware for server/storage deployments



**MULTI-HYPERVISOR &
NON-VIRTUALIZED
WORKLOAD SUPPORT**

- Shareable infrastructure for multiple hypervisor and non-virtualized workloads
- Designated hardware for server/storage deployments



**FLEXIBLE
HARDWARE
MODEL**

- Dedicated to single hypervisor virtualized workload
- Flexible hardware choices in predefined storage deployment model



- Shareable infrastructure for multiple hypervisor workloads
- Flexible hardware choices and support for mixed deployment models



s and
ware
d

Pleased to introduce you to Gal Naor

- CEO and Co-founder of StorONE
- Previously, Founder and CEO of Storwize
 - Real-time data compression market leader
 - Acquired by IBM in 2010 and a key embedded technology in IBM's storage product portfolio
- StorONE is a re-imagination of traditional storage software developed over a six year period and leveraging more than 50 patents
- The best SDS product to date!



*Gal Naor
CEO and Founder
StorONE*







UNIFIED ENTERPRISE STORAGE (UES) With IMMEDIATE ROI

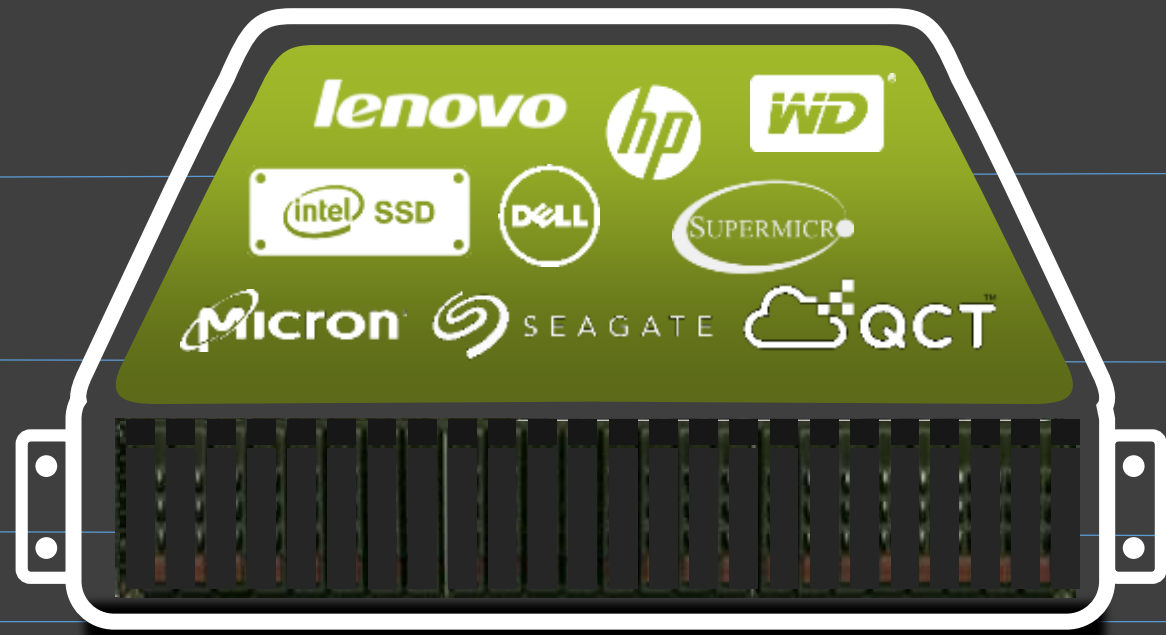





UNIFIED ENTERPRISE STORAGE (UES)

With IMMEDIATE ROI




-  **SSD**
-  **NVME**
-  **HDD**
-  **Block**
(FC, iSCSI)




-  **AFA**
Scale to millions of IOPS
-  **High Capacity**
Scale to 12PB in a single cabinet
-  **Virtual appliance**
Start with a single VM

 **File**
(NFS, CIFS/SMB)

 **Object**

 **Persistent integrity**
The only storage solution

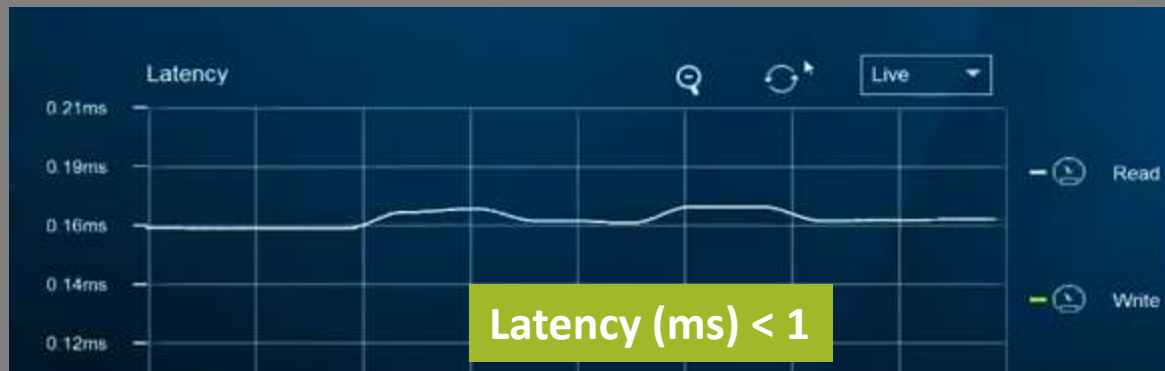
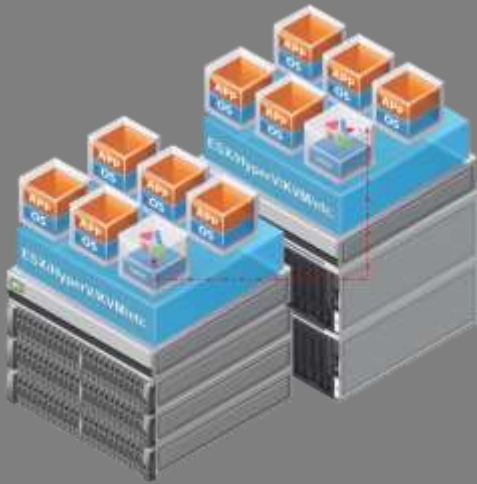
 **Integrated data protection**
Unlimited snapshots W/O performance degradation

WE DEPLOY AS A VIRTUAL MACHINE

500,000 IOPS, 92TB SSD

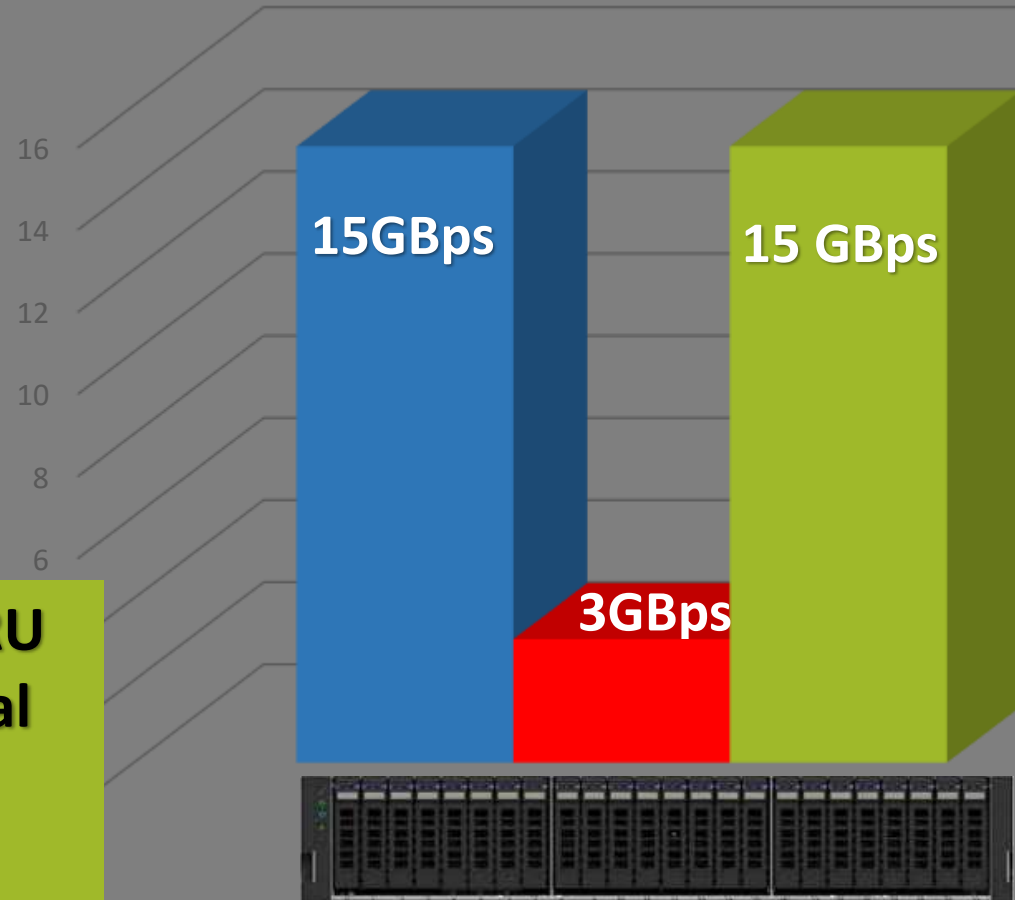
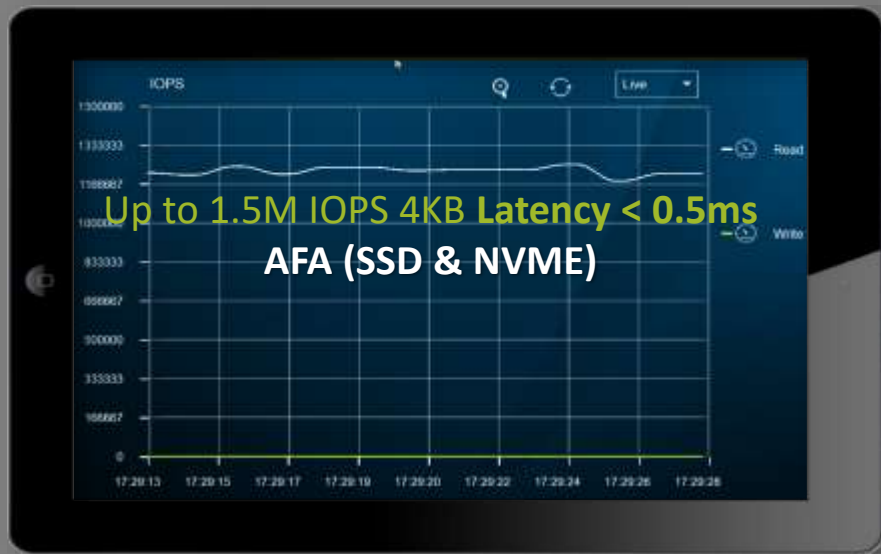


SBB with 24 SSD drives – HA solution
24 drives * 3.84TB = 92.16TB



MORE STORAGE WITH LESS MEDIA

We extract more performance & capacity from the drives

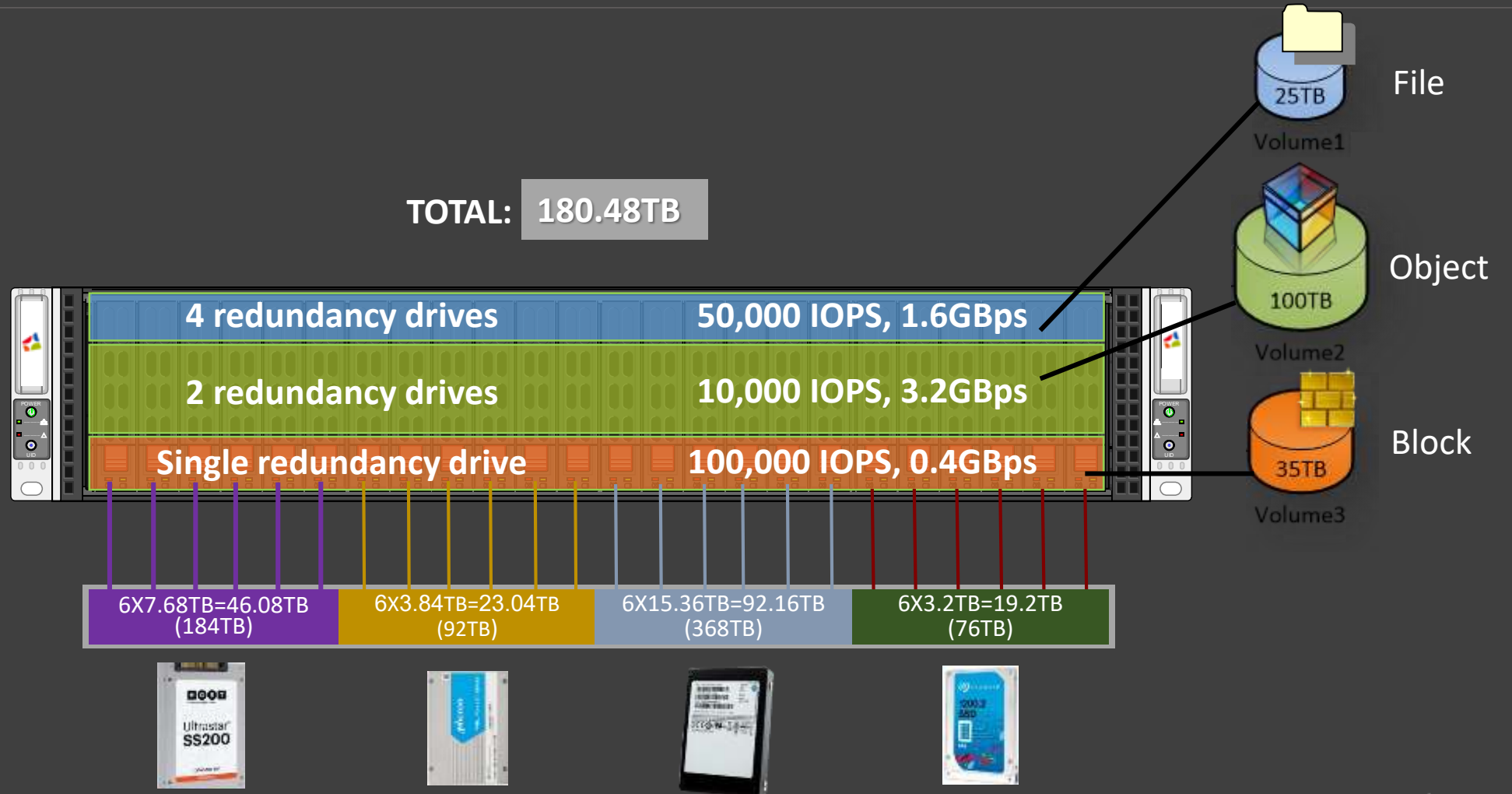


Greater Density - Performance and Capacity per RU

- 1. Up to 1.5M IOPS/15 GBps, Up to 368TB physical capacity in a 2U AFA JBOD.**
- 2. Up to 10PB HDD in a single cabinet**

EASE OF USE AND FLEXIBILITY – LIKE A CLOUD

Same user interface for all storage services



INTEGRATED FULL DATA PROTECTION And Retention

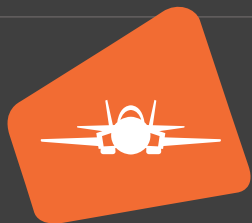
- No compromising to get more performance or high capacity
- Don't agree to buy external solution and to integrate "later"



1. **Integrated Unlimited snapshots with no performance degradation** - Instant, primary, sub-second, full volume backup and restore. Zero-time backup and restore.
2. **Data Protection** - any redundancy level, configurable per volume
3. **Persistent Integrity** - no specialized HW required for consistent failure recovery, enabling pure virtual machine deployment.

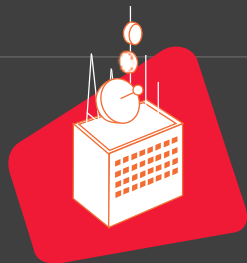
A SINGLE SOFTWARE-DEFINED SOLUTION

With Multiple Sales Options



Revolutionary AFA SSD and NVMe solution

1. Ultra high performance
2. Full data protection and retention without performance degradation
3. Doesn't need any drivers
4. Start small with a few drives and get extreme high performance



Cost effective high capacity & integrated backup solution

1. 10PB in a **SINGLE cabinet**
2. ~1.5PB in 4U JBOD & SSD
3. Integrated backup solution /backup target
4. High throughput with HDD



Breakthrough Virtual appliance solution

1. Very low resources & high performance: 2 VM 500,000 IOPS / 10Gbps
2. All virtual infrastructure, No need to reinstall. Start with single VM
3. SUPPORT external ESXis and external physical servers

All enterprise
storage layers
combined !

Everything for Everyone: Small - Mid - Large - Enterprise - Cloud - HPC

StorONE

A Different Kind Of Storage Company

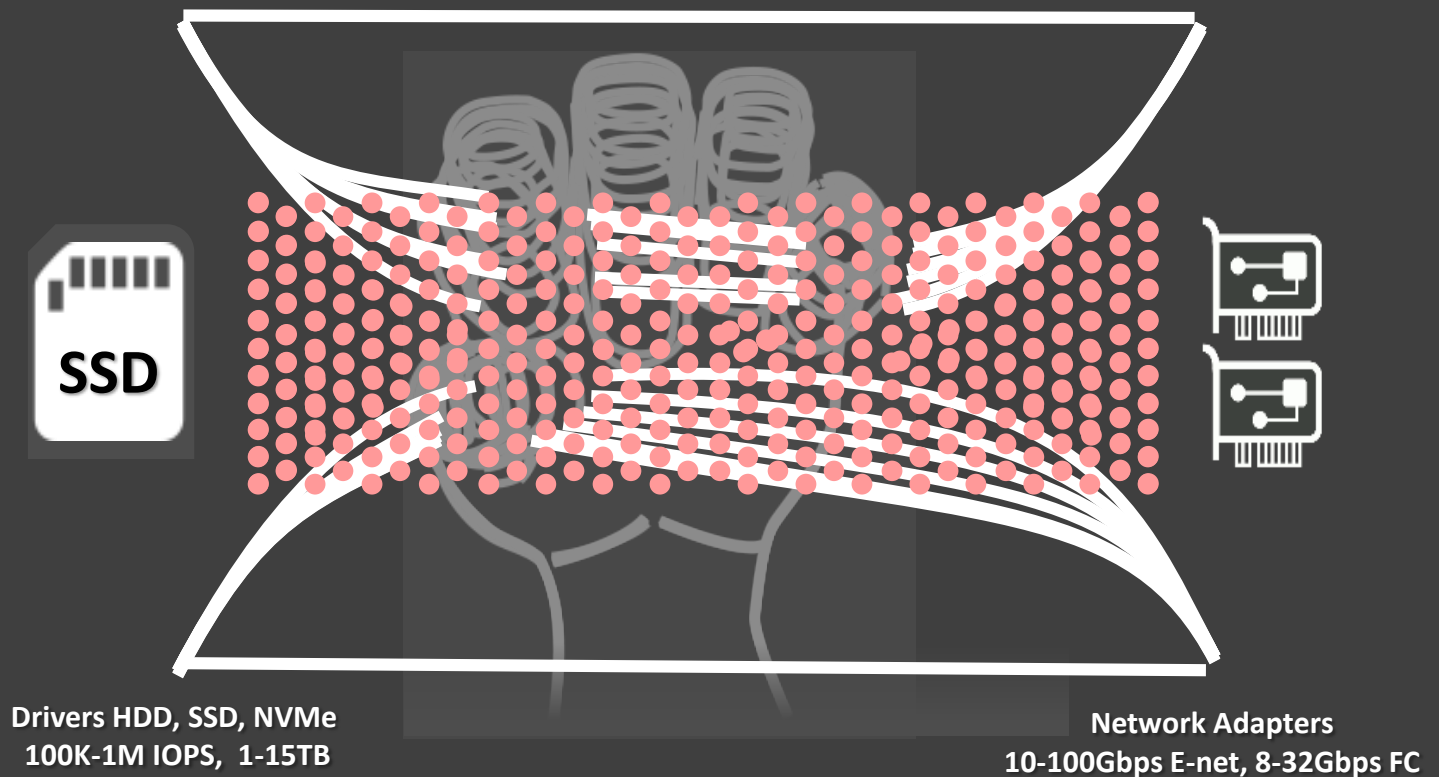
- **Founders - Proven Disruptive Serial Entrepreneurs**
 - **Gal Naor, CEO** - Created Storwize real-time compression, acquired by IBM 2010
 - **Raz Gordon, CTO** - Lead innovation technologist in Galileo's full-wire speed networking tech, acquired by Marvell 2001
- **Investors:**
 - Seagate, Giza (seed investor XtremIO), JGV (seed investor Kashya)
- **Mature Top Tech Industry Luminaries**
 - **John Thompson** - Microsoft Chairman/Symantec CEO & Chairman
 - **Ed Zander** - Motorola CEO/SUN CEO & president
 - **Kirk Bradley** - Oracle, SQL inventor
- **Offices** - Israel, NYC, TX & Singapore



BOTTOM LINE

StorONE's Unique Technology Delivers the Promise of SDS

- S1 clears the software choke points of proprietary SDS with simpler architecture (and better code)
- We “future proof” storage infrastructure while providing a way to derive real value from legacy and state of the art storage technology
- We capture the value of hardware and add value with software



HOW CAN WE WORK TOGETHER?

Time for Q&A.

- *Our software, your server and/or storage hardware*
- Let's talk about it...



FOR MORE INFORMATION

- StorONE LTD web site:
<https://www.storone.com/>
- Schedule a Demo:
<https://www.storone.com/#footer>
- Contact Us
 - Phone 1-877-26-6612
 - Email info@storone.com
 - Facebook <https://www.facebook.com/StorONEinc>
 - Twitter https://twitter.com/StorOne_Inc
 - LinkedIn <https://www.linkedin.com/company/storone>

