

R&D Team Fusing Flash + Storage + Software

Executives

Frankie Roothparvar CEO
Radoslav Danilak, Ph.D CTO

Micron, Xicor (**490+ patents**)
SandForce co-founder (acquired by LSI)
Nishan, nVidia, Toshiba (**60+ patents**)

Management from flash, storage & networking

Rod Mullendore	Chief HW Architect	SandForce, Nishan, McData,, Brocade
Dave Martin	Corp/Biz Dev	Former CEO HDS
Timm Hoyt	SVP Sales & Mktg	Brocade
Mitch Nishi	VP of Finance	Echelon, Toshiba, Johnson Controls
Farshid Tabrizi	VP Business Dev	Micron, Lexar, Synopsys
Ken Tan	VP Operations	Micron, Lexar, Creative Labs

Introducing Skyera skyHawk FS All-Flash Array

UP TO 136TB OF FLASH IN 1U



Frankie Roohparvar
Skyera CEO



skyHawk product family



Skyera skyHawk FS – Second Generation skyHawk



16, 32, 68, 136 TB
(Raw)
Uncompressed



Up to 400K
IOPS, 2.4GB/s
GB/s



Smallest Form
Factor, 25lb



3 x 10 GbE



300W
nominal



Enterprise
Storage



BENEFITS

- Unified SAN/NAS array
- High performance + low latency
- Lowest TCO
- SeOS v1.1
- Hardware-assisted inline compression
- Dual power supplies

Imminent Data Center Crisis

FORECAST: **56%** of total US Electricity consumed by data center by 2037

Exponential data growth at over 50% YoY

- Every two years, amount of data doubles

Data Center footprint is increasing by 10% YoY

- Data center footprint Doubling every 7 years
- Federal data centers grew from 432 in 1998 to 2,094 in 2010
- Over 500,000 data centers today globally

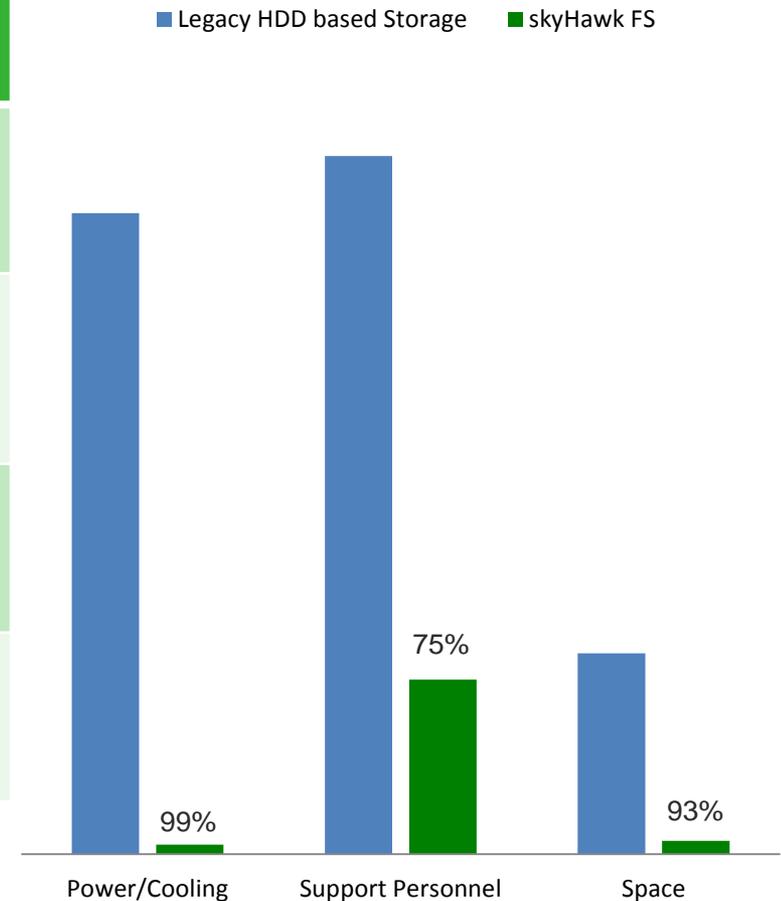
Data Center Power continued on current path

- 2016: 7% of total US Electricity
- 2023: 14% of total US Electricity
- 2030: 28% of total US Electricity
- 2037: 56% of total US Electricity

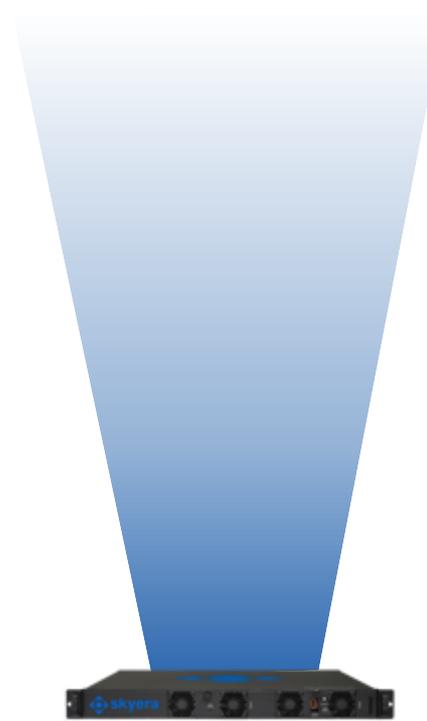
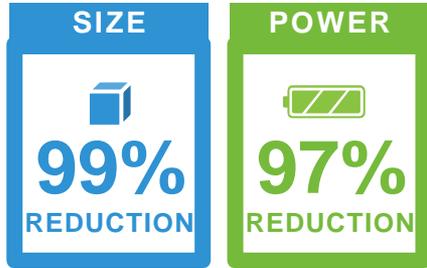
Data Center – OPEX savings with Skyera Flash

	Legacy HDD Storage	skyHawk FS
Total Capacity	1.3PB (raw)	1.3PB (raw)
Rack Space	15 racks (630U)	1 rack (40U)
Power/Cooling (K Watts)	203	3
Support Personnel	1	.25

5 Yr Op-Ex Comparison



136TB skyHawk FS vs. Competition



10x 16x
Violin Memory



29x 14x
Pure Storage



78x 36x
EMC XtremIO



59x 64x
EMC VNX8000



SeOS: Flash-aware Technology

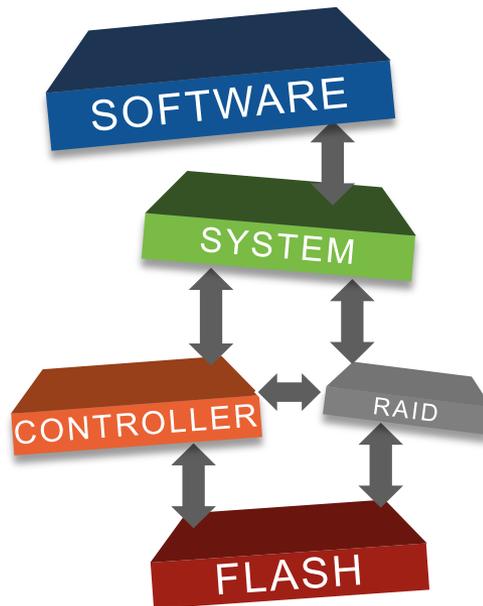
OTHERS

Compression,
De-Dupe, Encryption
in software

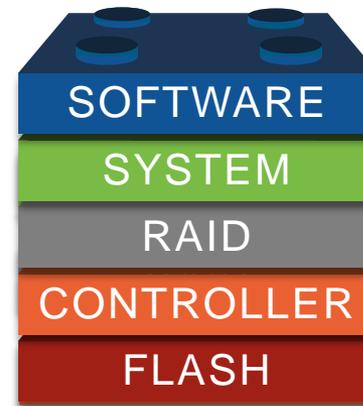
Legacy code

Least Common
Denominator APIs

Increased Data
Traversal



SEoS



Storage Management
Stack-aware Flash
Translation Layer

Better than RAID-6
with 3x less writes

Data reduction,
Encryption in
hardware

Minimal communication between sub-systems

Higher Reliability

Increased Performance

Unmatched Simplicity

Benefits of Skyera All-Flash Arrays



BOOST PERFORMANCE OF CRITICAL APPLICATIONS

100X performance at price parity with enterprise HDD systems



IMPROVED RELIABILITY

3x improved MTBF

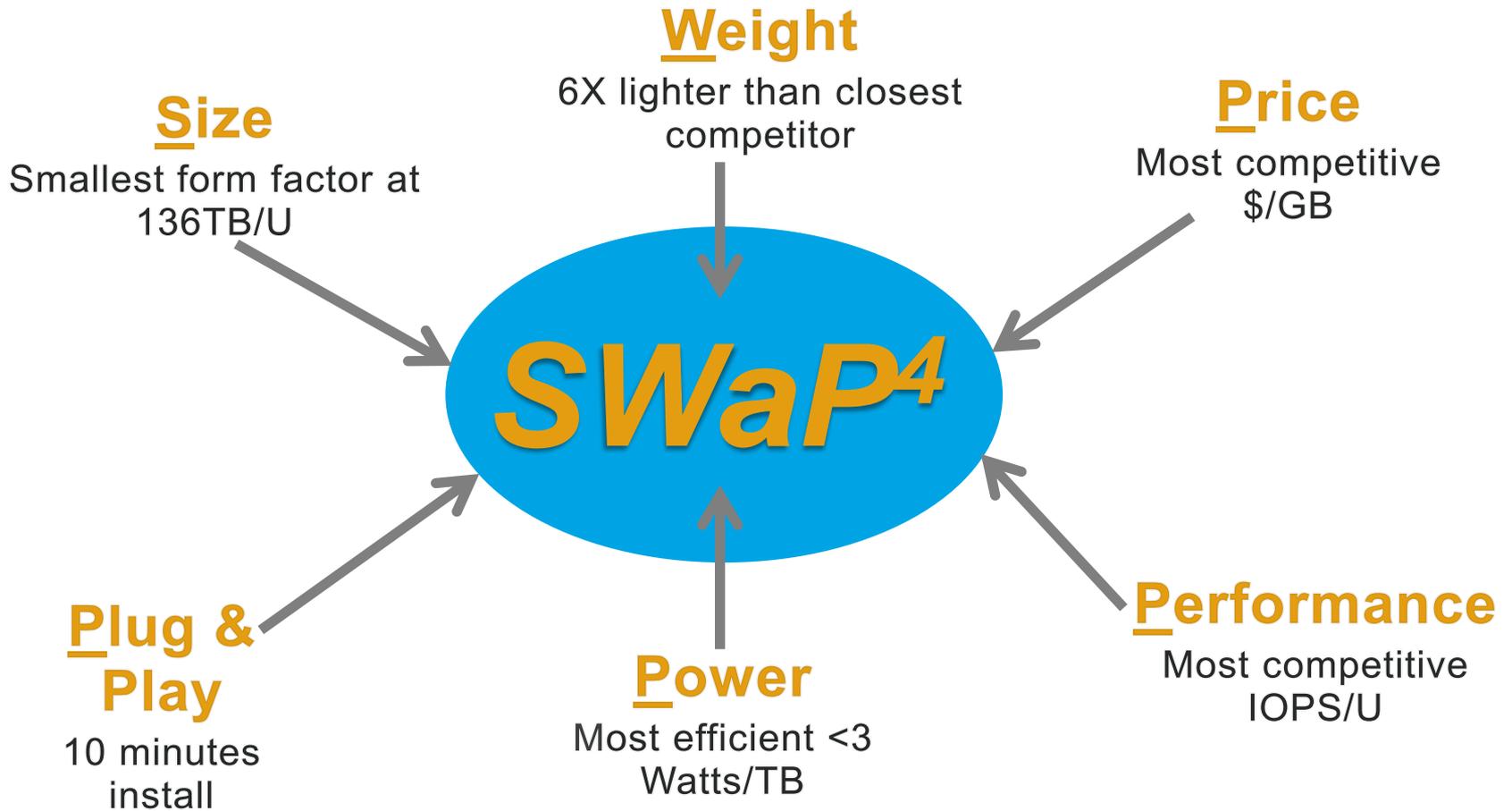


LOWER INFRASTRUCTURE AND OPERATIONAL COSTS

Reduce data center storage power/cooling consumption by 67x (99%)

Reduce the floor space of your data center storage by 60X (98%)

How are we different?



Target Markets / Use Cases

- File server consolidation
- Server Virtualization
- Database: OLTP, Data Warehouse
- Mobile Data Center: Federal, Oil & Gas, etc.
- Test and Development
- Business Continuity / Disaster Recovery
- Big Data / Analytics
- Cloud: Public, Private and Hybrid (incl. MSPs)



Solution Benefits

BIG DATA



- Achieve real-time insights faster with low latency, all-flash storage
- Over 100TB usable flash storage before compression in 1U to support ever-growing capacity requirements
- Achieve best total cost of ownership (TCO) with inline, hardware-assisted data reduction, lowest power consumption using minimal floor space



DATABASE

- Improve your business results with lightning fast all-flash array
- Reduce your database core licenses by reducing your I/O wait time with fast, low latency all-flash storage
- Increase your transactional throughput



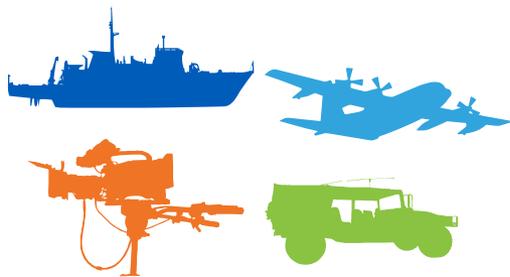
SERVER VIRTUALIZATION

- Highest density in smallest form factor for virtual environments
- Consistent microsecond latency, up to 400K IOPs
- Mission-critical reliability
- Fully certified and integrated. VMware Ready

Solution Benefits

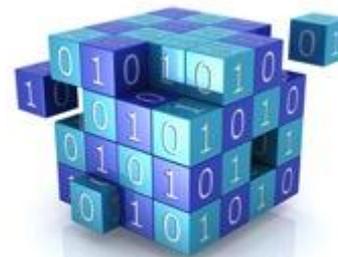
MOBILE DATA CENTER

- Highest density in a small form factor optimized for mobile deployments
- Lightweight and power efficient design
- Why replicate data over expensive WAN for Disaster Recovery? FedEx hundred of terabytes of data overnight!



TEST AND DEVELOPMENT

- Faster storage for faster time-to-results
- All-flash performance at the price of HDD-based storage
- Increase productivity of your engineers by giving them instantaneous, high performance snapshots of production data



Technology Ecosystem

- DataCore Ready:
 - skyHawk has passed rigorous DataCore certification
 - Fully support by DataCore and Skyera
- VMware Ready:
 - Turbocharge your virtual infrastructure with skyHawk all-flash array
 - vCenter Plug-in
 - VAAI compliant



Thank You!

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