**R&D Team Fusing Flash + Storage + Software**

### Executives

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frankie Roohparvar</td>
<td>CEO</td>
<td>Micron, Xicor <em>(490+ patents)</em></td>
</tr>
<tr>
<td>Radoslav Danilak, Ph.D</td>
<td>CTO</td>
<td>SandForce co-founder (acquired by LSI)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nishan, nVidia, Toshiba <em>(60+ patents)</em></td>
</tr>
</tbody>
</table>

### Management from flash, storage & networking

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rod Mullendore</td>
<td>Chief HW Architect</td>
<td>SandForce, Nishan, McData,, Brocade</td>
</tr>
<tr>
<td>Dave Martin</td>
<td>Corp/Biz Dev</td>
<td>Former CEO HDS</td>
</tr>
<tr>
<td>Timm Hoyt</td>
<td>SVP Sales &amp; Mktg</td>
<td>Brocade</td>
</tr>
<tr>
<td>Mitch Nishi</td>
<td>VP of Finance</td>
<td>Echelon, Toshiba, Johnson Controls</td>
</tr>
<tr>
<td>Farshid Tabrizi</td>
<td>VP Business Dev</td>
<td>Micron, Lexar, Synopsys</td>
</tr>
<tr>
<td>Ken Tan</td>
<td>VP Operations</td>
<td>Micron, Lexar, Creative Labs</td>
</tr>
</tbody>
</table>
Introducing Skyera skyHawk FS All-Flash Array
UP TO 136TB OF FLASH IN 1U

Frankie Roohparvar
Skyera CEO
skyHawk product family

- **PRICE PERFORMANCE LEADER**
  - skyHawk 44TB (usable)

- **DENSITY LEADER**
  - skyHawk FS 136TB (raw)
Skyera skyHawk FS – Second Generation skyHawk

**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

Source: [ABB Data Center Infographic](http://www.abb.com) 2014
## Data Center – OPEX savings with Skyera Flash

### 5 Yr Op-Ex Comparison

<table>
<thead>
<tr>
<th></th>
<th>Legacy HDD Storage</th>
<th>skyHawk FS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Capacity</strong></td>
<td>1.3PB (raw)</td>
<td>1.3PB (raw)</td>
</tr>
<tr>
<td><strong>Rack Space</strong></td>
<td>15 racks (630U)</td>
<td>1 rack (40U)</td>
</tr>
<tr>
<td><strong>Power/Cooling (K Watts)</strong></td>
<td>203</td>
<td>3</td>
</tr>
<tr>
<td><strong>Support Personnel</strong></td>
<td>1</td>
<td>.25</td>
</tr>
</tbody>
</table>

- **Power/Cooling** savings: 99%
- **Support Personnel** savings: 75%
- **Space** savings: 93%
136TB skyHawk FS vs. Competition

**Size Reduction:**
- 99% Reduction

**Power Reduction:**
- 97% Reduction

- **EMC XtremIO**
  - 78x
  - 36x

- **EMC VNX8000**
  - 59x
  - 64x

- **Pure Storage**
  - 29x
  - 14x

- **Violin Memory**
  - 10x
  - 16x
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?

**Size**
Smallest form factor at 136TB/U

**Weight**
6X lighter than closest competitor

**Price**
Most competitive $/GB

**Plug & Play**
10 minutes install

**Power**
Most efficient <3 Watts/TB

**Performance**
Most competitive IOPS/U
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!