Flash Storage Drives a Better Bottom Line

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Inside the Data Center

Complex storage performance problems typically disappear
  • This frees up time which can be put to better more rewarding use

Reduced investment in server CPU upgrades and server scaling
  • Reducing application based licensing fees – the gift that keeps on giving!
  • “It’s not just the cheques you write!” [Sony]

Decreased storage rack space requirements
  • Freeing up valuable space on the datacenter floor

Reduced power and cooling costs
  • Typically by up to 70%.
How can Flash transform your datacenter and business?

Outside the Data Center

**Permanently freed up OPEX funds**
- Fund that can be diverted into project investments instead

**Improved workforce productivity**
- Employees wait less for systems, making them more efficient.

**Improved customer satisfaction**
- Customers using systems based upon flash storage will typically enjoy a better experience – with less wait time and less frustrating “spinning wheels” – and they will be more likely to return to that business or portal in the future

**Reduced time-to-decision in analytics apps**
- Time is money! Access to data analytics results faster could prove invaluable and be that differentiator between a winner and a loser!
Consistent performance creates trust and builds loyalty

Inconsistent read latency typical of a spinning media based array.

- Promotes dissatisfaction
- SLA almost impossible

Predictable consistent sub-millisecond latency of an All Flash Array.

- Improves productivity
- Builds trust and loyalty
- SLA very easy to enforce
# Overall Savings

**Traditional Tier 1**
- 250TB usable
- 334TB raw
- 98U rack space (2.33x 42U racks)
- Power: 5800 Watts
- Heat: 30 KBTU/hr
- Cost > $1.5M

**HP 3PAR 7450**
- 253TB usable (4:1 space efficiency)
- 85TB raw
- 4U rack space
- Power: 1252 Watts
- Heat: 3 KBTU/hr
- Cost < $0.5M

<table>
<thead>
<tr>
<th>Delta</th>
<th>&lt; 95%</th>
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<tbody>
<tr>
<td>Rack Space</td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>&lt; 75%</td>
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<tr>
<td>Heat</td>
<td>&lt; 90%</td>
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<tr>
<td>CAPEX</td>
<td>&lt; 55%</td>
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<tr>
<td>OPEX (FTE)</td>
<td>At least 3x lower</td>
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Here are some data points from HP 3PAR telemetry data against All-Flash Arrays:

- Up to **75% reduction** in storage footprint when migrating from fat storage to 3PAR thin volumes.
- 43% percentage average thin volume utilization across the install base. This translates to about **57% savings** for customers that use thin volumes.
- As per July 2015 the average **deduplication** ratios across all production system is **2.1:1**
  - This is calculated as data written to the volumes by the hosts’ vs what the storage array is allocating.
  - Does not include zeroes.
  - Includes production systems (no POC or internal systems) and ratios between and including 1 and 20.
- Over **550 Petabyte** of savings from using 3PAR StoreServ efficient snapshot technology.
HP 3PAR StoreServ All-Flash customers are seeing huge benefits

- **RBS (The Royal Bank of Scotland)**: 60% less space. 2x VM performance. 1 un-needed datacenter.
- **80% less space. $2.75M saved. Increased staff productivity through VDI.**
- **93% reduction in processing time. “new competitive footing.”**
- **Metro Health**: 95% less space. 10x performance. Business up 11%.
- **Sony Entertainment Network**: 75% ERP batch time reduction. Enabled new market expansion.
- **SOCAN (Society of Composers, Authors and Publishers)**:
Endurance concerns? Not with HP 3PAR

0.7% average wear across the install base over 12 months on cMLC drives
The right architecture

- All-flash is rapidly becoming mainstream
- Cost and reliability are key in fueling this change
- Moving to newer and cost effective media is investable
- An architecture that can take advantage of this is critical

There can be economy only where there is efficiency
- Benjamin Disraeli
Architecture. Matters

HP 3PAR StoreServ Greatest Competitive Advantage