



All Flash Array Handles Multi-Tenant Big Data Customers



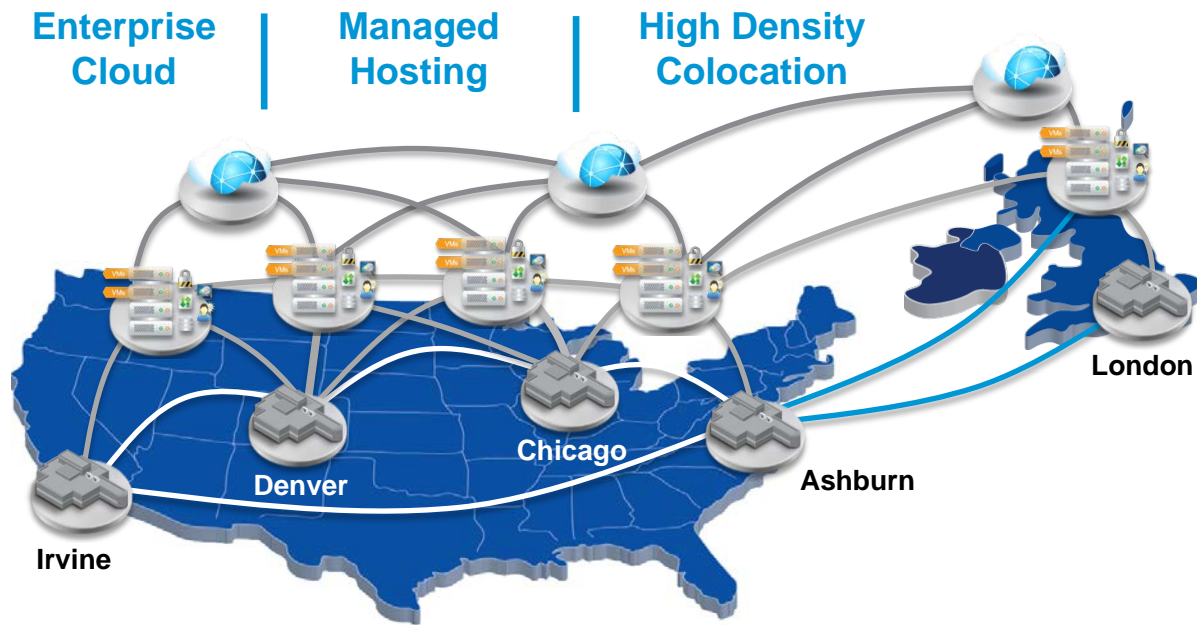
Latisys Case Study on HP 3PAR StoreServ 7450

Christian Teeft
Chief Technology Officer
Latisys
Christian.teeft@latisys.com

Priyadarshi Prasad
Product Line Manager
HP Storage
@Priyadarshi_Pd

Who is Latisys?

Worldwide provider of Infrastructure as a Service



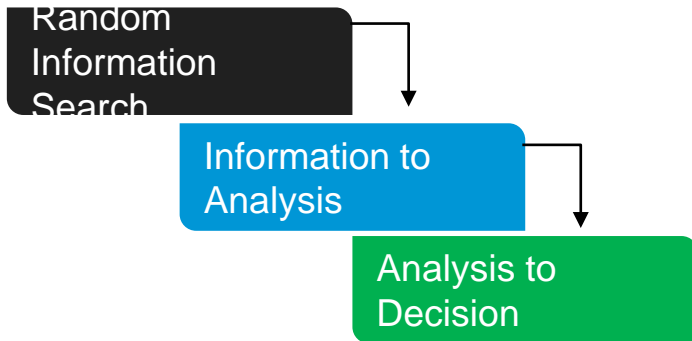
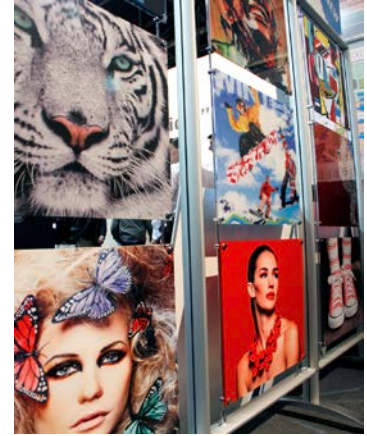
Latisys has arrived on Gartner's MQ!



2014 Magic Quadrant
Cloud-Enabled Managed Hosting - North America
<http://www.latisys.com/why-latisys/gartner-mq>



Big Data = Big Demands



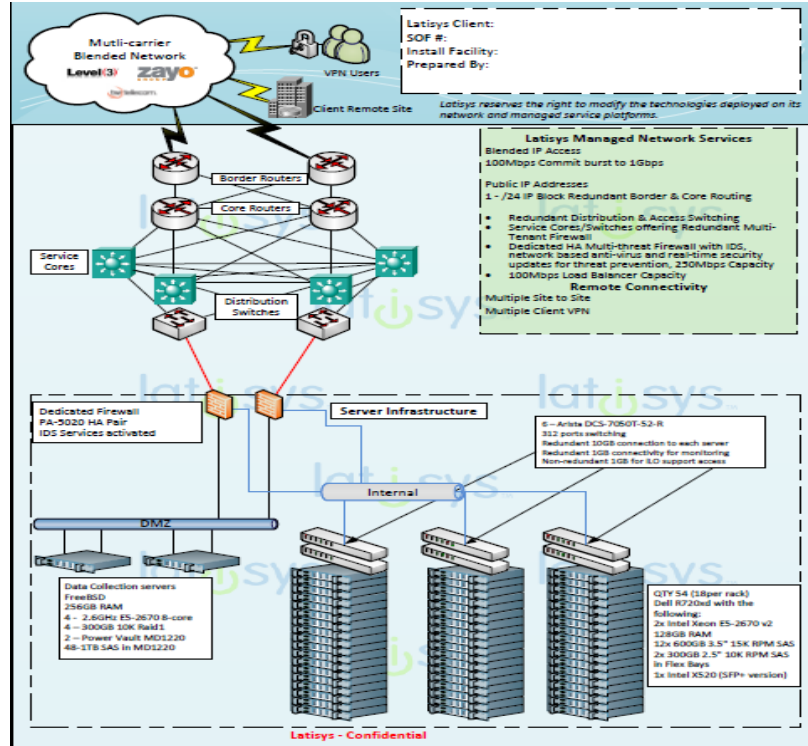
- Gain deep consumer insight
- Improve inventory management
- Make faster and better decisions

Big Data puts the Big Guessing at Rest

Why All-Flash Array

- **Performance, Performance, and more Performance**
 - Creating an island is a good thing sometimes
- **We are all Service Providers now...**
 - QoS is the only way to guarantee performance and SLA
- **DevOps World**
 - Same scripts across platforms
- **Features and Functionality Today and Tomorrow**
 - Need an evolving platform with a proven track record
- **Standard proven hardware**

Latisys Use Case #1



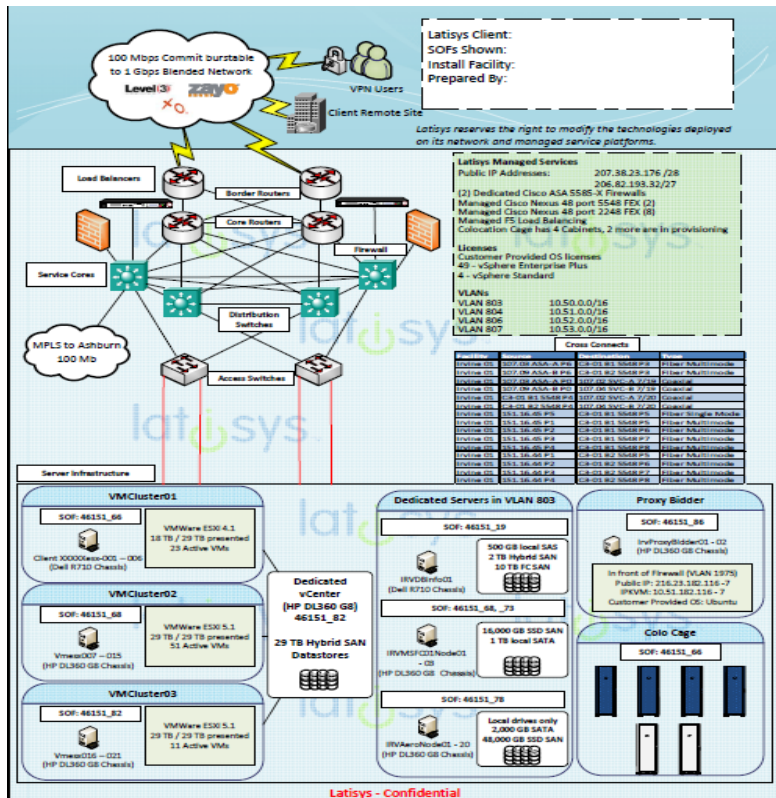
Leading “Big Data” Customer Engagement Platform

Production in Denver

- 56 dedicated servers
- 470 TB of Storage Capacity
- 7+TB of RAM
- 10-Gigabit Ethernet
- 1120 Processing Cores

Massive parallel processing database combining numerous existing customer interactions with data systems (web, phone center, mobile, retail store, etc.) in order to provide behavior analysis within and across all client interaction channels.

Latisys Use Case #2



Multinational Advertising Platform with Massive Scale

Production in Irvine & Ashburn

- 15 dedicated servers
- 30 ESX Hosts
- 100+ VMs
- 70 TB SAN (w/ 16 SSD)
- 6 cabinets of colocation

Latisys 3PAR 7450 Configuration Overview



Usable/Written
Capacity = 4.5X

Thin Savings = 85%

Future Growth
Potential = Over
330TB Raw

Sections	Summary	Latest	Licences	Support
RAW Capacity:	23.2 TiBr			
RAW Free Capacity:	3.8 TiBr (16.4%)			
Allocated Capacity:	88 TBu			
Written Capacity:	13.3 TBu			
Over-Allocation:	379.3% [1:3.8]			
Avg Written/Month:	1.3TBu (since 2013-09-12)			
Virtual/Physical Ratio:	453.6% [1:4.5]			
Thin Alloc TBr:	17.7TBr (License: 10000TBr)			
Thin Saved TBu:	74.7TBu (84.9%)			
Physical Disks:	64			
Defined Volumes:	90 (2 fpvv / 15 tppv / 0 tdvv / 73 snp)			

25 Data Services Being Used

Compaction

Thin Technologies

Multi-tenancy

QoS, Virtual Domains, Virtual Lock

HA & DR

Snapshot, Remote Copy,
Transparent Failover

Application
Integration

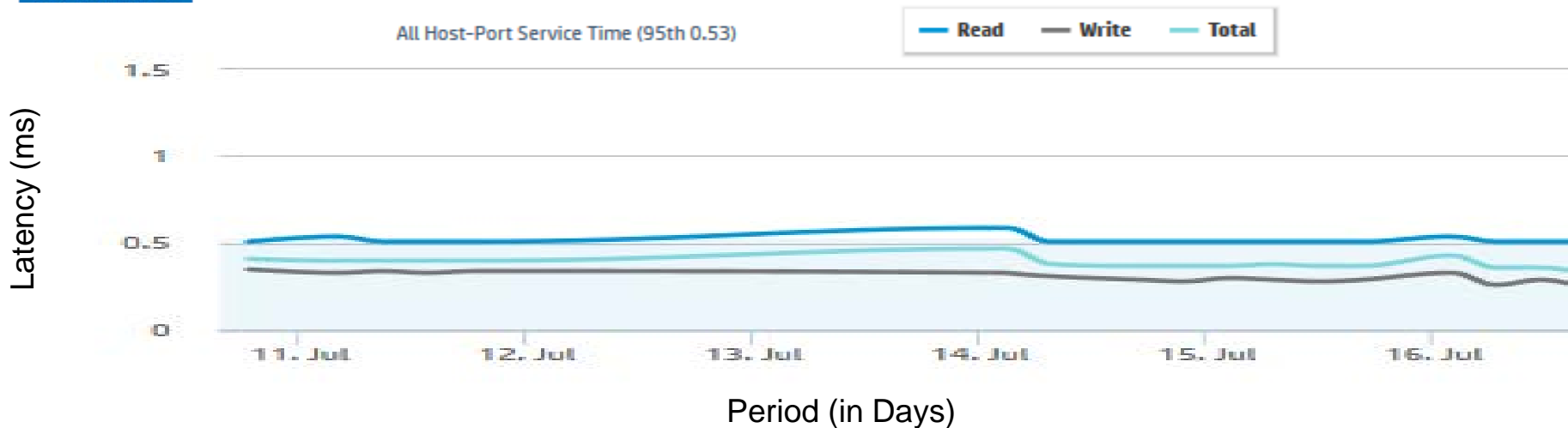
VMware, Oracle, SQL, Hyper-V,
Exchange

Federation

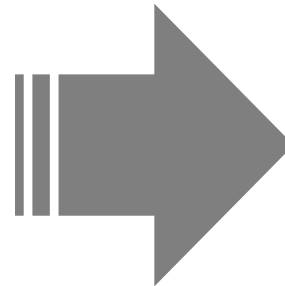
Peer Motion



Response Time with 3PAR 7450



Write latency below 0.4ms
Read latency hovering around 0.5ms
Overall latency 0.53ms (95th percentile)

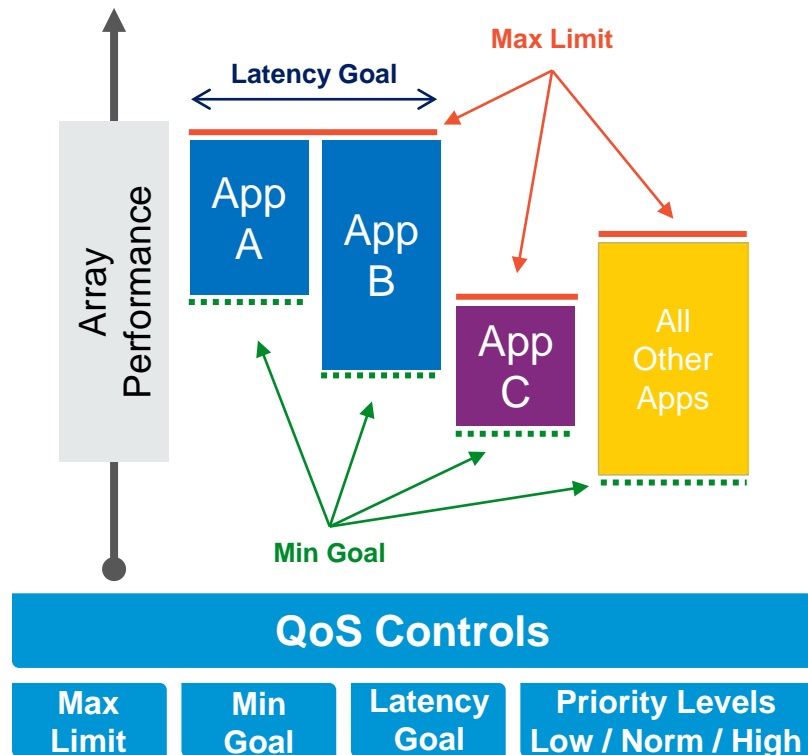


Consistent Performance
Predictable Outcomes
Happy Customers

Handling Multi-tenancy with 3PAR Priority Optimization

Consolidate massively with confidence

- Protect mission critical applications
- Deliver predictable service levels on a shared array
- Assure Premium service to the right customers
- Deliver Bronze service level for low-cost tenants
- Consolidate test/dev on production system



Storage for the datacenter of the future

HP 3PAR StoreServ delivers TODAY

Affordable and Autonomic all flash platform

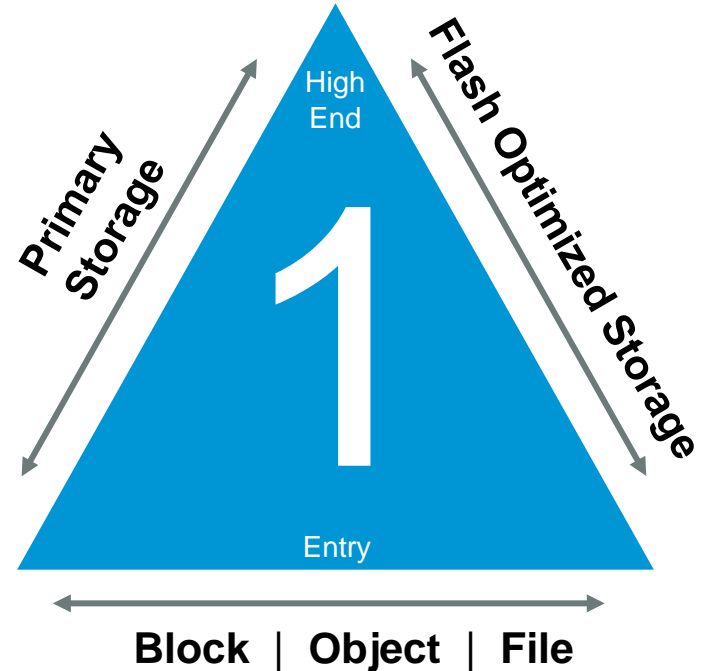
- Easy to put FLASH FIRST

Modern Tier 1 Storage Architecture

- Move to Flash without compromises

Availability guaranteed

- Get 6-Nines Guarantee for peace of mind



HP 3PAR Redefines FLASH

F FAST

900,000 IOPS **at** 0.7ms

L Low

\$2/GB Usable with Thin Deduplication

A Cost
Autonomic

System-wide Striping, Rapid Provisioning

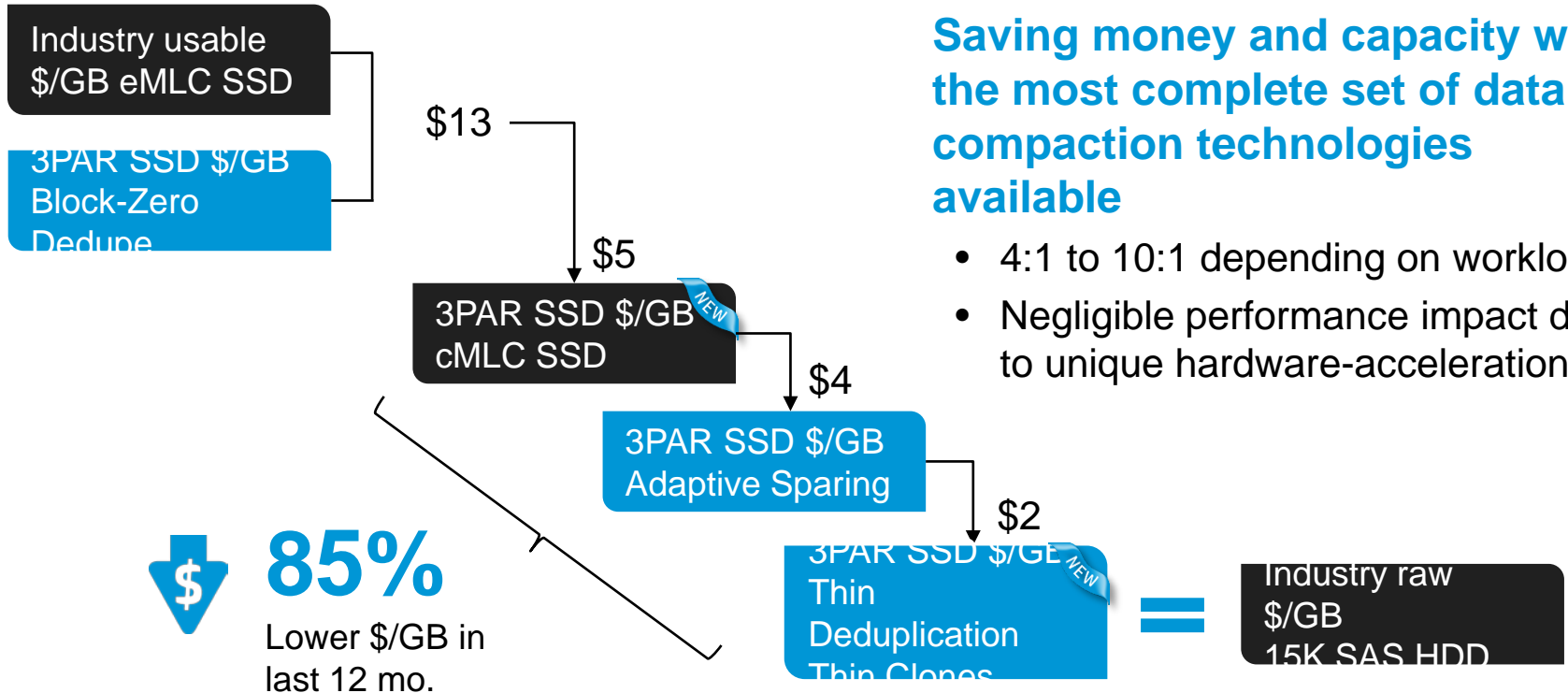
S Scalable

>450TB all-flash raw, >1PB Usable

H Highly
Available

Quad-controller resilience with most
complete data services (RC, QoS,
Federation)

Affordable: All-flash at less than \$2 per GB usable

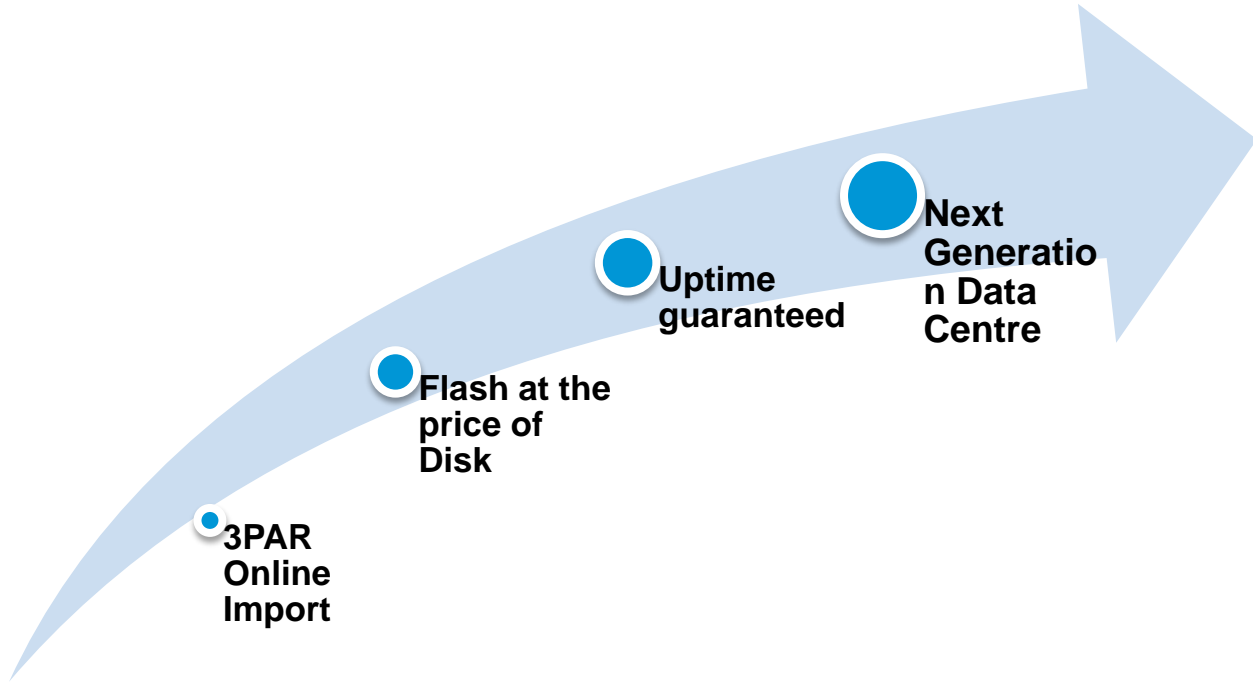


Saving money and capacity with the most complete set of data compaction technologies available

- 4:1 to 10:1 depending on workload
- Negligible performance impact due to unique hardware-acceleration



The Future is NOW!



3PAR
Online
Import

Flash at the
price of
Disk

Uptime
guaranteed

Next
Generatio
n Data
Centre





Thank You





Make it matter.