HIGH PERFORMANCE AND LONG TERM RETENTION THAT DOESN'T BREAK THE BANK

Neal Wingenbach – RSM for HPC

Seth Ingram – RSM, Tom Yenny – RSM QSS (Disk)

Quantum

The Demanding Markets We Serve

CYBERSECURITY

OIL & GAS

GENOMICS

FEDERAL

ENTERPRISE BACKUP

SURVEILLANCE

GEOSPATIAL

UNIVERSITIES

CORPORATE VIDEO

ENTERPRISE ARCHIVE

Applying The Right Technology At The Right Time

HPC Workflow

ACQUIRE → ANALYZE → RETAIN

STORNEXT 5 DATA MANAGEMENT LAYER

Tiers and Sites

PRIMARY

SECONDARY

ARCHIVE
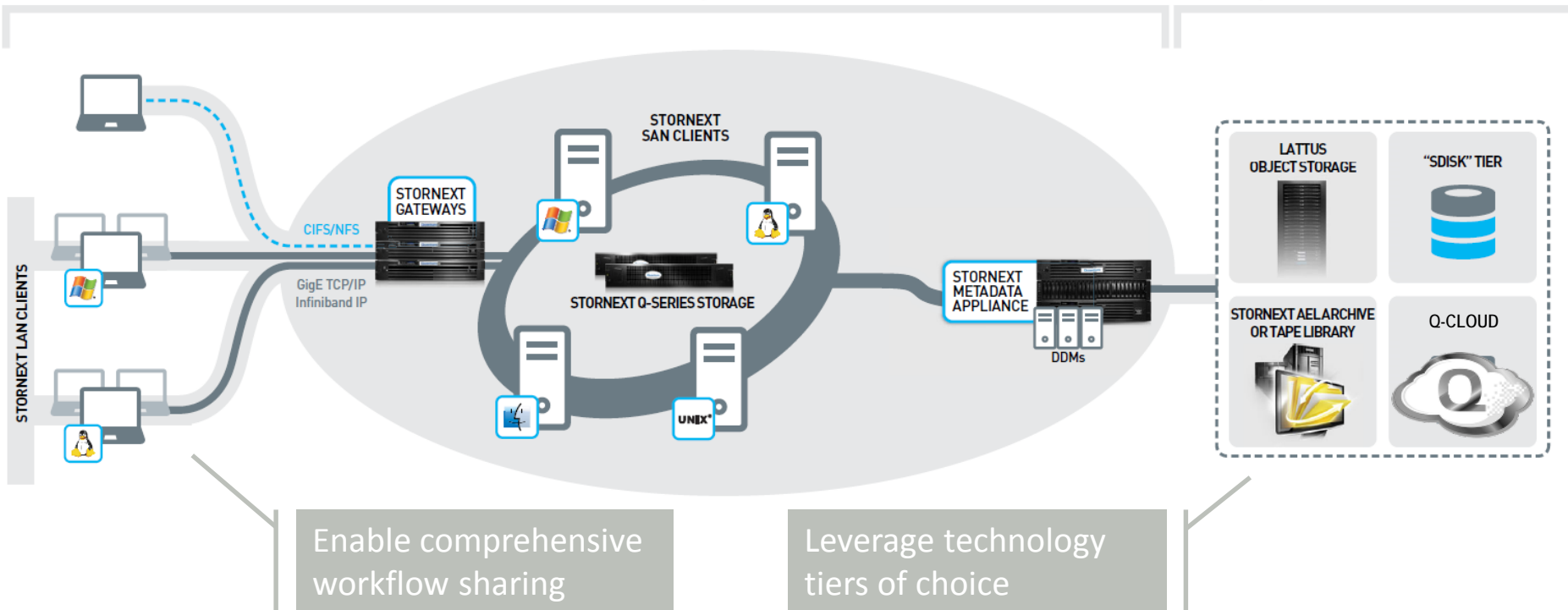
CLOUD

File System, Tape, and Nearline Disk: StorNext

STORNEXT 5 SCALE-OUT STORAGE
High-Performance Shared File System

STORNEXT TIERED ARCHIVE
Policy-Driven, Cost-Effective Tiering

STORNEXT LAN CLIENTS

CIFS/NFS

GigE TCP/IP
Infiniband IP

STORNEXT
GATEWAYS

STORNEXT
SAN CLIENTS

STORNEXT Q-SERIES STORAGE

STORNEXT
METADATA
APPLIANCE

DDMs

LATTUS
OBJECT STORAGE

"SDISK" TIER

STORNEXT AE ARCHIVE
OR TAPE LIBRARY

Q-CLOUD

Enable comprehensive
workflow sharing

Leverage technology
tiers of choice

Quantum Tiered Storage Portfolio

Lattus Object Storage

Q-Cloud Services

Scalar LTO Libraries

DXi Deduplication

Artico NAS Archive

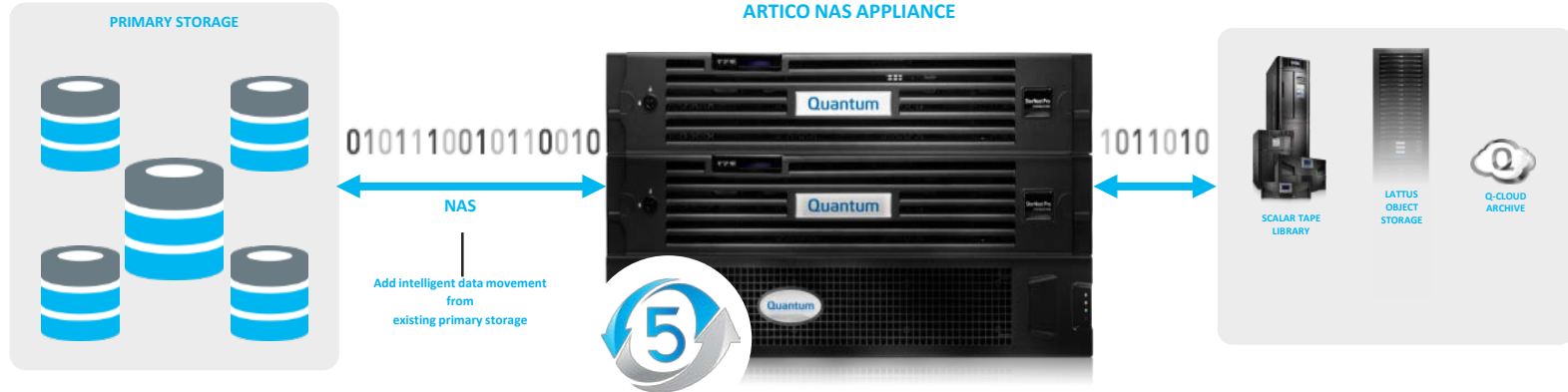StorNext Scale-out Storage

QXS Hybrid Storage

End-to-end storage portfolio that powers your strategic applications

ARTICO – Intelligent NAS Archive

- Tiering policies deliver the best TCO for sharing, storing, and protecting data

- Comprehensive choice of archive targets

- Scales from small environments to petabytes

PRIMARY STORAGE

ARTICO NAS APPLIANCE

0101110010110010

1011010

NAS

Add intelligent data movement from existing primary storage

SCALAR TAPE LIBRARY

LATTUS OBJECT STORAGE

Q-CLOUD ARCHIVE

HYBRID STORAGE

Quantum QXS Hybrid Storage Family

Entry

QXS-3 Series

Arrays optimized for virtualized IT workloads

Up to 40,000 iops

Optimized Performance

QXS-4 Series

Storage targeting vertical markets: Telco, M&E, Big Data Analytics, High-Performance Computing

Up to 100,000 iops

High Performance

QXS-6 Series

High-Performance Computing

Up to 200,000 iops

Real-time, autonomic data placement (tiering) for balancing performance and costs are critical

Capacity HDD   Performance HDD   SSD

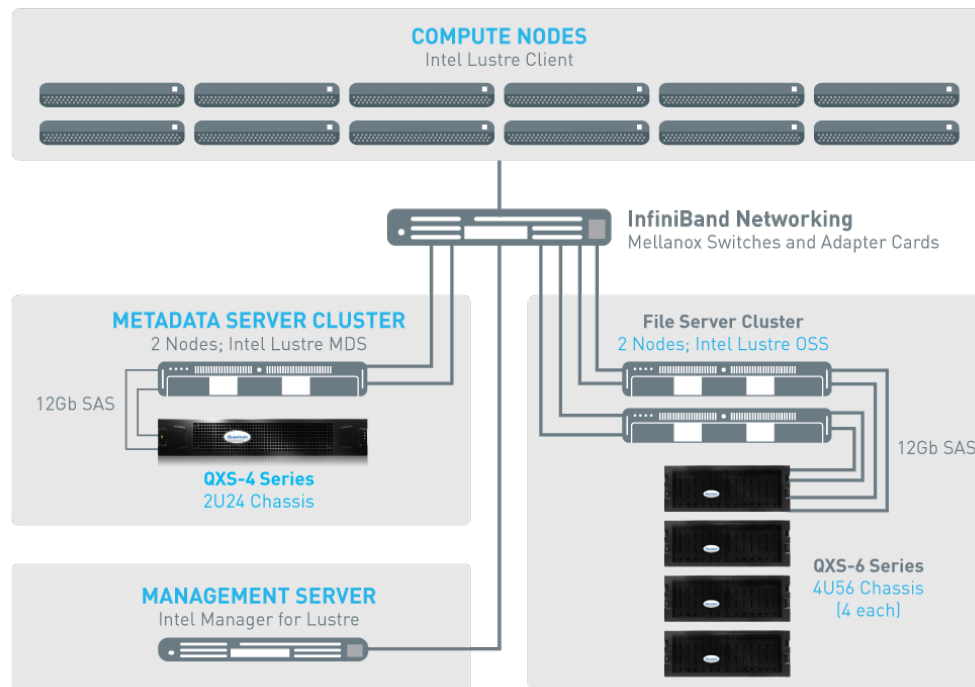# Customer Example: HPC Customer

SITUATION / PROBLEM

- New HPC customer, wanting to avoid Panasas and EMC/Isilon lock-in. Needs 1PB with tremendous read, good write throughput and ability to expand. Concerned with Lustre ramp.

CUSTOMER SOLUTION

- **QXS-656** with 224x6TB LFF drives, Linear Configuration, 22 Object Storage Targets + **QXS-456** with 8x900GB LFF HDDs

BUSINESS BENEFITS

- Extreme read performance of 12GBps
- Trusted partner with Intel IEEL™
- Simple setup and management

COMPUTE NODES
Intel Lustre Client

InfiniBand Networking
Mellanox Switches and Adapter Cards

METADATA SERVER CLUSTER
2 Nodes; Intel Lustre MDS

12Gb SAS

QXS-4 Series
2U24 Chassis

File Server Cluster
2 Nodes; Intel Lustre OSS

12Gb SAS

QXS-6 Series
4U56 Chassis
(4 each)

MANAGEMENT SERVER
Intel Manager for Lustre

Quantum Tiered Storage Portfolio

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