



NetApp[®]

Hybrid Cloud Solutions to Transform Your Enterprise

Solutions for Media & Entertainment & Enterprises of all kinds



Partner
Network

ADVANCED TECHNOLOGY PARTNER

Who is NetApp?

\$6.1 B

FY15 Revenue

1 Exabyte-Qtr

Average Storage Shipped

#1

U.S. Government, Germany, Australia
Market Share

#1

Storage OS
Market Share

#2

Open Networked Storage
Market Share

DC Q4 2014 Storage Hardware Market Share March 2015: Open Networked Market Share Branded – Open Networked = combined NAS and SAN - Revenue and Capacity for 2014

Federal agencies must report all contracts valued at \$3,000 or more. Based on FPDS-NG reports FY2011-2013, NetApp is the top storage provider.

IDC Names NetApp Data ONTAP as the #1 Branded Storage Operating System Source: IDC Worldwide Quarterly Disk Storage Systems Tracker 2014 Q2, September 2014

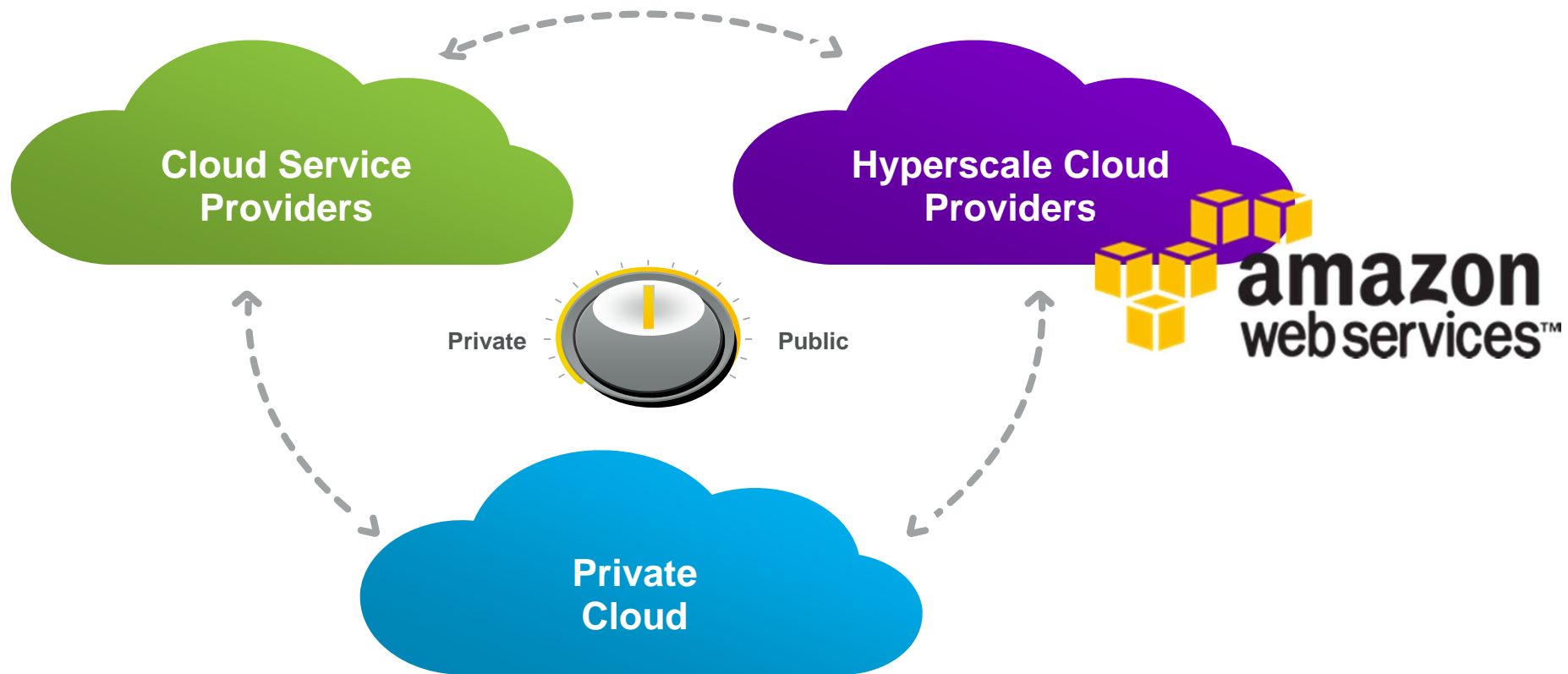
NetApp Powering the world's media

320 Petabytes of NetApp solution shipped into media and entertainment in last three years



Hybrid cloud: Fundamental trend for IT

Promises to address imperatives, but data management across clouds still a challenge



Common Cloud use cases for Enterprises

Elastic Workloads

- Analytics
- Bus Apps
- Data Collaboration
- Dev-Test
- Disaster Recovery
- Mobile/Web Apps
- Remote Apps
- Scientific Compute

Backup & Archive

- Tape
- Competitive storage replacements



Use Case #1: MLB Network uses NetApp for Private Cloud

Business Objective

Creation of a new television channel, the Major League Baseball Network. The new network is broadcasting 24/7 in season.

Technical Requirements

- Consolidate various datacenters used to capture and edit HD video and images from MLB games and related events.
- Make the resulting video segments and clips available to the network and other MLB properties.
- Enable rapid growth of the network's capabilities to scale as necessary.

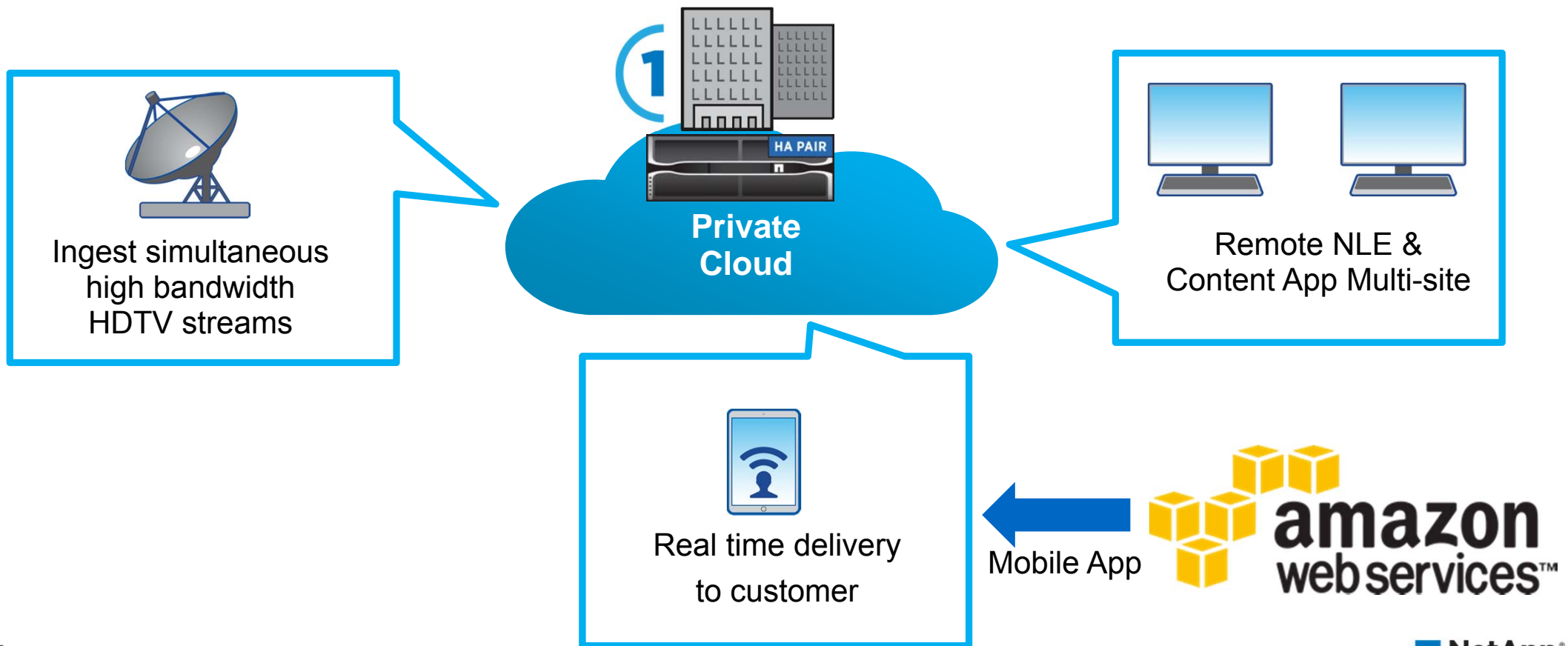


MLB Network, the ultimate television destination for baseball fans launched on January 1, 2009 in a record-setting 50 million homes.



MLB Use Case – Massive video data ingest, remote app, sharing

Consolidation to single data center and run NLE Apps in Private Cloud





Key Results

- MLB consolidated to a single virtualized Private Cloud environment, hosted in a co-location facility
 - Single centralized active repository of all video assets to handle all aspects of a non-linear production media workflow: ingest, edit, transcode, logging, distribution & playout
 - MLB selected NetApp E-Series
 - Consolidated from four systems into a single rack
 - Solution implemented with raw capacity of 2.88 PB, with additional 360TB in lab environment
- Virtualize production applications in the new Private Cloud datacenter
 - Grass Valley production tools for ingest control, edit, MAM, ingest proxy gen; 250 proxy desktop edit work spaces, Adobe Premiere Pro CC, 50 HD edit work spaces
 - Enabled rapid staff growth at reduced cost with consistent performance
- **Solution proof point: MLB Networks Diamond metadata tagging 4,200 hours of video per week, 37 million individual tags total**

Use Case #2: Global Mass Media company goes “all in” to AWS with NetApp Cloud ONTAP

Business Challenge

- Company grew rapidly through global acquisitions
- Improve operational efficiencies of family of companies

Technical Requirements

- Consolidate apps & a large on-premises image repository to cloud
- Avoid data centers & cap-ex infrastructure
- Achieve same data management capabilities as on-premises



About the Firm

- Global Mass Media
- Newspapers and publishing on three continents

Media Company – Migrate all applications & image data to AWS

DevOps to production. Share images and deploy applications globally.



Media Company – Key Results

Company employs a phased implementation approach to target 75% migration of Apps & systems to AWS

- Phase 1: Create consistent global Image Repository
 - Consolidate globally dispersed image repositories on AWS
 - Select NetApp Cloud ONTAP using SnapMirror for data movement automatically keeping images in synch globally
 - Optimized use of storage via decreased data redundancies while decreased overall network traffic
 - IT Management simplified with on premise FAS environments using ONTAP
- Phase 2: Dev/Test environment moved to AWS
 - Use Cloud ONTAP on AWS to move and clone production apps and data, developer productivity improved via reduced staging time decreased spend on test systems.
- **Solution Proof Point: Upon test completion, migrated apps and data provision to production in hours vs. days and are available globally**

Konica Minolta: NetApp AltaVault & AWS for Mission Critical Backup

“NetApp AltaVault has strengthened our disaster recovery capability, and furthermore, it reduced the related costs by shifting our data backup destination of mission-critical system to an offshore public cloud”

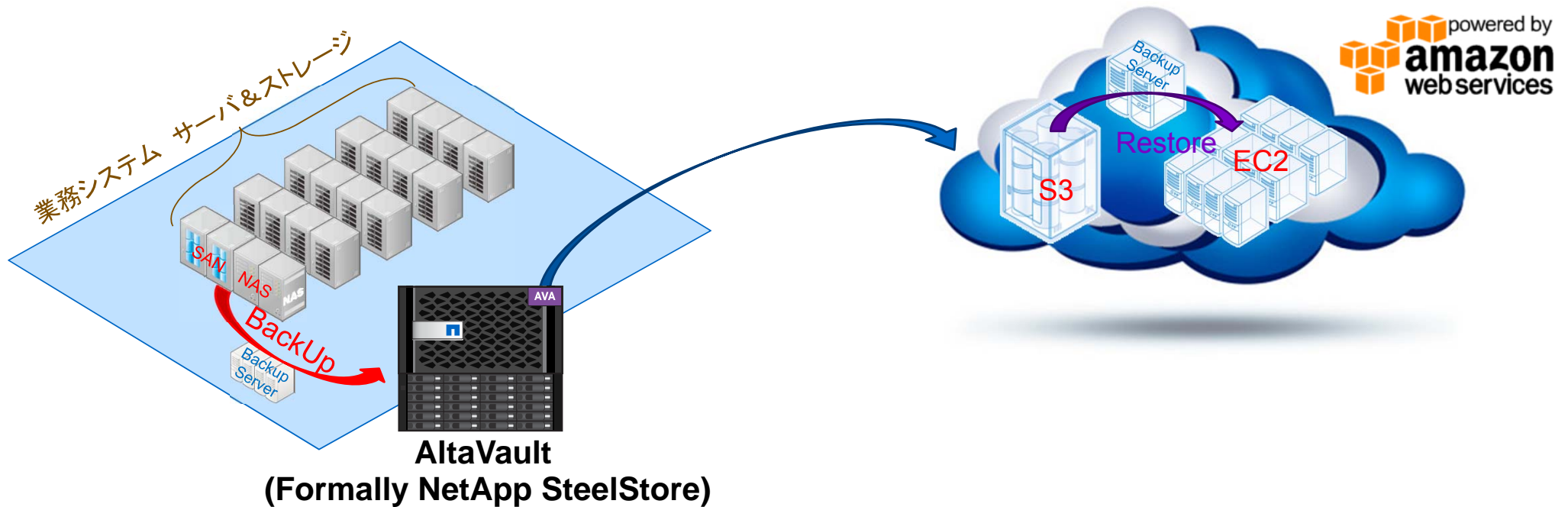
- Akira Tai,
Executive Officer and General Manager,
Corporate IT Planning Division,
Konica Minolta, Inc.



- **Japanese Global Company**
- **Business Imaging systems, Software Solutions and Services**

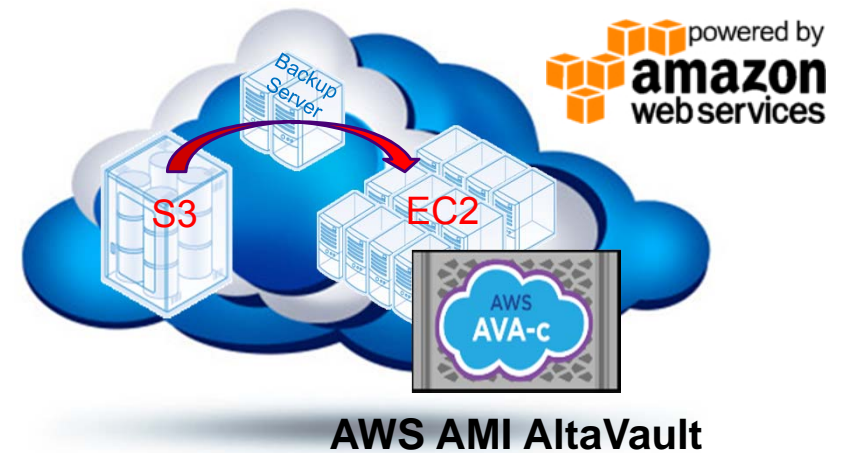
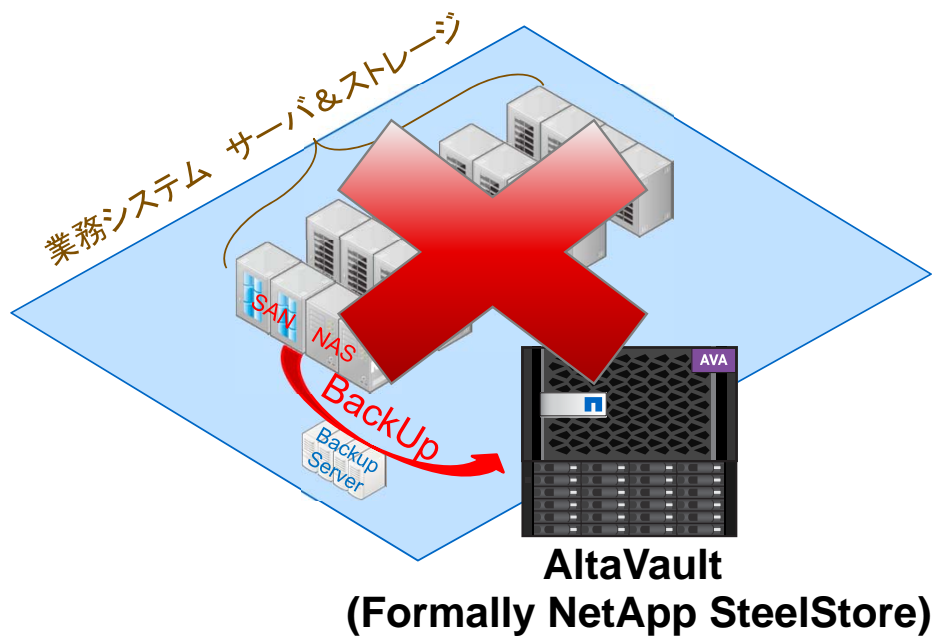
Normal time File Service Backup to AWS

Daily Backup data to NetApp AltaVault (Formally NetApp SteelStore) and backup to AWS S3 at the same time

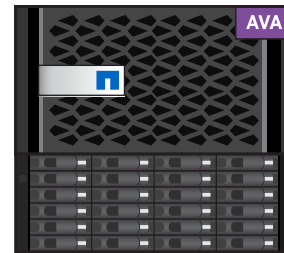


DR case

At DR situation AWS AMI AltaVault can be used with Amazon S3 data to continue busiens temporarily until production recovery



NetApp AltaVault & AWS



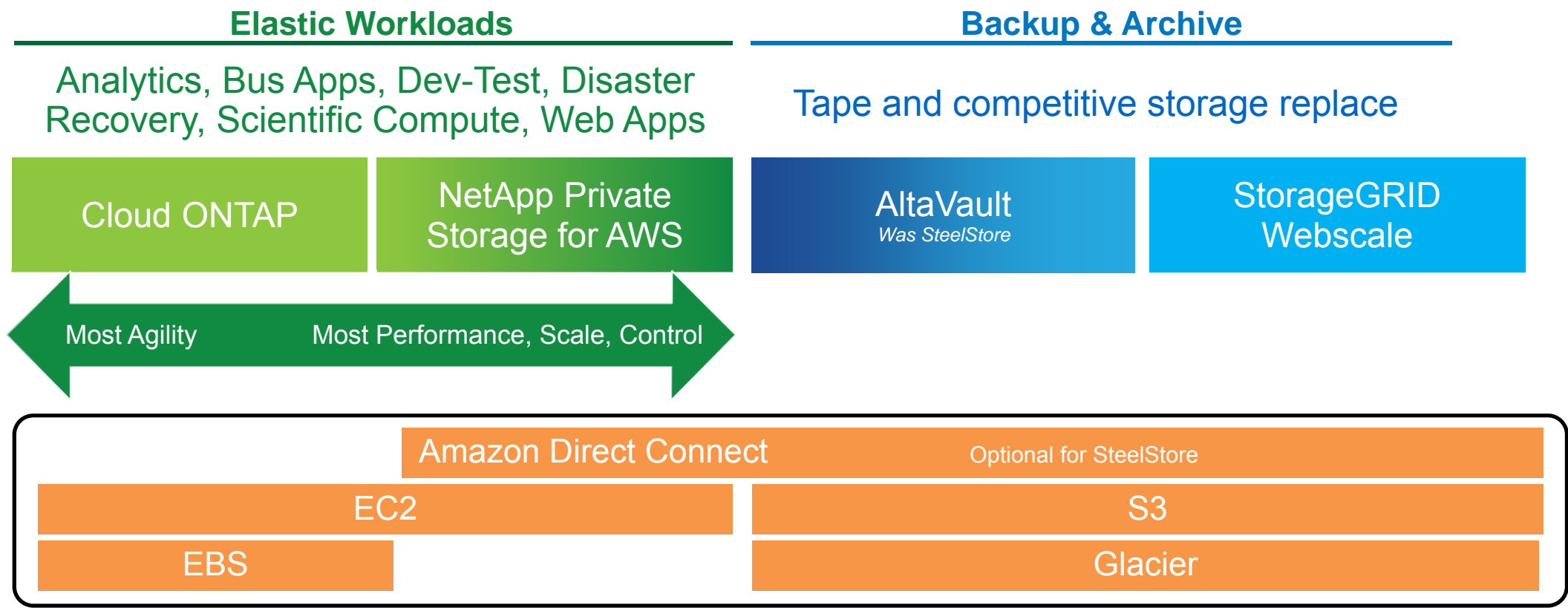
■ Solution

- Integrated Backup with AltaVault (SteelStore) & AWS

■ Benefit

- Lower backup-related costs
- Greater data security
- Restores in minutes versus several hours with tape
- Countless man-hours saved by having only one backup appliance to maintain
- Uses existing backup software
- With a single appliance, the customer can protect PB, but pay for TB.
- Cloud storage utilization reduced with a 10-30x deduplication rate.
- Security – encryption – key stored on site in their control, data is encrypted on appliance, on-cloud, and in flight. Role-based access control to make sure the right people have access.

Hybrid solutions to transform your enterprise



Hybrid cloud solutions for enterprises

Elastic Workloads

DR

Dev/Test

Analytics

Scientific
Compute

Web Apps

Biz Apps

Cloud ONTAP



Enhance cloud storage with powerful enterprise data management for elastic workloads

NPS for AWS



Gain cloud compute benefits for elastic workloads & bus apps that demand performance, scale, availability, or control

LSI Company EDA Resource Management Challenge Case Study

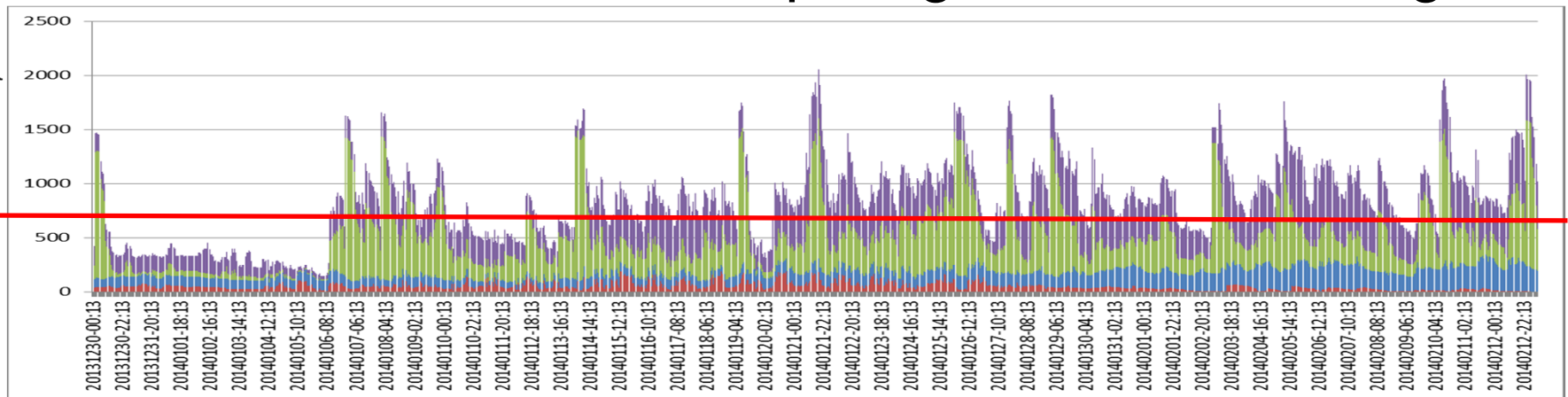
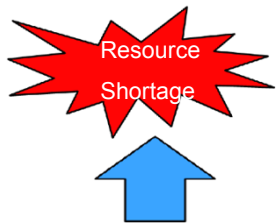
Current

- Short Rental
- Resource Traffic Control
- Need to wait resource vacancy

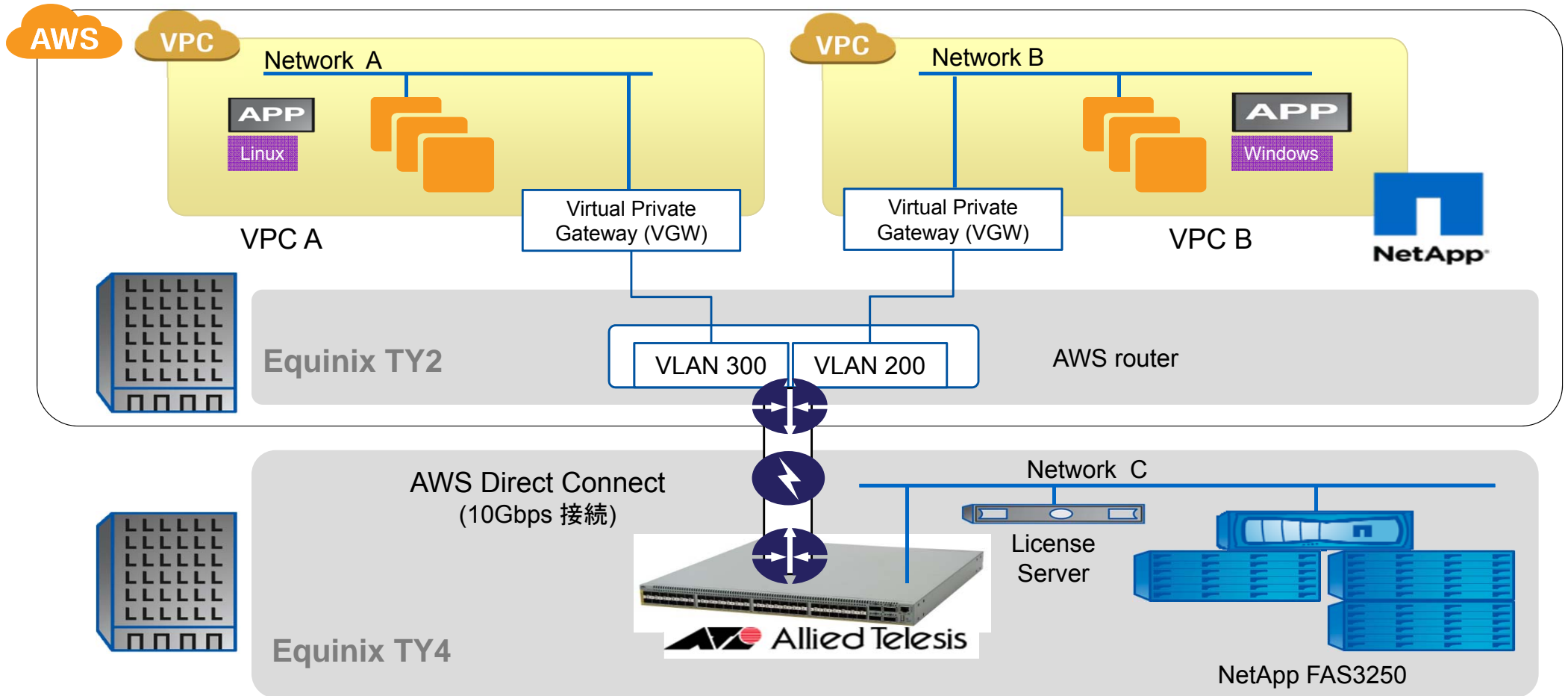
Challenge

- Time, Cost Growth
- Resource Human Management
- Product Schedule Delay

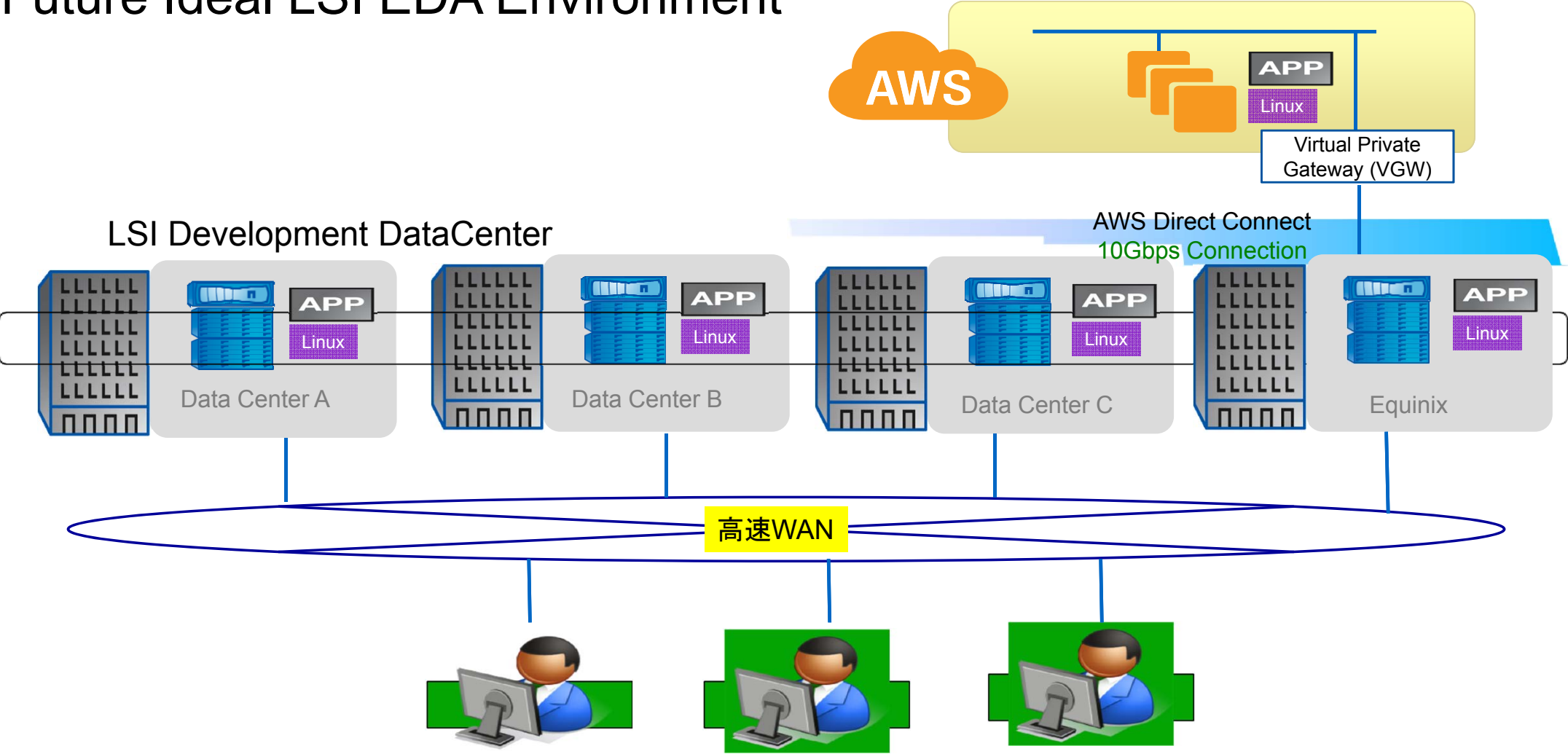
Peak Burst EDA Computing Resource Management



Evaluation Environment @ Equinix Japan

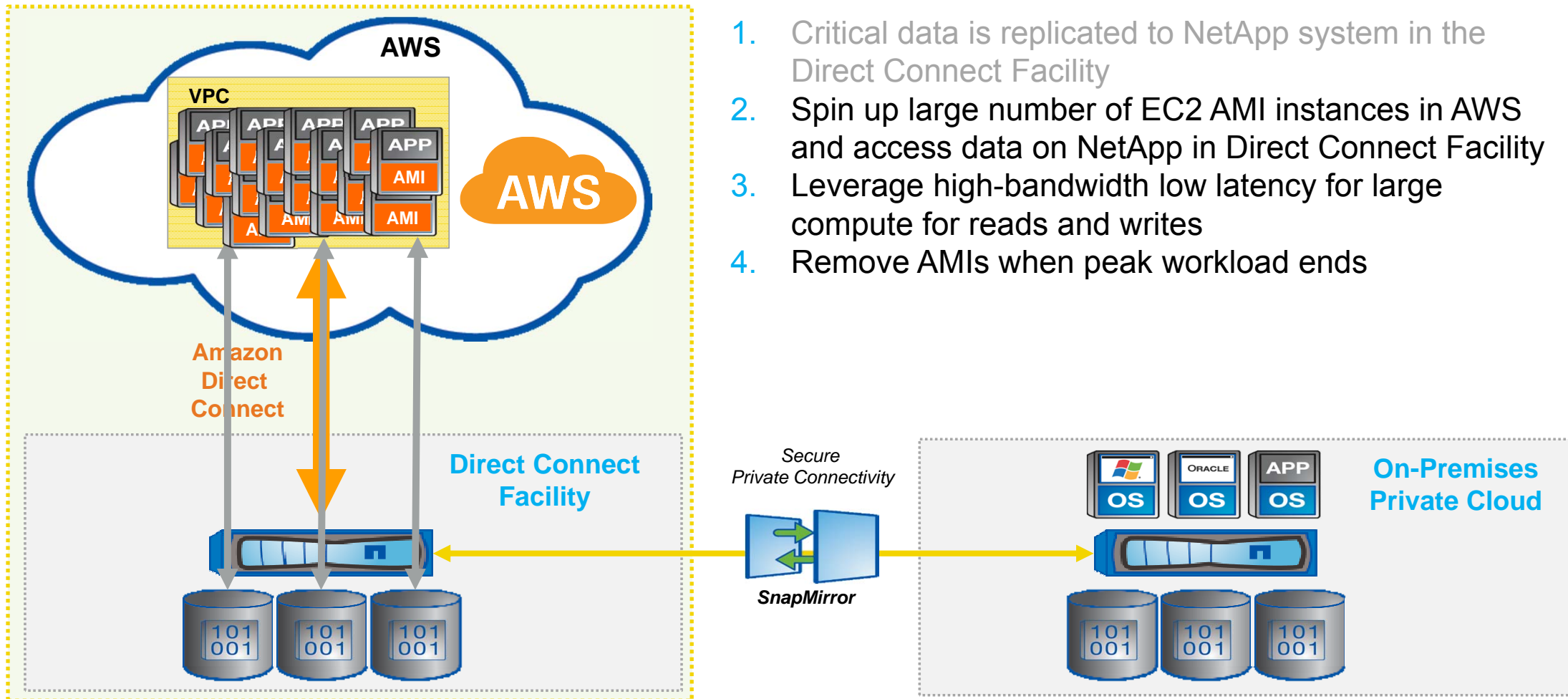


Future Ideal LSI EDA Environment



Cloudburst for Peak Workloads

Hybrid Cloud Solution: AWS & NetApp



1. Critical data is replicated to NetApp system in the Direct Connect Facility
2. Spin up large number of EC2 AMI instances in AWS and access data on NetApp in Direct Connect Facility
3. Leverage high-bandwidth low latency for large compute for reads and writes
4. Remove AMIs when peak workload ends

Hybrid cloud solutions for enterprises

Backup

NetApp AltaVault



Solve backup & archive headaches
with cloud integrated storage

Archive

StorageGRID Webscale



Store & manage large
amounts of data reliably &
cost-effectively across
locations & decades

Try our solutions today



Test Drive

1-Hour Free Trial
Cloud ONTAP | NPS for AWS

POC.netapp.com

1-Hour Free Trial
Cloud ONTAP | NPS for AWS
2-Week Evaluation
NPS for AWS



2-Week Evaluation
Cloud ONTAP
90-Day Trial
SteelStore Virtual Appliance

More information

ハイブリッド クラウド ソリューション –
Amazon Web Services | ネットアップ –
<http://nt-ap.com/1Fo3YYT>

まとめ

- ネットアップは、お客様に有益とあって頂けるよう様々なクラウドでの選択肢をご提供致します。

パブリック クラウドの
優れた経済性・柔軟性



エンタープライズ ストレージの
高いパフォーマンス、可用性、
データ管理性



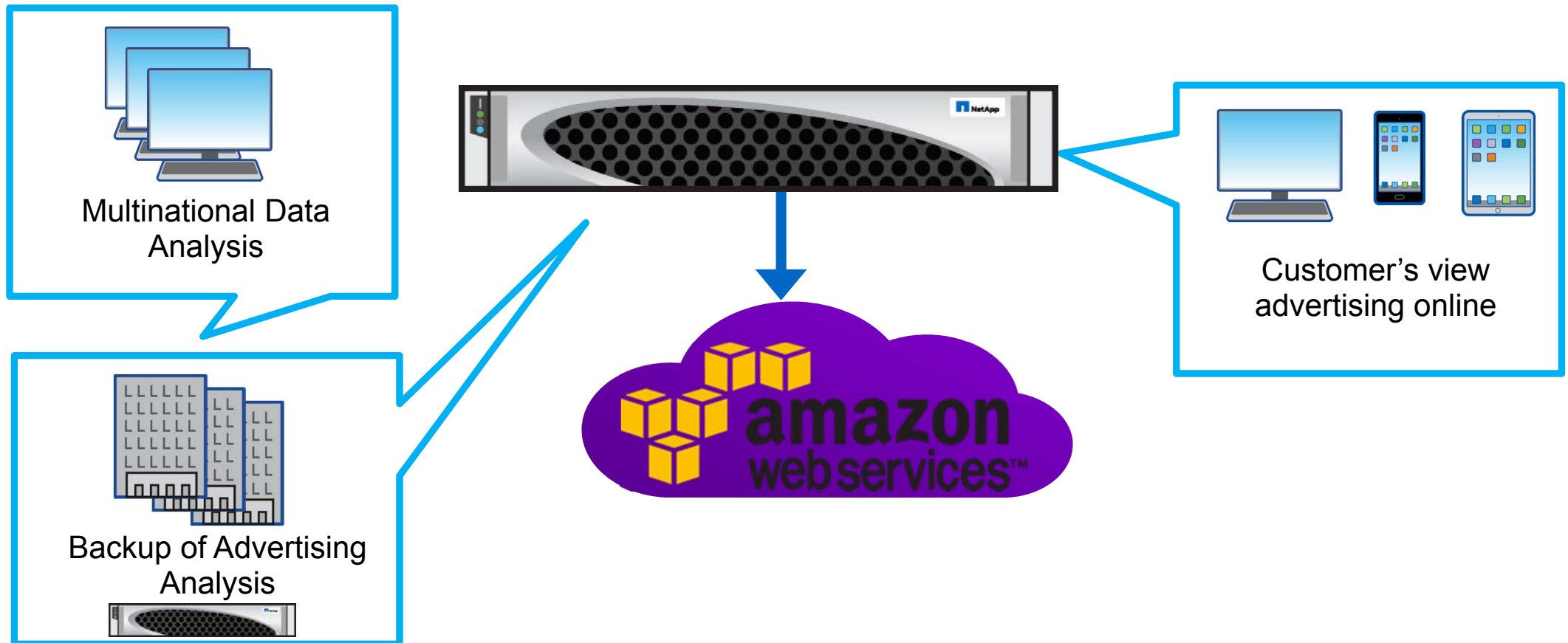


NetApp®

Thank you

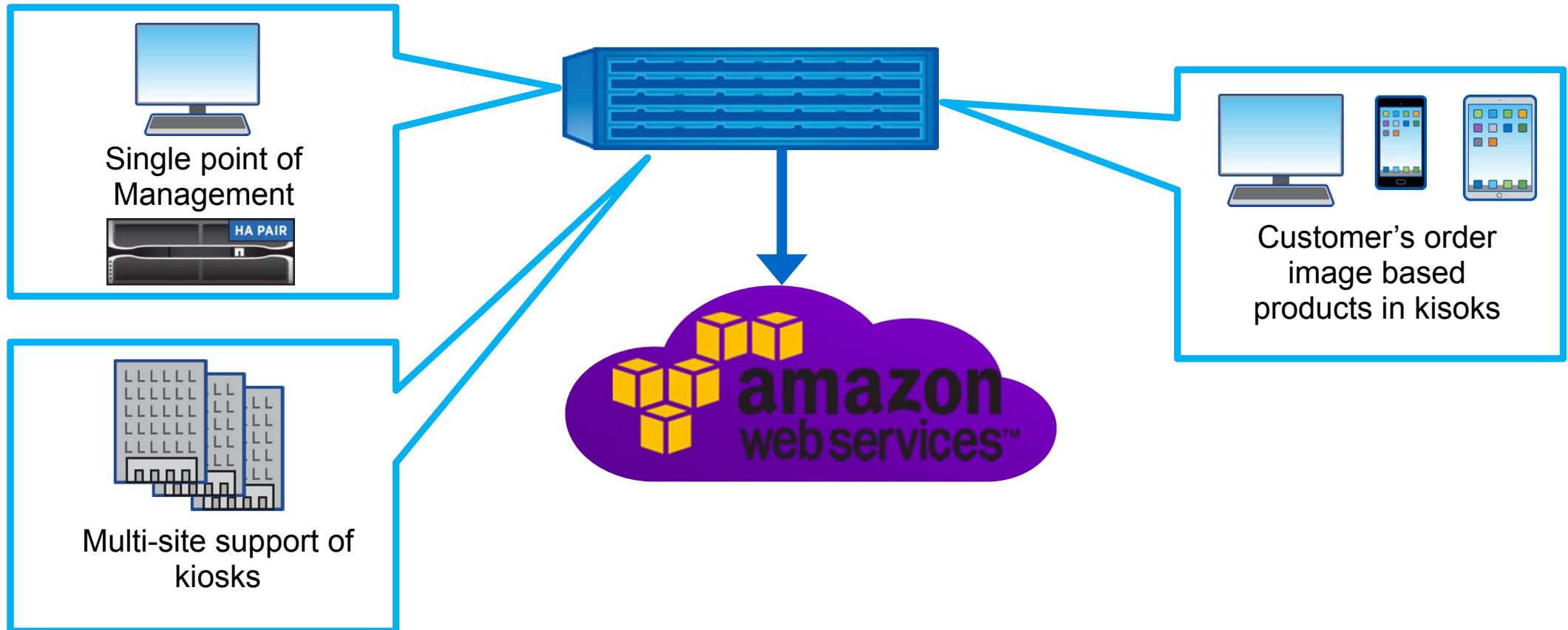
Use Case – Back up advertising analytics to AWS Cloud

Massive big data, security (encryption) and efficiency/cost controls (deduplication)



Use Case – Manage Petabytes of Image data to AWS Cloud

Scale to multi-Petabyte annual growth of data, simplify storage architecture and management



Digital Media Company Chooses StorageGRID Webscale To Support Global Retailers

Business Challenge

- Grow at 2.5+ PB/year, support 19,000 retail locations & 8,000 kiosks generating 18 million+ transactions/year
- Support peak seasonal demand - all this with minimal IT staff

Solution

- StorageGRID Webscale enterprise-class object storage with cloud tiering to Amazon S3

Benefits

- Simplified management & storage for billions of files across dozens of system
- Easy on-ramp to S3 from a massively scalable on-premises repository
- Low-cost repository for a remote, independent, safe copy of their data
- IT that supports high-growth with minimal involvement from staff



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USA based company with 19,000 retail locations & 8,000 kiosks generating 18 million+ transactions/year

Hybrid Cloud Solutions to Transform Your Enterprise Faster

- ✓ Accelerate - Innovate faster
- ✓ Optimize your hybrid IT resources
- ✓ Maximize data stewardship

- ✓ Run backup, archive & elastic workloads





Appendix

Dynamic Dev and Test Environment Enhances Customer Experience with Cloud ONTAP for AWS

Business Challenge

- Establish a faster, simpler, and less costly approach for testing and refining new applications on AWS prior to production launch

Solution

- NetApp® Cloud ONTAP for AWS

Benefit

- Improves application functionality and customer satisfaction by speeding time to innovation, supporting more frequent updates, and quickly resolving issues
- Provides a simple, low cost application dev and test environment in AWS that links with storage in the data center
- Supports a cohesive on-premises and cloud data management strategy



About the Firm

- 100 year old Fortune 100 company provides insurance, annuities, and retirement solutions to those working in education
- Largest provider of employer-sponsored 403b tax sheltered annuities

Wright-Pierce Finds NetApp SteelStore and Amazon S3 Cost-efficient and Easy to Maintain

Business Challenge

- Company's growth means an increasing amount of data must be stored; expanding disk-to-disk backup system is too costly

Solution

- NetApp® SteelStore™ cloud-integrated storage appliance and Amazon S3 cloud storage

Benefit

- Countless man-hours saved by having only one backup appliance to maintain
- Lower backup-related costs
- Greater data security
- Restores in minutes versus several hours with tape



“I was curious if the appliance would be as easy to deploy as NetApp promised, and it was. I commend the user interface, too. It's very clean and gives me the right information quickly.”

Ray Sirois, Director of IT, Wright-Pierce

Spot Trading Implements NetApp SteelStore Cloud Integrated Storage for Data Backup

Business Challenge

- Spend less time managing data storage process and better utilize IT team resources

Solution

- NetApp® SteelStore cloud integrated storage with Amazon Glacier cloud storage service

Benefit

- 40 hours/month reclaimed by IT team to focus on new strategies and systems
- Annual archival storage and cost reduced by 96%
- Restore in minutes instead of two to three days with tape
- Meet encryption data security requirements



“Once we connected to Amazon Glacier, we pointed Backup Exec to the SteelStore appliance, and it just worked.”

Andrew Girin, IT Technical Team Lead, Spot Trading

Financial Services and Insurance Leader Goes All in with Cloud

Business Challenge

- Take advantage of cloud agility and benefits while meeting broad compliance requirements

Solution

- NetApp® Private Storage for Cloud

Benefit

- Saves millions of dollars in data center costs
- Provides reliable, high-performance DR
- Meets data compliance and sovereignty requirements
- Mitigates risk with multicloud capabilities
- Offers proven path for moving production workloads to the cloud
- Avoids rearchitecting applications for cloud



About the Firm

- Large financial services and insurance company with 15,000 employees and 9 million customers
- Custodian of petabytes of personal data in a heavily regulated industry

Nanyang Technological University Academics & Research

Business Challenge

- Scalable computing resources for academics & research by 33,000 students, 4,000 teaching & research staff, & HPC Center
- Control sensitive research data for healthcare, genomics, defense

Solution

- Integrated private & public clouds managed with Red Hat.
- Workloads move from private cloud to NPS for AWS during peak times & for research – eg typhoon simulation

Benefits

- Reduced costs by 30% by integrating public & private clouds.
- Increased flexibility during peak times with better service for researches – avoids IT procurement
- Complete data sovereignty



Top 50 university & HPC Center for multidisciplinary research

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“NetApp provided us with the right hybrid cloud solutions to create an infrastructure that tied into our existing private cloud environment while meeting all our immediate needs.”

MR. SOH Hwee Jin, Senior Assistant Director, High Performance Computing Centre

Hybrid solutions that span premises and AWS are a critical need

