YOUR INDEPENDENT HPE SOFTWARE COMMUNITY

Transforming Data Protection with HPE:
A Unified Backup and Recovery
June 16, 2016

Brought to you by

Hosted By

Bob Crews
President
Checkpoint Technologies
Florida Chapter Leader

Today's Speakers

Julita Kussmaul
Product Marketing - Data Protection
Hewlett Packard Enterprise

Mike Whalen
Storage Specialist
Hewlett Packard Enterprise

Housekeeping

- This "LIVE" session is being recorded
  Recordings are available to all Vivit members

- <u>Session Q&A:</u>
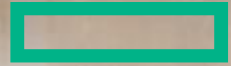 Please type questions in the Questions Pane

Webinar Control Panel

Toggle View Window between
Full screen/window mode.

Questions

Transforming data protection with HPE
A unified backup and recovery solution for a modern enterprise

Julita Kussmaul, Sr Product Marketing Manager, HPE Software
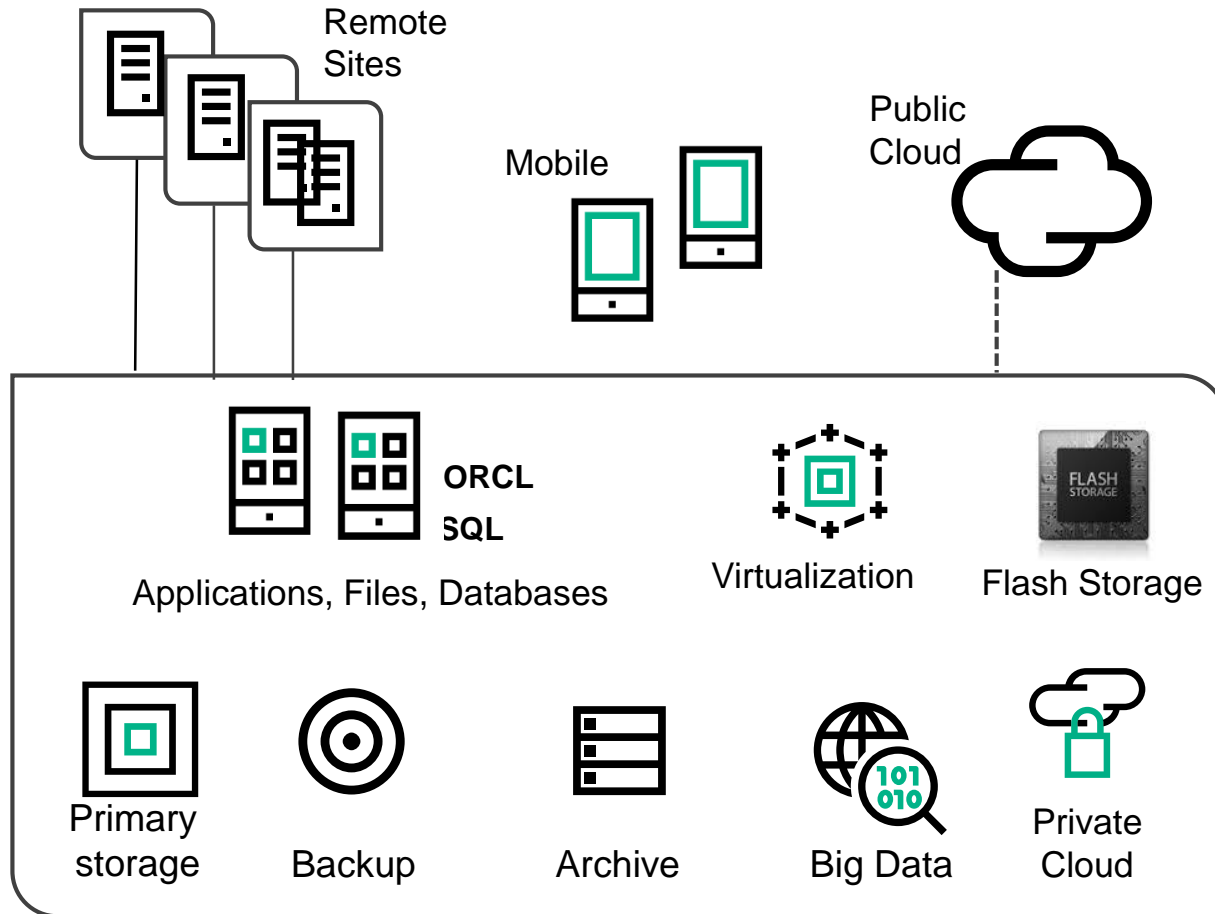Mike Whalen, Sales Specialist, Backup, Recovery & Archive

June 16, 2016

Agenda

- Today's backup and recovery: key trends and challenges

- Point products vs. integrated solutions

- HPE Data Protector and our single unified architecture

- Unified data protection in action: customer case study

- 5 ways to transform IT environment with Data Protector

- Integration with storage: StoreOnce, 3PAR array, RMC

- Summary and next steps

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The modern enterprise has evolved…

Remote Sites

Mobile

Public Cloud

ORCL SQL

Applications, Files, Databases

Virtualization

Flash Storage

Primary storage

Backup

Archive

Big Data

Private Cloud

Dynamic
Evolving with new applications, data types and business models, emergence of flash
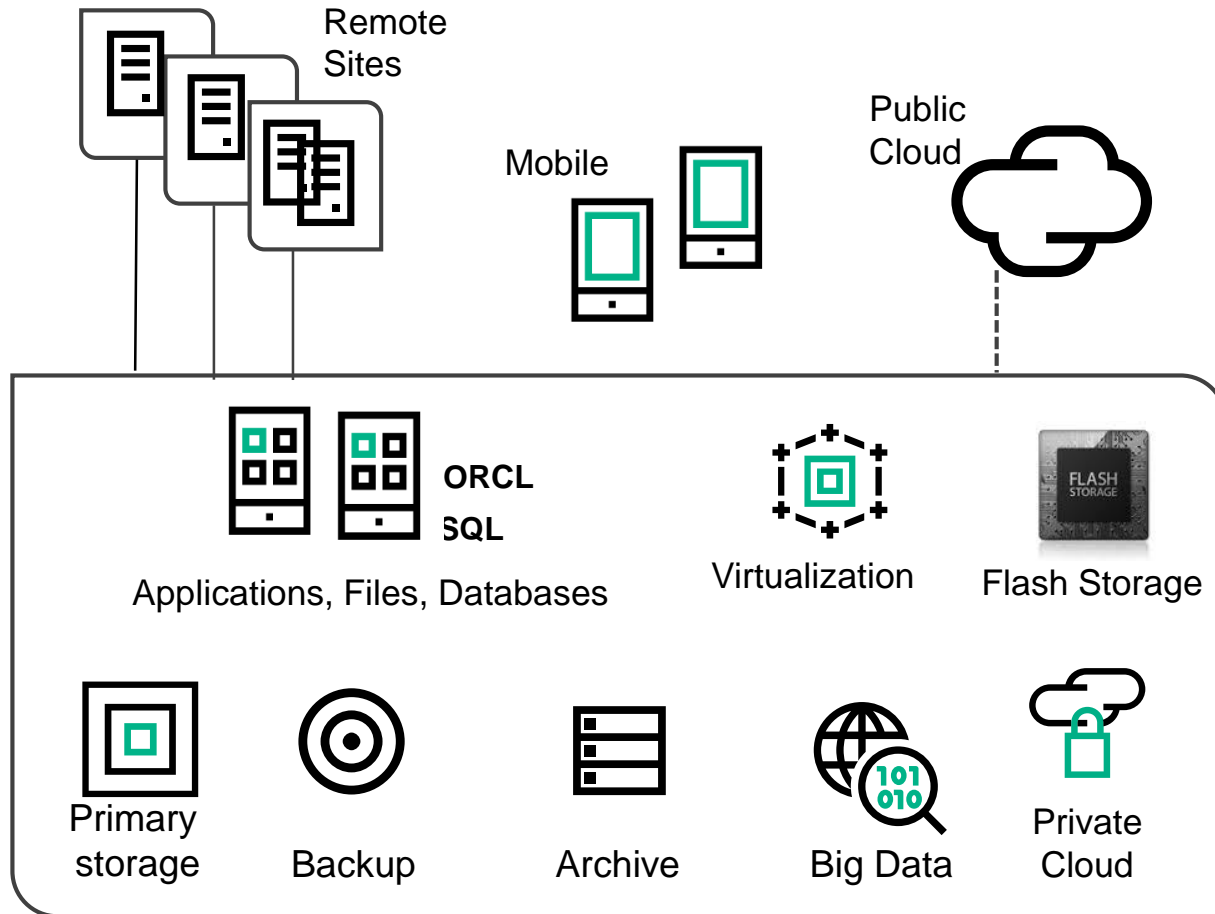
Distributed
Unique requirements for mobile, cloud, virtualization, remote offices

Always-On
Zero tolerance for downtime. Users need access to data anytime, from anywhere

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…but enterprise data protection has not

Remote Sites

Mobile

Public Cloud

ORCL SQL

Applications, Files, Databases

Virtualization

Flash Storage

FLASH STORAGE

Primary storage

Backup

Archive

Big Data

Private Cloud

Unpredictable
Zero planning window for rapid spikes in demand. No tolerance for manual processes

Isolated
10+ separate production, protection, archive systems for DC, ROBO, Virtualization, etc.

Exposed
Single-controller systems, failed backups, stranded data with limited IT, cyber attacks

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What are today's data protection challenges

More pressure to prevent downtime

$6.5M   **Online brokerage per hour**
$336K   **Industry average cost for 1 hour**

High cost of legacy infrastructure

Application modernization

VM sprawl

VM   VM

Data center consolidation

Security risks and cyber attacks

Cost   **Risk**   **Complexity**
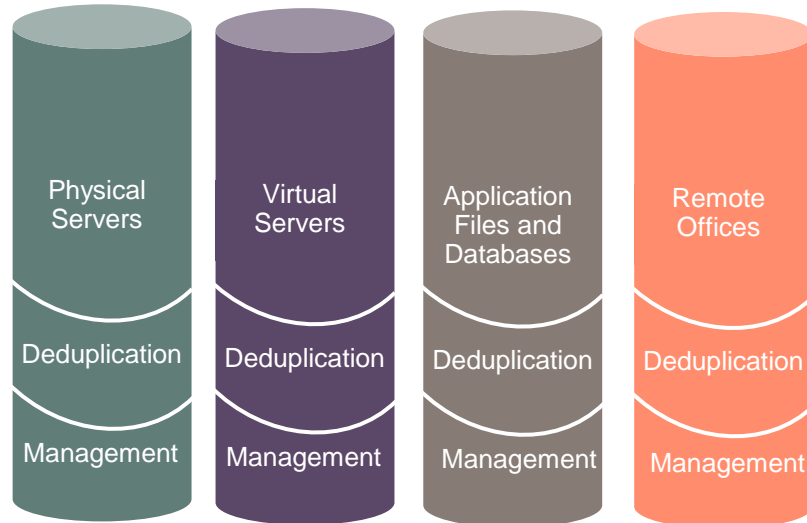
IT managers have a choice:

Deploy more software or hardware point products, or

Invest in an integrated, unified architecture

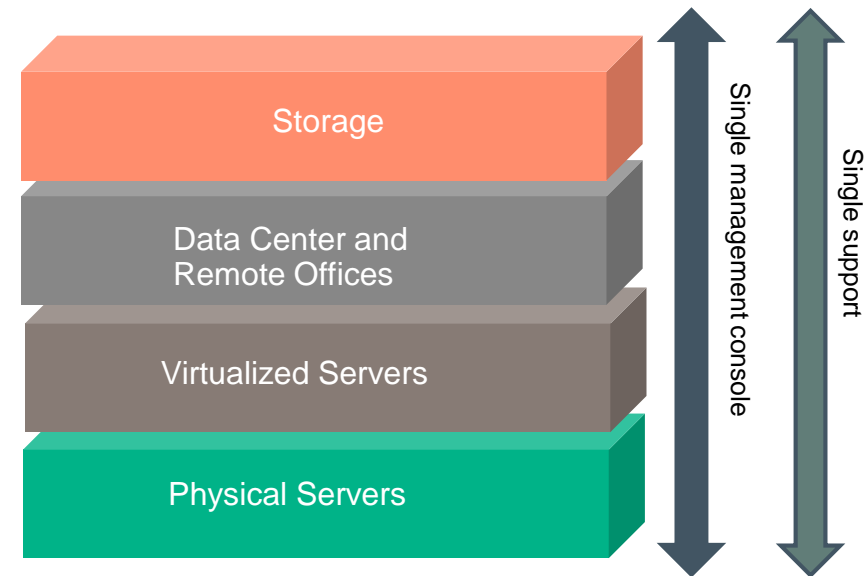# Point data protection products vs. a single integrated solution

Point products

- Separate management consoles
- Siloed deduplication
- Multiple support organizations
- Separate data analytics

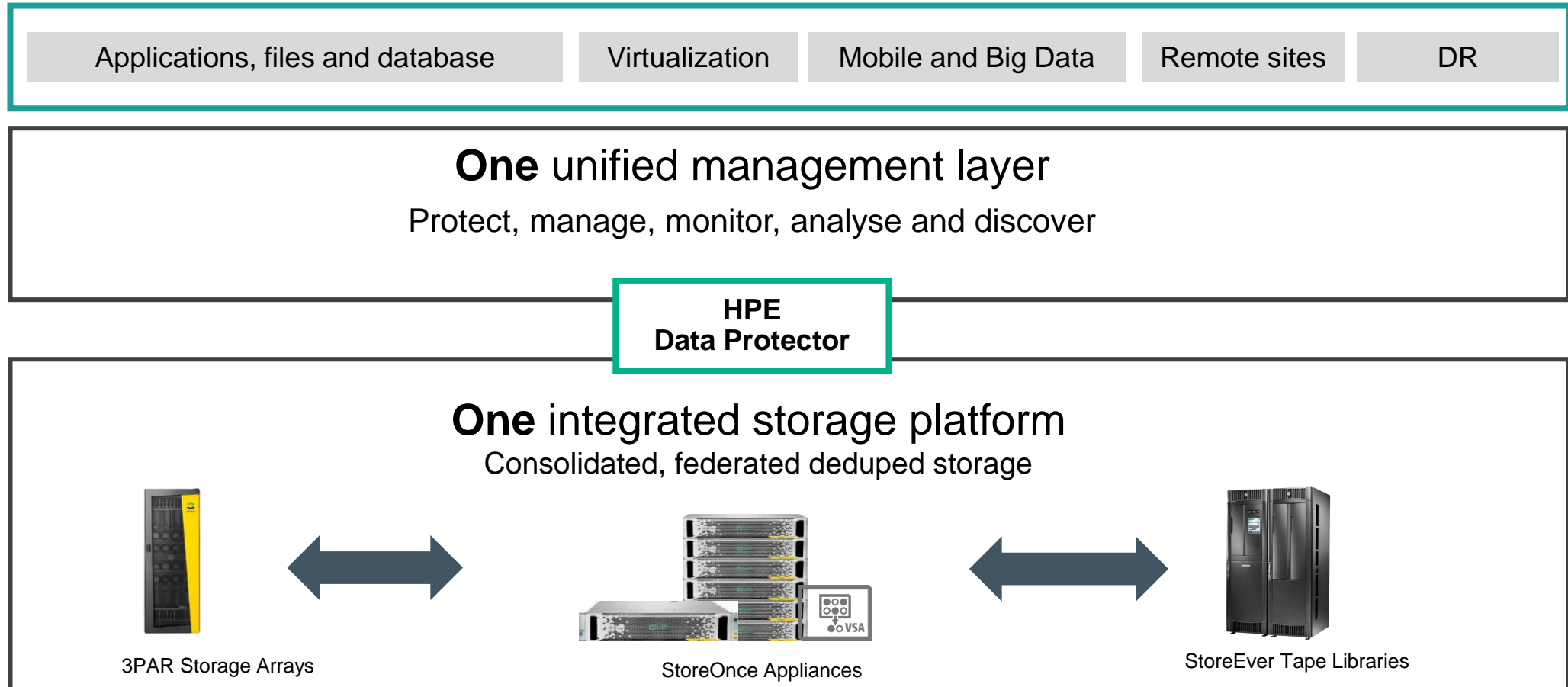**Higher risk**
Higher cost
Complexity

A unified, integrated solution

- A single software and hardware solution that is designed, tested, purchased, delivered and supported together
- One deduplication engine through the stack

Lower TCO
More reliable
Lower complexity
More innovation

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Our single HPE data protection architecture

| Applications, files and database | Virtualization | Mobile and Big Data | Remote sites | DR |

One unified management layer

Protect, manage, monitor, analyse and discover

**HPE
Data Protector**

One integrated storage platform

Consolidated, federated deduped storage

3PAR Storage Arrays

StoreOnce Appliances

StoreEver Tape Libraries

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Unified Data Protection in action

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HPE data protection solution implementation

Primary Datacenter

HPE Backup Navigator

HPE Storage Optimizer

HPE Data Protector

HPE Recovery Mgr Central

3PAR array

StoreOnce

StoreEver Tape
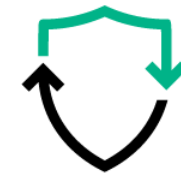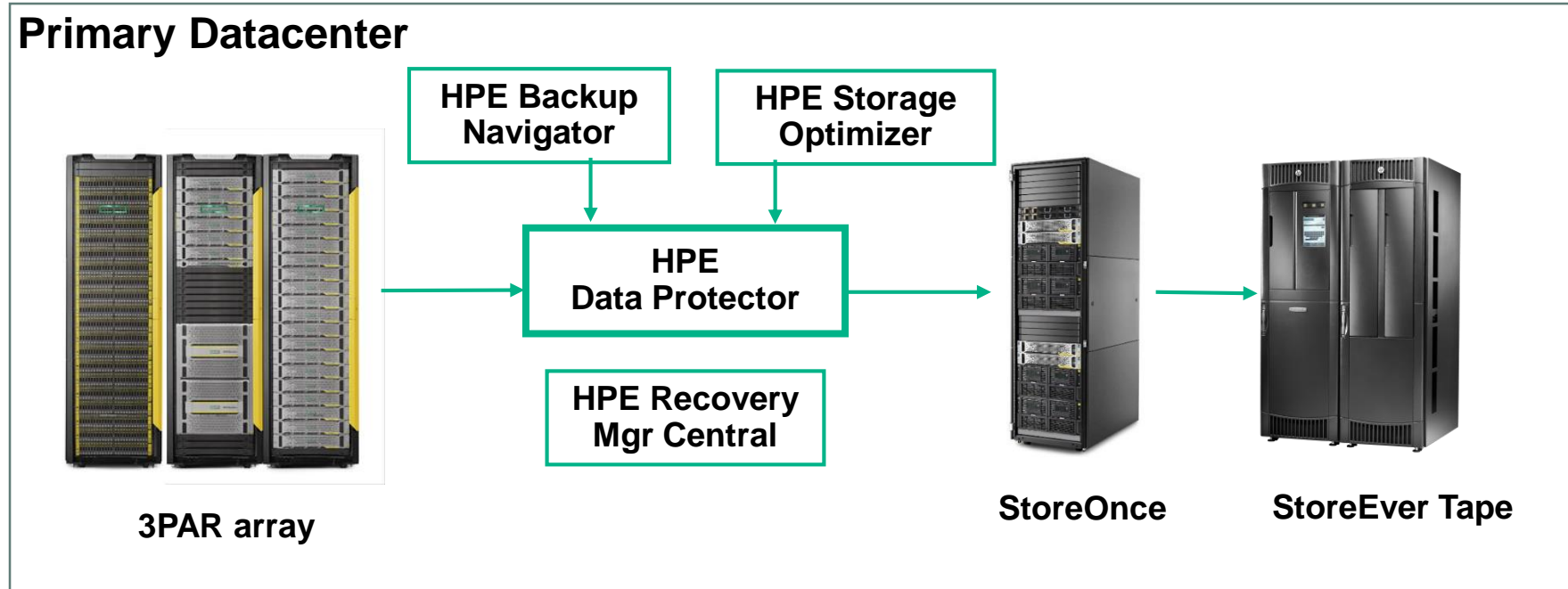
One Platform
One Interface
One Deduplication

Remote & Branch Offices

HPE Data Protector

StoreOnce

Disaster Recovery

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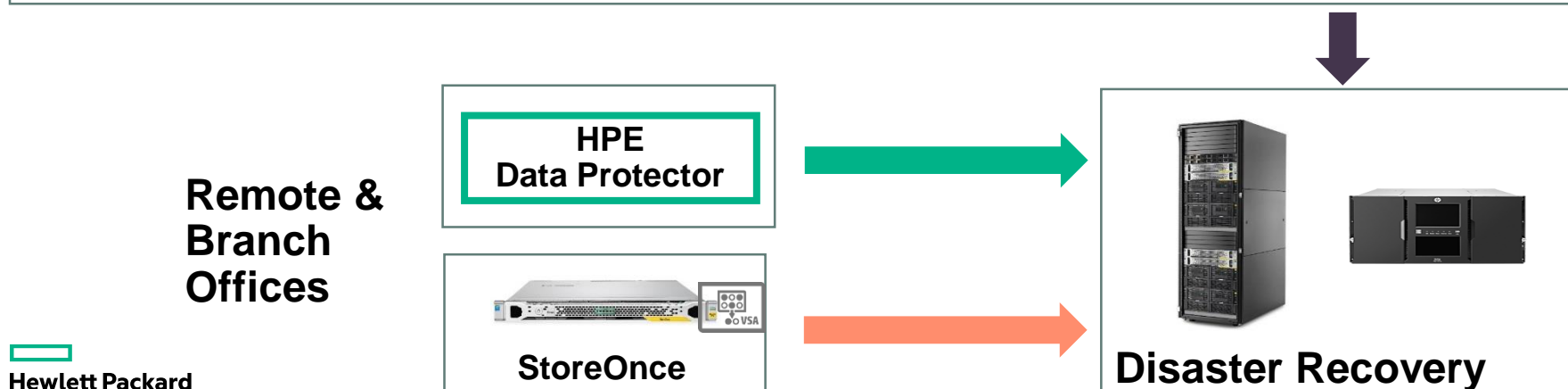
UPS: Adaptive backup in action

+1,200 distribution facilities

Primary datacenter
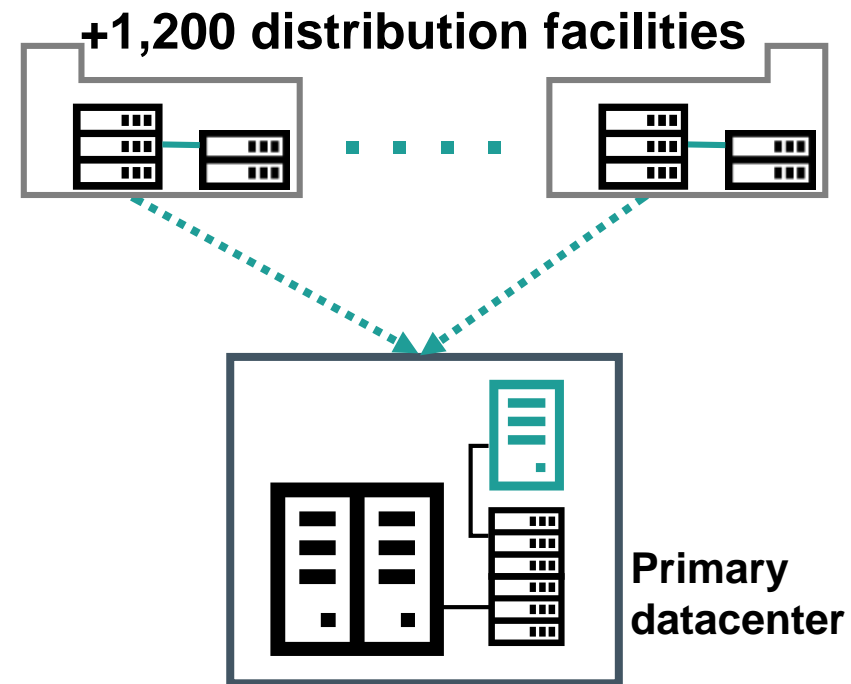
Why HPE?
- **Only vendor** to offer fully centralized management of combined software & hardware solution
- HPE StoreOnce replication from remote site to data center for disaster recovery
- Remote system bare metal recovery

HPE Data Protector
Core protection engine of HPE data protection

Hewlett Packard
Enterprise

5 ways to transform your environment with HPE Data Protector

1 Simplify and standardize data protection across heterogeneous environments, applications and media.

2 Enable performance and reliability at scale.

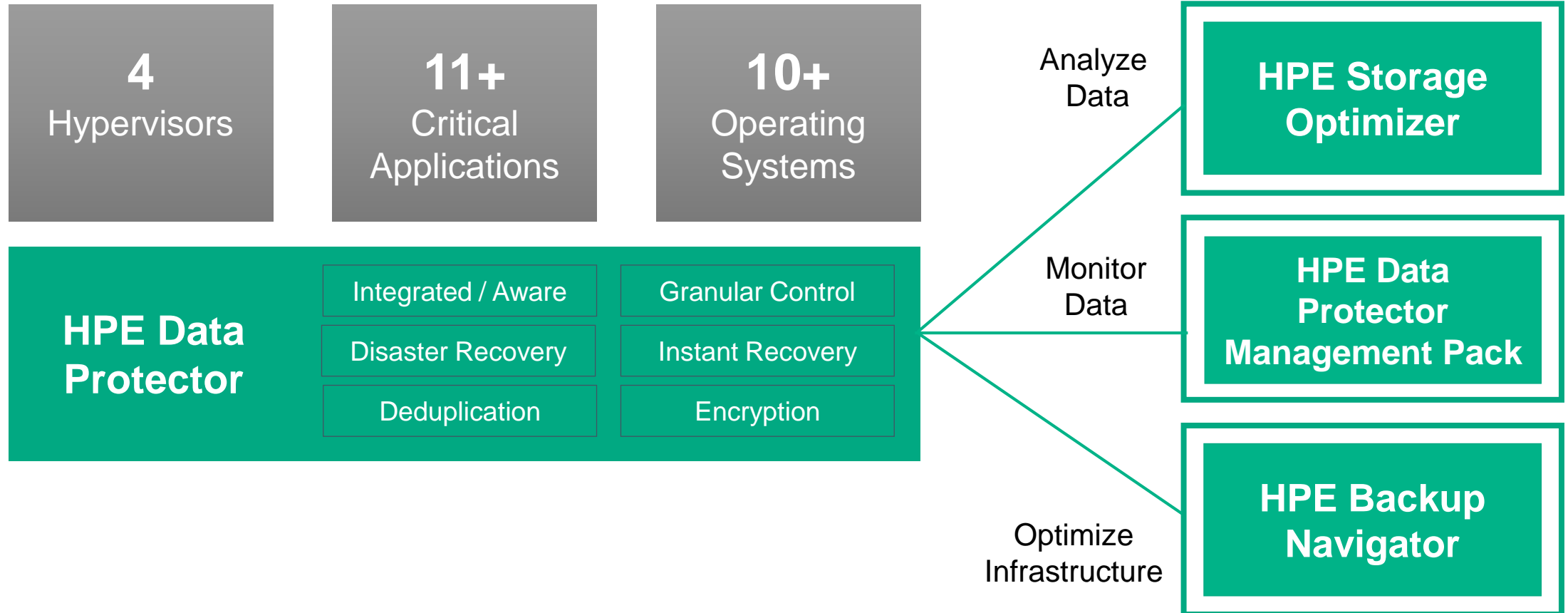**3** Ensure flexibility and control with advanced virtual server protection.

4 Enable business continuity and compliance with application consistent recovery.

5 Maximize backup infrastructure and plan for future needs with advanced operational analytics and data storage tiering capabilities.

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Comprehensive protection across all environments

HPE Adaptive Backup and Recovery Suite

| **4** Hypervisors | **11+** Critical Applications | **10+** Operating Systems |

HPE Data Protector

Integrated / Aware	Granular Control
Disaster Recovery	Instant Recovery
Deduplication	Encryption

Analyze Data

HPE Storage Optimizer

Monitor Data

HPE Data Protector Management Pack

Optimize Infrastructure

HPE Backup Navigator

Hewlett Packard Enterprise

Industry leading performance and scalability

100,000 sessions/day

5,000 clients

1 trillion unique files

Data Protector centralized management and reporting

Remote sites	Replication site

Core datacenter

Storage arrays	Virtualized infrastructure	Mission-critical applications	Converged infrastructure
NAS	Legacy infrastructure	Business applications	Operating Systems

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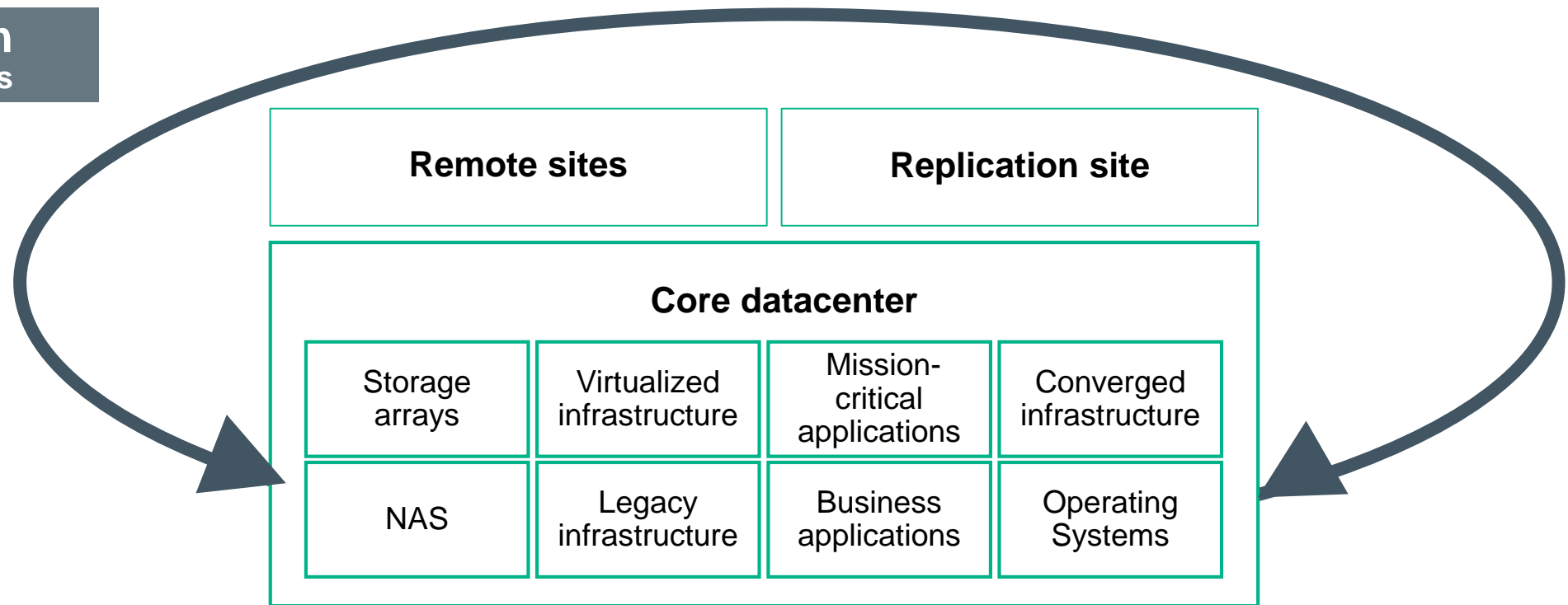
Advanced data protection for virtualized environments

Multi-hypervisor support	Flexible VM backup options	Advanced recovery options
• VMware vSphere • Microsoft Hyper-V • Citrix Xen • KVM	• Agent-based • Agentless • Hardware-assisted agentless	• Single file recovery • Instant VM recovery

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Native integrations with core enterprise apps and databases

Microsoft SQL Server

Oracle Database

SAP HANA

Microsoft Exchange

Microsoft SharePoint

VMware

Microsoft Hyper-V

Enable rapid and consistent recovery

- Automatically groom transaction logs

- No need to manage application integration

- Common interface for different applications

- Full and incremental backup process

- Diverse secondary storage options

- Easy to manage restore via Data Protector, StoreOnce Catalyst and RMC plugins

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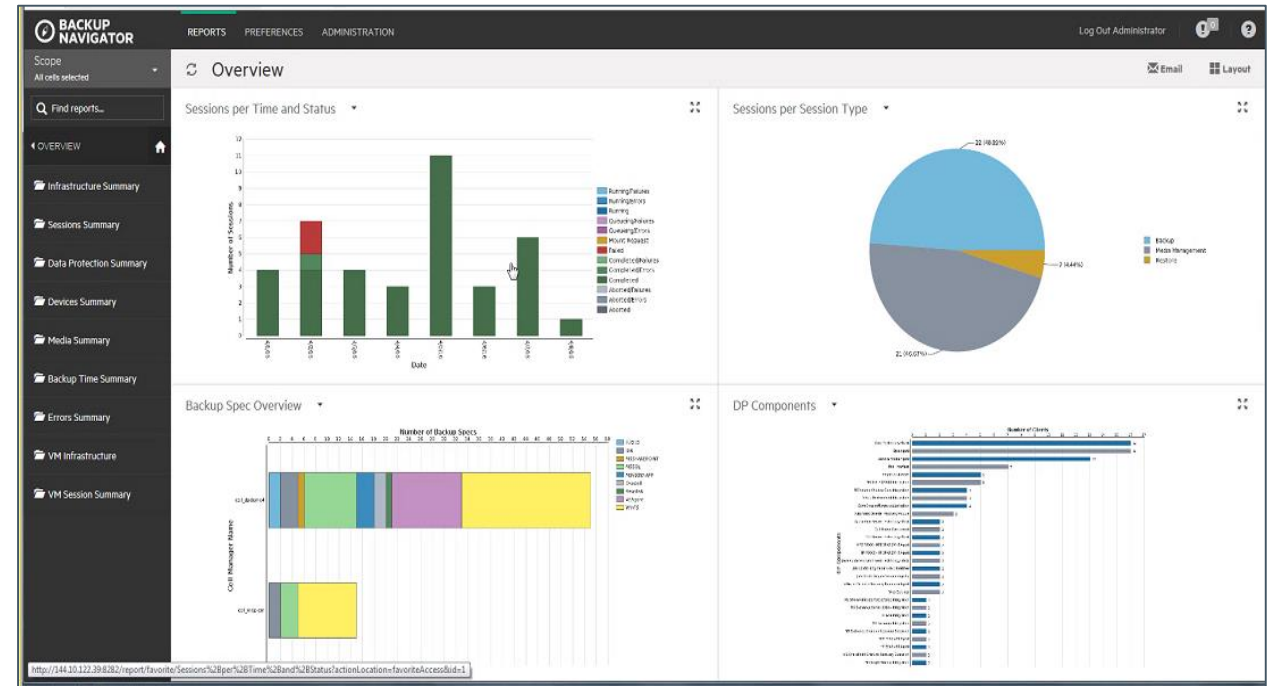# HPE Backup Navigator – Analytics and advanced reporting

>90 Reports
Environmental, retrospective, predictive and prescriptive analysis

Schedule and Subscription-Based

Web-based User Interface

Interactive Dashboards

Real-time Predictive Analytics

Analyze Data Protector infrastructure, locate and troubleshoot problems and simplify usage in multi-cell and multi-tenant environments

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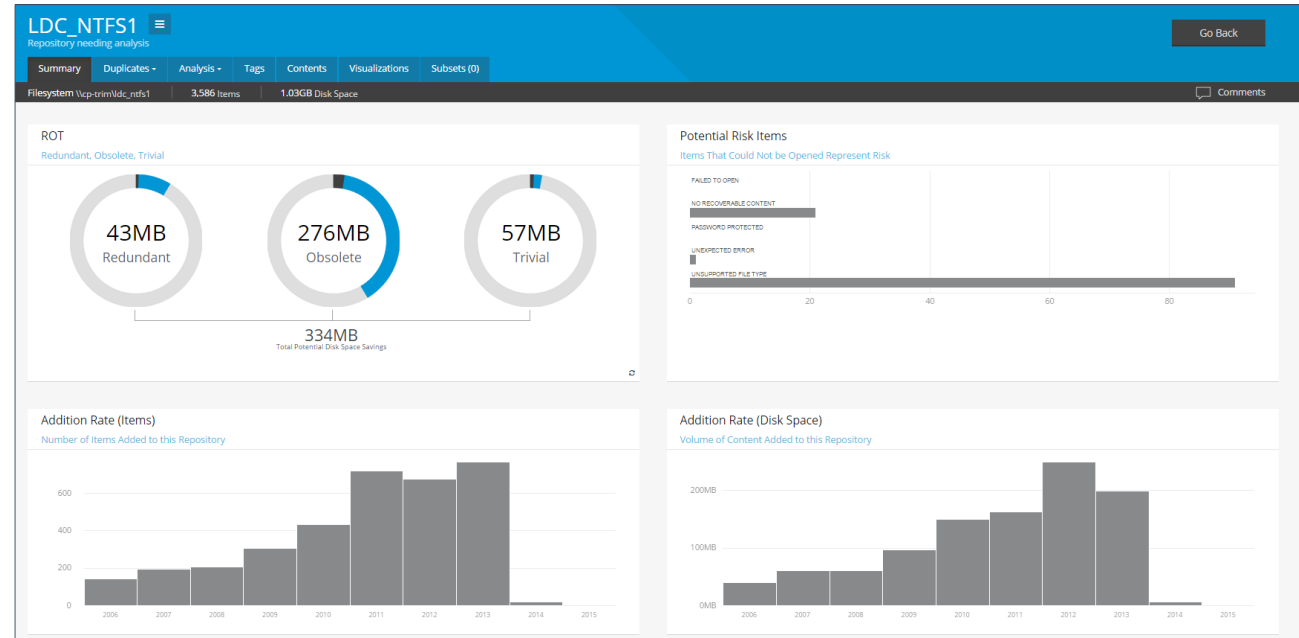# HPE Storage Optimizer – Analysis tool for eliminating ROT data

Improved infrastructure management

Lower total IT spend

Backup times reduced by up to 50%

Better application performance

Support information management and governance initiatives

Analyze data to identify where to eliminate redundant or unneeded data so that you can store the right files on the right tiers and easily
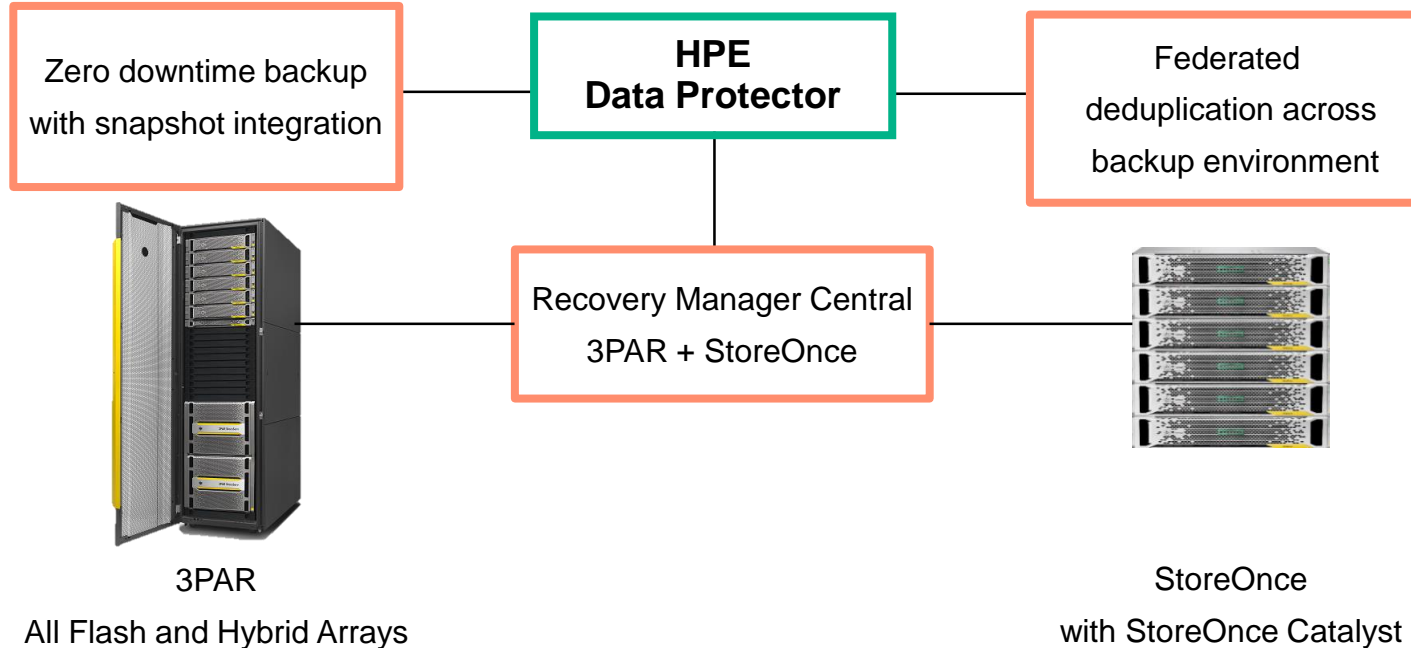
HPE Integrations
HPE 3PAR, Recovery Manager Central and StoreOnce Backup Systems

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Key points of integration across software and storage

Advanced integration capabilities with best-of-breed storage

Zero downtime backup with snapshot integration

HPE
Data Protector

Federated deduplication across backup environment

Recovery Manager Central
3PAR + StoreOnce

3PAR
All Flash and Hybrid Arrays

StoreOnce
with StoreOnce Catalyst

3PAR StoreServ array

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3PAR InfoWorld
Technology of the Year

3PAR Gartner Critical
Systems Capabilities #1

Data Protector market leader
In performance and scalability

HPE StoreOnce 6500
Best Deduplication Backup Appliance

Market leader in 2014 / 2015 Gartner
Magic Quadrant for Deduplication
Backup Target Appliances

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HPE 3PAR StoreServ portfolio: Eliminating boundaries

- ONE Operating System
- ONE Interface
- ONE Feature Set

Optimized for Performance

Optimized for Scale

Optimized for Value

#1 Market Share
Midrange SAN Storage
HP 3PAR StoreServ

Hewlett Packard
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IDC

**IDC Worldwide Disk
Storage Systems
Tracker for CQ2, 2015**

BUSINESS APPLICATION
Flash
Memory
Summit
2015 BEST OF SHOW

**Flash Memory Summit
Best of Show**
3PAR StoreServ 20850

ALL-FLASH NEW
2015-16
DCIG
BUYER'S
GUIDE
ARRAY

**All-Flash Storage Array
Recommended**
HP 3PAR StoreServ 20000

FLASH MEMORY
2014-15
DCIG
BUYER'S
GUIDE
STORAGE ARRAY

**Flash Memory Storage Array
Recommended**
HP 3PAR StoreServ 7450

BEST-IN-CLASS
2015
DCIG
BUYER'S
GUIDE
Repeat

**Midrange Array
Best-in-Class**
HP 3PAR StoreServ 7000

STORAGE
MAGAZINE
PRODUCTS
OF THE YEAR 2014
GOLD

Storage Magazine #1 All Flash
Storage Array Vendor
HP 3PAR StoreServ 7450

Integrated protection and disaster recovery for 3PAR Flash

Flash-Optimized Availability	Flash Integrated Backup and Disaster Recovery

Virtual Copy (Snapshots)

Data Protector backup application
With StoreOnce Catalyst

Remote Copy
(Full range of DR options inc. Peer Persistence)

Application Managed
With StoreOnce Catalyst

Recovery Manager Central (RMC)
Flat Backup

Offsite Copy
3PAR StoreServ

**Primary Storage
3PAR StoreServ**
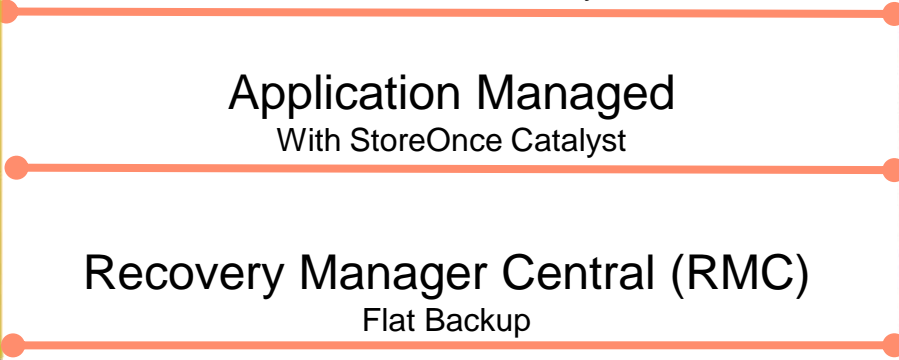
Secondary Storage
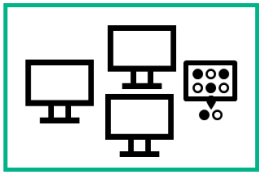StoreOnce

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HPE StoreOnce portfolio: A single backup platform

- Flexible deployment options (physical and VM)
- Reduced costs with up to 95% lower data volume
- Optimized data movement without rehydration
- Simplified management of remote sites
- Integration with 3PAR and Data Protector

6600

Scalable up to
1.7PB usable

5500

Scalable up to
864TB usable

5100

Scalable up to
216TB usable

3520 / 3540

Scalable up to
15.5TB / 31.5 TB usable

3100

5.5TB usable

VSA

1TB, 4TB, 10TB,
and 50TB usable

HPE Data Protector
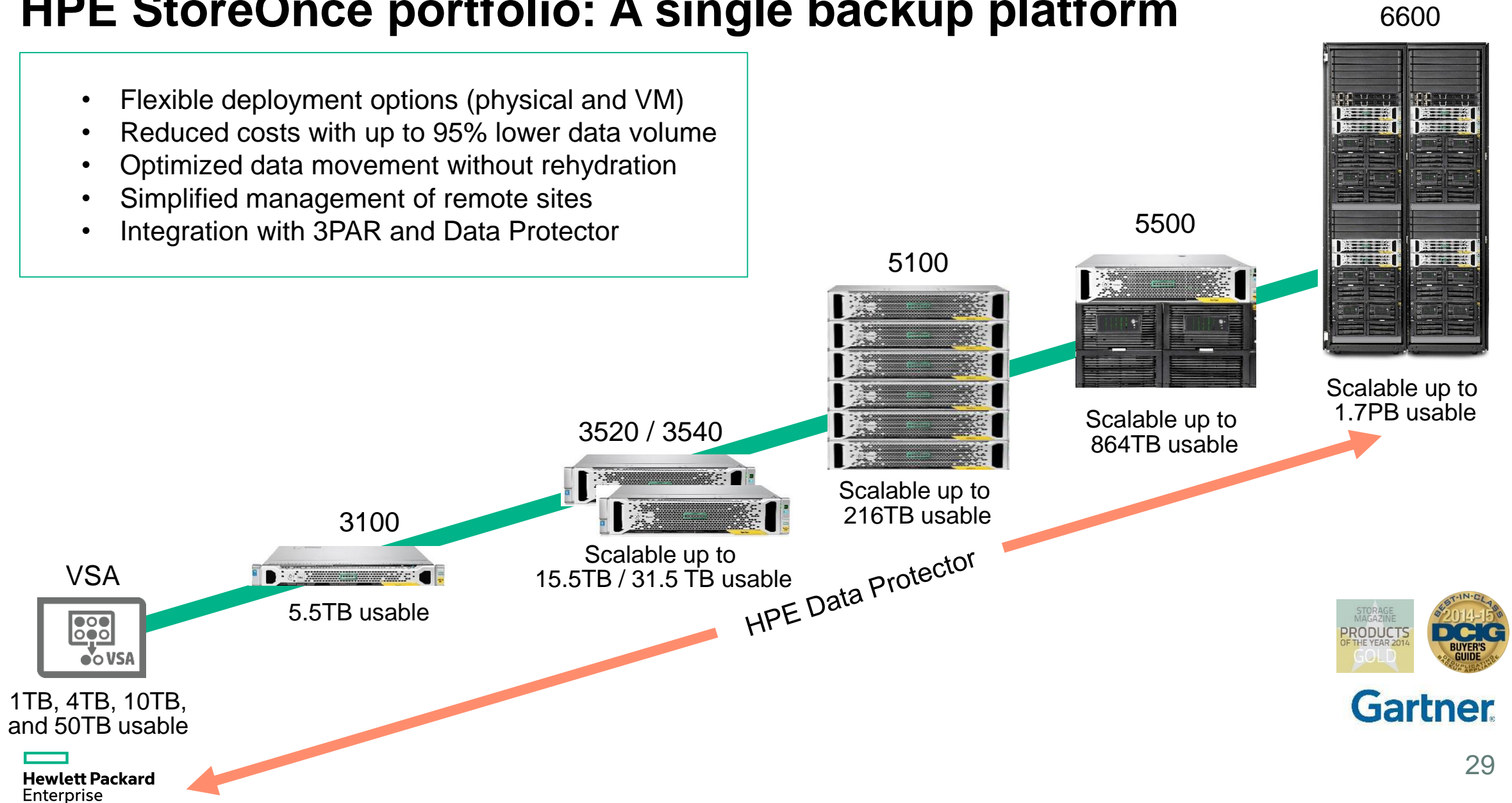
Optimize storage with federated deduplication

Application source **Backup server** **Target system**

Low-bandwidth   Low-bandwidth
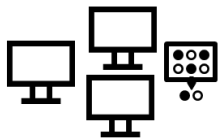
- Dedupe where data is created – application source
- Reduces network bandwidth requirements
- Ideal for remote or bandwidth-constrained sites

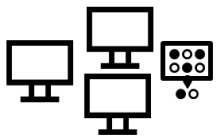**Application source** **Backup server** **Target system**

Low-bandwidth

- Backup server participates in dedupe process.
- Reduces bandwidth requirements to StoreOnce.
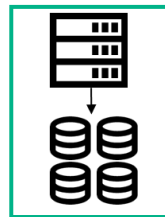- No additional impact on application source.

Application source **Backup server** **Target system**

- Purpose built appliance optimized for backup data
- Simplest implementation – no operational changes
- Ideal for high-bandwidth LAN environments.

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HPE Recovery Manager Central: Flash-integrated flat backup

Fast

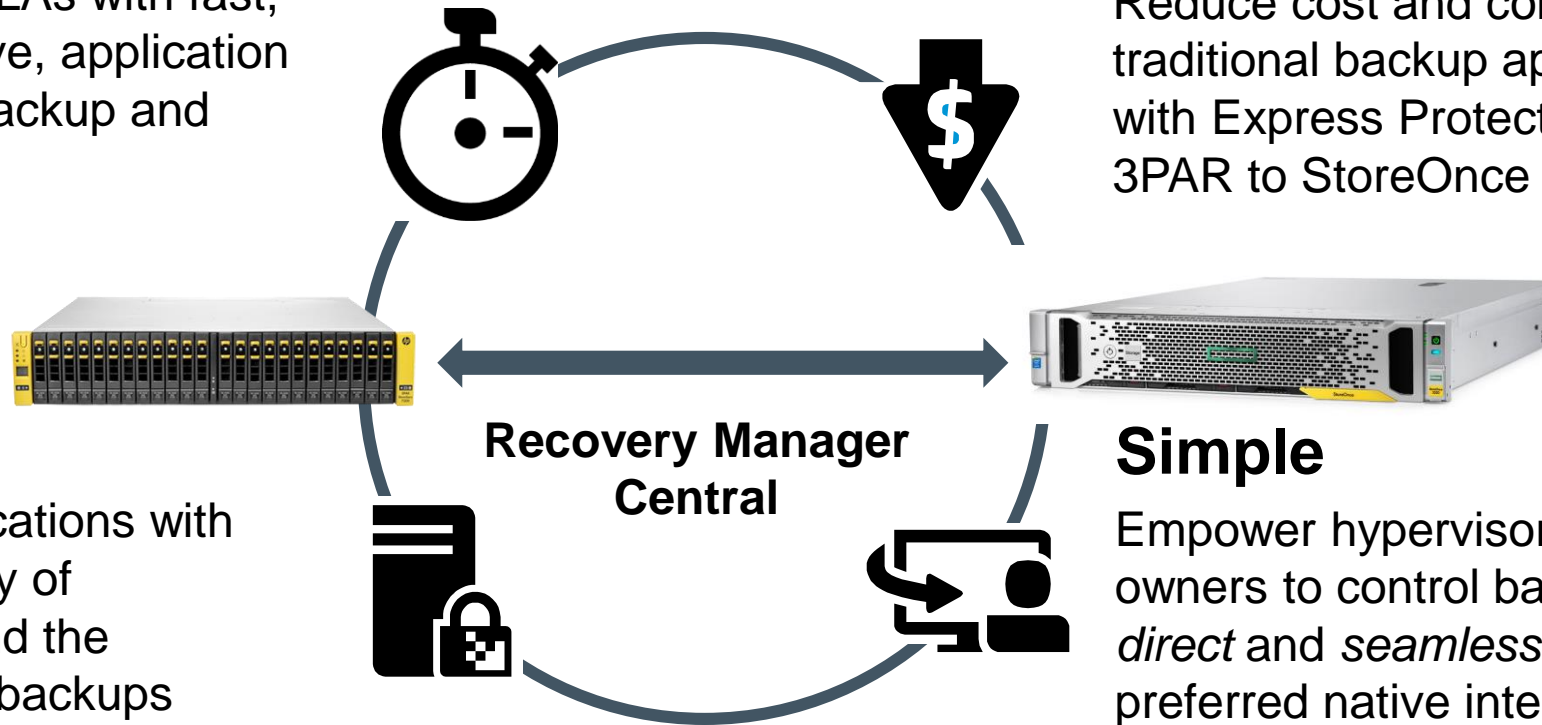Deliver on SLAs with fast, non-disruptive, application consistent backup and recovery

Efficient

Reduce cost and complexity of traditional backup approaches with Express Protect *direct* from 3PAR to StoreOnce

Recovery Manager Central

Reliable

Protect applications with the availability of snapshots and the protection of backups

Simple

Empower hypervisor and application owners to control backup and recovery *direct* and *seamlessly* from their preferred native interfaces

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HPE's unified data protection solution for a modern enterprise

HPE Data Protector

HPE Backup Navigator

HPE Storage Optimizer

+

+

=

Better performance

Greater scalability

Cost savings

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Why HPE?

1 One organization with highly efficient, interoperable suite of technology solutions to Protect your Digital Enterprise.

2 Trusted technology partner with over 80 years of innovation.

3 Proven performance, lower risk, lower cost, high efficiency.

Call to Action

1 Are you fully protected? Can you recover fully and quickly? Engage HPE to answer.

- Trusted highly experienced HPE Technical Consultants

- Free Assessment Tools. Free Architecture.

- Download Data Protector from hpe.com/software/dataprotector

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Thank you

- Complete the short survey and opt-in for more information from Hewlett Packard Enterprise.

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www.vivit-worldwide.org