Reduce risk and ensure resiliency in HPE's All-Flash data center

Veeam

1+1=3
HPE + Veeam
Better Together

Four Trends you Should be Planning

1) Production optimization via Flash

2) When you modernize Production, you must modernize Protection

3) Get more from your data protection infrastructure
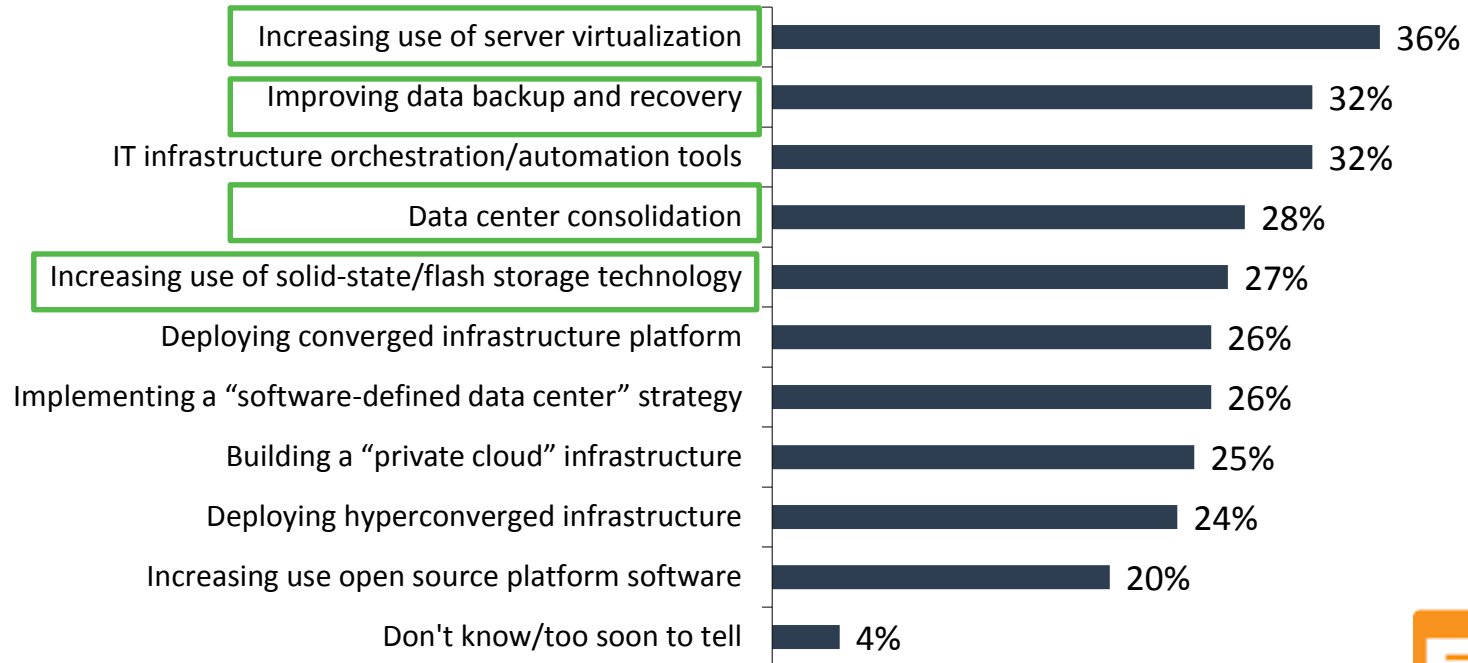
4) Plan for 'Hybrid Everywhere'

Jason Buffington
ESG Principal Analyst

2017 Data Center Modernization Spending Priorities

Q: In which of the following areas will your organization make the most significant investments over the next 12-18 months?

Area	Percentage
Increasing use of server virtualization	36%
Improving data backup and recovery	32%
IT infrastructure orchestration/automation tools	32%
Data center consolidation	28%
Increasing use of solid-state/flash storage technology	27%
Deploying converged infrastructure platform	26%
Implementing a "software-defined data center" strategy	26%
Building a "private cloud" infrastructure	25%
Deploying hyperconverged infrastructure	24%
Increasing use open source platform software	20%
Don't know/too soon to tell	4%

ESG
Enterprise Strategy Group

We've All Seen Flash Evolve at a Record Pace

Wave 1: Performance

Wave 2: Economics

Wave 3: New Normal

Niche Workloads
Adding SSDs to existing storage arrays to increase performance for performance sake.
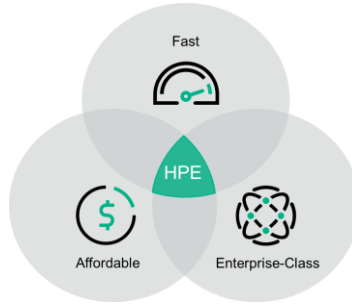
Mainstream
Increasing SSD capacities and adding data reduction technologies to further drive down the economics of flash.

Flashanomics
Flash is the default for critical apps. What does this mean for the rest of your data center infrastructure?

All-Flash Data Center Acceleration

The economics are shifting, where flash storage is a requirement to stay competitive in business

Factors for Flash Acceleration

Apps

Acceleration of established and emerging apps

5X performance gain, faster response time, applications run at the speed of flash
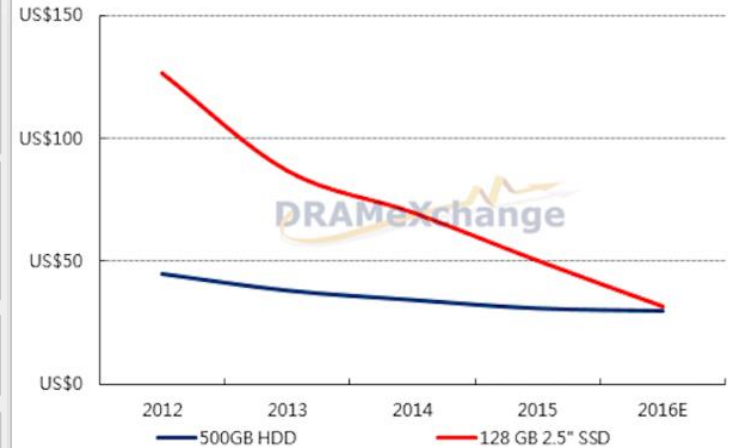
In-line storage efficiencies driving $/GB costs down

Power & cooling costs down

Operational costs down

Figure: 128GB SSD and 500GB HDD Price Trends, 2012~2016

DRAMeXchange

US$150

US$100

US$50

US$0

2012   2013   2014   2015   2016E

500GB HDD   128 GB 2.5" SSD

Source : DRAMeXchange, Mar., 2016

All-Flash arrays enable consolidation

Take away - *Watch your basket*
Reduce Risk & Ensure Resiliency

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Don't put all your eggs in one basket' is all wrong.
I tell you 'put all your eggs in one basket, and then watch that basket.

(Andrew Carnegie)

izquotes.com

Standard Arrays
Limited data efficiency
Unpredicable response time

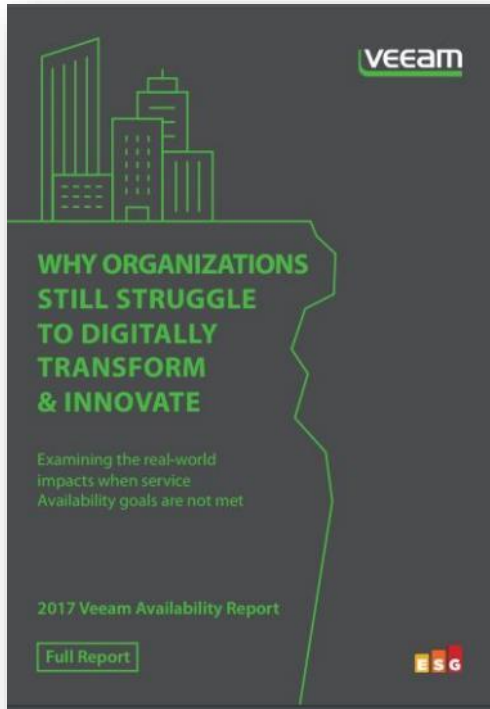**All-Flash Array**
Inline data efficiency
Consistent response time

*Respective capacity support available in 2H16
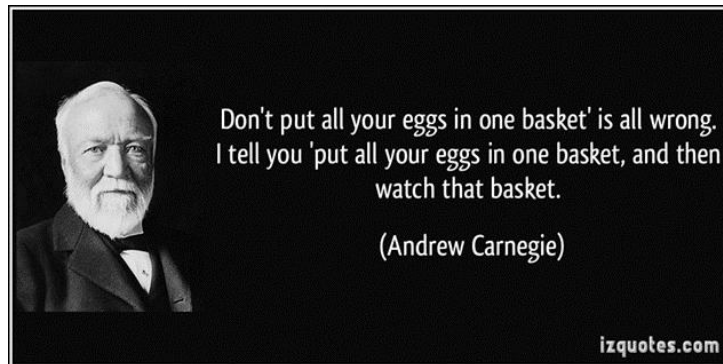
When you update to All-Flash, you need to update your data protection to keep pace

66% report that their digital transformation initiatives are being inhibited because of unplanned downtime or insufficient application Availability

3 of 4 organizations surveyed recognize they have a Protection Gap

1 in 4 servers suffer at least one unplanned outage each year

https://www.veeam.com/2017_availability_report_wpp.pdf

How do you reduce risk & ensure resiliency?

Reduce Risk
Maximize data loss avoidance by providing:

High-Speed Recovery - Accelerate the time to recover business applications

Data Loss Avoidance - Decrease or eliminate business downtime

Verified Recoverability - Recover critical business functions with confidence

Leveraged Data - Use your data to drive your business

Complete Visibility - Know the state of your IT business and proactively regulate

Ensure Resiliency
Demand the following from your AFA:

99.9999% uptime guarantee

5 year unconditional warranty on all HPE SSDs with no services upsell

Embedded data protection with flash-integrated offload of snapshots

App and flash integrated availability with Peer Persistence

Low cost snapshot offload and secondary protection to StoreOnce

How do you reduce risk & ensure resiliency?

Reduce Risk

VEEAM

You Need Both

Ensure Resiliency

Hewlett Packard Enterprise

Enable the Always-On Business™

VEEAM | AVAILABILITY for the Always-On Enterprise™

- High-Speed Recovery
- Data Loss Avoidance
- Verified Recoverability
- Leveraged Data
- Complete Visibility

Modern Data Center

- Virtualization
- Modern storage
- Cloud

- 24/7 operations
- No patience for downtime and data loss
- Growing amount of Data

vmware **ORACLE** **SAP HANA** **Microsoft SQL Server** **Microsoft apps using VSS**

99.9999% guarantee

Any App - Crash Consistent

Peer Persistence

Express Protect / Express Restore

3PAR StoreServ Primary Storage

3PAR StoreServ Primary Storage

StoreOnce System Secondary Storage

Reduce Risk - Veeam with HPE All-Flash Integration
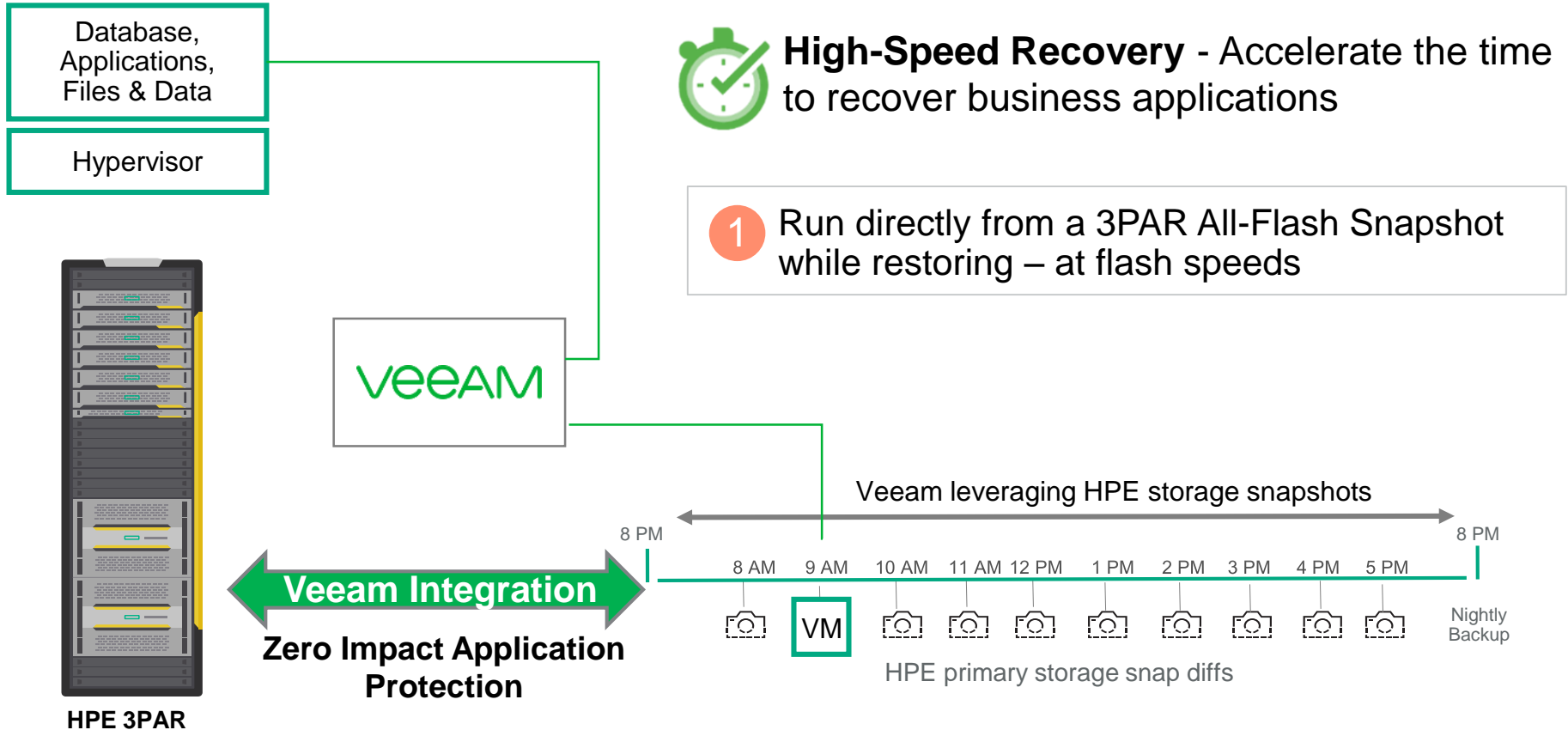
Database, Applications, Files & Data

Hypervisor

High-Speed Recovery - Accelerate the time to recover business applications

1 Run directly from a 3PAR All-Flash Snapshot while restoring – at flash speeds

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Veeam leveraging HPE storage snapshots

8 PM

Veeam Integration

Zero Impact Application Protection

8 AM   9 AM   10 AM   11 AM   12 PM   1 PM   2 PM   3 PM   4 PM   5 PM

8 PM

VM

Nightly Backup

HPE primary storage snap diffs

HPE 3PAR

Reduce Risk - Veeam with HPE All-Flash Integration

Database, Applications, Files & Data

Hypervisor
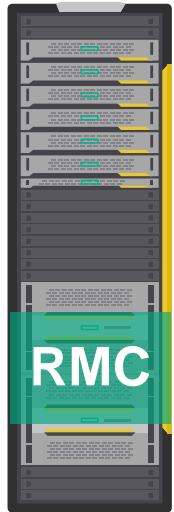
High-Speed Recovery - Accelerate the time to recover business applications

2 Recover applications and data in minutes with full or granular recovery for enterprise applications and more

Microsoft Exchange | Microsoft Active Directory | Microsoft SQL Server | Microsoft SharePoint | ORACLE Oracle

Veeam leveraging HPE storage snapshots

RMC

Veeam Integration

Zero Impact Application Protection

HPE 3PAR

8 PM

8 AM 9 AM 10 AM 11 AM 12 PM 1 PM 2 PM 3 PM 4 PM 5 PM

8 PM

Nightly Backup

Reduce Risk - Veeam with HPE All-Flash Integration

Database, Applications, Files & Data

Hypervisor

Data Loss Avoidance - Decrease or eliminate business downtime

1 Backup from HPE Storage snapshots to avoid data loss and achieve RPOs of <15 minutes

veeam

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8 PM

8 PM

Veeam Integration

Zero Impact Application Protection

HPE 3PAR

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Nightly Backup
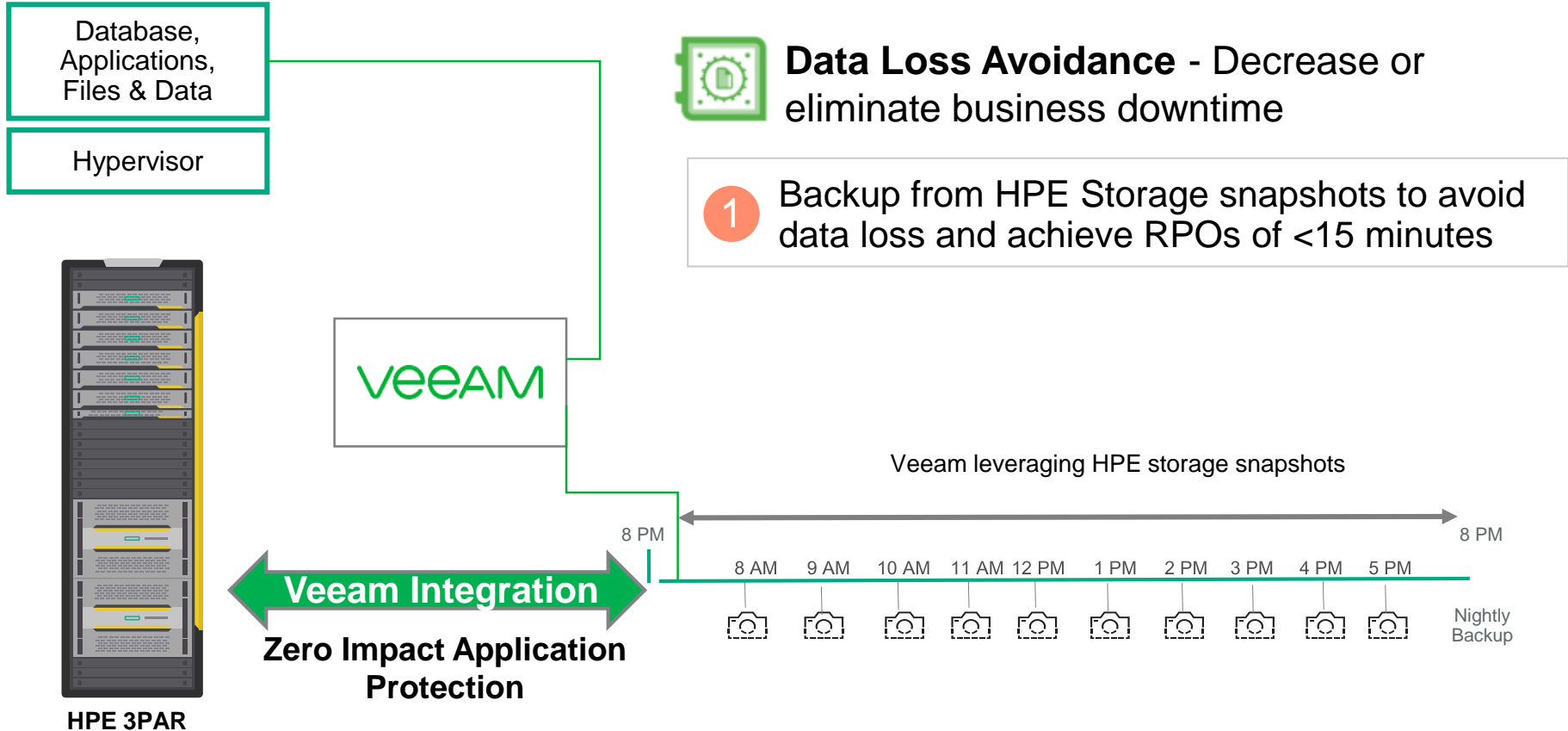
Reduce Risk - Veeam with HPE StoreOnce Integration

Database, Applications, Files & Data

Hypervisor

Catalyst

veeAM
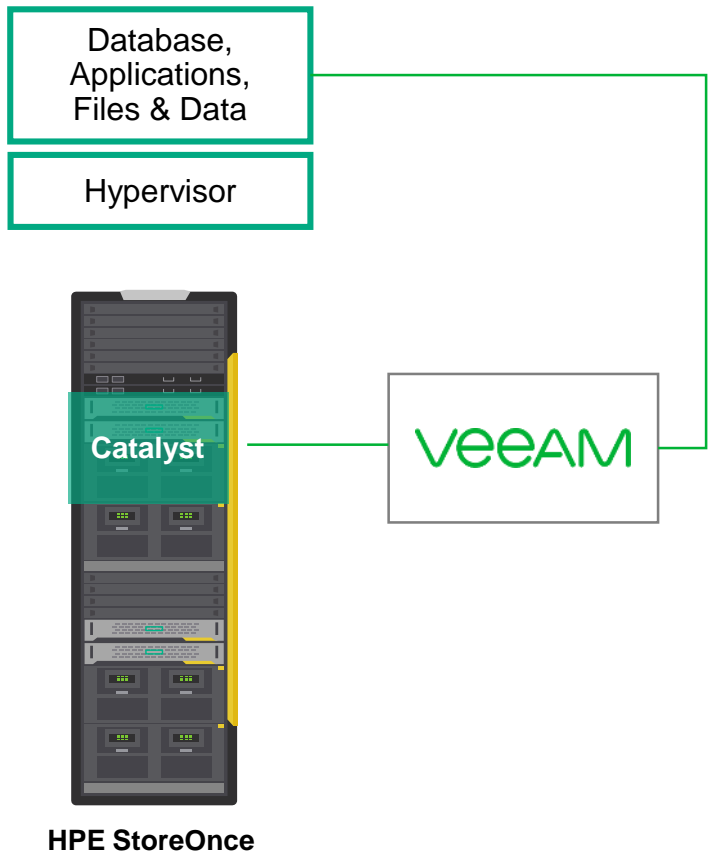
HPE StoreOnce

Data Loss Avoidance - Decrease or eliminate business downtime

1. StoreOnce Catalyst integration for 20X performance gain for faster backups and restores

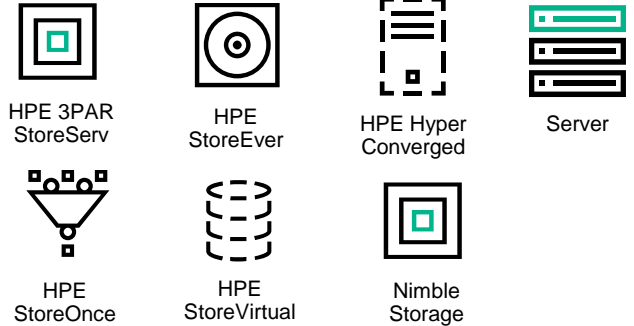2. Leverages StoreOnce Catalyst to protect backups images from malicious attacks

3. Run VMs directly from StoreOnce Catalyst store to decrease application downtime

Reduce Risk - Veeam with HPE

Database, Applications, Files & Data

Hypervisor
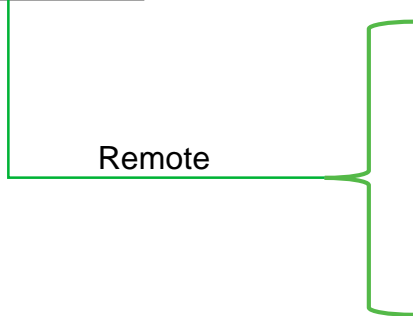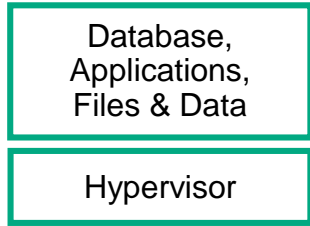
Data Loss Avoidance - Decrease or eliminate business downtime

3 Hardware agnostic virtual machine replication for DR or remote office

4 Offsite backup for archive compliance & DR

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Remote

HPE 3PAR
StoreServ

HPE
StoreEver

HPE Hyper
Converged

Server

HPE
StoreOnce

HPE
StoreVirtual

Nimble
Storage

Reduce Risk - Veeam with HPE

Database, Applications, Files & Data

Hypervisor

Verified Recoverability - Recover critical business functions with confidence

1 Verify backups to be certain you can restored when your business needs it the most

2 Ensure business resiliency through automated backup and disaster recovery (DR) testing

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Nimble Storage SFA

HPE StoreOnce
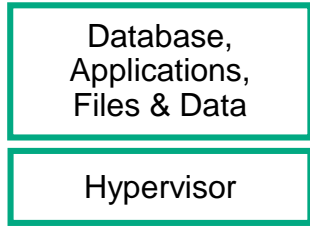
Local

Remote

HPE Storage

Nimble Storage

HPE Hyper Converged

HPE StoreOnce

HPE StoreVirtual

Reduce Risk - Veeam with HPE

Database, Applications, Files & Data

Hypervisor

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Virtual Lab

Leveraged Data - Use your data to drive your business

1 Create isolated production environments to test changes before deploying them

2 Create copies of your production data to drive business change
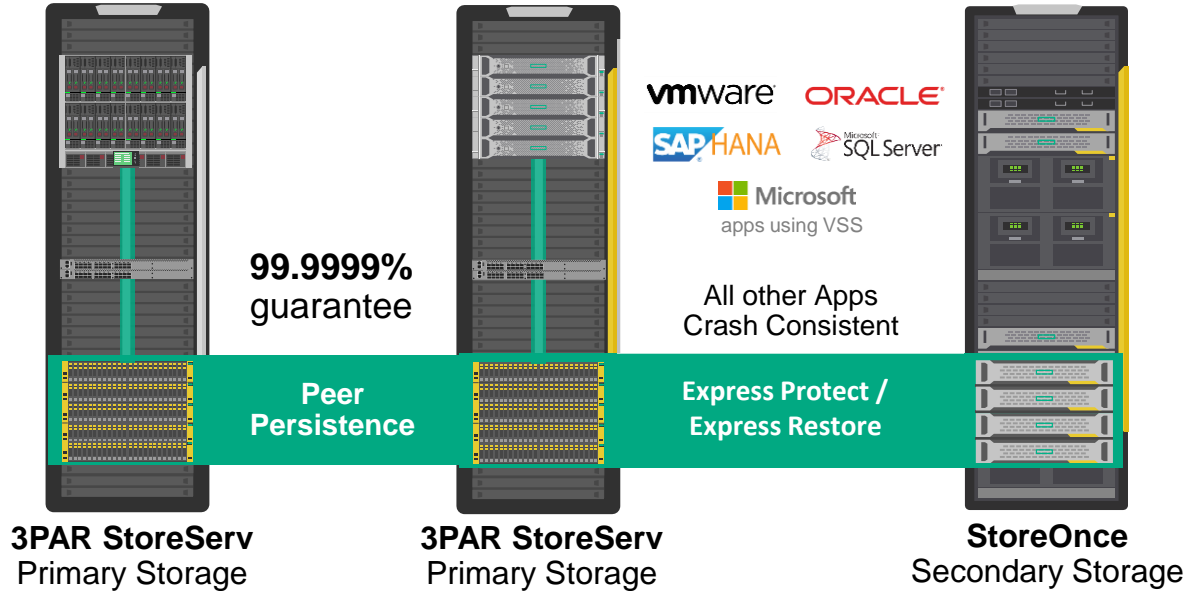
Reduce Risk - Veeam with HPE

Database,
Applications,
Files & Data

Hypervisor

veeAM

Veeam®
ONE™ **Automated reports**
– Find out what VM's are not protected
– Generate a report to prove you're protected
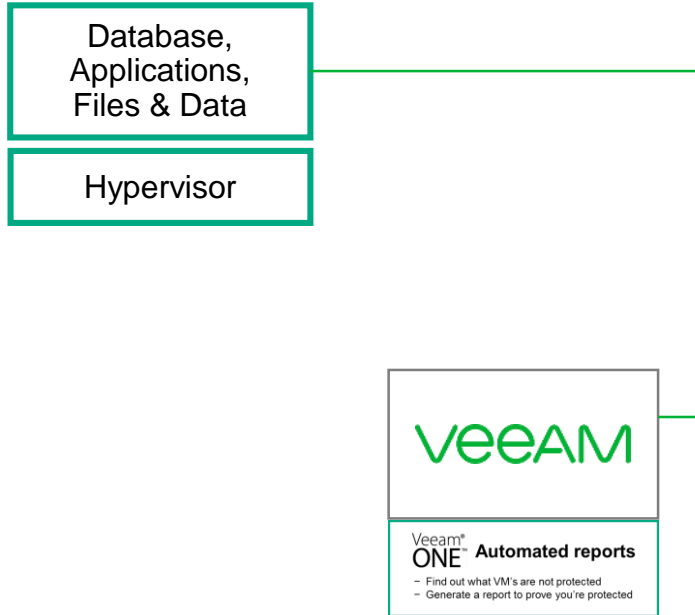
Complete Visibility - Know the state of your IT business and proactively regulate

1 Detect issues in your IT environment before they impact the business

2 Complete visibility of your Veeam backup, VMware vSphere and Microsoft Hyper-V infrastructures, know you are protected

Resilience without compromise

If you put your eggs all in one basket, it better be a good basket!

99.9999%
guarantee

**Peer
Persistence**

vmware   ORACLE

SAP HANA   Microsoft SQL Server

Microsoft
apps using VSS

All other Apps
Crash Consistent

**Express Protect /
Express Restore**

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Primary Storage

3PAR StoreServ
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StoreOnce
Secondary Storage

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Peer Persistence

Express Protect / Express Restore

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Primary Storage

3PAR StoreServ
Primary Storage

StoreOnce
Secondary Storage

Optimized for storage efficiency and performance

Secure with Encryption and Secure Erase to international standards

Simplified management through business application integration

Affordable with inclusive and simple licensing

Cloud ready compatibility with Microsoft Azure and CloudBank
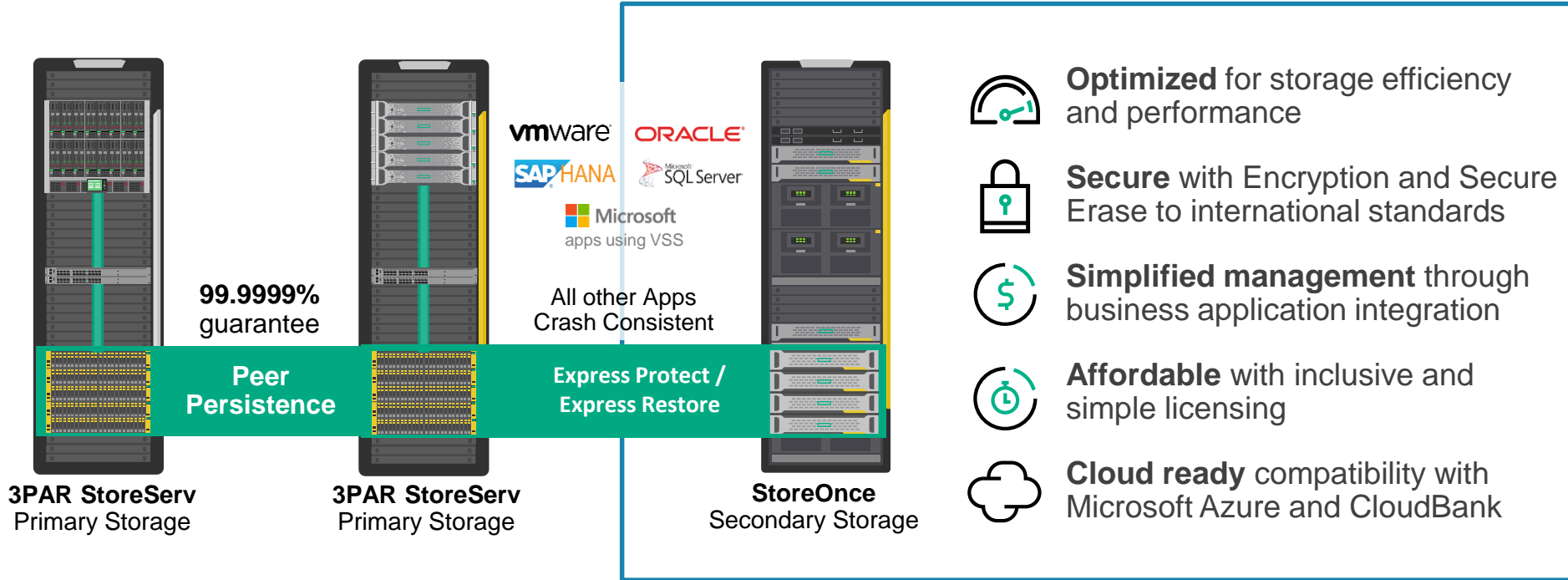
Bring the best together for a complete solution

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Hold for customer session

Why HPE + Veeam Software?

- Shortest backup windows
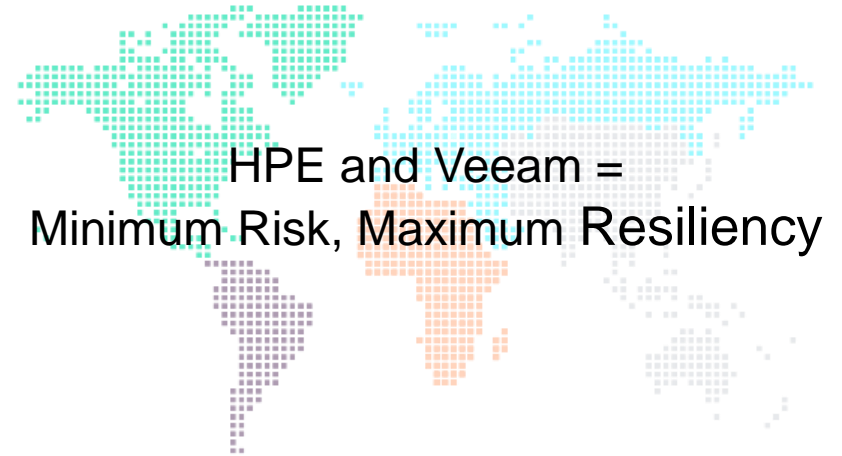- Best restore times
- Smallest storage footprint
- Lowest server resource utilization
- Best Licensing Costs
- Greatest Flexibility

HPE and Veeam =
Minimum Risk, Maximum Resiliency

Thank you

Veeam | Hewlett Packard Enterprise