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HP**TECH**FORUM 2010

HP Storage innovations that enable Converged Infrastructure

Intellectual property

Value delivery

Platform Convergence

Storage Optimization

Virtualization

Application Integration

Other deduplication solutions are fragmented and complex

Data movement between systems requires processing through different deduplication tools

Remote Office

Regional Site

Datacenter

Technology A

Technology B

Technology C

Complex Provisioning

Proliferated Management

Inefficient Data Movement

3
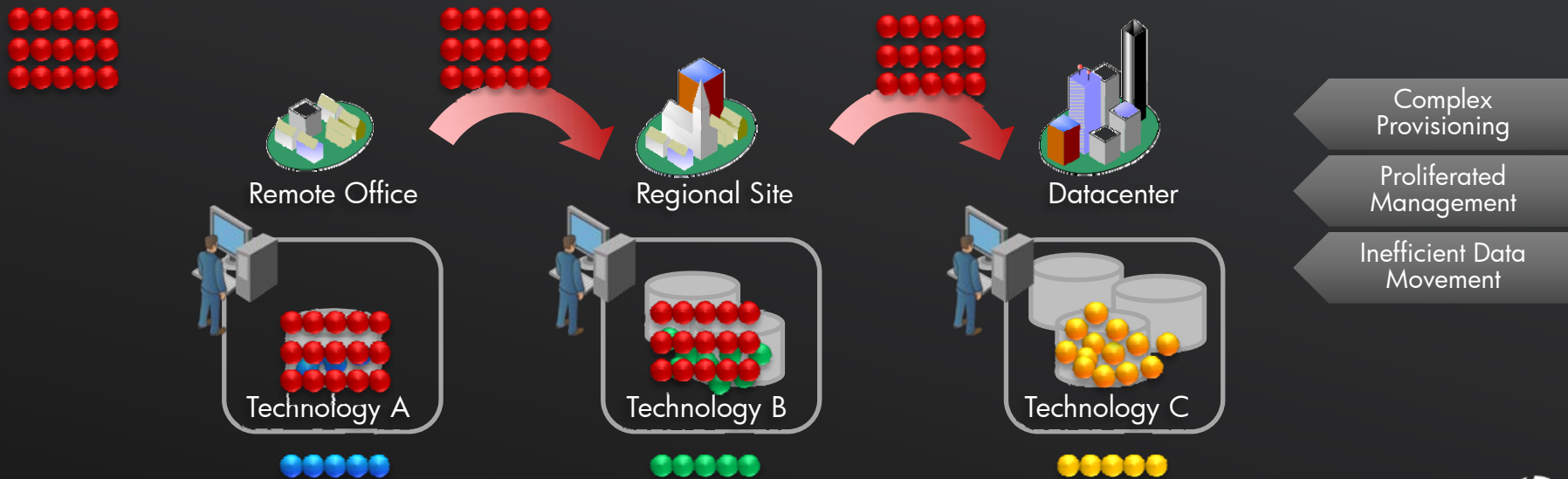
Introducing HP StoreOnce deduplication software

1

Single software design reduces complexity
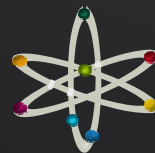
Store Once

Can deploy end to end from backup to primary scale-out

50:1 *

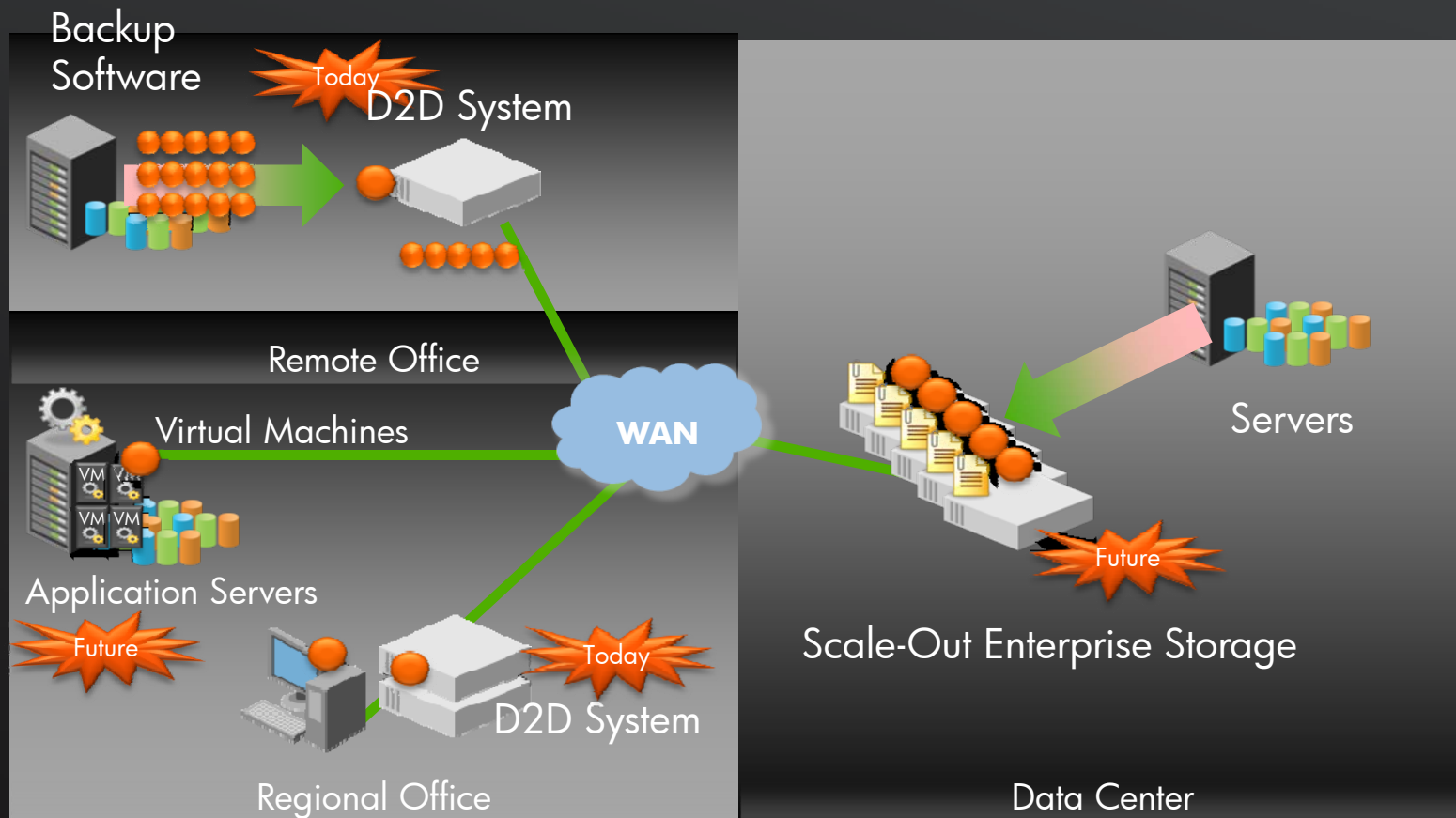Data reduction rates dramatically reduce storage requirements

Built for Converged Infrastructure, with HP Labs innovation

*50:1 capacity ratio assuming daily full backups and various multiple factors

The same software solution can be used end to end

HP Store Once

Backup Software

Today

D2D System

Remote Office

Virtual Machines

WAN

Application Servers

Future

Today

D2D System

Regional Office

Servers

Future

Scale-Out Enterprise Storage

Data Center

5

HP D2D4312 Backup System

Powered by HP StoreOnce software

New

2X price/perf — 20% faster than competitive solutions

Store Once — Optimized multiple applications and data types

48TB — Start small and grow to 48TB

Remote Office — Integrated iLO2 remote management & multisite replication manager

HP Labs Innovation

HP Store Once

- Focus on high-impact research on real-world problems – like moving lots of data across slow networks

- Engagement with product teams on synergies between research and product plans

- Collaboration during product development – improves both base technology and product features

- The result – leading edge technology based on IP from HP Labs and product engineering from StorageWorks

Russ Fellows, Sr. Partner, Evaluator Group

D2D4312 Testing – what we did:

▲ Objectives:

- Compare general usability and ease of use
- Validate HP D2D4312 operates as expected for common interfaces, protocols and operating systems
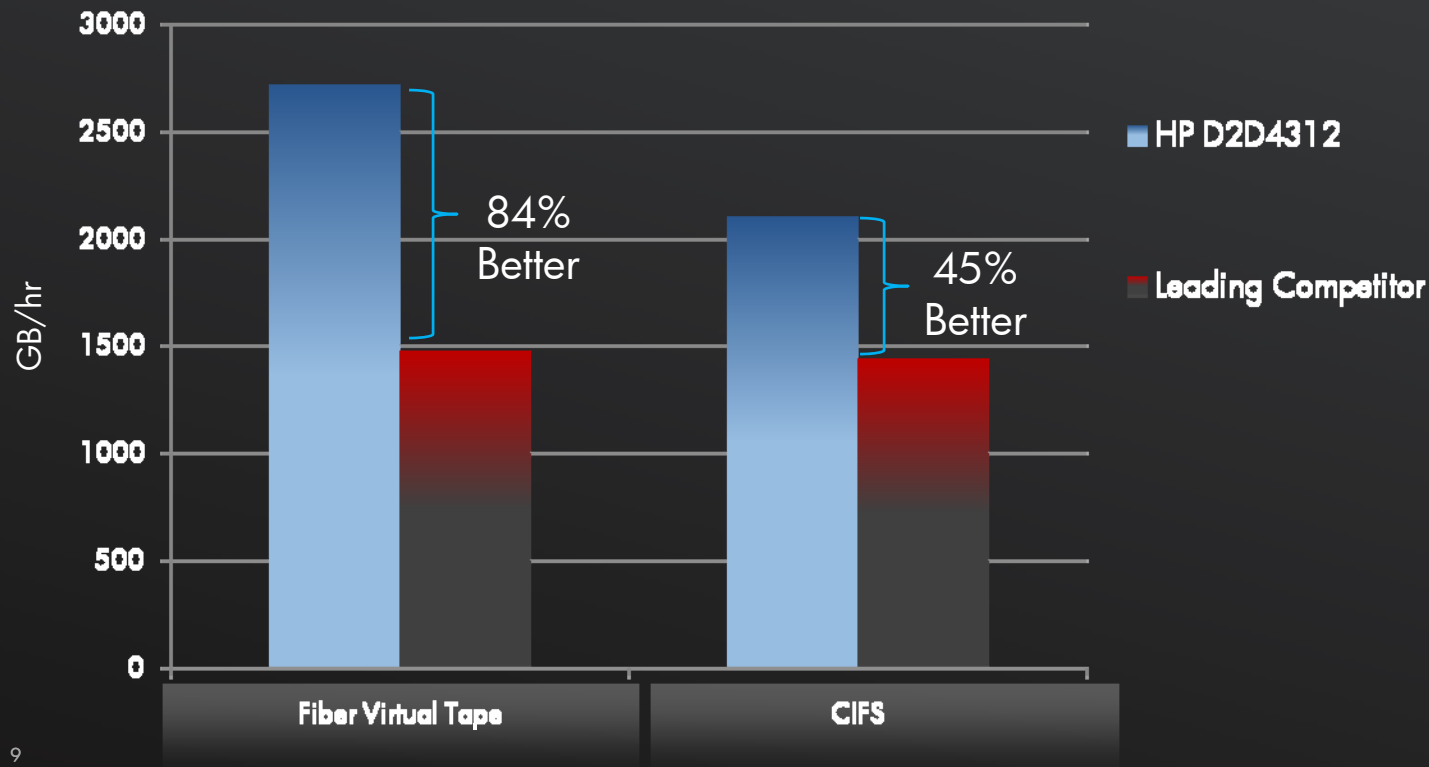
▲ Quantitative Measurements:

- Backup and restore performance using various interfaces
- Deduplication ratios, using synthetic and real-world data sets

▲ Qualitative Tests:

- Number of steps to complete tasks
- Intuitive feel for product and / ease of use

Verified Performance

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HP P4800 BladeSystem SAN Solution

New

A SAN purpose-built for the HP Client Virtualization solution

Zero — No external switches, no traffic leaves the rack, so no network bottleneck

78% — Less cabling with Virtual Connect

66% — Less IT staff to administer, better security

$ — Converged Infrastructure enables lower TCO than competing SAN solutions

Microsoft CiTRiX vmware

EVA Cluster - Industry leading simplicity reaches new scale

2PB — Higher scalability and capacity up to ~2PB's and ~2,000 drives

Protect — Transparent failover, Copy and Mirroring services

Simple — Next-generation Command View management for the entire cluster - including non-HP arrays

300% — Increase capacity utilization of existing arrays by up to 300%

New

Summary

HP is extending leadership of converged infrastructure trend

HP Converged Infrastructure

- **D2D4312 with HP StoreOnce software**
  Single software solution to minimize the impact of explosive data growth

- **HP P4800**
  Purpose-built SAN for Virtual Client Infrastructure at <$750 per seat

- **HP EVA Cluster**
  Extends EVA leading ease-of-use features across multiple EVAs and non-HP arrays

Unleashing the potential of the data center of the future

Outcomes that matter.