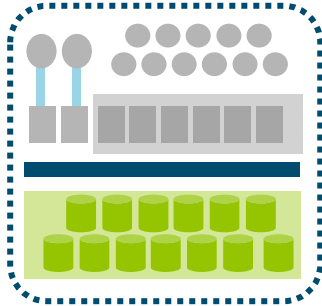# Storage als integraler Bestandteil einer Private Cloud

christoph.schnidrig@netapp.com

Manager Systems Engineering

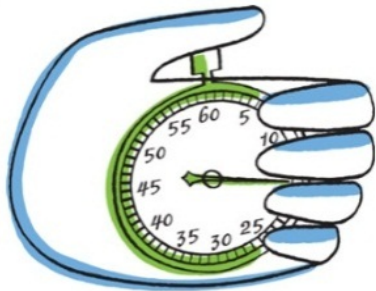# NetApp Product Innovation Strategy
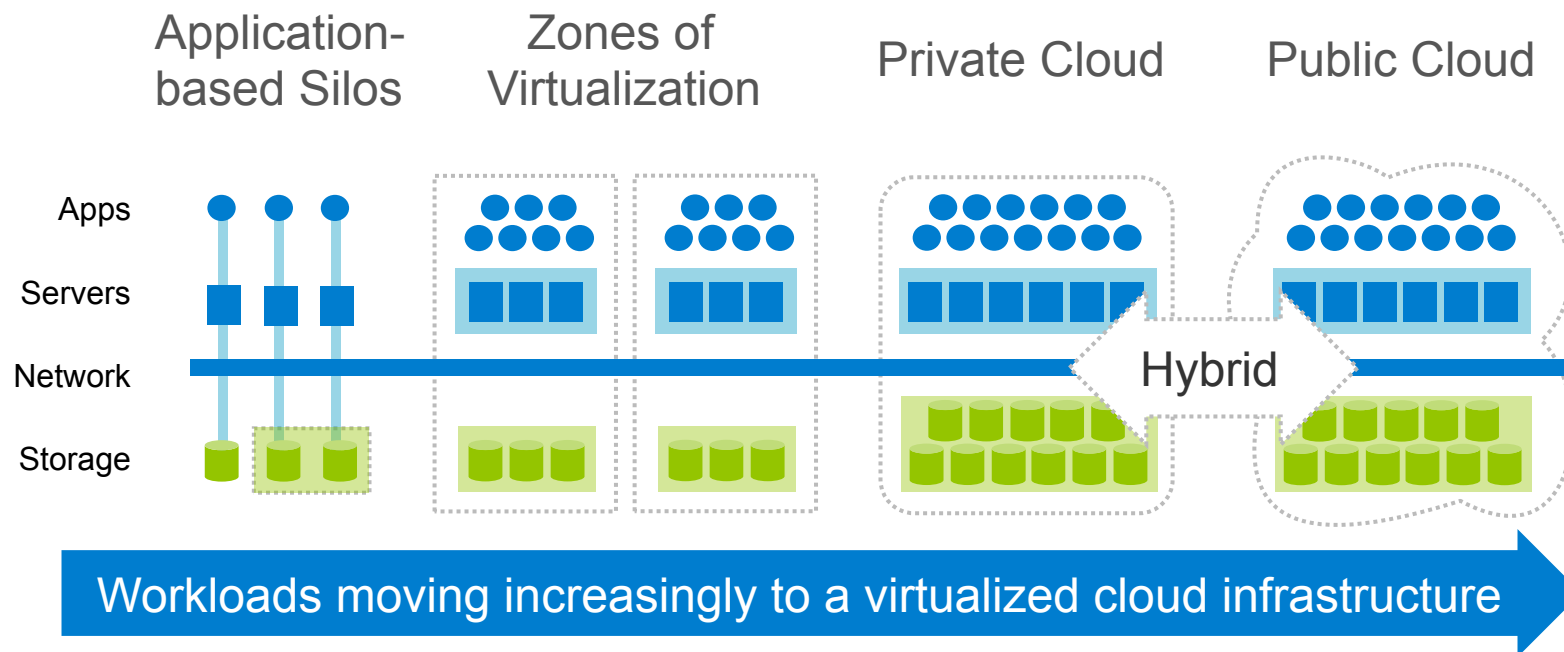

Shared Infrastructure

+

Flash   Cloud   Object

Looking Ahead to the Hybrid Cloud

Application-based Silos

Zones of Virtualization

Private Cloud

Public Cloud

Apps

Servers

Network

Storage

Hybrid

Workloads moving increasingly to a virtualized cloud infrastructure

Converged Infrastructure (Flexpod)

Converged Infrastructure

Operating System

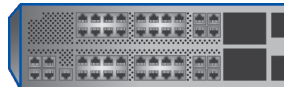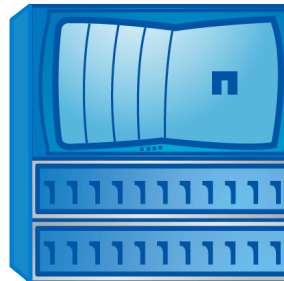| APP | APP | APP | APP | APP | APP |
| OS | OS | OS | OS | OS | OS |

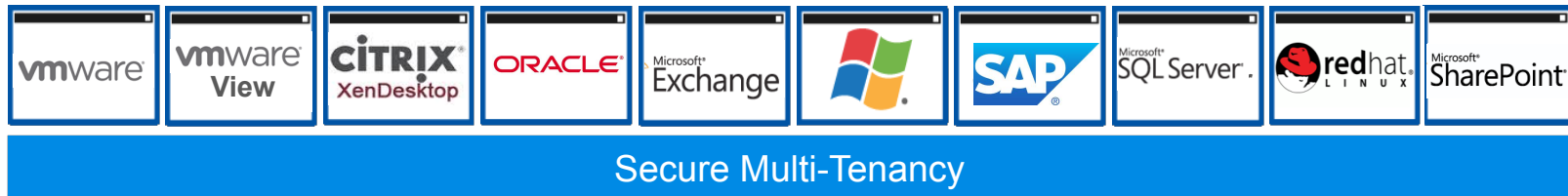**Virtualization**

Server

Network

NetApp
FAS/V Series

Complete data center in one rack cabinet

# Validated Enterprise Workloads

- Step-by-step instructions for repeatable high-quality deployments
- VMware, Microsoft, SAP, Red Hat, Citrix
- Wide range of resources available: validated design, deployment, and solution guides
- 20+ validated designs

Secure Multi-Tenancy

Performance balanced server, network and storage components

Converged Infrastructure (Flexpod)

NetApp®

Converged Infrastructure	Any Provider

Operating System

Virtualization

Virtualization in AWS

Server

Network

NetApp FAS/V Series

Complete data center in one rack cabinet

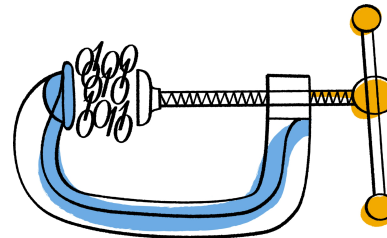**Flexible AWS compute backed by NetApp**
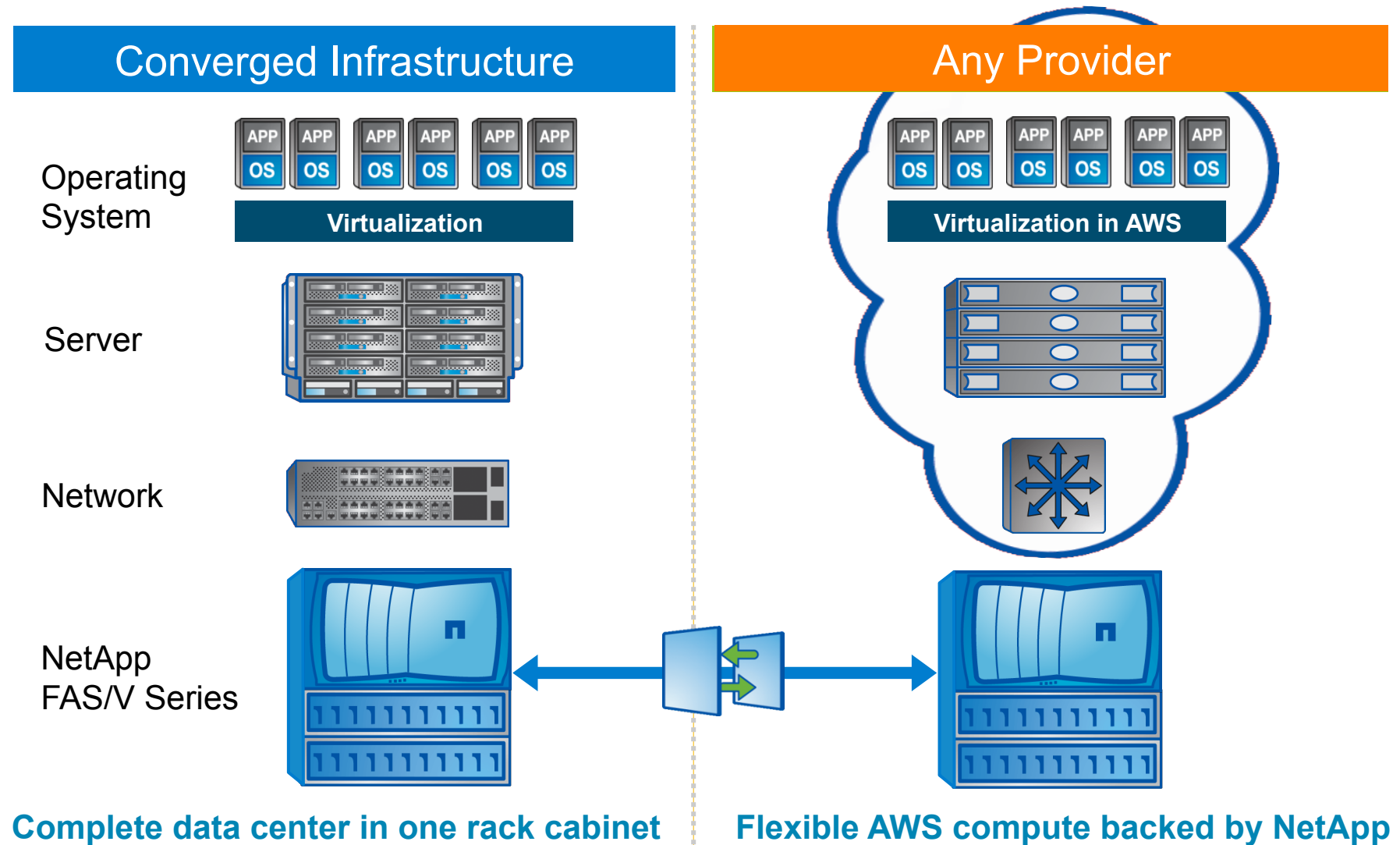
Storage Infrastructure

- Non-Disruptive Operations
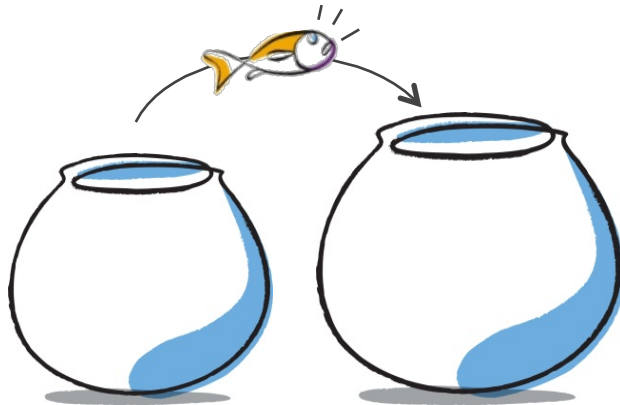
- Storage Efficiency
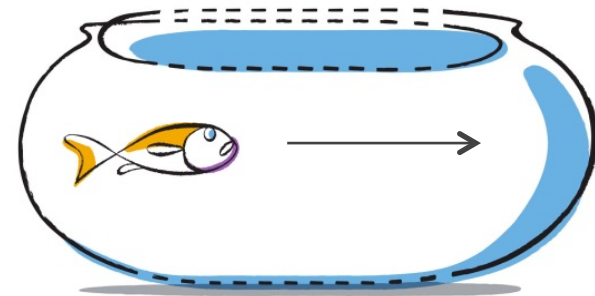
- Service Efficiency (Automation)

Revolutionizing Data Migrations

Old World

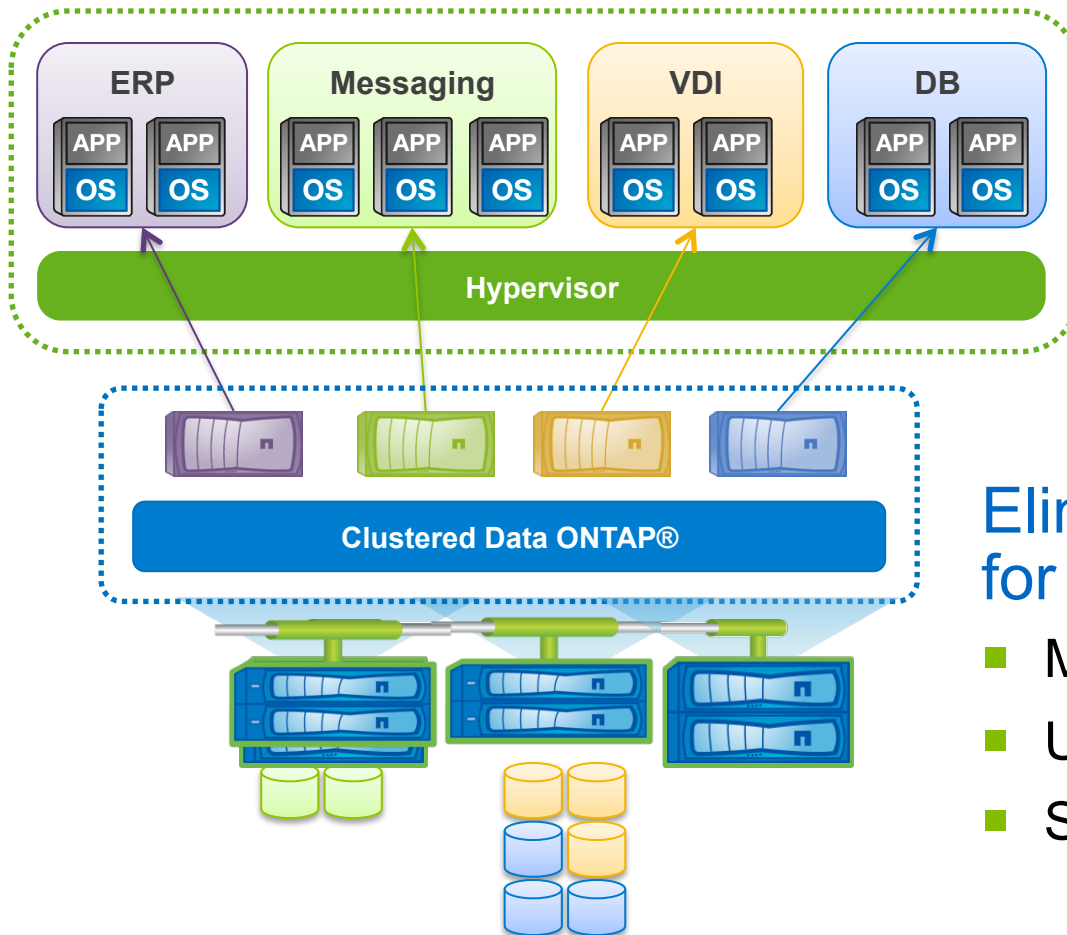New World

Disruptive
Workload Migration

Non-Disruptive
Workload Migration

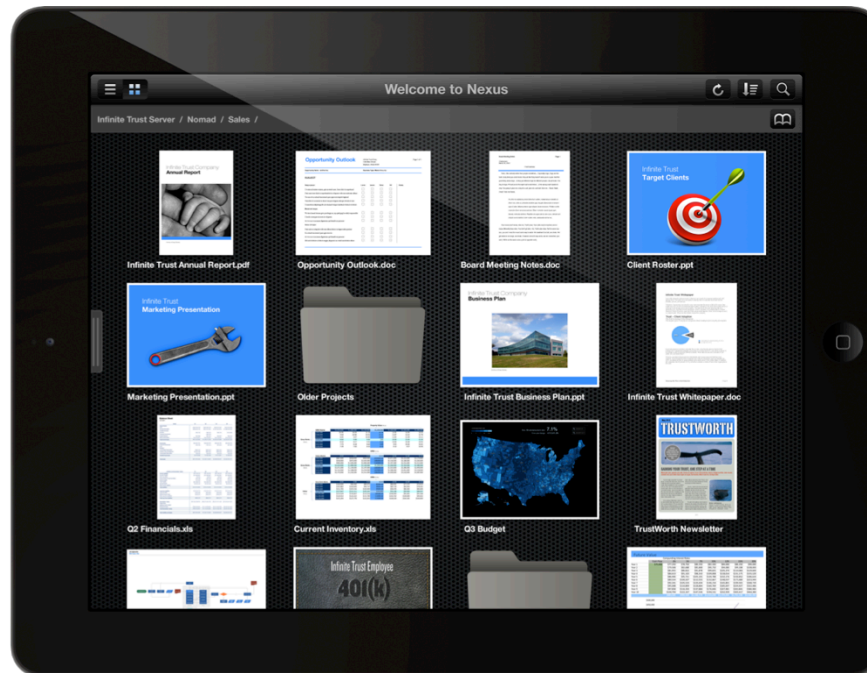# Non-disruptive Operation and Scaling

These stay online

Eliminate planned downtime for storage

- Move data off old nodes
- Upgrade storage software
- Scale and load balance

Unified Protocol+ (NAS/SAN→Mobile)

NetApp Connect

Dedupe/Kompression - Kundenbeispiele

ohne Storage Effizienz	Dedupe bei VMware	Dedupe bei Fileservices	Dedupe und Kompression bei Fileservices
ohne	Provider 3000+ VMs	Verwaltung 15'000 User	Rückversicherung 15'000 User
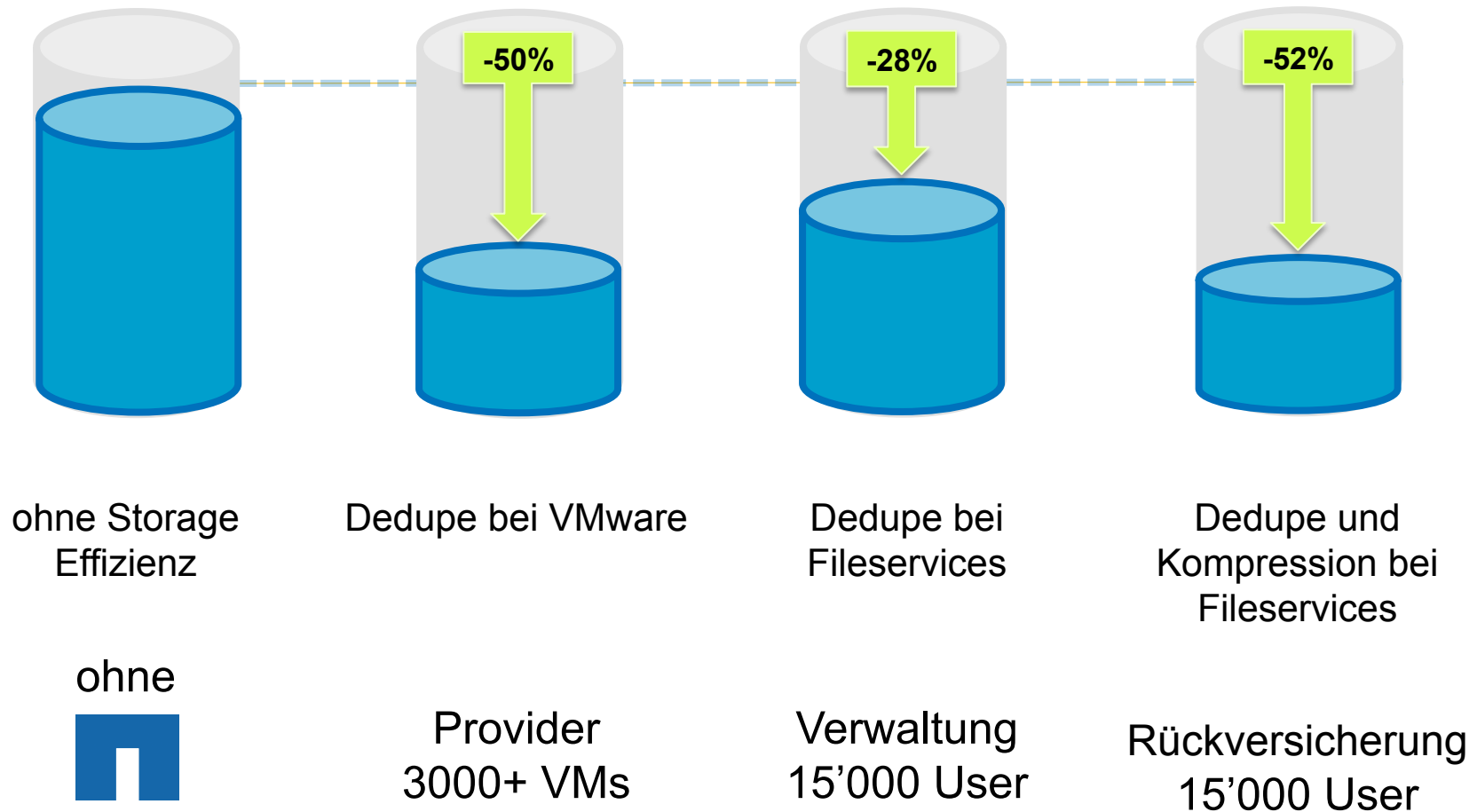
Service Efficiency

- Automation
  - reduce administrative efforts
  - application integration
  - leverage storage features
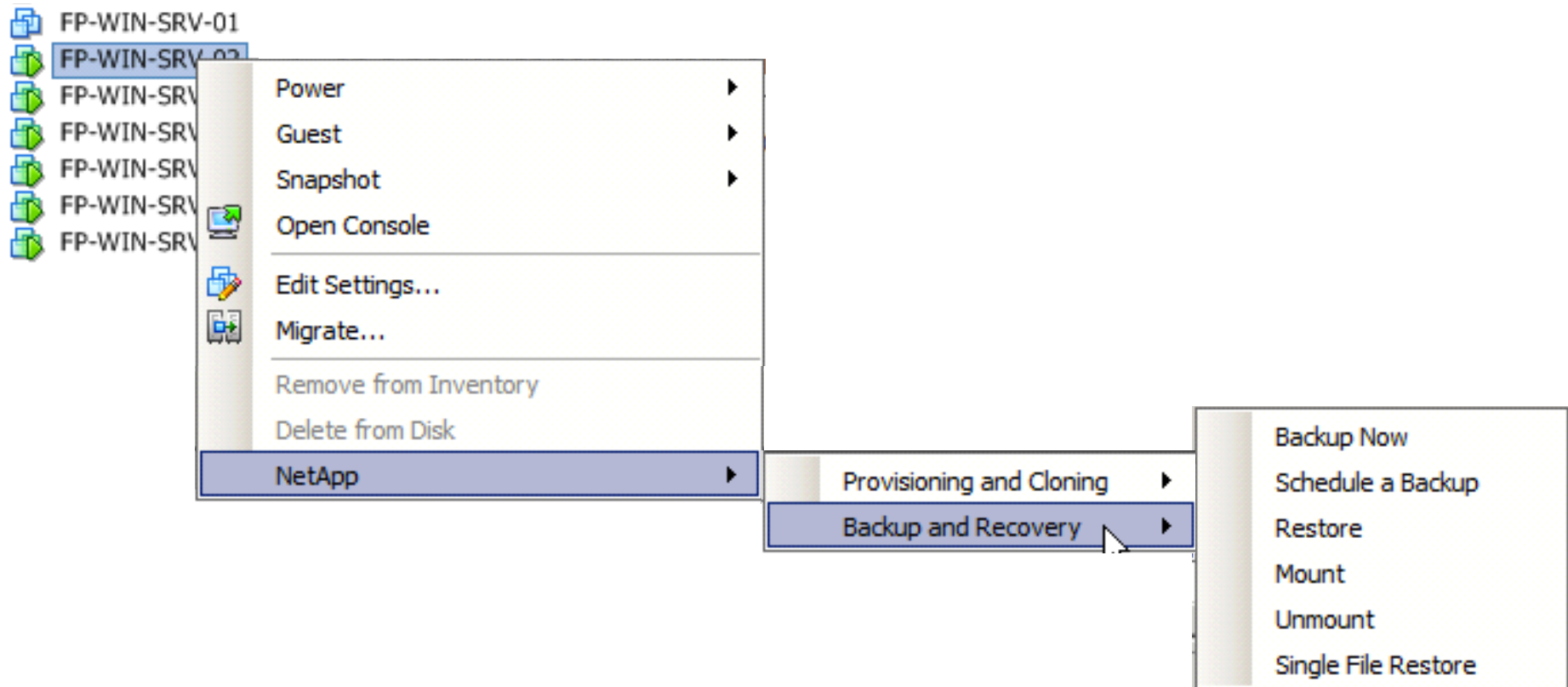
- Orchestration
  - automated workflows for daily tasks
  - enable lower skilled people to manage storage
  - self-service portal
  - IT as a service (Cloud)

Automation by Application Integration

FP-WIN-SRV-01
FP-WIN-SRV-02

Power	▶	
Guest	▶	
Snapshot	▶	
Open Console		
Edit Settings...		
Migrate...		
Remove from Inventory		
Delete from Disk		
NetApp	▶	

Provisioning and Cloning ▶
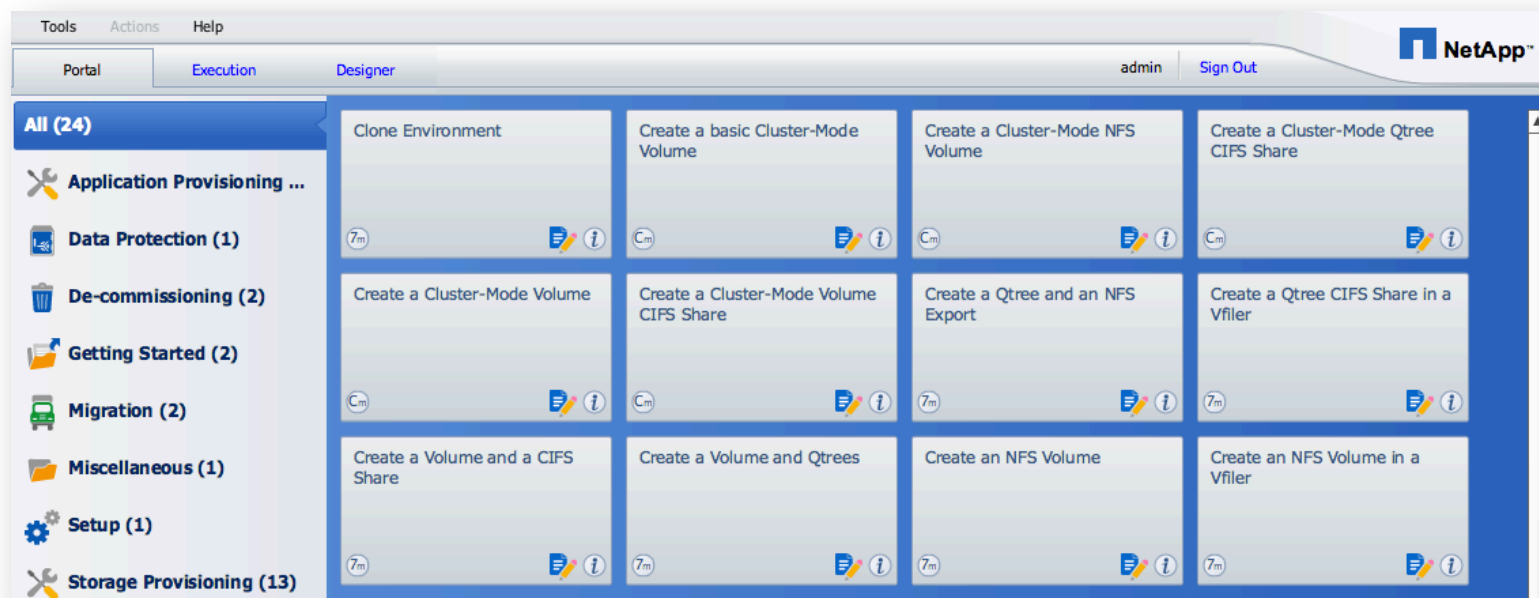Backup and Recovery ▶

Backup Now
Schedule a Backup
Restore
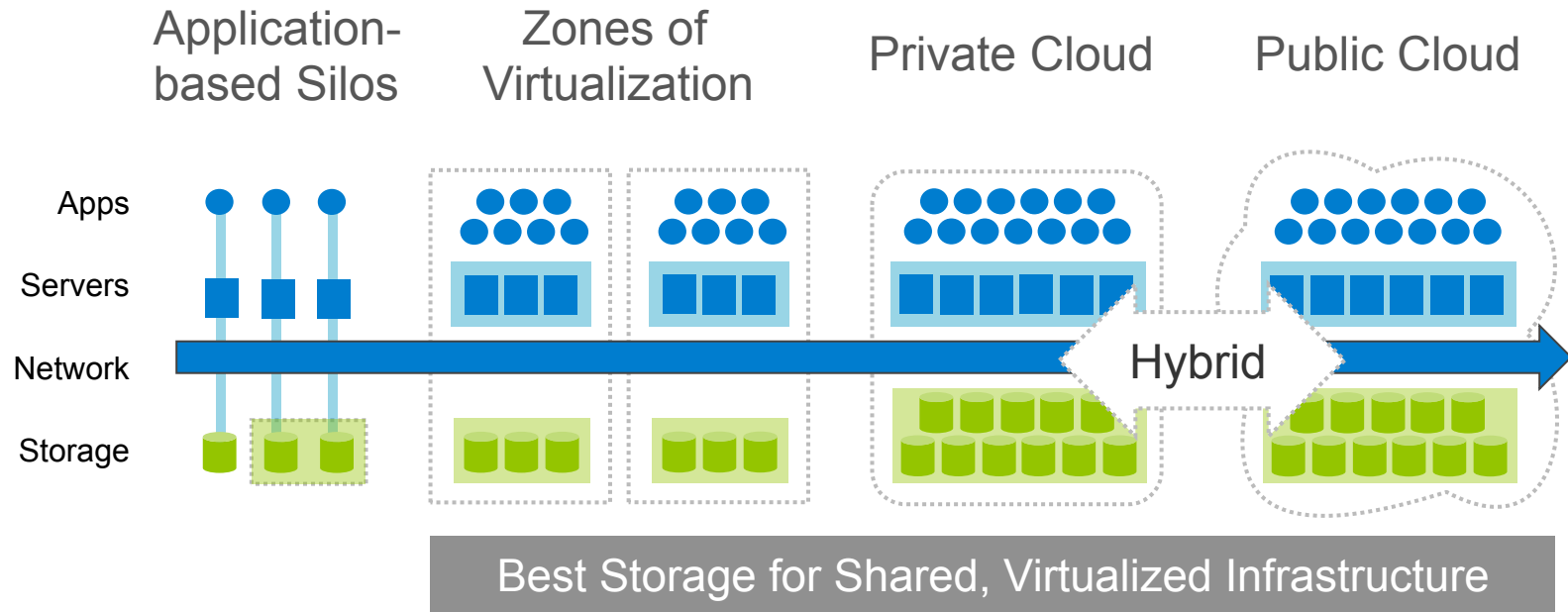Mount
Unmount
Single File Restore

Storage Workflow Automator (WFA)

- Automation of daily/repetitive tasks
- Can be executed by junior storage admins
- Eventually be offered as self-service
- Very easy integration to 3rd party portals/orchestrators

NetApp Cloud Approach

| Application-based Silos | Zones of Virtualization | Private Cloud | Public Cloud |

Apps • Servers • Network • Storage • Hybrid

Best Storage for Shared, Virtualized Infrastructure

Help customers increase IT flexibility and efficiency to make their businesses future-ready

NetApp®

Vielen Dank