

Simplify Modern Data Protection

PowerProtect Data Manager Appliance

 Dell Technologies

Five key takeaways

2022 Global Data Protection Index Snapshot



The last 12 months have brought **higher levels of disruption** for organizations than in previous years



Experience of **cyberattacks or incidents** are more prevalent this year and are **contributing** to increased disruption



Almost all are **facing challenges** in relation to **data protection**



There has been a shift towards **public cloud use**, which may create **further data protection** issues for organizations



Working with **fewer data protection vendors** is linked to **better data protection outcomes**

Concerns and a lack of confidence in existing data protection measures are prevalent, exposing organizations to risk



55%

are **not very confident** that their organization is **meeting its backup and recovery service level objectives (SLOs)**¹



69%

are **concerned that they will experience a disruptive event** in the next twelve months¹



67%

are concerned their organization's existing data protection measures **may not be sufficient to cope with malware and ransomware threats**¹



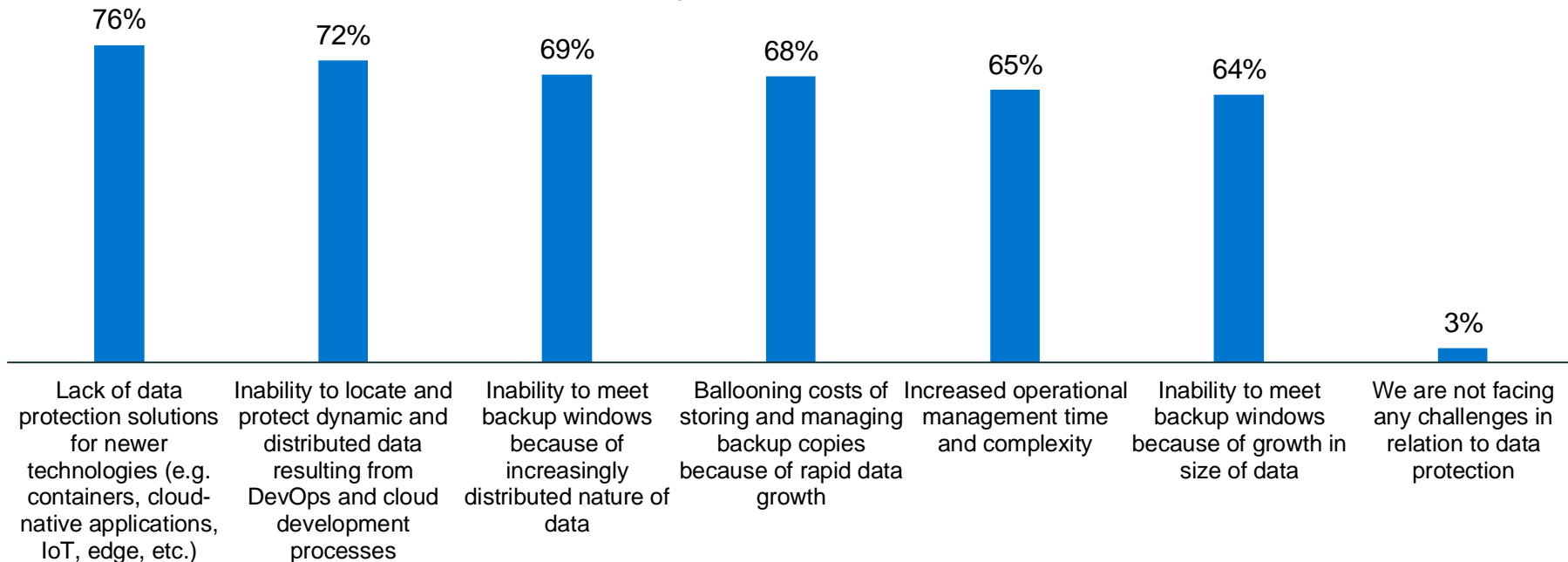
70%

agree their organization has **increased exposure to data loss** from **cyberthreats** with the **growth of employees working from home**¹

1. Based on Dell Technologies Global Data Protection Index 2022 Key Findings, November 2022.

Alongside commonplace data protection challenges organizations are faced with

Ranked top 5: Challenges faced in relation to data protection



Dell Technologies data protection portfolio

Optimizes resources and improves business agility

Less than
1¢
per GB/month
cost to protect

98% Average reduction in consumed storage resources

Up to **85%** Faster time to recover in the event of a disaster

76% Reduction in backup and restore times

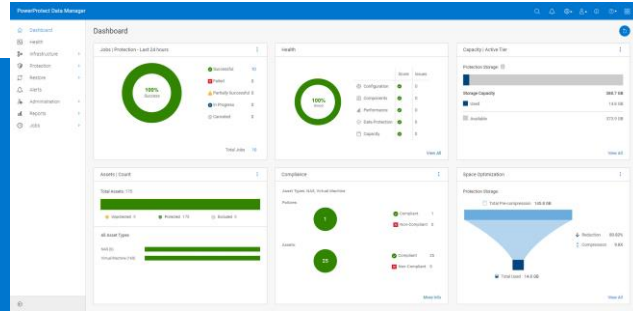
22% Reduction in data protection administration costs

PowerProtect Data Manager in an Appliance

PowerProtect Data Manager

Start your journey towards modern data protection

Trusted protection
and restore



Operational
simplicity

Software defined multicloud data protection

Oracle

SQL

Exchange

SAP HANA

Kubernetes

VMware

Filesystems

PowerProtect Data Manager

Flexible consumption

On VMware with
target appliances

In the cloud

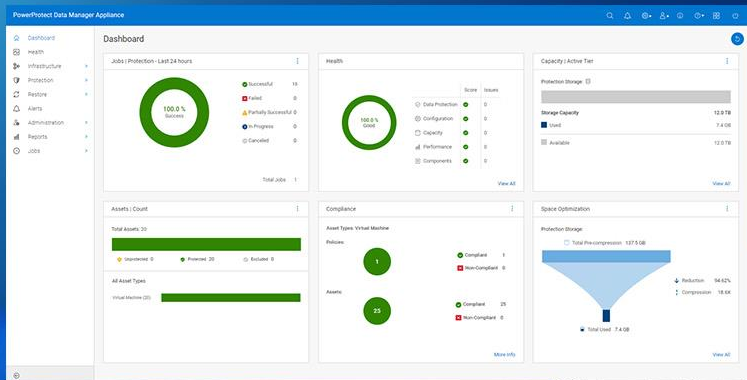
Integrated appliance



INTRODUCING

PowerProtect Data Manager Appliance

Simplify Modern Data Protection



MODERN

Software-defined
architecture

SECURE

Operational and
cyber resilience

SIMPLE

Unified user
experience

PowerProtect Data Manager Appliance

Can deploy in
15 mins¹

12TB – 96TB

Grow in place
or to the cloud



Deduplication



Cyber
Resilience



VMware
Integration



Cloud enabled



Instant Access
+ Restore



Disaster
Recovery

¹Based on a Principled Technologies paper commissioned by Dell comparing Dell PowerProtect Data Manager Appliance vs competitive data protection solutions, November 2022. Actual results may vary.

Modern Protection

PowerProtect Data Manager Appliance

 **DELL**Technologies

Leverage cloud for application availability and business continuity

Long term retention to cloud object storage



Data Manager Appliance

Cloud Tier
Long-term retention



Simple

Automated, native tiering to public, private or hybrid cloud

Cost-effective

Reduce TCO by sending and retrieving only unique data

Open

Broad ecosystem and flexible deployment options

Orchestrated recovery to the cloud

Cloud Disaster Recovery



Data Manager Appliance



Orchestrated DR

End-to-end orchestration for disaster recover to the cloud and failback

Efficient architecture

Eliminate DR data center costs using minimal cloud infrastructure

Simple operation

3 clicks failover, 2 clicks failback¹
Direct in-cloud access

¹According to Dell Internal Testing, March 2022

Seamless protection of cloud workloads

Protect cloud-native workloads across multiple public clouds

Name	Status	Operating System	Apps	Protection Policy	Protection	Disk Excluded	vCenter	Size	Network
dan.com	Available	SUSE Linux Enterprise 12 (S445)		none	Protected		disco004.srm.ssa.lap.dell.com	210.2 GB	
try-linur-testbed-9	Available	Other 3.x Linux (S345)	none	try-linur-testbed-9	Protected		disco004.srm.ssa.lap.dell.com	671.1 MB	vlar003
linur-testbed-9	Available	SUSE Linux Enterprise 12 (S445)		linur-testbed-9	Protected		disco004.srm.ssa.lap.dell.com	19.9 GB	
linur-testbed-9-2	Available	SUSE Linux Enterprise 12 (S445)		linur-testbed-9	Protected		disco004.srm.ssa.lap.dell.com	19.9 GB	
nv45176-80103kran	Available	Microsoft Windows 10 (S445)		VMAC	Protected		nv-45-11.ssl.lap.emc.com	548.8 GB	
nv45161	Available	CentOS 7 (S445)		VMAC	Protected		nv-45-11.ssl.lap.emc.com	107.4 GB	
nv45111	Available	VMware Photon OS (S445)		VMAC	Protected		nv-45-11.ssl.lap.emc.com	335.4 GB	
Sherr-nv45-128-windows	Available	Microsoft Windows Server 2012 (R...		VMAC	Protected		nv-45-11.ssl.lap.emc.com	40.3 GB	
nv45182-ml-lab-emc.com	Available	SUSE Linux Enterprise 12 (S445)		VMAC	Protected		nv-45-11.ssl.lap.emc.com	167.8 GB	
Blanc-00-18-S-D-0	Available	SUSE Linux Enterprise 12 (S445)		VMAC	Protected		nv-45-11.ssl.lap.emc.com	587.2 GB	
New Virtual Machine	Available	Microsoft Windows Server 2016 or L...		VMAC	Protected		nv-45-11.ssl.lap.emc.com	23.6 GB	
nv45181	Available	VMware ESXi 6.5 or later		VMAC	Protected		nv-45-11.ssl.lap.emc.com	1.1 TB	
nv45181-70m	Available	SUSE Linux Enterprise 12 (S445)		VMAC	Protected		nv-45-11.ssl.lap.emc.com	666.7 GB	
WV0218-nv45-18	Available	Microsoft Windows Server 2016 or L...		VMAC	Protected		nv-45-11.ssl.lap.emc.com	23.6 GB	
WV0218-nv45-18-19	Available	Microsoft Windows Server 2016 or L...		VMAC	Protected		nv-45-11.ssl.lap.emc.com	23.6 GB	

SaaS solution

simple, scalable and secure

Global visibility and control

across Azure, AWS and Google

Discover, orchestrate, and automate protection of workloads with tag-based policies

Single pane protection status via PowerProtect Data Manager

Flexible, efficient retention

cloud snapshots with PowerProtect DD Virtual Edition

Protect Cloud-Native Workloads



AWS EC2 Instances



AWS EBS Volumes



AWS Elastic File System



AWS Aurora DB



AWS Redshift DB



AWS RDS Instances



AWS Dynamo DB



Azure Blobs



Azure VMs



Google GCE



Google Persistent FS

VMware protection

Providing a consistent protection experience



VMware

Manage protection through vSphere



Automation

Discovery and policy creation



Modern

Kubernetes container protection



Cloud

In-cloud and extend to cloud protection

Transparent Snapshots

Transparent Snapshots **simplifies**
VM image backups delivering
near-zero impact on VMs

Ensure availability of all your VMs
at scale without business disruption



Transparent Snapshots benefits



Increase backup performance

Near zero impact to VMs
or environment

Faster backups

Faster restores



Lower costs & simplify management

Zero proxies for
data movement

Storage agnostic

Environment auto-scales
via automation

Comprehensive protection for containerized apps

Discover and manage
unprotected Kubernetes
natively

Protect Kubernetes
in AWS, Azure
and Google Cloud

Protect OpenShift
PaaS resources

Agentless
application consistency

VMware
Tanzu integration

Protect
EKS, AKS, GKE



Dynamic NAS Protection

Dynamic NAS **automates** and **optimizes** the protection of NAS infrastructure

Tight integration with PowerStore, PowerScale and Unity

Storage agnostic

Automatic discovery

Incremental forever backups

Dynamic slicing of NAS assets with load balancing

Secure

PowerProtect Data Manager Appliance

 **DELL** Technologies

Peace of mind with security and data integrity

Secure Access

IAM, RBAC, AD integration,
Two-Factor Authentication

Reduced potential for malicious data changes

With Retention Lock
Governance

Reduced attack surface

Private network for internal
communication

Data Invulnerability Architecture

End-to-end verification, fault
avoidance and more

Cyber Recovery Requirements



Immutability

Preserve original integrity of data



Isolation

Physical and Logical separation of data



Intelligence

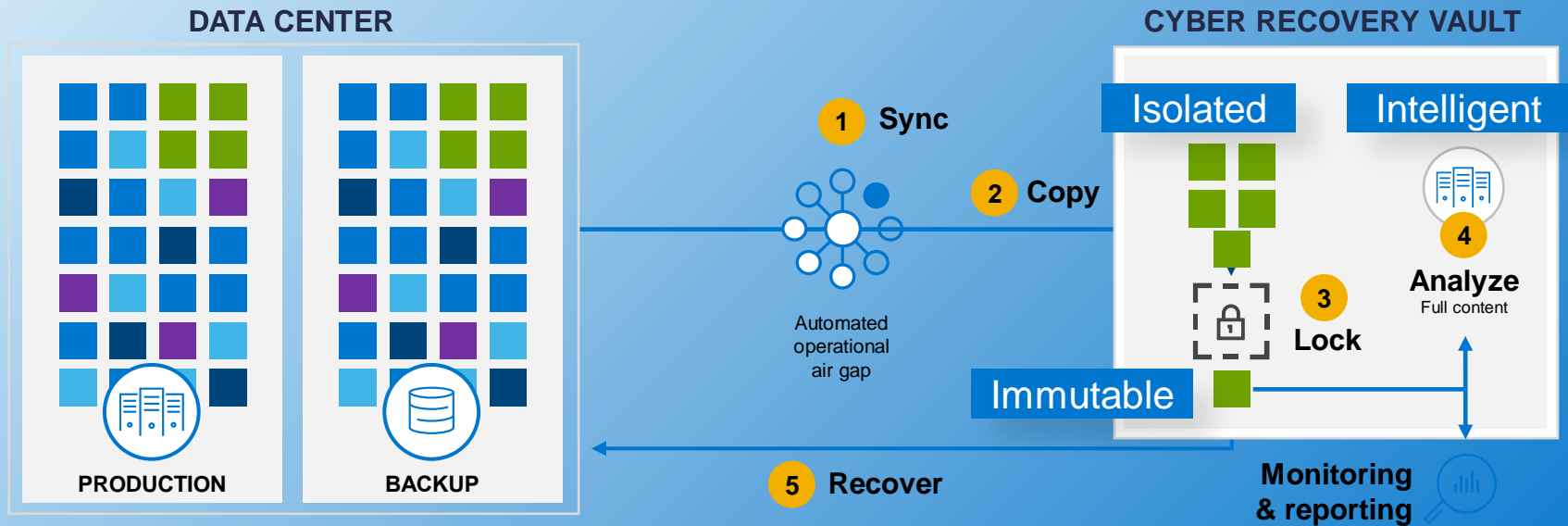
Machine Learning and Analytics identify threats



Modern threats require modern solutions to ensure cyber resilience

PowerProtect Cyber Recovery

Data Vaulting Critical Business Data

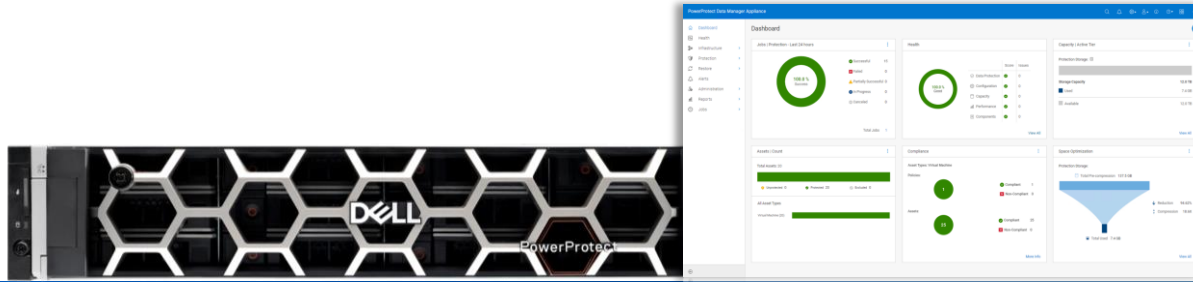


Simple

PowerProtect Data Manager Appliance

 **DELL** Technologies

Simple user experience



**Start backing up
in minutes**

**Streamlined
upgrades**

**Self-service with
governance**

Single pane of glass management

Unified interface for rapid, easy-to-use experience



Dashboards

Single view for on-premises and in cloud protection



Problem Resolution

Alerts, monitoring, appliance support telemetry



Policy Management

Automated discovery and protection of assets

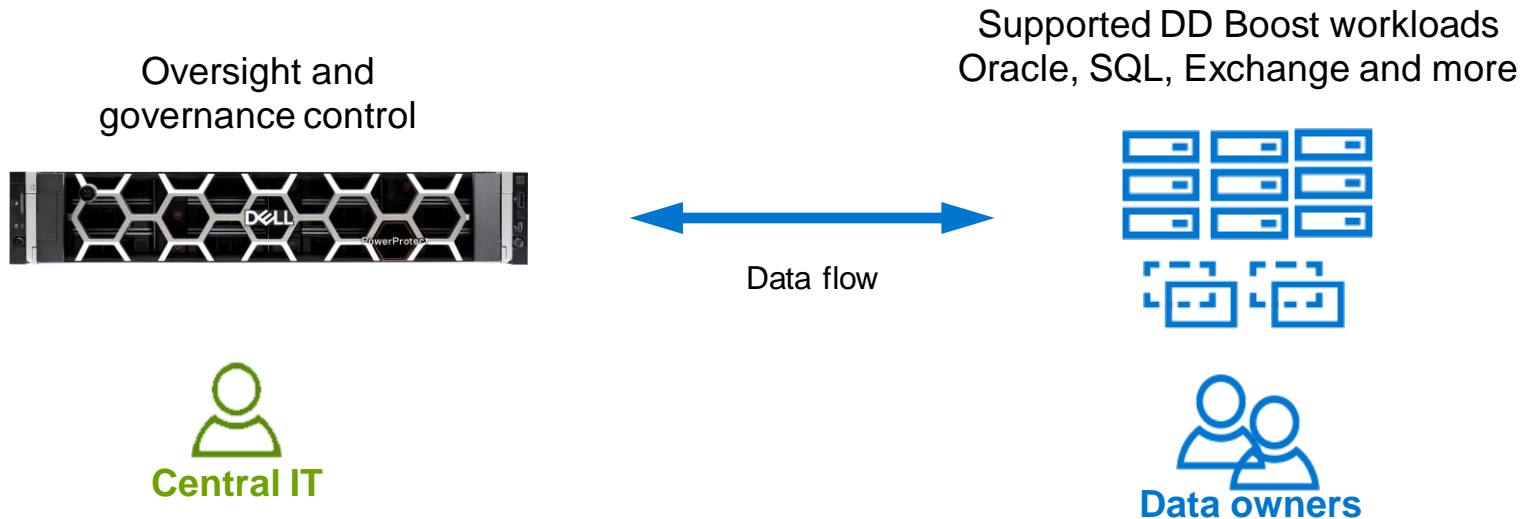


Reporting

Protection health compliance reporting

Centralized governance with data owner control

Self-service or IT controlled data protection with PowerProtect Data Manager Appliance



Automated configuration and onboarding

Self-service backup and restore

Dell Data Protection Guarantees

Increase confidence in data recoverability, optimize storage efficiency and lower costs



Guaranteed Recovery & Optimization



Up to \$10M to assist in recovery of your data from ransomware and qualifying cyber events.¹

Achieve a guaranteed deduplication ratio or we'll make it right.²

Dell Technologies Future-Proof Program



Data Protection Deduplication Guarantee

55:1 Deduplication Guarantee¹

PowerProtect Data Manager Appliance



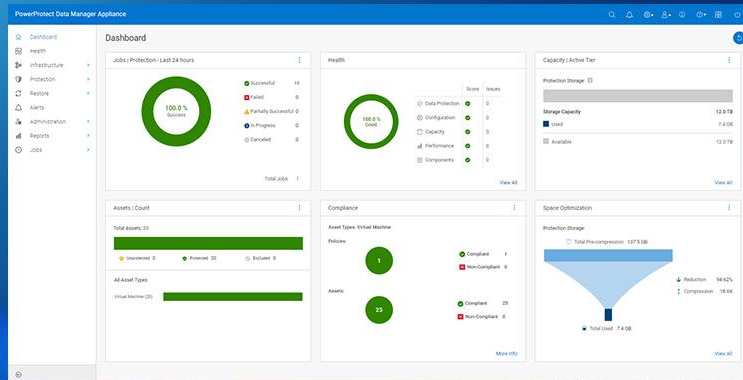
¹Use recommended best practices from Dell Technologies to get guaranteed data reduction for data protection appliances.

PowerProtect Data Manager Appliance

MODERN

SECURE

SIMPLE



Start your journey towards modern data protection

DELLTechnologies

Comprehensive services portfolio for data protection

Choice & flexibility throughout the lifecycle of your solution



Strategize

PROCONSULT

Define data protection strategy and requirements



Implement

PRODEPLOY INFRASTRUCTURE SUITE

Plan, install & configure with confidence

PRODUCTION READY FOR BACKUP

Specific short-term activities that translate unique customer needs into backup and data protection policies

DATA MIGRATION

Move data efficiently with minimal disruption



Adopt

PROSUPPORT INFRASTRUCTURE SUITE

Proactive and predictive support for critical systems

EDUCATION

Develop the skills needed for your digital transformation & build a culture of learning and continuous Improvement

RESIDENCY

Providing deep technical expertise to help achieve customer-directed business objectives and fulfill outcomes



Scale

DATA SECURITY

Secure data on returned, replaced redeployed or retired systems

Our commitment to progress through innovation

Our expertise in supply chain and our leadership in sustainable design and materials is how we will get there.

Products

We create high quality, durable, reliable, secure and repairable products incorporating responsible design processes and sustainable materials wherever possible, while reducing energy intensity across our entire portfolio of offerings.

Packaging

Dell Technologies is a leader in responsible packaging – reducing waste and driving innovation to find recycled and renewable alternatives to protect our products while in transit. We also offer multipack shipping to maximize efficiency for customers purchasing devices in large quantities.



76%

We have reduced energy intensity throughout our products by 76% Since 2013