

Rendez-vous autour de VMS

Solutions de stockage Dell Technologies pour OpenVMS

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 **DELL**Technologies



Client Solutions & OEM

Precision Rack / Mobile / Tower **Latitude / Latitude 2 in 1** **XPS / XPS 2 in 1 / XPS Tower** **OptiPlex Tower / Desktop / Micro / All-in-One / AIO-Ultra** **Wyse Thin Clients / Desktop / Mobile / All-in-One**

Vostro Mobile / Tower **Chromebook / CB 2 in 1** **Inspiron Mobile / Tower / All-in-One / Gaming** **Alienware Mobile / Tower** **Monitors**

Projectors **Accessories: Docks, Keyboards, Headphones, Bags** **Unified Workspace** **OEM & Customized Services / Edge IoT Gateways / Embedded Box PCs / Rugged Tablets / Mobile / Server**

DEPLOY SECURE MANAGE SUPPORT

DELL IoT Solutions Partner Program



(Selected Primary Products)
 Cloud Foundation™
 vSphere® / ESX®
 vRealize®
 NSX® / NSX Cloud™
 AppDefense™
 vSAN™
 Site Recovery Mngr.™
 vCloud Suite®
 vCloud® NFV™
 Fusion® / Horizon®
 Horizon® FLEX™
 Workspace™ ONE™
 HCX™
 CloudHealth
 SD-WAN by VeloCloud
 AppDefense™
 Carbon Black Cloud

(Selected Primary Solutions)
 VMware Tanzu
 Pivotal Greenplum®
 Pivotal GemFire®
 Pivotal RabbitMQ®
 Pivotal Spring®
 Pivotal Labs®

Services

Consulting Services
 Deployment Services
 Support Services
 Managed Services
 Education Services
 Cloud Services
 Financial Services

Boomi AtomSphere
 Integration
 Master Data Hub
 Flow
 API / B2B Mgmt.

Secureworks

Managed Security
 AETD Red Cloak™
 Counter Threat Unit™
 Security & Risk Cons.

virtustream

Enterprise Cloud
 xStream®
 Viewtrust



Infrastructure Solutions

Storage

PowerStore **NX-Series** VPLEX UNITY XT SC-Series PowerVault ME PowerMax VMAX XtremIO PowerScale ISILON ECS

CI / HCI

PowerOne VxBlock VxRack PowerFlex VxRail Ready Stack

Data Protection

PowerProtect DDVE IDPA 4400 PowerProtect Data Domain PowerProtect X400 IDPA 5XX,8XX Grid Avamar DLm

PowerEdge Server

Towers - Racks - Modular - Extreme - Rugged

Networking

OS9 / OS10 NSX CUMULUS Pluribus big switch Open Switch ipinfusion velocloud VERSA RUCKUS

Data Center - Campus - Branch - Wireless - SD-WAN - SAN - HPC - Infiniband - Open Network

Special Solutions Select Program

DELL EMC PARTNER PROGRAM
 Tech Connect - Select

VSCALE

Partner Program / Tech Select / Validated DC

Modular Data Center / Ready Solutions-Bundles-Nodes

Software

Storage Resource Management Suite
 Storage Analytics
 AppSync
 PowerPath
 VxFlexOS (Software Defined Storage)
 Virtual Editions: Data Domain, UNITY, ISILON Edge, CTA
 RecoverPoint for Virtual Machines
 Data Protection Suite
 PowerProtect
 Cloud Bundle Data Protection Suite
 Cloud Bundle PowerProtect
 Data Protection Suite for Archive
 Data Protection Suite for VMware
 Open Manage Enterprise
 Live Optics
 CloudLink KMG
 Encryption Enterprise/Personal

Storage - Data Protection - Server - Tools

Innovative, simple and powered up storage

Unity XT all-flash and hybrid arrays



All-Flash Models: Hybrid Models:	Unity 380F ¹ Unity 380 ¹	Unity 480F Unity 480	Unity 680F Unity 680	Unity 880F Unity 880
CPU (per system)	12 Cores 2x Single-Socket 1.7GHz	32 Cores 2x Dual-Socket 1.8GHz	48 Cores 2x Dual-Socket 2.1GHz	64 Cores 2x Dual-Socket 2.1GHz
Memory (per system)	128GB	192GB	384GB	768GB
Max raw capacity	2.4PB	4.0PB	8.0PB	16.0PB
Max drives	500	750	1000	1500

¹ Run advanced dedupe on 380 and 380F models with more memory

All-inclusive software with every storage array

No hidden costs make Unity XT easier to own, deploy and use

<p>Cloud-based Storage Analytics</p> <p>Comprehensive health scores for storage</p>	<p>Thin Provisioning</p> <p>Maximize your available capacity</p>	<p>Unified Management</p> <p>Configure & manage file, block, vVol objects</p>	<p>Central Management</p> <p>Manage multiple Unity XT systems</p>	<p>Dynamic Pools</p> <p>Get faster rebuild times & save costs</p>	<p>Space Efficient Snapshots & Clones¹</p> <p>Create file, block & vVol snaps/clones</p>
<p>Unified Synch & Asynch Replication</p> <p>Throttling, full copy avoidance, interface pairing, snapshots</p>		<p>Compression & Deduplication</p> <p>Advanced inline data reduction with zero detect</p>	<p>Software Defined Storage</p> <p>HA file/block storage to run on premise or on AWS in VCF</p>	<p>Cloud Tiering Appliance</p> <p>Automated, policy-based unified data tiering to clouds</p>	<p>REST API</p> <p>Connect interactive apps with web svcs</p>
<p>Anti-Virus Enabler</p> <p>Flexibly connect with popular anti-virus solutions</p>	<p>Data At Rest Encryption</p> <p>Protect all business data residing in the array</p>	<p>QoS (Host IO Limits)</p> <p>Limit host IO and bandwidth to specified block resources</p>	<p>File Level Retention</p> <p>Protect files from modification or deletion</p>	<p>Virtualization Integration</p> <p>VMware Microsoft, OpenStack</p>	<p>IP Multi-Tenancy</p> <p>Assign isolated partitions to NAS Servers</p>
<p>CSI Plug-in</p> <p>Easily deploy and consolidate containerized workloads with Kubernetes</p>	<p>vRO Plug-in</p> <p>End-to-end workflow automation simplifying & automating storage mgmt. processes</p>	<p>FAST Cache (HFA)</p> <p>Automated storage tiering performance optimization to provide rapid access to frequently accessed data improving read performance</p>		<p>FAST VP (HFA)</p> <p>Fully Automated Storage Tiering for Virtual Pools uses intelligence dynamically matching storage requirements with changes in the frequency of data access.</p>	

¹ Supported through AppSync for iCDM

PowerMax family



PowerMax 2000

Storage Class Memory

FC-NVMe

80GB/s sustained bandwidth¹

1.2PBe Capacity

1 to 2 Bricks

64 FC/iSCSI Ports

PowerMax 8000

Storage Class Memory

FC-NVMe

350GB/s sustained bandwidth¹

4.5PBe Capacity

1 to 8 Bricks

256 FC/FICON/iSCSI Ports

PowerMax Software

ESSENTIALS

SnapVX

Non-disruptive Migration

QoS

Compression

Deduplication

iCDM Basic (AppSync)

ABOVE +

PRO

SRDF

eNAS

SRM

PowerPath

D@RE

iCDM Advanced (AppSync)

Order separately: end-to-end efficient encryption and Thales host encryption licenses through Dell's ETC partner program.

A la carte titles: RecoverPoint, PowerProtect Storage Direct.

¹ Based on Dell EMC internal analysis of PowerMax random read hits (8K IOs), August 2020. Actual results will vary.

DellTechnologies

PowerMax Changes the Game

POWERFUL

Architecture



Scalability
Multi-controller
Architecture



Performance
End to End NVMe
Storage Class Memory



Resiliency
End to End data
integrity with T10
Diff



Efficiency
Inline, Global
Dedupe and
Compression –
No Compromise

SIMPLE

Operation



Connectivity
Block, File,
Mainframe, IBM i

CloudIQ

Cloud-based
monitoring and
analytics

FUTURE-PROOF
PROGRAM



Automation

TRUSTED

Innovation



Intelligence
Machine Learning



Availability
Over 6-9s



Protection
Gold Standard
in Replication

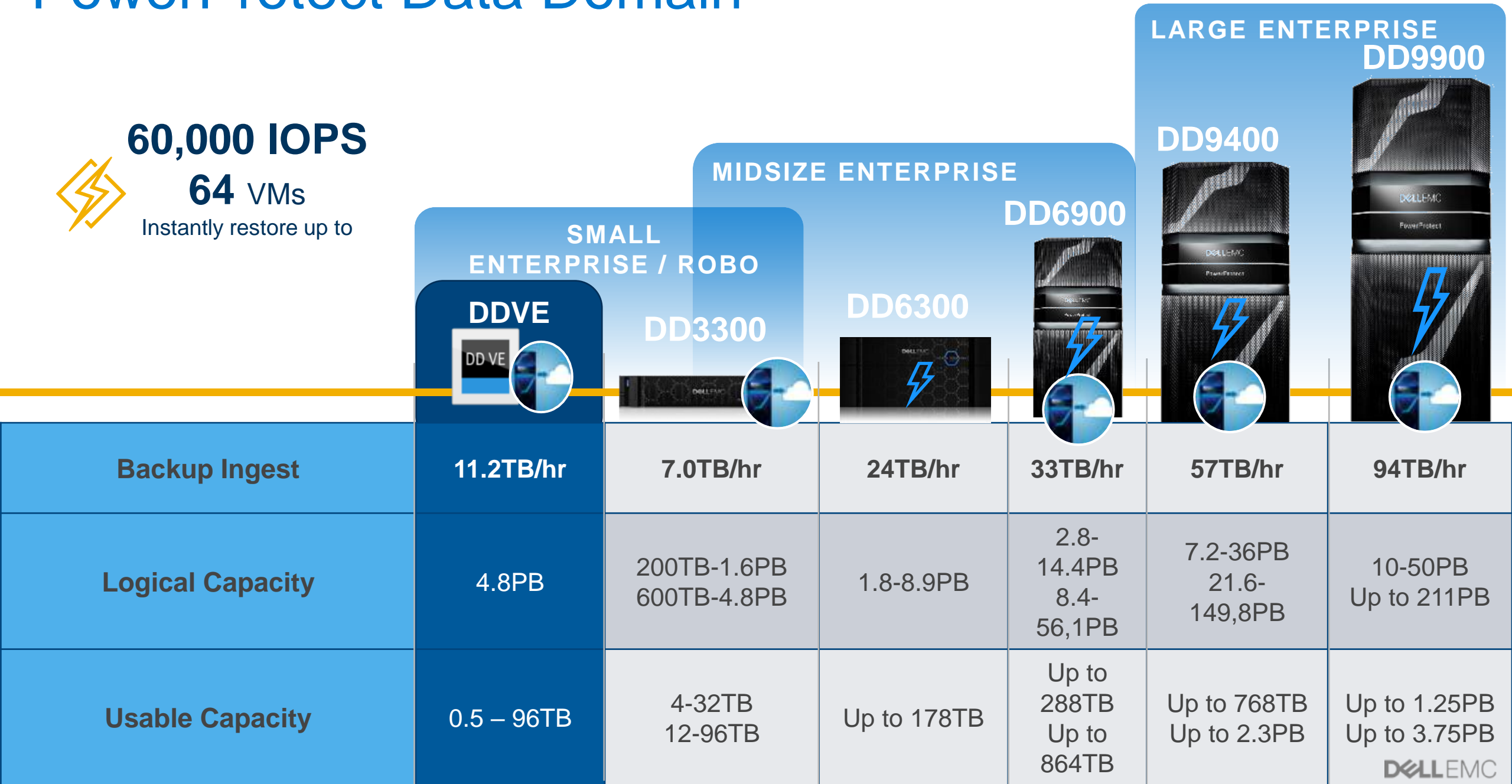


Security
End-to-End
Efficient
Encryption



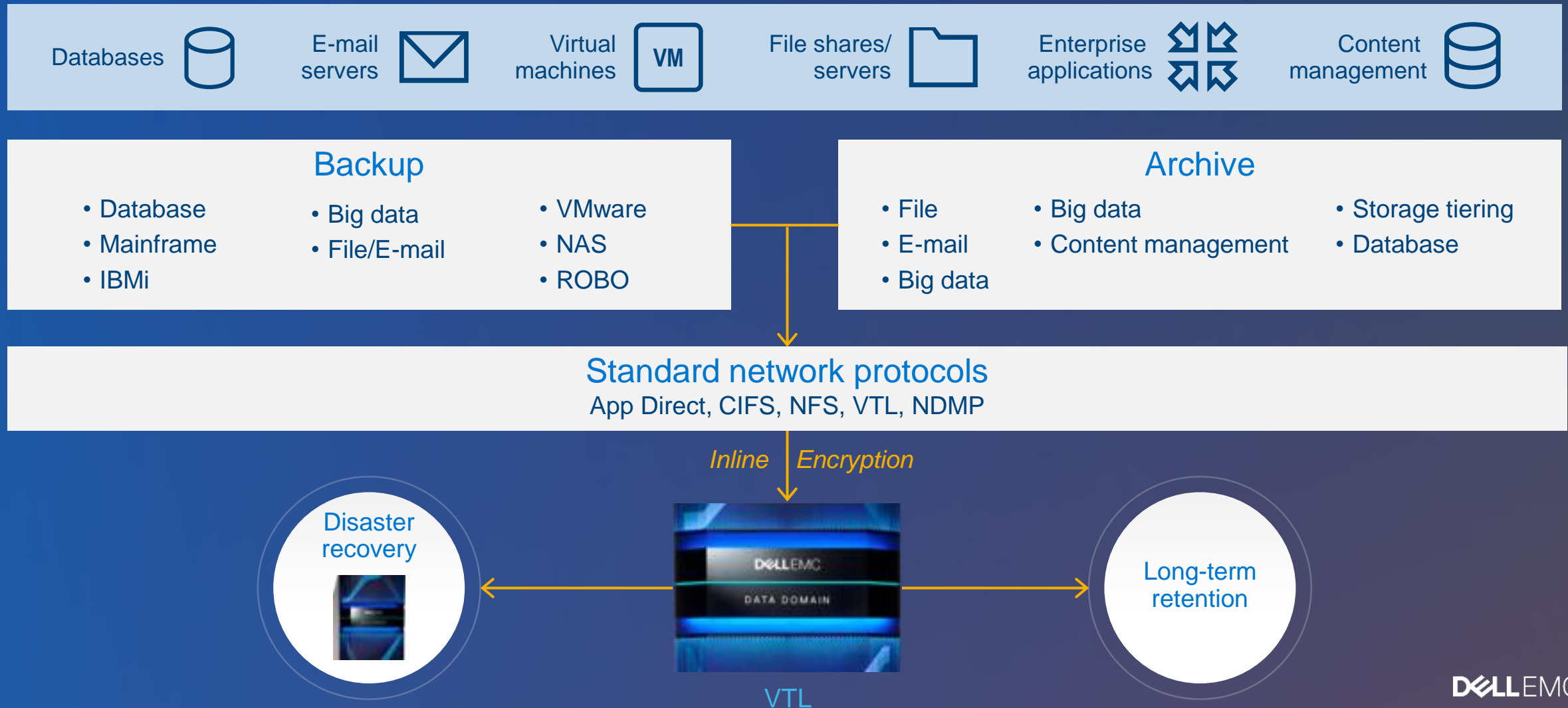
PowerProtect Data Domain

 **60,000 IOPS**
64 VMs
 Instantly restore up to



PowerProtect DataDomain : The ultimate protection storage

Protect everything in a single platform



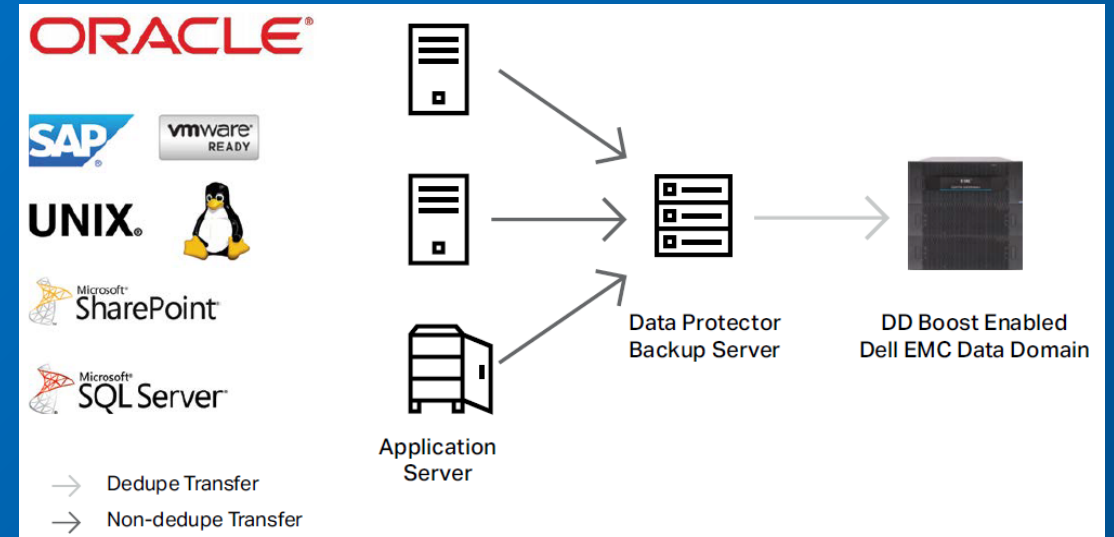
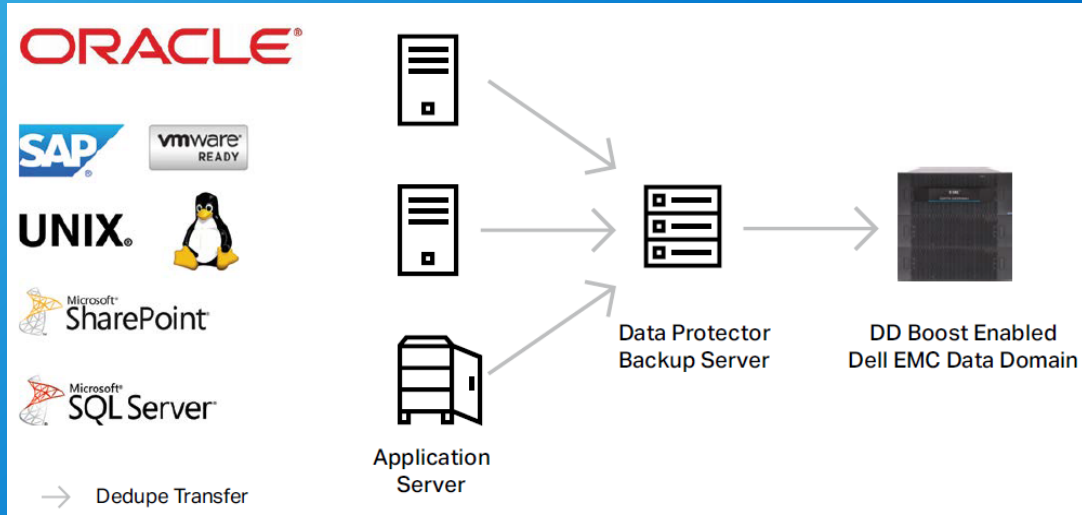


Figure 2. Backup server deduplication implementation.

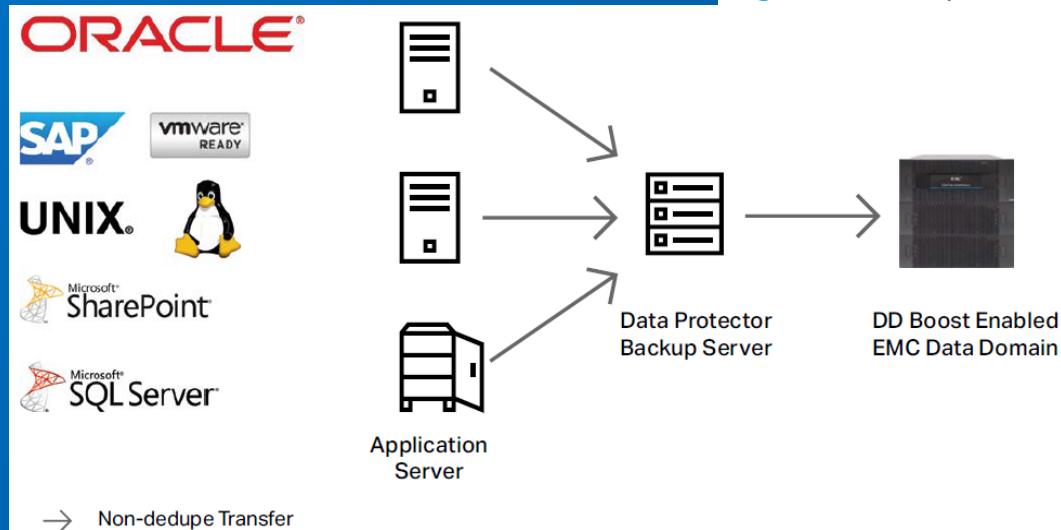


Figure 3. Target-side deduplication implementation

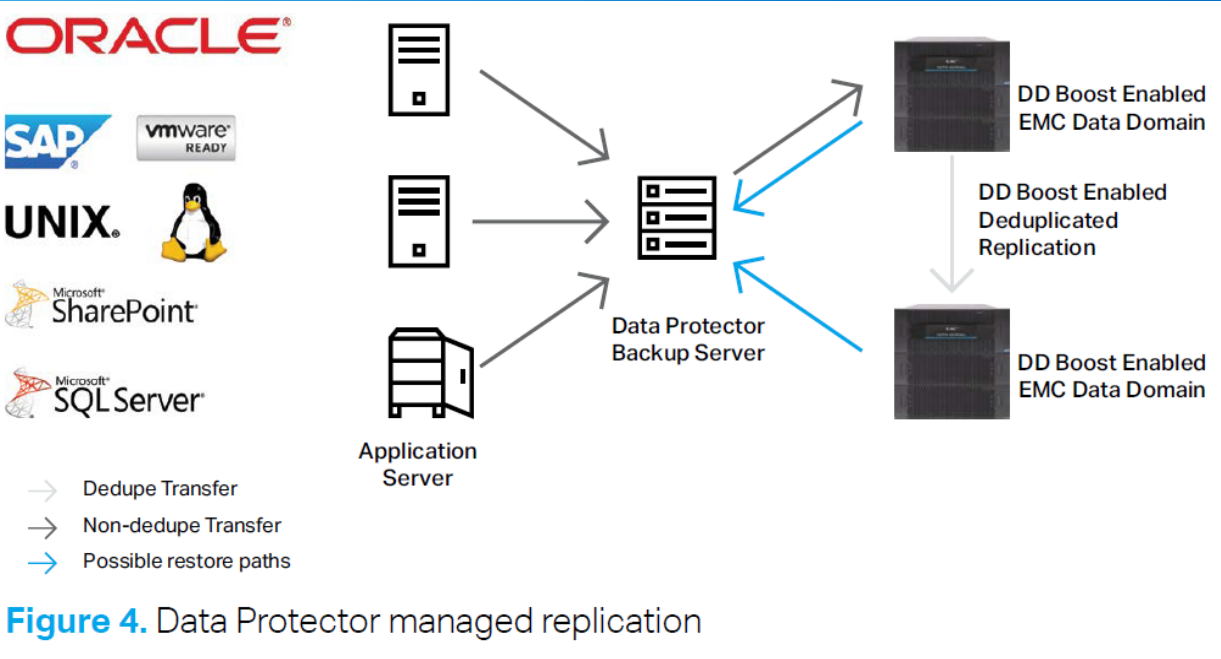


Figure 4. Data Protector managed replication

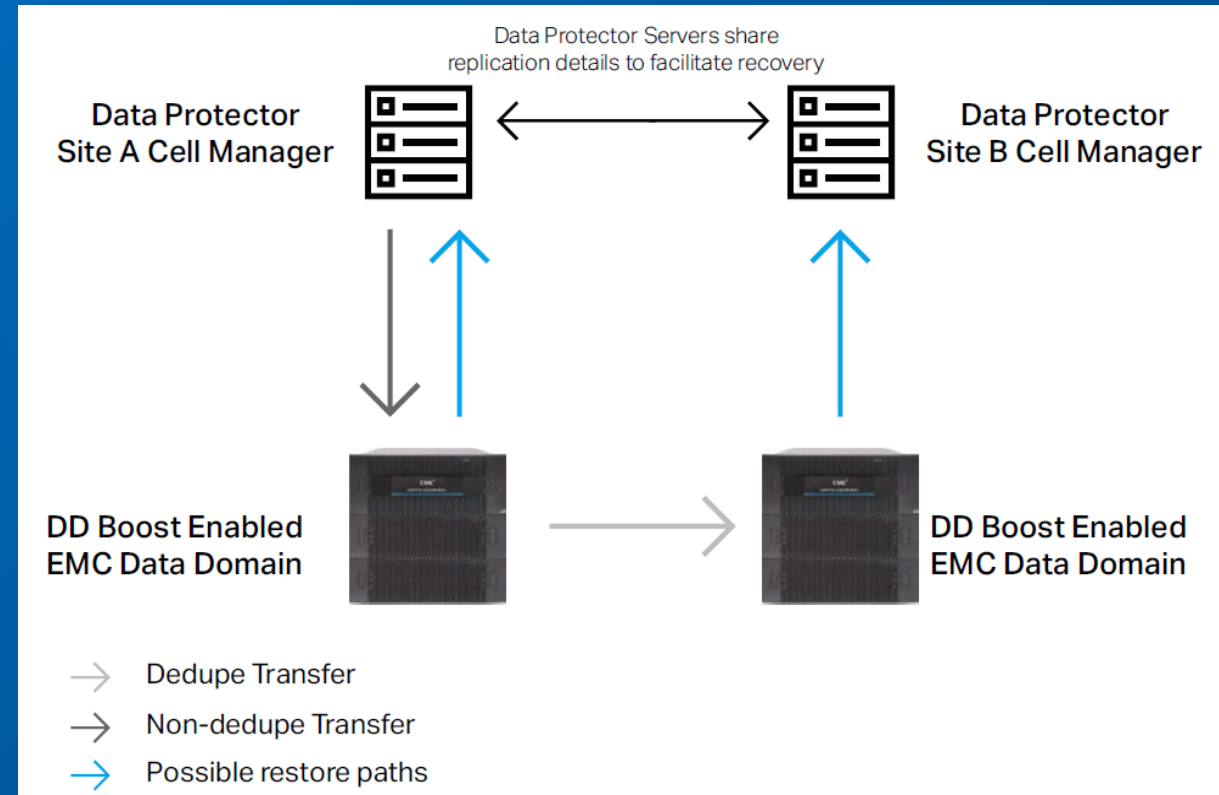


Figure 5. Data Protector automated replication synchronization

Questions ?