DELL TECHNOLOGIES CLOUD PLATFORM

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Contents

Why Cloud?

01

Cloud computing organizes a virtual environment. In a traditional IT, there will many factors affecting the scaling of the hardware resources, time, and money can seriously affect the business. Cloud addresses all of that.

02

Some of the advantages[#] of cloud computing are:

- Cost Savings - 20% is the average reported savings.
- Security - 94% of the organisation reported an increase in security.
- Flexibility - 65% of organisations reported increased flexibility.
- Mobility - 24% is the average expansion of cloud services.
- Disaster Recovery - 20% of cloud users claim recovery in <= 4hrs.
- Automatic Software Update - 50% decrease in maintenance time.
- Competitive Edge - 77% of businesses cited a competitive advantage.

Data obtained from https://www.salesforce.com/products/platform/best-practices/benefits-of-cloud-computing/

About DELL Inc.

Dell is an American multinational computer technology company that develops, sells, repairs, and supports computers and related products and services. Named after its founder, Michael Dell, the company is one of the largest technology corporations in the world, employing more than 165,000 people in the U.S. and around the world. It is one of the biggest PC product companies in the world.

Dell sells personal computers (PCs), servers, data storage devices, network switches, software, computer peripherals, HDTVs, cameras, printers, and electronics built by other manufacturers. Dell was listed at number 51 in the Fortune 500 list, until 2014 before it went private.

Dell acquired EMC on October 2015 to focus on data storage, information security, virtualization, analytics, cloud computing and other related products and services.

At $67 billion, it has been labeled the "highest-valued tech acquisition in history".

Introducing DELL Cloud

If you're looking to modernize your data center, unify your hybrid cloud operations, build modern apps, customize your cloud to scale or migrate workloads to any cloud, Dell Technologies Cloud can help.

01 One of the major problems companies are facing is the migration to cloud. Many companies have treated migration to the cloud as a mandate – and NOT a strategic resource to complement business and application requirements.

02 The results has been the proliferation of multiple clouds, which can create challenges ranging from unpredictable costs to security vulnerabilities.

03 Dell Technologies Cloud solves for this, enabling you to establish a strategic hybrid cloud strategy that aligns IT resources with your business and application needs.

Challenges Addressed.

01

Streamline infrastructure and operations across IT environments:

- Challenge- When leveraging multiple clouds, you need to manage different tool sets, platforms, security postures, operational silos, and poor workload/application mobility.
- Solution- A hybrid cloud that offers consistent infrastructure and operations to eliminate silos and drive efficiency and agility, while also supporting workload/application mobility.

02

Speed innovation with simplified migration:

- Challenge- You must act quickly to deliver differentiated value. Yet time spent planning, designing, deploying, configuring, and debugging IT systems during migration negates speed.

- Solution- Leverage pre-engineered solutions to help you get up and running quickly, reduce total cost of ownership, minimize risk, and simplify the cloud migration experience.

03

Optimize TCO with flexible hybrid pricing models:

- Challenge- While public cloud is perceived as more cost-effective compared to on-premises, it creates unpredictable costs. Steady-state workloads may be more suitable in your data center.

- Solution- Choose the optimum mix of public, private, and edge cloud resources your business requires, with flexible consumption and payment options.

04

Align IT skill sets to ensure performance and availability:

- Challenge- You need a variety of skill sets to plan, design, configure, deliver, and maintain IT resources in the cloud. Many organizations have trouble recruiting or retaining this expertise, creating issues that impact performance and cause outages.

- Solution- Empower your IT teams to work with a familiar toolset and operating model to boost productivity and mitigate performance issues and outages.

05

Enforce security throughout all IT environments:

- Challenge- While cloud vendors enforce rigorous protections, it can be difficult to understand and meet their security requirements, resulting in vulnerabilities.
- Solution- Enforce security policies consistently across IT environments, minimize your attack surface, and maintain the proper visibility and control over applications and data.

WHY DELL CLOUD?

Dell Technologies helps you reach new levels of business agility, reliability and control with a simplified and consistent approach. Our cloud solutions are tailored specifically for your organization.

Support for all major clouds

The world's broadest cloud provider ecosystem covering more than 4,200 cloud providers including hyperscalers AWS, Azure and Google Cloud Platform.

Single vendor experience

Benefit from a simplified experience for procurement, consulting and support. Accelerate and streamline roadmap development, migrations and upgrade paths with a single vendor.

Build and run modern apps

Accelerate innovation by combining containers with Kubernetes and virtual machines on a single platform with full stack lifecycle automation.

Management across clouds

Choose the optimal mix of public, private and edge cloud resources, then simplify operations with common management for them all.

Use Cases for DELL Cloud

01

Modernize your data center

Realize the same agility and CapEx savings in your data center as you have in the public cloud. Blend CapEx and OpEx to achieve the right cost structure for your business while bringing cloud operating models to all your applications.

- Lower TCO by buying, renting or consuming as-a-service.
- Streamline operations through automated lifecycle management.
- Future proof your operations with a platform that allows you to leverage any cloud – private, public or edge.

02

Unify your hybrid cloud operations

Get the benefits of private cloud, public cloud and edge environments without the chaos. Eliminate cloud complexity and gain control by using consistent infrastructure and operational models across clouds.

- Avoid vendor lock-in by shifting to alternative clouds as needed.
- Maintain control of data with ease of data portability across clouds.
- Be ready to scale with capacity on-demand, turn-key cloud access.

03

Accelerate innovation with modern apps

Capitalize on the next evolution in enterprise applications with Dell Technologies Cloud.

- Support for both traditional and cloud-native applications on the same infrastructure.
- Enable your VMware admins to become Kubernetes admins and address the cloud-native skills gap.
- Public and private cloud designed to work together.

04

Extend your cloud with ease

Leverage your hybrid cloud to achieve your business goals and avoid costly disruptions. Seamlessly extend your environment to deliver resources and resiliency without adding complexity and cost.

- Tailor your cloud solution to maximize productivity and efficiently run workloads.
- Minimize disruptions and outages with cloud resources for disaster recovery and backups.
- Utilize familiar tools and skills you already have.

05

Migrate workloads to any cloud

Migrate workloads to any cloud using familiar tools to avoid disrupting operations. Transition from traditional infrastructure to cloud operating models without costly re-platforming and lengthy transition cycles.

- Lower cloud migration costs without the need for extensive re-platforming.
- Reduce application rework with app and workload portability.
- Accelerate your journey to the cloud by leveraging the tools and skills you already have.

06

Run workloads in the right environment

Gain the flexibility of deploying applications in the right cloud. Let business needs dictate where workloads reside with one operational paradigm across public, private and edge.

- Optimize cloud spend and lower costs
- Use reliable and secure infrastructure
- Sustain innovation with flexible cloud solutions

Infrastructure in DELL Cloud

01

Instance types are standardized categories of resources optimized for virtualized and containerized workloads. Additionally, we offer special purpose instance types with Graphics Processing Units (GPUs) from Nvidia ™ to address Artificial Intelligence/Machine Learning and Virtual Desktop Infrastructure.

02

These instances are standardized combinations of compute (in some cases GPU/accelerators), memory, storage, and networking resources—powered by Dell EMC VxRail. They are optimized to fit your different use cases and range from small (4GB) to extra-large (32GB) memory-to-CPU core ratios for virtualized and containerized workloads.

03

Instances are offered in quantities (i.e. blocks) of 50, 100, 200 and 500 [instances], allowing you to scale your cloud deployment to meet the requirements of your workloads. Instance blocks can be added together to run a larger quantity of instances of the same type, or you can mix and match in order to support multiple different workloads within the same solution.

04

How does Virtual Destiny Infrastructure on Dell Technologies Cloud Platform Stack Up Against Public Cloud[#]?

- **Better User Experience**: Horizon on DTCP was up to 2.5x better than Amazon WorkSpaces on AWS.
- **Superior Productivity**: No loss of productivity compared to an average loss of up to 2.97 hours productivity per week on Amazon WorkSpaces on AWS.
- **Lower Application latency**: An average of up to 54% decreased latency compared to Amazon WorkSpaces on AWS and up to 34% decreased latency compared to WVD on Azure.

05

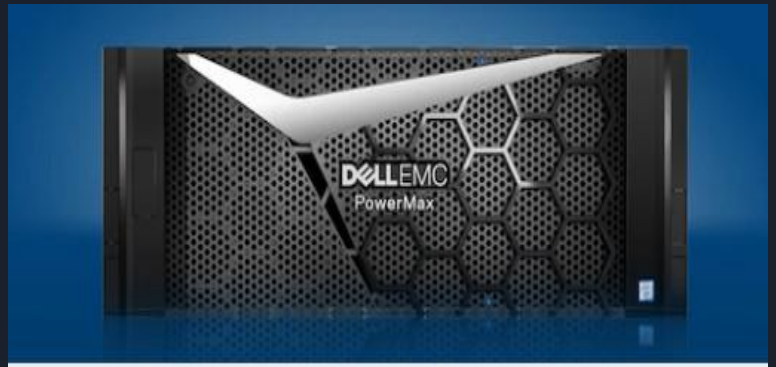
VxRail is the only jointly engineered system with deep VMware Cloud Foundation integration, enabling simplified hybrid cloud deployment and management. This delivers an automated lifecycle management experience, which significantly simplifies operations and ensures clusters are in continuously validated states so that your hybrid cloud infrastructure is always up to date.

Virtual Desktop Performance-
http://cloud-evolutions.com/wp-content/uploads/2020/11/VDI-UX-Comparison-Horizon-on-DTCP-WhitePaper-1.pdf

Dell EMC Solutions for Microsoft Azure Stack

Dell EMC vSAN Ready Nodes

PowerFlex



Data Storage

Fully Managed Data Center as-a-Service.

Use familiar VMware tools together with third-party integrations regardless of location with the best solution for today's applications. The offering includes everything you need—including the SDDC software stack, physical rack, network equipment, hyper converged servers, and power distribution.

Node Configuration

Name	Specifications	Capacity
G1s.small	• Form Factor: 1U1N (VxRail E560F) • CPU Cores: 24 • RAM: 256 GB	• All Flash Storage: 11.5 TB SSD
M1s.medium	• Form Factor: 1U1N (VxRail E560F) • CPU Cores: 24 • RAM: 384 GB	• All Flash Storage: 23 TB SSD
M1d.medium	• Form Factor: 1U1N (VxRail E560 NVMe) • CPU Cores: 48 (2x24) • RAM: 768 GB	• All-flash Storage: 23 TB NVMe
X1d.xlarge	• Form Factor: 1U1N (VxRail E560F) • CPU Cores: 48 • RAM: 1536 GB	• All Flash Storage: 61 TB SSD

Data center modernization

- Streamline operations and eliminate maintenance downtime.
- Switch to a more predictable OpEX model.
- Hardware refresh to easily build and scale modern applications.

Application modernization

- Support traditional and modern applications without extensive re-platforming.
- Automate your IT environment with tools such as vRealize Suite, Kubernetes, and Ansible.
- Rapidly stand up needed capacity or extend capacity for scaled-up services.

Low latency & data sovereignty

- Make decisions with data in real-time at edge locations without a round-trip to the central data center.
- Retain control of your data and easily extend your on-premises security to new cloud infrastructure.
- Meet regulatory compliance requirements for sovereignty sensitive workloads.

DELL Technologies Platform.

01

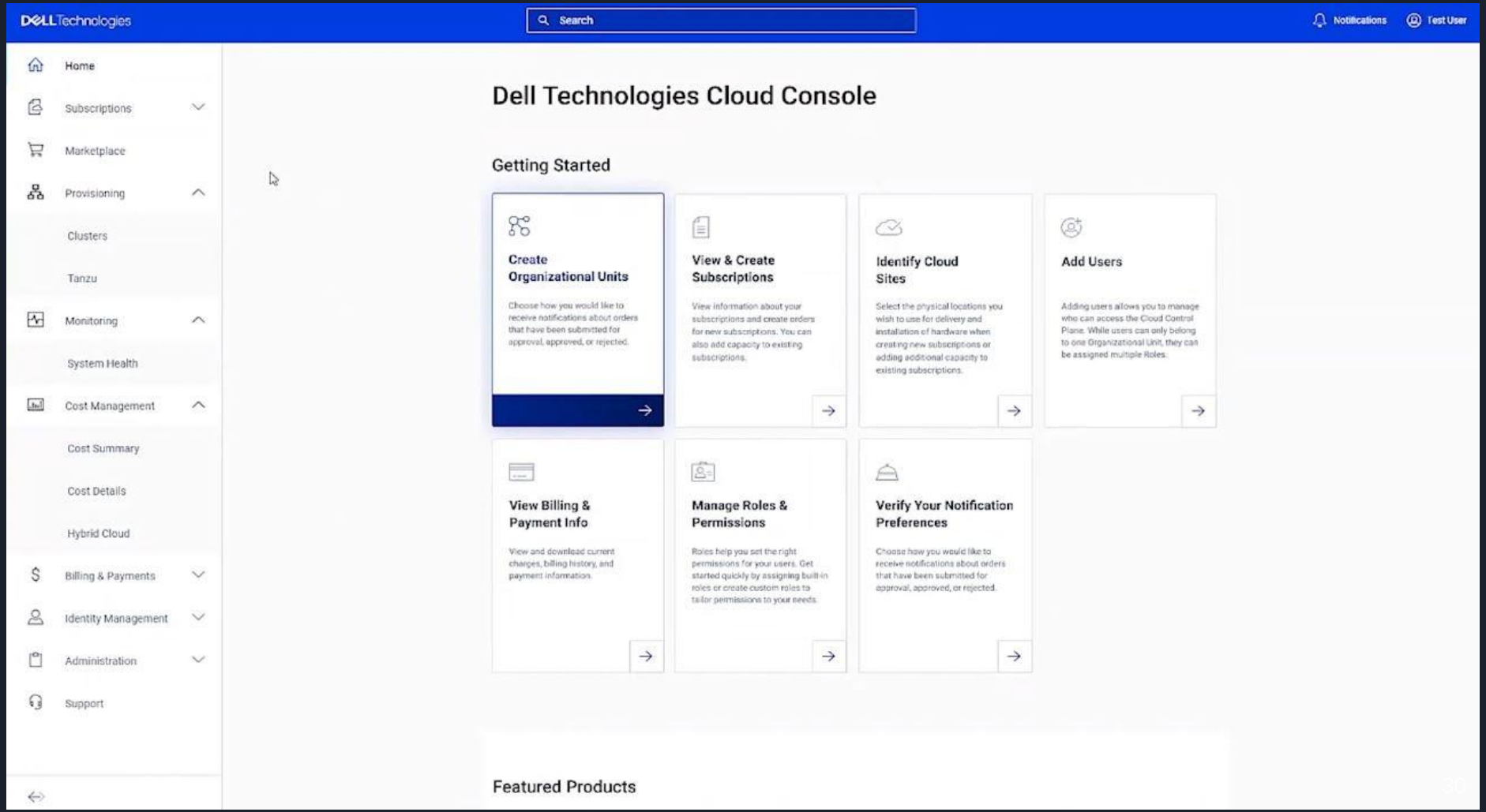
Dell Technologies Cloud Platform is the first hyperconverged infrastructure system fully integrated with VMware Cloud Foundation SDDC Manager, delivering simplified operations through automated lifecycle management. It is easy to get started with hybrid cloud, using a single platform to develop, test, and run cloud native applications on alongside traditional applications.

02

Power your modern applications with VMware Tanzu Kubernetes Grid — DTCP is now shipping with the most current edition of VCF with Tanzu. Gain a competitive advantage through innovation and developer productivity by deploying and maintaining containers on the same platform as your older applications. With support for both traditional and cloud-native applications on the same infrastructure, you can capitalize on the next evolution in enterprise applications.

03

Choose from a wide range of pre-configured solutions designed for your workload requirements and orderable through the Dell Technologies Cloud Console. The console brings the whole platform together.


DELL Technologies
Search
Notifications
Test User
Home
Subscriptions
Marketplace
Provisioning
Clusters
Tanzu
Monitoring
System Health
Cost Management
Cost Summary
Cost Details
Hybrid Cloud
Billing & Payments
Identity Management
Administration
Support
Dell Technologies Cloud Console
Getting Started
Create Organizational Units
Choose how you would like to receive notifications about orders that have been submitted for approval, approved, or rejected.
View & Create Subscriptions
View information about your subscriptions and create orders for new subscriptions. You can also add capacity to existing subscriptions.
Identify Cloud Sites
Select the physical locations you wish to use for delivery and installation of hardware when creating new subscriptions or adding additional capacity to existing subscriptions.
Add Users
Adding users allows you to manage who can access the Cloud Control Plane. While users can only belong to one Organizational Unit, they can be assigned multiple Roles.
View Billing & Payment Info
View and download current charges, billing history, and payment information.
Manage Roles & Permissions
Roles help you set the right permissions for your users. Get started quickly by assigning built-in roles or create custom roles to tailor permissions to your needs.
Verify Your Notification Preferences
Choose how you would like to receive notifications about orders that have been submitted for approval, approved, or rejected.
Featured Products

DELL Technologies Cloud Storage.

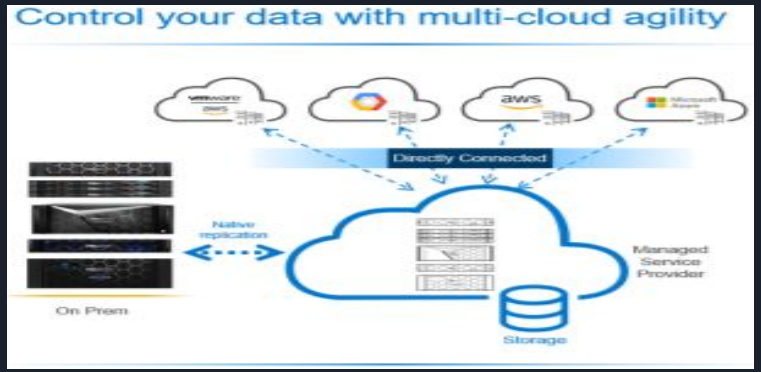
Dell Technologies offers a solution that addresses these challenges by delivering durable, persistent cloud attached storage that is scalable, highly available, and has a flexible design to optimize costs and keep businesses in control of their data.

01

Dell Technologies Cloud Storage for Multi-Cloud enables users to connect their file and block storage – Dell EMC Unity, PowerStore, PowerMax and PowerScale - consumed as a service, directly to public cloud(s) including VMware Cloud on Amazon Web Services (AWS), AWS, Microsoft Azure and Google Cloud Platform. This is done through a high-speed, low latency(6 - 9s) connection from Dell EMC storage at a managed service provider to the cloud or clouds of choice.

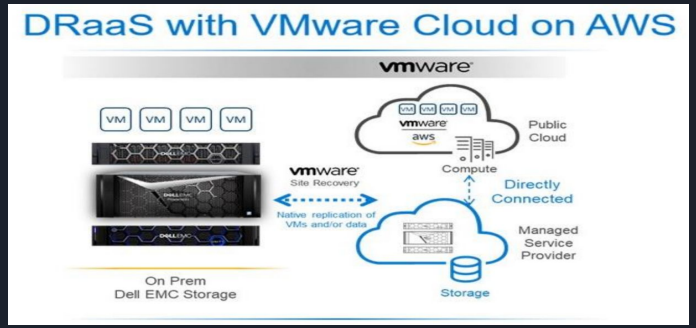
02

Organizations can avoid cloud vendor lock-in by keeping data independent of the cloud, so they do not have to worry about high egress charges, migration risk, or time required to move data. Extending the data center to the cloud using enterprise-class storage empowers users to innovate in the cloud and easily scale cloud environments to hundreds of thousands of IOPS to support high performance workloads, while reducing risk and maintaining complete control of their data.



03

With Cloud Storage for Multi-Cloud, businesses running VMware environments can deploy an automated, rapid DRaaS solution in VMware Cloud on AWS for seamless, cost-effective and enterprise-grade DR in the cloud. This solution makes it easier and more affordable to achieve higher levels of resiliency and provides complete operational consistency from on premises to the cloud. VMware Site Recovery along with native replication of the storage arrays enable setup and automation of DR operations.



04

Dell Technologies Cloud PowerScale for Microsoft Azure provides a higher bandwidth (up to 200 Gbps) and lower latency (as low as 1.2ms) connection to the cloud using Azure ExpressRoute Local. This solution allows for the right combination of storage and compute in the cloud for data-intensive, high I/O throughput workloads that require high compute performance on a periodic and/or unpredictable basis. With no outbound data traffic costs, this solution enables workloads that require a lot of temporary writes to storage to cost-effectively take advantage of Azure's application services.

05

Dell Technologies provides a wide range of choices for private, multi-cloud and native cloud storage services for unstructured data. Our cloud services extend the capabilities of our number 1 Distributed File System and Object Storage – Dell EMC PowerScale Scale-Out NAS and Dell EMC ECS – such as performance at-scale, operational efficiency and management simplicity. We enable enterprises to deploy the most suitable offering with cloud economics.

06

PowerScale for Google Cloud is a fully integrated native cloud file service for Google Cloud users, powered by Dell EMC PowerScale, the industry's number 1 scale-out NAS storage system. This turnkey managed service combines the performance, efficiency and security of PowerScale OneFS with the flexibility and cost economics of Google Cloud.

07

We combined PowerScale, powered by PowerScale OneFS with the Microsoft Azure public cloud, which offers enterprise-grade compute for operational flexibility. This cloud service provides high bandwidth and low latency connection from PowerScale to Azure using Azure ExpressRoute Local, which is required to effectively run compute, intensive file workloads in industries like life sciences and media and entertainment. It also eliminates outbound data traffic costs for data written to PowerScale from within Azure.

Cloud Data Protection.

Dell Technologies Cloud for Data Protection keep your data safe across private, edge and public clouds. Reduce business risk, meet regulatory compliance while maintaining data control across your entire cloud infrastructure.

Trusted cloud protection

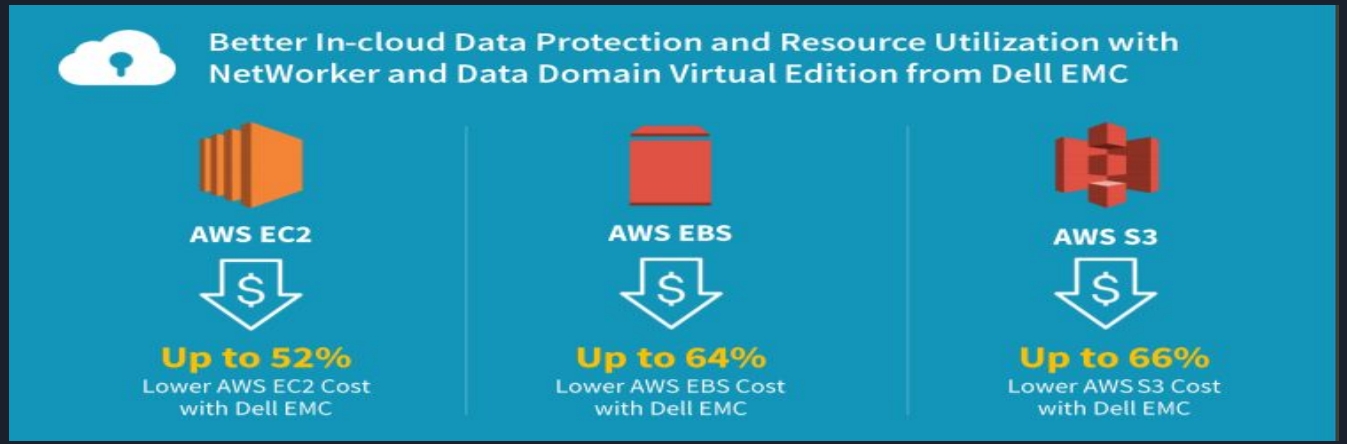
Protect your cloud data with a single solution that supports workloads on any platform and can cut cloud protection costs by 66%. Your data is safe, and you can extend backup and disaster recovery capabilities across your entire IT infrastructure.

1100+

companies trust Dell Technologies to protect their data in the cloud[1]

>4.0 EB

of data protected in the cloud[2]



1, 2 Based on Internal Dell Technologies research, October 2020

01

Dell Technologies Cloud PowerProtect for Multi-Cloud supports a data centric approach to data protection for our customers, allowing them to separate their data and cloud management strategies across Public Cloud Providers. Now, our customers can use the compute and application capabilities of any cloud provider with their data residing on a PowerProtect DD Appliance powered by Faction.

02

PowerScale for Google Cloud is a fully integrated native cloud file service for Google Cloud users, powered by Dell EMC PowerScale, the industry's number 1 scale-out NAS storage system. This turnkey managed service combines the performance, efficiency and security of PowerScale OneFS with the flexibility and cost economics of Google Cloud.

03

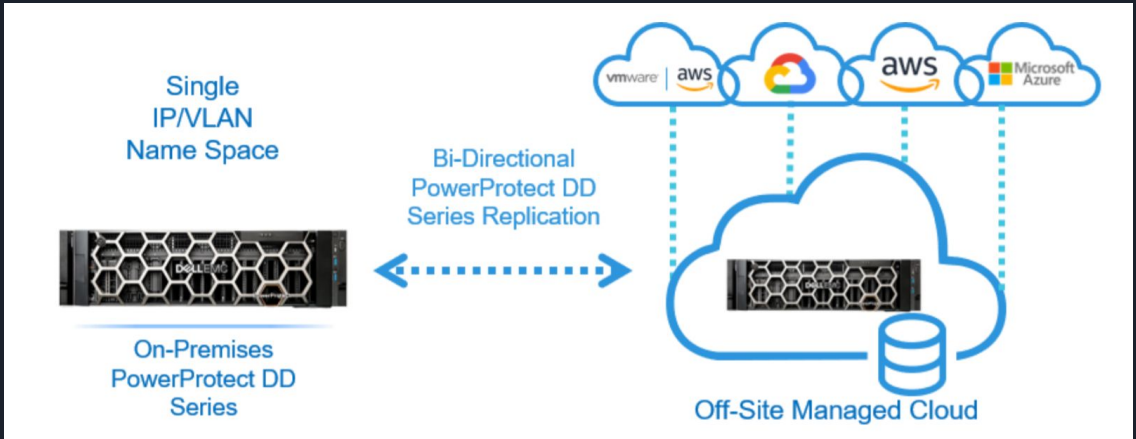
PowerProtect for Multi-Cloud is a fully managed service that gives organizations a single namespace across on-premises and public clouds to protect their data and applications, allowing organizations to manage their data separate from the public cloud, leveraging a single destination for backup, archive and long-term retention.

04

PowerProtect for Multi-Cloud allows organizations to restore point-in-time data availability to the public cloud provider of their choice at any time. In the event of data failure or data loss, the multi-cloud attachment allows customers to spin up their data on-demand in any public cloud, avoiding cloud vendor lock-in.

05

PowerProtect for Multi-Cloud provides the ability to protect on-premises data and applications in a cloud-adjacent location by leveraging familiar and trusted array-based replication from on-premises PowerProtect DD appliances replicating to the target device for multi-cloud service.



Virtual Desktop Infrastructure.

Dell Technologies Cloud for Data Protection keep your data safe across private, edge and public clouds. Reduce business risk, meet regulatory compliance while maintaining data control across your entire cloud infrastructure.

VDI delivers workforce transformation, by enabling users without compromising security or high-quality end user experience and streamlining IT resources and management.

Enhance your user, data, app and endpoint security

VDI solutions enhance security by centrally storing IP, data and apps in the datacenter..

Deliver high user experiences

Dell's end-to-end solutions deliver extreme graphics in a reliable environment, reducing downtime and enabling anytime, anywhere digital workspaces.

Streamline IT resources and improve productivity

IT can centrally manage images and applications and dynamically allocate resources to respond faster to users and business demands.

High Performance

Provide beyond workstation level performance for critical users wherever they are. NVIDIA GRID technology allows users to use as much or as little resources as they need.

Consumption & Payment

Simplify the way you pay

- Make predictable payments over an agreed upon term and grow over time.
- 0% Financing for 24 or 36 months on datacenter infrastructure products and services
- Let us manage the technology infrastructure you pay for resources as consumed.

On demand technology Consumption

- Select from a wide range of consumption models, payment solutions and services.
- Optimize for diverse operating environments, technology landscapes and workloads.
- Consume infrastructure in new ways to realize cost-savings and business advantages.

Business Value of Dell Technologies# IDC Study

- 23% lower average storage cost per year
- 64%lower cost of unplanned outages
- 25% lower storage acquisition costs
- 20% more available capacity
- 92% faster time to deploy new storage capacity
- 54% fewer incidents of unplanned downtime
- $36,400 gain in business operations per 100 users

Data Obtained From Business Value of Dell Technologies On Demand: A Study of Usage-Based Consumption Models for Storage

https://www.delltechnologies.com/en-us/cloud/dell-technologies-cloud/consumption-options.htm#accordion0&overlay=/en-us/collaterals/unauth/white-papers/solutions/idc-the-business-value-of-dell-tech-on-demand.pdf

DELL Partner.

We can help you unlock the potential of our full Dell Technologies portfolio, including Dell Technologies Cloud solutions. We create the right teams and transformational solutions needed to solve your most challenging business problems.

IT decision makers multi-cloud environments

Support for organizations to navigate multi-cloud complexity and yield substantial benefits.

Access partners for cloud services

Go into production quicker with providers who follow trusted guidelines for deployment. Quickly extend to a hosted Dell Technologies Cloud from your own facility.

Cloud Service Provider Credentialed Partners

Faction, NTT, Rackspace technology, Sungard Availability Services, Tierpoint are some of the partners.

Cloud Partner Connect for solution providers

Maintain account control while expanding product lines with cloud services and hybrid IT. Enter the cloud service market without capital investment or the need to develop extensive knowledge of XaaS.

Thank you!

Ask any question you want.