Bringing the
Cloud Experience
to your Storage
and Data

Data#3 | Hewlett Packard Enterprise

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Introduction

We're in the midst of a data management paradigm shift.

To move forward in the digital transformation process, organisations need to reach a certain level of data maturity. However, uncontrolled data sprawl and infrastructure complexity are holding them back. Siloed software and hardware, time-intensive manual processes, and data being generated and stored in the far-flung corners of the enterprise are creating mounting headaches. The consequences of not addressing data management and infrastructure quickly stacks up - wasted IT time, higher costs, greater risks and stymied innovation.

The way data has been managed is simply no longer fit for purpose.

Inspired by the consumerisation of IT, Hewlett Packard Enterprise (HPE) decided to flip the script and turn the customer's ownership, deployment and data management model into a true, cloud-first model. Along the way, they have re-engineered the way data is managed, added a good dose of intelligence and automation to the mix, collapsed silos and made observability a key business asset in the age of rising complexity.

It's all culminated in an approach referred to as Unified DataOps that brings the cloud operational experience to wherever data lives.

In this eBook, we illuminate how Unified DataOps steers IT in the enterprise towards better performance, maximum use of resources, and ROI on their infrastructure investments.

"The average organization today uses 23 different data management tools. That makes no sense."

Scott Sinclair, Senior Analyst, Enterprise Strategy Group

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The key emerging storage and data challenges

IT complexity stands in the way of innovation

82% of executives said storage management is currently a key challenge, with 93% stating it's impeding their digital transformation.*

Speed, agility and the ability to leverage data and intelligence are key to accelerating digital transformation. However, spiralling volumes of data, intensifying threat landscapes, and increasing demands for utilising all that data, is making storage and data management at scale so complex it's actively preventing innovation.

While flash and arrays have helped - as more and more assets are accumulated - managing everything along with storage infrastructure lifecycle management remains a stubborn challenge.

Dealing with data infrastructure divergence

1 in 4 organisations have more than 50 distinct data silos**

A complex web of data is being generated and housed outside of the traditional data centre, across the cloud, and at the rapidly expanding edge. Harnessing this sprawl of data with multiple tools in multiple silos is just too complex, making the goal of achieving a single view of lifecycle data management almost impossible.

Extracting value is reducing time-to-value

Only 32% of the data available to enterprises is ever used and the remaining 68% goes unleveraged***

Parsing data across data siloes and generating business-critical insights swallows up valuable resources. Budget limitations and skill shortages only amplify the problem. Meeting these increased demands isn't solely a human resources problem, the infrastructure itself must transform to simplify data management and operations.

* HPE (2021), Managing storage: It's all about the data [ONLINE]. Available here.

** ComputerWeekly.com (2020), Data silos and IT complexity stifle business potential [ONLINE]. Available here.

*** Seagate (2020), Seagate's 'Rethink Data' Report Reveals That 68% Of Data Available to Businesses Goes Unleveraged [ONLINE]. Available here.

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The Unified DataOps Vision

In an attempt to eliminate data management complexity, Unified DataOps is a promising approach. One that collapses silos across people, processes, and technologies to accelerate innovation, streamline data operations, and mobilise data across the cloud. No matter where data resides.

Unified DataOps: A cloud-native data infrastructure

Unified DataOps enables customers to break down silos and leverage data to deliver a new data experience that impacts everyone from IT to database managers, to developers. It does this by:

- Integrating data-centric policies across the board to streamline data management.
- Leveraging AI-driven insights and intelligence to provide a holistic approach to problem prevention, identification and a recommended resolution.
- Pooling your data into categories to abstract hardware from the management layer, rendering the infrastructure invisible.
- Incorporating cloud-native data control, cloud-native data infrastructure, and AI Ops.
- Tightly integrating the entire platform within a SaaS consumption experience.

Ultimately, Unified DataOps connects applications to infrastructure, people to data, and policies to workflows in a seamless cloud experience, wherever data lives.

So how do we bring the Unified DataOps vision to life?

Let's take a closer look at some of HPE's newest tools and technologies that promise to bring the cloud experience to the discovery, provisioning and management of storage:

- **HPE CloudPhysics — an AI-based hybrid cloud assessment tool**

  Quickly identify the most efficient, and cost-effective data infrastructure resource for your workloads.

- **Replace HPE CloudConsole with Data Services Cloud Console**

  Utilising intent-based provisioning to ensure workloads are deployed and maintained on the right resources to ensure business velocity, data availability, efficiency, and best economics.

- **HPE Infosight — an industry-leading AI ops platform**

  Proactively monitor, maintain and optimise your data storage and workload

Eliminating the silos and complexity that plague organisations

Line of business	IT management
Creates competitive advantage	Operational agility at scale
Drives more value from data	Eliminate the firefighting
Faster decision-making	Maximise resource efficiency
Data innovator	**Data manager**
Faster access to data	Operational simplicity
Self-service provisioning	Protect critical assets
Accelerate time to market	Decreased data risks

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Take the guesswork out of rightsizing virtual infrastructure in 15 mins with CloudPhysics.

When it comes to the cloud, capacity management is often a combination of past experience and guesswork. While the elasticity of the cloud provides some protection against capacity planning mistakes, the reality is that a lot of workloads are still idle for large portions of time. Idle workloads still consume resources, and cost money, so the ability to accurately rightsize virtual workloads will have a positive impact on resource optimisation and cost management.

Knowing exactly what you have and what you need in terms of compute, memory and storage is an obvious game-changer and that's exactly what HPE CloudPhysics is able to deliver.

This AI-based hybrid cloud assessment tool can help you right size your existing virtual environment, ensuring workloads use the most cost-effective infrastructure. Or, when planning cloud migrations it can monitor and analyse IT infrastructures, estimate cloud migrations costs and viability, and model a recommended virtual IT environment. How much will it really cost to run various applications in the public cloud, versus keeping them on-premises? Will you save money, or could it actually cost more?

In short, CloudPhysics removes the guesswork out of capacity planning, RCA/troubleshooting, performance analysis, risk or health assessments and repairing, upgrading and optimising data centre operations.

The ability of CloudPhysics to tame complexity is only superseded by its simplicity. As the infrastructure is abstracted away from the operator, it can be deployed in minutes and start generating insights within another 15 minutes (a process that usually takes days) – and given its ability to streamline data management, it can deliver some serious ROI.

- Eliminates the chance of moving idle resources to the cloud and paying for over resourcing.
- Optimise workloads and IT spend across your edge to cloud environment.
- Identify the ideal configuration for compute, memory, storage, and network when moving data to the cloud.
- Accomplish more efficient IT infrastructure planning and procurement.
- Use increased visibility and understanding to improve a virtual data centre, transform a private cloud, or transition workloads to the public cloud.

Request a CloudPhysics Assessment for your vSphere environment

REQUEST NOW

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Eliminate silos and complexity with Data Services Cloud Console

Data Services Cloud Console is not just another piece of software to manage storage infrastructure. Instead, it brings the cloud operational model into data centres and unifies data and infrastructure management across edge, on-premises, and public cloud. It works by abstracting control from the storage infrastructure to transform fragmented data and infrastructure operations into a streamlined data experience.

Delivered as a full Software as a Service (SaaS) console and built and on unique cloud-native architecture, it removes complexity from data operations management and simplifies infrastructure at scale so managing hundreds of systems becomes as simple as managing one.

It delivers on the data mobility promise by making data available as needed across multiple hyperscalers so you get an entire view of the storage infrastructure, the data PLUS its context as well as role-based infrastructure access controls.

Simplifying the deployment model
Automated discovery and activation allow you to simply connect power and network cables, turn it on and Data Services Cloud Console will register and onboard the device, preload it based on either a previous state or a new state and induct it into the fleet ready for use.

Simplifying the provisioning model
Traditional LUN-centric provisioning processes are incredibly time-consuming and require a level of knowledge and familiarity of your infrastructure architecture that are often only available to a small number of staff. Intent-based provisioning transforms this process.

Instead of choosing storage infrastructure, you define your requirements in terms of speed, latency and application functionality and AI will do the provisioning work for you. It uses telemetry data gathered across your infrastructure to choose the right storage infrastructure to meet your described requirements. You can override any decisions made, but it delivers in minutes what used to take hours or even days because of the abstraction of the infrastructure layer from the operator.

Intent-based provisioning is a storage paradigm shift moving from LUN-centric to app-centric provisioning. When you combine it with identity management and role-based access, you're enabling self-service on-demand provisioning of the underlying data infrastructure to accelerate the workload deployments. You're also eliminating guesswork and providing the ability to be able to optimise service level objectives.

Simplifying automation and orchestration
Data Services Cloud Console provides a highly extensible, fully programmable, unified API that allows you to automate operations with your choice of orchestration tool across your entire infrastructure. This includes invisible cloud-delivered upgrades of software and firmware that are automated, non-disruptive and policy-driven.

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"Storage complexity is the roadblock to innovation. The Data Services Cloud Console strips away all the traditional management work across the lifecycle of storage—from deployment and provisioning to global management—all from the ease of a single cloud console. The idea is that storage deployment can be done in minutes, rather than days or in some cases weeks, with auto-discovery and configuration."

Tom Black, senior vice president and general manager, HPE Storage

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Get autonomous infrastructure with HPE Infosight

HPE Infosight is the final piece of the Unified DataOps puzzle - one of the industry's most advanced AI Ops platforms. It's an all-knowing, self-managing, maintenance and optimising solution that applies advanced machine learning to enable autonomous data operations and optimise performance, availability, and resource management across clouds. All these technical capabilities translate to an amazing customer experience.

Over a decade ago, HPE started designing systems with sensors across the infrastructure stack. Today, the platform collects and analyses millions of sensors from many thousands of systems. It uses the swathes of data to learn and gather intelligence and insight, getting smarter and more autonomous with every passing moment.

This advanced machine learning radically transforms how infrastructure is managed and supported:

- Problems that cause application disruptions through multivariate analysis of the IT stack are predicted and prevented. In fact, the advanced pattern-matching algorithms can prevent customers from ever seeing, or having to deal with, a known issue.
- Data is optimally stored using real-time context and visibility into applications and infrastructure.
- Dashboards, reports, and analysis give support teams insight into patterns at a rate far higher than is humanly possible.
- It all happens lightning fast, speeding up response and time to resolution.

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The HPE storage portfolio for Unified DataOps

Data Services Cloud Console
Centralised cloud-based management
Delivers unified data and infrastructure management across edge, on-premises, and public cloud

HPE Infosight
Applies AI and ML to Storage Management

HPE Nimble
Business Critical Apps
All Flash Array & Hybrid
99.99999% Uptime

HPE Primera
Mission Critical Apps
100% Availability
Built in Replication

HPE Alletra
Cloud Native
Mission Critical Apps
All-NVMe Array

Delivered as a Service via **HPE GreenLake**

HPE Alletra — cloud-native data infrastructure
The Alletra storage family is an evolution of HPE Primera and HPE Nimble systems into a single cloud-native storage portfolio. Consisting of Alletra 6000 and 9000 series servers, they offer the architectural flexibility needed to run a variety of applications without compromising their performance .

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Data#3 and HPE

With over two decades of partnership experience, Data#3 is one of HPE's largest Platinum Partners in Asia Pacific, and recent recipient of the HPE GreenLake Partner of the Year award (2021). We have worked together on a broad range of projects for leading Australian organisations across education, government and the corporate sector. Leveraging HPE's broad range of solutions and services, as well as its renowned Aruba technology, we help our customers to accelerate their digital transformation and unlock true business value.

Get an accurate picture of your current cloud workload capacities

Seeing the power of CloudPhysics and the depth of information it can provide can be eye-opening. Before investing in new hardware, know what you have and what you need. No more wasted resources on idle workloads. To get access to an initial assessment by this tool of your environment completely free of charge, contact us today.

CONTACT US

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