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Summit

Connect

Build Great Customer Experiences Today!

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Pure Storage

Roma, 07.11.2024



3 Takeaways from this session



Why the inevitable transition to Red Hat OpenShift for databases, VMs, & storage?

- Agility •Automation •Productivity



What are your considerations during the transformation?

- Ease •Security •Cost •Multi-cloud

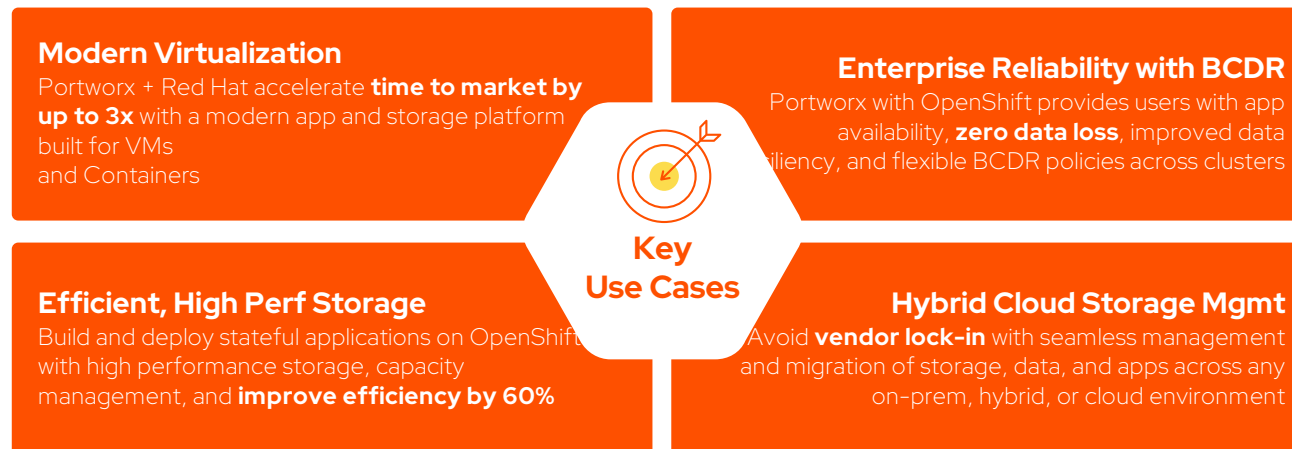


Why Portworx & Red Hat are the hybrid cloud platform for your transformation?

- Easy •Complete •Agnostic •Leader

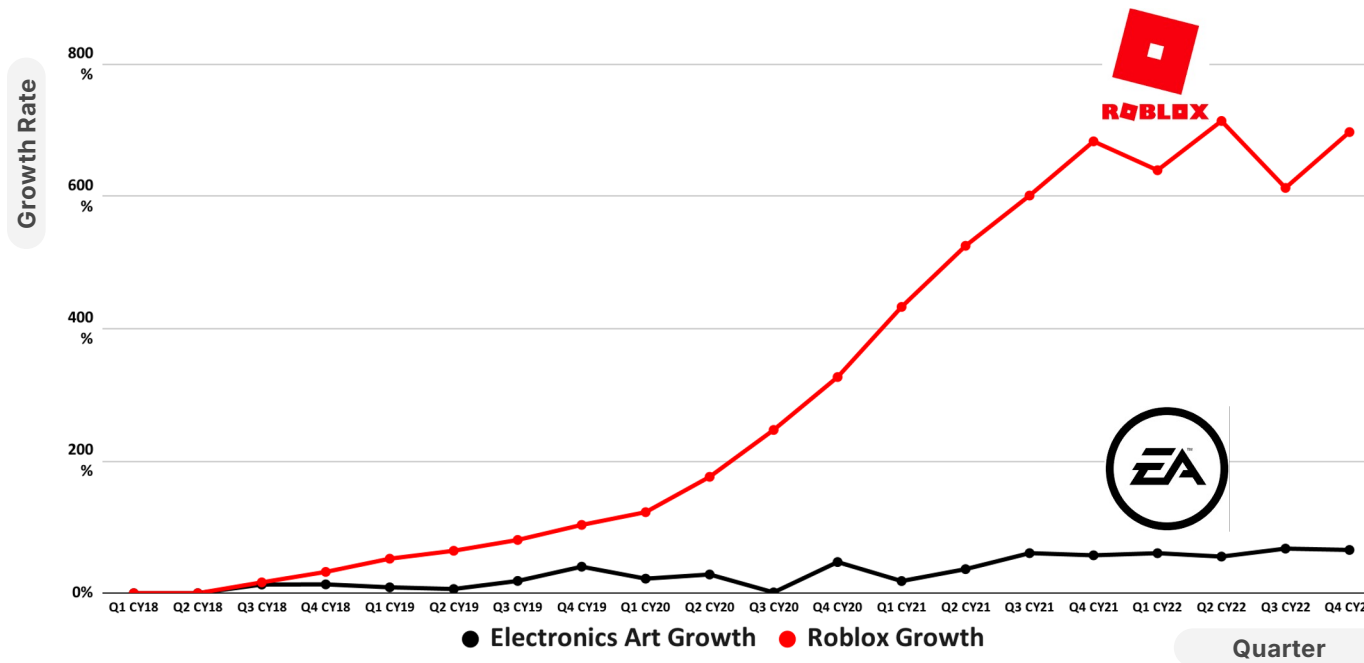
Portworx + Red Hat

Together Portworx + Red Hat provide businesses with the enterprise-grade tools, services, and support what they require to run modern, mission-critical applications at scale



The #1 K8s Data Platform + The Leading K8s Distro

Better customer experiences deliver greater revenue growth



Developers are the Engines that Create Great Customer Experiences

29M

developer population globally
by end
of 2024



600M

enterprise apps supporting
digital transformation by end
of 2024



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Are Platform Teams Overwhelmed Supporting 100s of Developers?



A single open platform for application innovation

A complete DevSecOps platform that integrates with existing infrastructure, tools, and services



Empowering developers to innovate

Get applications to production sooner with a wide range of technologies and streamlined workflows

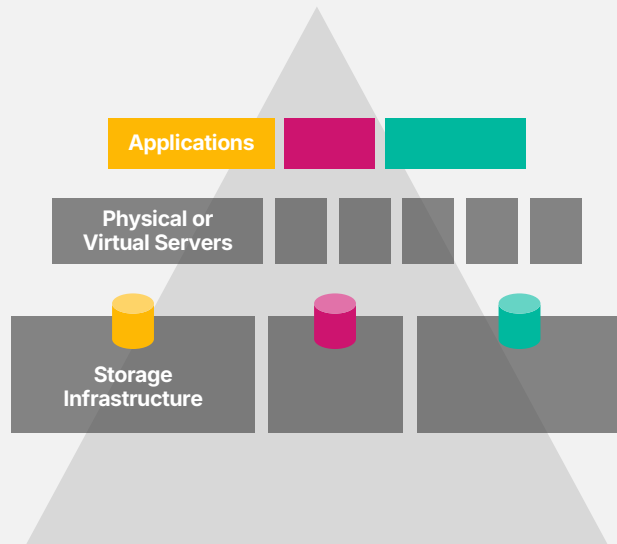
A cloud-like experience, everywhere

Full-stack and automated operations on a consistent foundation for on-premises or hybrid cloud infrastructures

Trusted enterprise Kubernetes

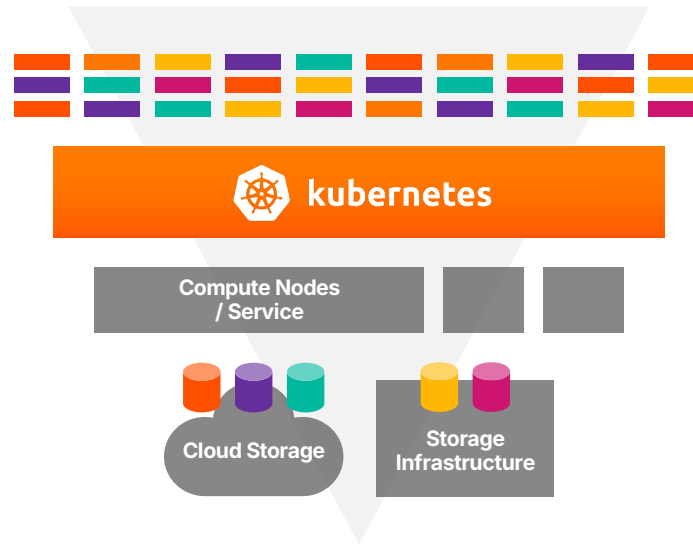
Continuous security, world-class support and services, and deep expertise to confidently run any application

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Virtual Machine World: Infrastructure-Centric

- Storage wired to servers
- Apps, infrastructure live forever
- Provision the server & storage
- Monitor the server & storage
- Backup the server & storage...



Kubernetes World: App-Centric

- Kubernetes is all about automation
- Can use commodity infrastructure
- Apps and infrastructure come, go, and grow
- Provision the app, observe the app, scale the app, protect the app, migrate the app...infrastructure follows



Portable

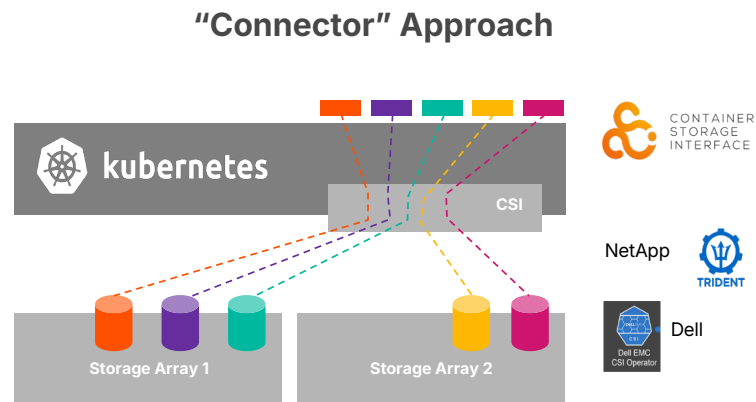


Elastic

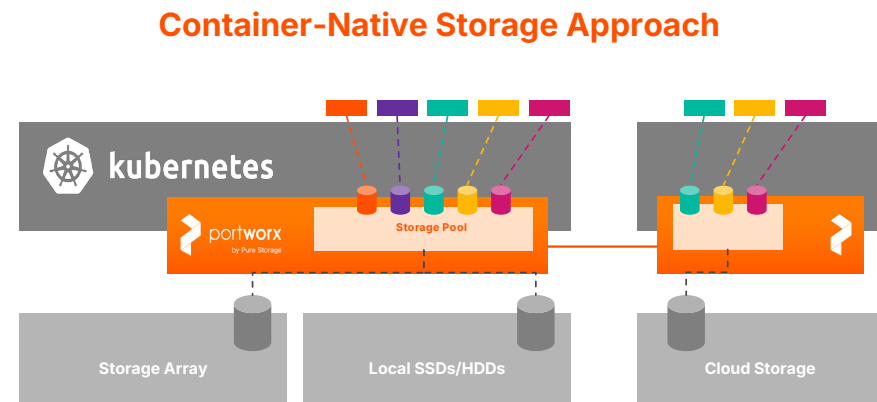


**Agile &
Modular**

Container-Native vs. Connector Approach



- 1:1 container <-> volume mapping
- Container capabilities vary depending on the capabilities of the underlying array
- Storage arrays often are challenged by the object count (# volumes, connections) and change rate (10,000s changes/day)
- Innovation limited to the features in the open CSI specification
- Storage arrays managed independently from K8s



- Many (1,000s):1 container <-> volume mapping
- Designed to scale to 10,000s operations/day
- Ensures consistent storage services across ANY infrastructure
- Storage services container-granular and application consistent
- Storage "encapsulated" in a container-native virtual volume that is free to move with the container
- Managed as a native part of K8s

Moving to production requires addressing these key storage, data management, & data protection requirements



SDS storage layer that automates container storage for developers and admins

Reduce Operational Costs Accelerate Time to Market



Easily move applications between clusters for hybrid & multi-cloud availability

Easy Migration from On-Prem to Cloud



Implement consistent encryption and security policies & multi-tenancy across clouds

Lower Risk with Automated Protection



High Availability Replication between AZs and regions & Clouds

Eliminate Downtime with Zero RPO



Auto-scale storage as your app grows to reduce costs

Intelligently deploy cloud storage to reduce overall spend



App-consistent backup for cloud native apps with all k8s artifacts and state

Maintain Governance & Compliance



The Alternate Approach: Cloud-Native Apps built on Red Hat OpenShift and Portworx



100% Self Service

Databases, environments and tools for developers



Build Anywhere

In multiple clouds or on-prem with cloud-like experience



Run at Scale

Scale any app, stateless or stateful, quickly and resiliently



Operate Cost-effectively

Avoid costly cloud services and consume only needed resources

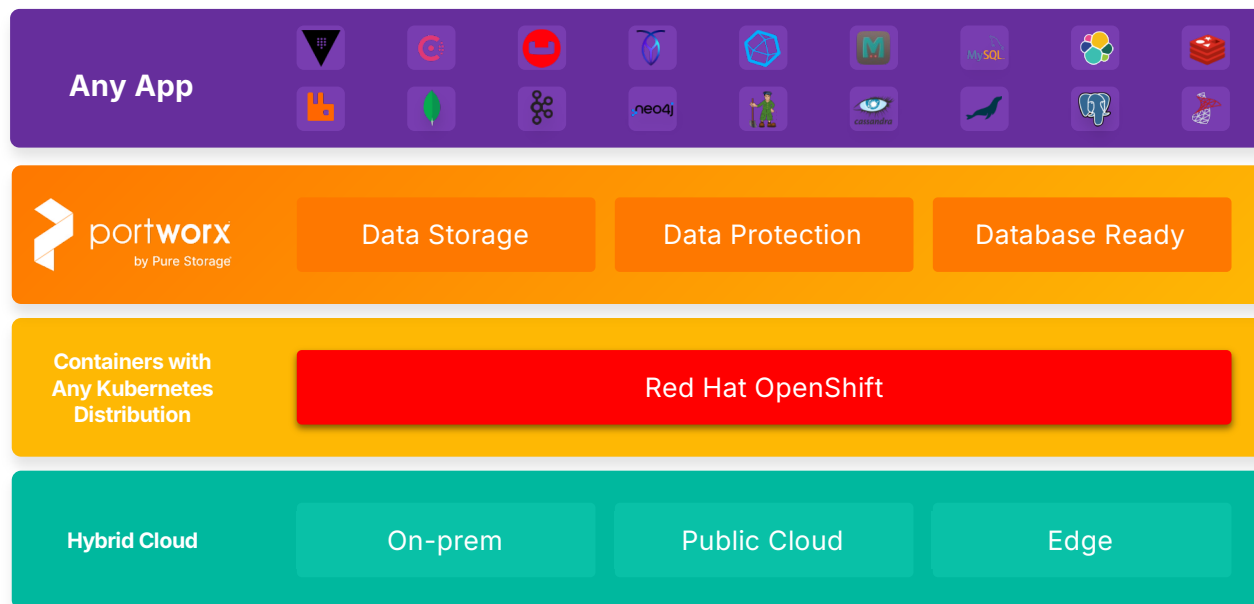


Remain in Control

Retain full control of your data no matter where it runs

Portworx + Red Hat OpenShift

The #1 K8s Data Platform & Leading K8s Distro



Red Hat OpenShift is the industry's leading enterprise Kubernetes platform, providing a consistent foundation for developers to build, deploy, manage, and scale containerized applications. **Portworx data management and data protection offerings help unlock key use cases for Red Hat OpenShift workloads in production.**

– Chris Gray, VP Global Customer Success, Red Hat





portworx

by Pure Storage

The #1 Kubernetes Data Platform

300%

Faster time to
production for apps

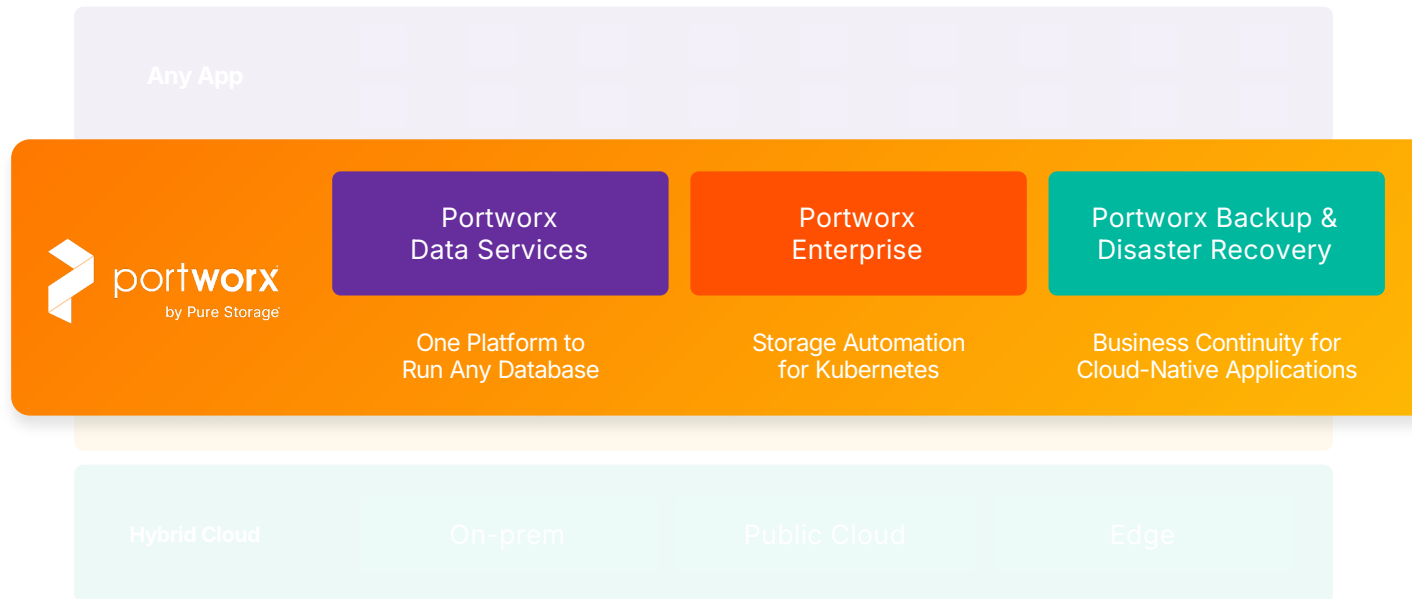
99.999%

Application
uptime

75%

Savings in cloud
infrastructure

Build Apps Anywhere and Run them at Production Scale with High Availability, Reliability, and Security



Application Performance: Storage Automation for Kubernetes

Run Kubernetes in Production with On-Demand Access to ANY Storage, Unmatched Availability & Elastic Scalability

Red Hat OpenShift

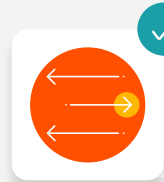


Kubernetes Data Management Platform

Hybrid & Multi-cloud Ready

On-prem | Hybrid Cloud | Public Cloud | Edge

Portworx Enterprise



Developer-ready Storage



High Availability and Performance



Enterprise Business Continuity with DR



Thinly Provisioned K8s Storage



What Do You Get With Portworx?



Automated Capacity Management

- PX-Autopilot, Cloud Drives



Cloud-native DBPaaS for Any DataBase

- Curated DB images, UI & API Parity



Full suite of Enterprise class Disaster Recovery

- Sync DR, Near-Sync DR & Async DR



App and Volume Migrations Across Any Cloud

- PX-Migrate, VPS, Stork, Cloud Drives



Broadest Catalog of Data Services

- 1-click deployment, Single Pane of Glass



Resource Optimization at Scale

- App I/O control

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Data Services

Any
Cloud or Storage Infra

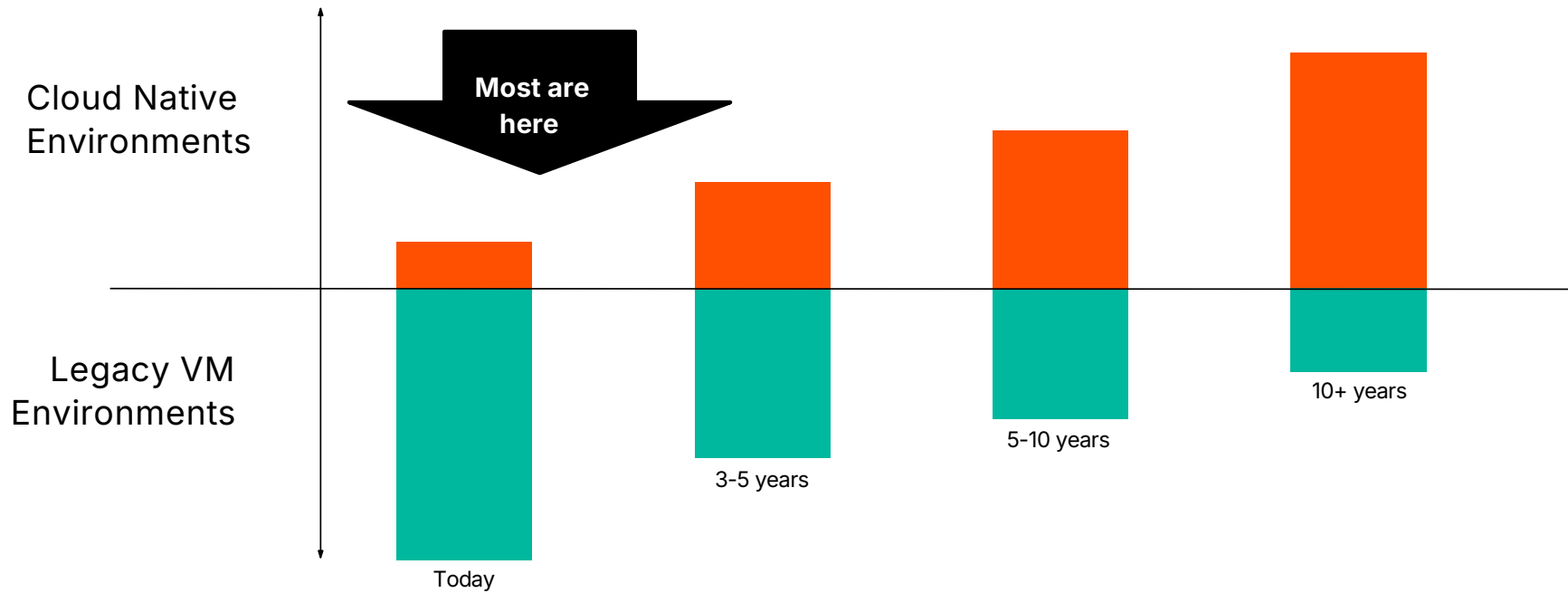
100%
Data Protection

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Portworx & OCP Virtualization





By 2029, 35% of all enterprise applications will run in containers, an increase from less than 15% in 2023.



Why should you run VMs on Kubernetes

Migrate



Existing VM-based applications can be migrated as-is to Kubernetes from VMware/RHEV/OpenStack environments

Modernize



Organizations can choose to refactor applications when they want, instead of doing everything at once.

Unified Management



Development teams can use the same tools, pipelines, and platform for building, managing and diagnosing issues with all applications.

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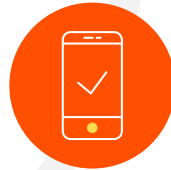
Modern Application Development Platform



Optimize Operational Costs



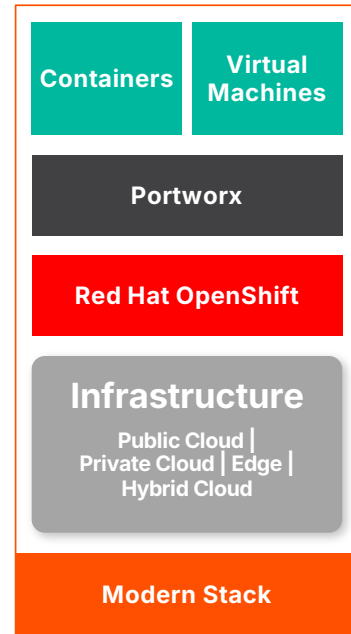
Mitigate enterprise risk



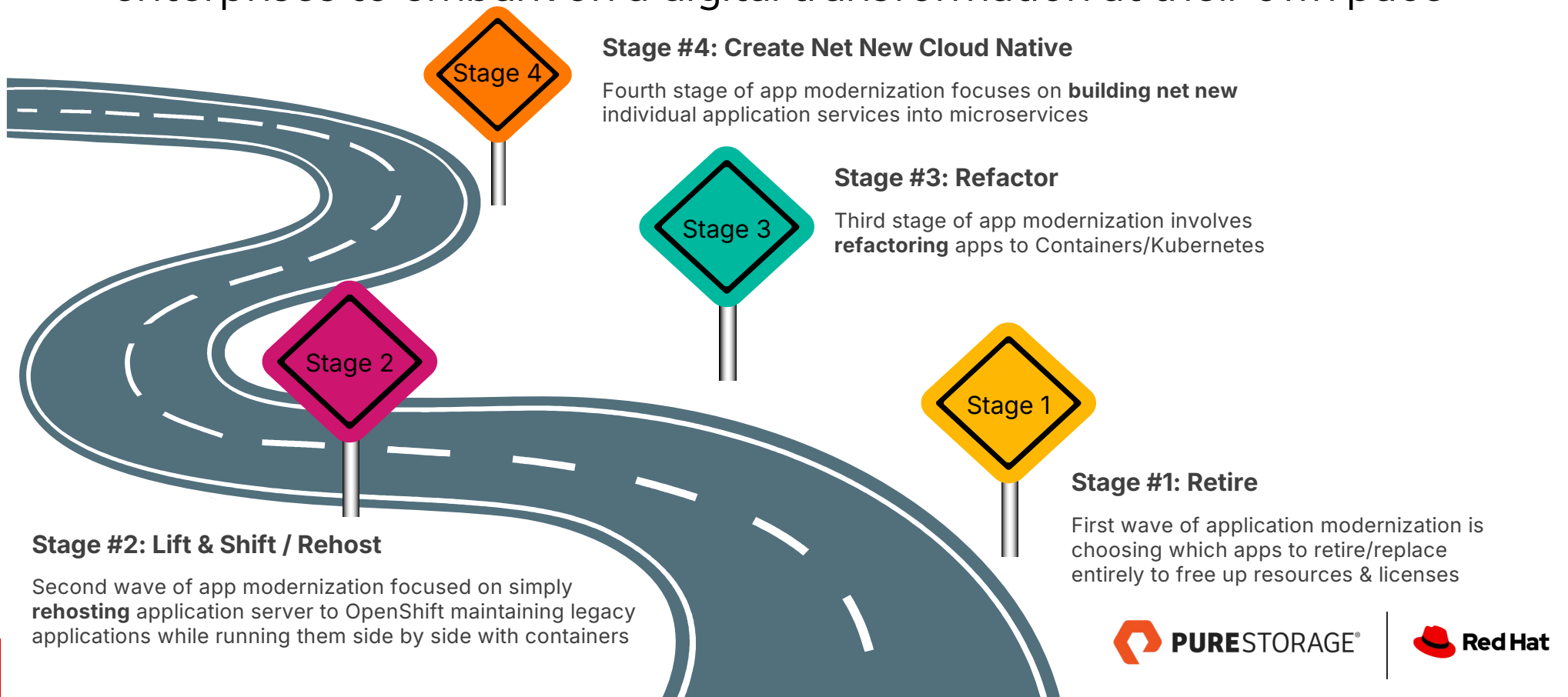
Accelerate Time to Revenue



Achieve Data Agility



Portworx + Red Hat provide a cloud native platform that enables enterprises to embark on a digital transformation at their own pace



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Customer Stories



Globally modernizing applications on a multi-cloud and scalable platform for Kubernetes

An American multinational automobile manufacturer with over \$100B in annual revenue



Challenge:

Ford needed a solution to manage thousands of **stateful apps** as they transformed their **data applications** to the **OpenShift platform** and migrated away from a **monolithic architecture**. Ford was looking for **persistent storage management** that offered **scalability** and **portability**, so they could provide reliable access to **data** for applications across their business—from **banking** to **order fulfillment**.

Benefits:

- Eliminated barriers to innovation
- Rapidly deliver services for a better customer experience

Solution:

Ford uses **Portworx** to manage their **platform-based, cloud-native app storage** in **OpenShift**. As a result of **modernization**, they have streamlined their applications, realizing **cost savings** in their **data storage**. Also, they are able to easily **scale** and **migrate applications** in their **multi-cloud environment**. This helps them rapidly deliver **services**, enabling better **customer experience** and increased **innovation**.

Portworx Services:

- BCDR services
- Storage services



An American multinational financial services corporation specializing in payment cards and travel services



Challenge

They were struggling to manage the 1000's of Kubernetes clusters and huge volume of cloud-native data on Nutanix.



Solution

Portworx streamlined and automated data protection workstreams, so routine backups went from hours and days to only taking minutes.



Benefits Using Portworx

- 90% savings in data protection workstreams
- Performance and availability over ODF



The Scottish Government's biggest directorate, Agricultural and Rural Economy (ARE), promotes sustainable economic growth in agriculture, the food industry, and in rural areas.

Enabling farmers claim subsidies by improving app developer experience

The ARE directorate develops apps for farmers to claim subsidies based on rapidly introduced agricultural policies. It was a challenge for ScotGov to make their Kubernetes implementation as agnostic as possible while also improving developer productivity to keep up with the rate of data velocity.

Portworx boosts ScotGov app development by managing their data layer and providing reliability and recoverability. Portworx also enables their multi-cloud strategy and their current environment of Openshift on AWS agnostic. It simplifies migration of apps and data between platforms, improving the "dex" (developer experience).

"Portworx helps the Scottish Government build a hybrid and multi-cloud strategy with Red Hat Openshift on AWS, giving them the flexibility to migrate apps and data across different platforms. ScotGov is able to run their workloads anywhere they want with Portworx managing the data management layer."

Savings in developer hours for faster app development

Reduced Capex with migrating workloads from on-prem to containers



Creating scalable, easy-to-use multiregion OpenShift for stateful applications

Ministero della Giustizia (Italian Ministry of Justice)



Challenge:

Ministero della Giustizia was looking to **modernize** their dated, **customer-facing applications** like institutional and **citizen service portals** on **containers**. They needed an **enterprise backup solution** for their **Red Hat Openshift clusters** that could easily **scale** while still remaining easy to **manage** for a very **small staff**.

Benefits:

- High performance SDS for OpenShift
- High availability and reliability
- Secure and easy-to-use backup and recovery
- Managed by a small team

Solution:

Ministero della Giustizia is leveraging **Kubernetes** to quickly roll out **new applications** for their **end user experience**. Simultaneously, they are in the process of **containerizing legacy applications** that will be part of their new **Kubernetes workloads**. They protect all these workloads on **Portworx Backup**, so they have all the advantages of **disaster recovery** and **fast backup and restore** for all their **Kubernetes applications**.

Portworx Services:

- BCDR services
- Storage services
- Backup services



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Thank you

