

# Enabling the Modern Application Platform: Containers and Virtualization

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Cloud Architect

Portworx by Pure Storage

# Agenda



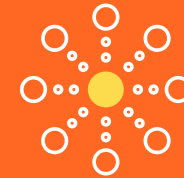
Market  
Trends



Portworx +  
OpenShift



Why  
Portworx?



Demo  
Time



# Kubernetes Platforms and Containers Underpin App Modernization

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

**Gartner**

By 2026, **80% of software engineering organizations will establish platform teams**, to accelerate the delivery of applications and the pace at which they produce business value.

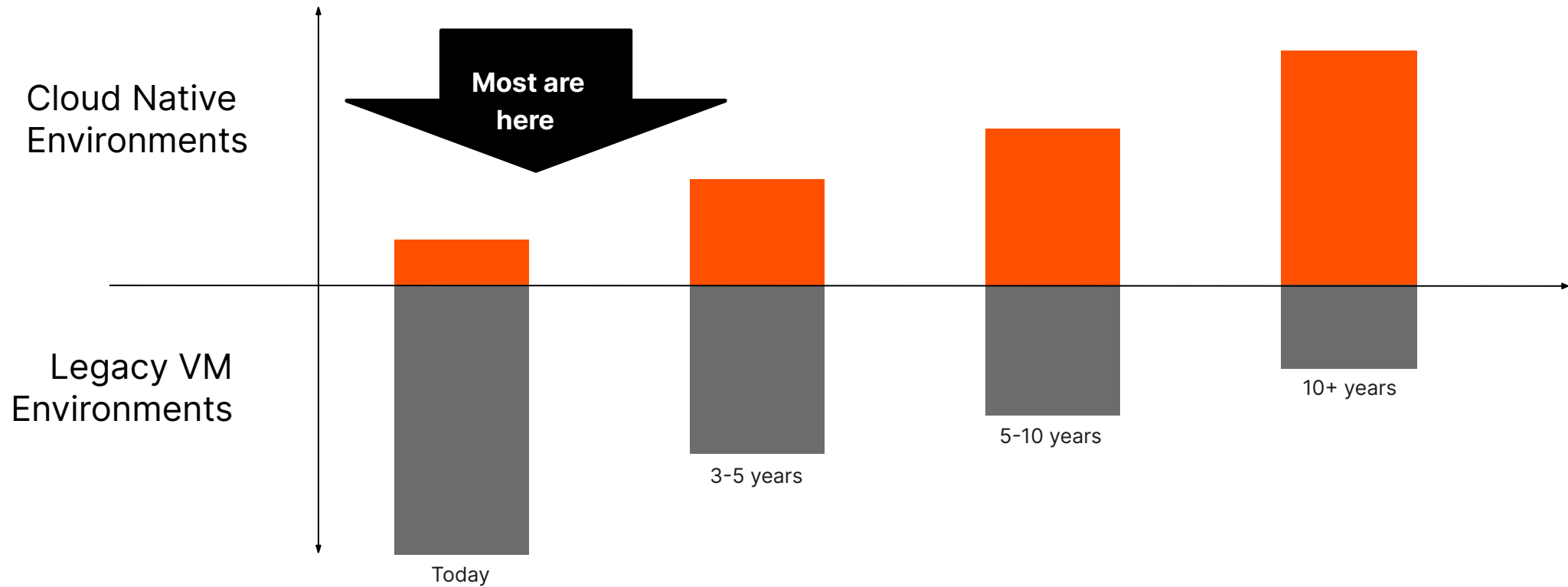
**“When an organization has the right platform, one designed for agility and portability, they can better respond to change and outperform their peers by 4.5x shareholder return.”**

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**BCG**



# Cloud Native and VM environments will continue to exist side by side for the foreseeable future so supporting both is critical





# Application Modernization Drives Enterprise Innovation

Engage Customers

Empower Employees

Optimize Operations

Transform Products

# Portworx + Red Hat

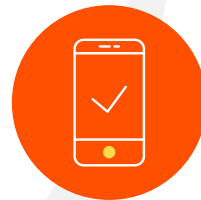
## Modern Application Development Platform



Optimize Operational Costs



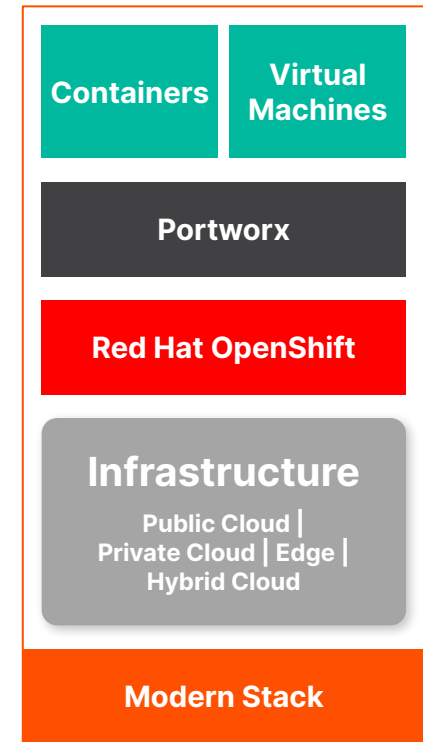
Mitigate enterprise risk



Accelerate Time to Revenue



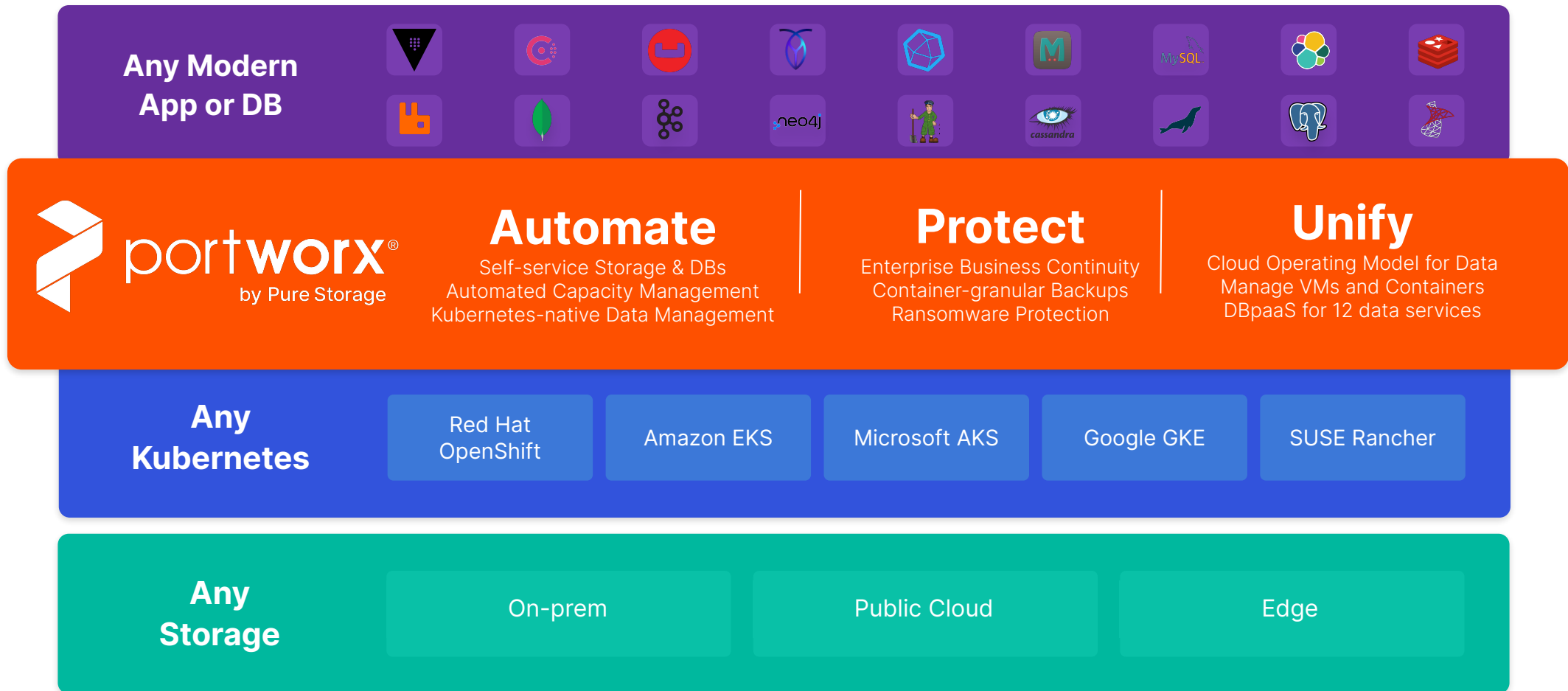
Achieve Data Agility





# Automate, Protect and Unify Modern Applications and Data Anywhere

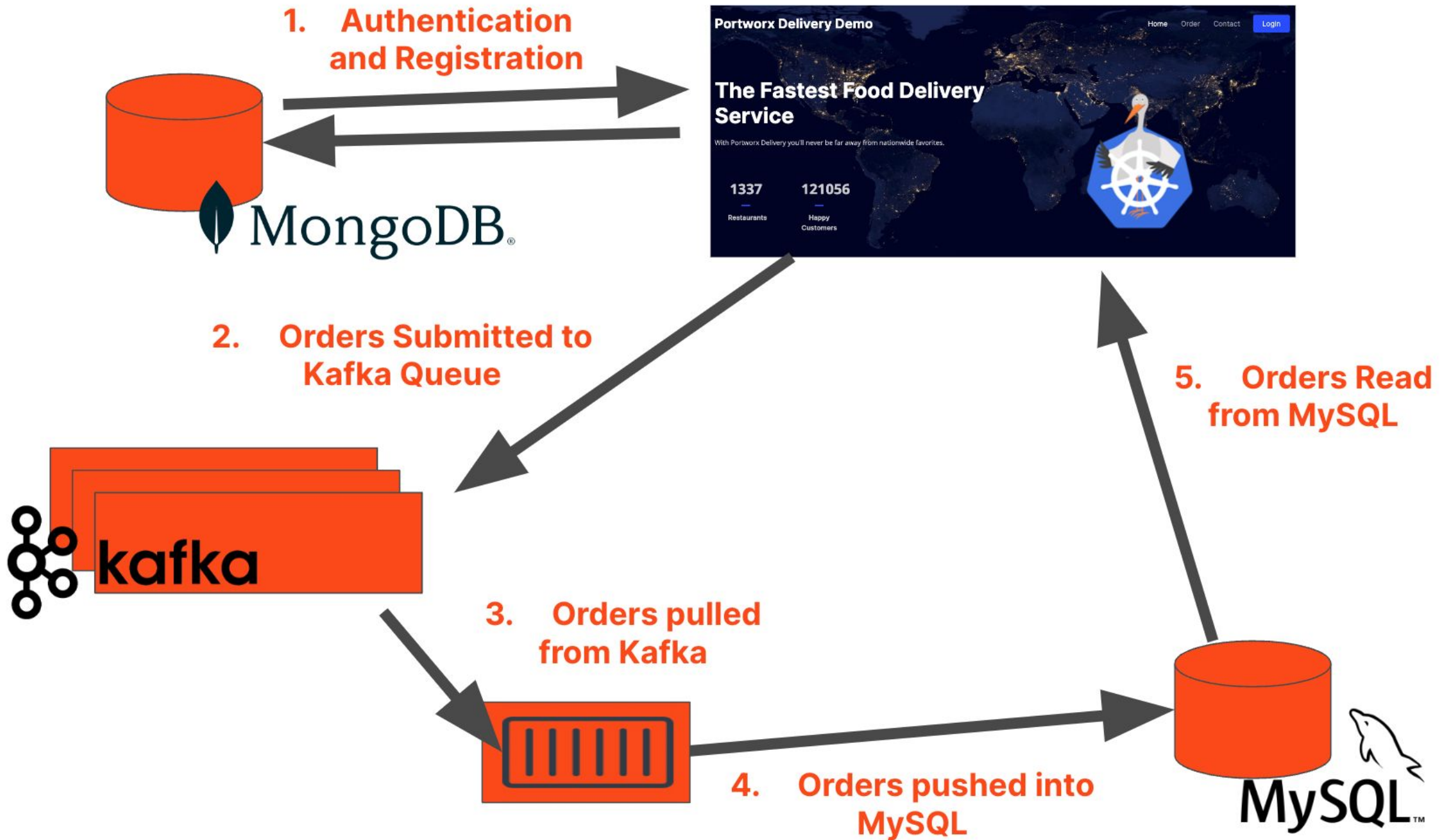
Market Leading Kubernetes Data Platform for Enterprise Scale





# Demo Time

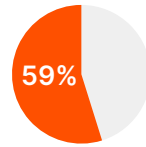




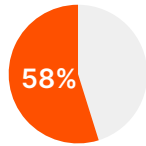
# Traditional Virtualization is at a Tipping Point

Over the coming years, what do you expect your company will do with existing VM Workloads?  
(select all that apply)

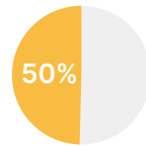
Source: A Survey of Data Management Stakeholders in a Kubernetes environment, April 2024 (537 participants)



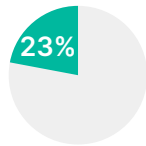
Modernize by re-architecting VM workloads to run as containers



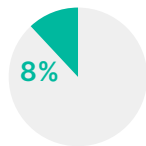
Migrate VM management to Kubernetes (via KubeVirt, Red Hat Openshift Virtualization, etc.)



Move on-prem VM workloads to public cloud environments ("lift-and-shift" to cloud)



Leave existing on-prem VM workloads in our datacenter



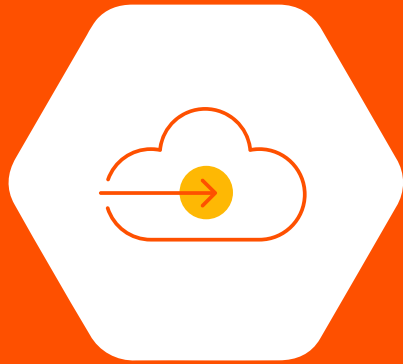
We'll leave existing cloud VM workloads in the cloud

**81%**  
"Leave VMs"

**50%**  
"Lift-and shift"

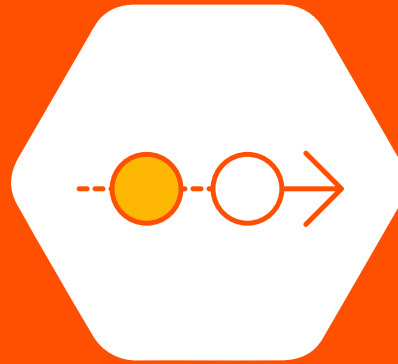
**31%**  
"Do nothing"

# Why should you run VMs on Kubernetes



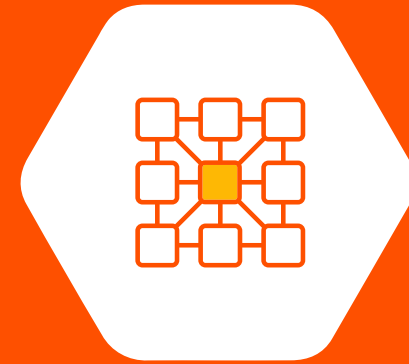
## Migrate

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.

# Solving Kubernetes Storage Challenges

## Flexibility and Mobility

Support for **Live Migration**

Support for VM **High Availability**

Storage policy-like experience via **StorageClasses**

**PX-Migrate/PX-Backup** for cold migrations between clusters

Run VMs on any platform (public or on-premises) when using **OpenShift/vanilla k8s**

## Day 2 Benefits

Automated capacity management via **Autopilot**

**Application I/O Control** to remedy noisy neighbor VMs (requires cgroup-v1)

## DR and Data Protection

**Async DR** with only two clusters required

**Sync DR** with less complexity and more flexible failover options

VM auto-detection and **simple backup and restore** with PX-Backup 2.7

**Blog:** [Portworx, Red Hat OpenShift Virtualization, and KubeVirt](#)





# Demo Time



## Resources

- [www.youtube.com/Portworx](https://www.youtube.com/Portworx)
- [portworx.com/blog/](https://portworx.com/blog/)
  - IDP Blog
- <https://www.linkedin.com/in/thomas-lapp/>
- [portworx.com/hands-on-labs](https://portworx.com/hands-on-labs)

A dark grey banner for a hands-on lab. In the top left is the Portworx logo, which consists of an orange stylized 'P' followed by the text 'portworx' in white and 'by Pure Storage' in smaller orange text below it. The main text in the center reads 'Portworx 101: Hands-on Lab' in orange, 'Wednesday, June 12, 2024' in large white font, and '9am PT | 12pm ET' in orange. On the right side, there is a white server rack icon with various colored icons (red shield, blue gear, yellow shield) on top. At the bottom, there is a white text box with an orange vertical bar on the left side containing the text: 'Ready to streamline your Kubernetes operations? Join our hands-on lab to master advanced Portworx features.'





**Thank you**