PERFICIENT®

vision. execution. value.

OpenShift on Azure

Workshop Agenda

1. Business Case
2. ARO
3. Things To Know
4. eShop on Containers / ARO Demo

Introductions

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Market and Customer Situation

Organizations must adapt to fast, ongoing change in market situations, customer demand, and competitors.

Containerized environments can provide the speed, innovation, and flexibility to become a digital business.

Customer Challenge

Building a hybrid, containerized environment can be time and resource consuming

Expertise

Some organizations don't have the expertise or resources to build their own solution.
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Data Sovereignty

Maintaining data sovereignty in hybrid environments can also be challenging
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Security

Complex environments make managing security across infrastructure difficult.

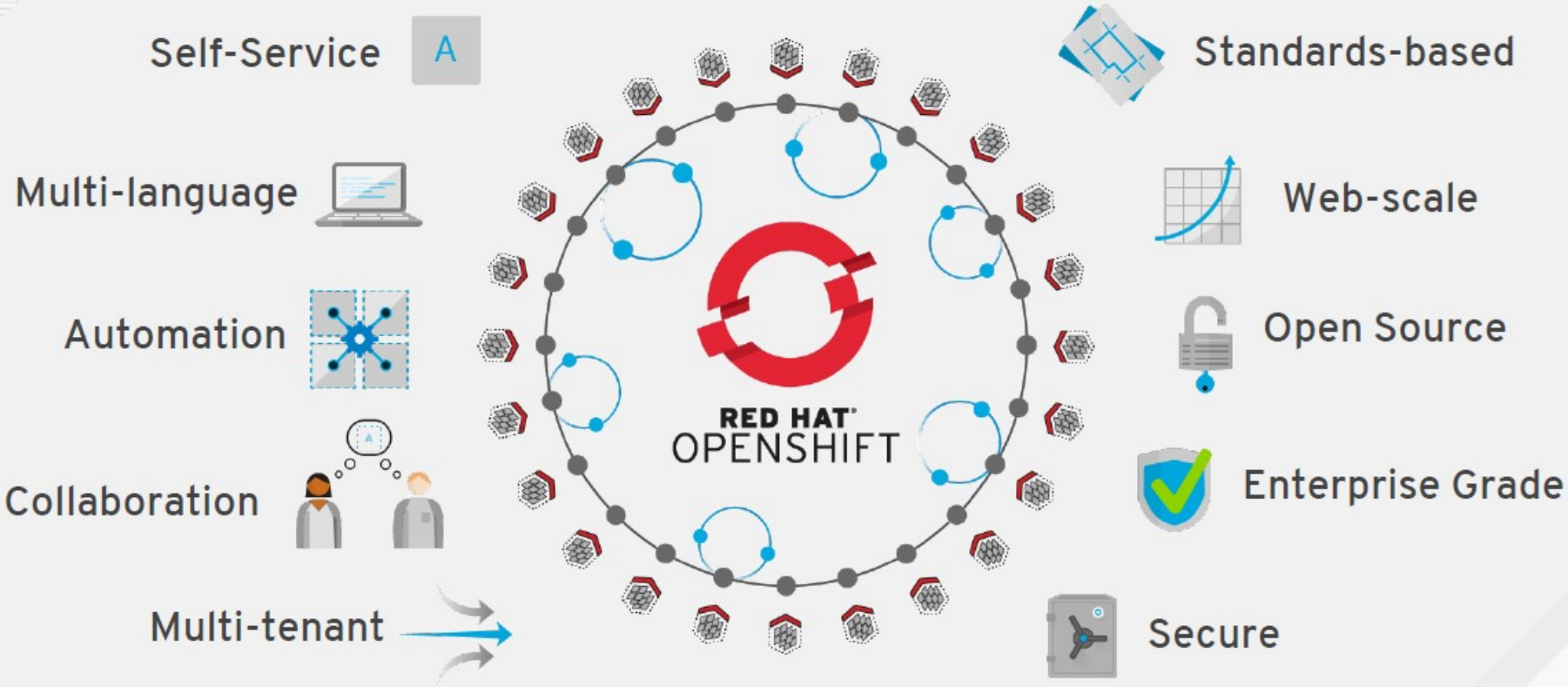
You need a trusted, supported containerized hybrid infrastructure solution that lets you launch, scale, and adapt applications quickly and efficiently.

Azure Red Hat OpenShift

Red Hat and Microsoft help you adopt container and hybrid cloud technologies more easily with Red Hat OpenShift Container Platform running on Microsoft Azure.

Build an enterprise-grade, containerized hybrid environment rapidly and easily. Red Hat and Microsoft deliver the consistency, support, and managed services you need to meet modern business needs.

Red Hat and Microsoft help you adopt container and hybrid cloud technologies more easily. Combine your Red Hat and Microsoft investments into a scalable, reliable, and supported hybrid environment that can be deployed in-house or as a managed service. Ensure a consistent application experience across on-site and cloud environments. Focus on developing applications that deliver more value to your business. With Red Hat OpenShift and Microsoft Azure, you can quickly deploy a containerized, hybrid environment to meet modern business needs.


Self-Service
Multi-language
Automation
Collaboration
Multi-tenant
RED HAT
OPENSHIFT
Standards-based
Web-scale
Open Source
Enterprise Grade
Secure

Azure Red Hat OpenShift (ARO)

Ensure a consistent application life-cycle experience across on-site and cloud environments.

- Build and deploy applications where it makes the most sense for you.
- Eliminate inconsistencies using a single platform across environments.
- Speed application development and deployment.

Combine Red Hat and Microsoft infrastructure into a scalable, reliable, and supported hybrid environment.

- Take advantage of industry expertise.
- Simplify issue resolution with collaborative support.
- Deploy tested, integrated solutions.

Focus on application development, not on container platform management.

- Deploy a container environment faster.
- Offload platform management to the experts.
- Give developers self-service capabilities.
- Maintain security and regulatory compliance.

Azure Red Hat OpenShift (ARO)

Things to Know

- OpenShift Version - v3.11.146
- Azure AD Integration
- Master / Infra Nodes
  - 3 Master Nodes – Managed – you can’t change them
  - 3 Infra Nodes – Managed - you can’t change them either
- Cluster Admin vs Customer Admin
  - No Cluster Admin access
  - Customer Admin gives you access to manage projects and add users to them
- Open Service Broker (OSB) support
  - Use OSB to integrate with, and provision Azure PaaS services like Data and or Queues
- Logging
  - Coming in next version Azure Monitor Integration
  - Currently will need to install your own side car pattern if you want to pull from Standard Out
  - Or use application insights in your code
- Integrated Azure Domain with routes

Azure Red Hat OpenShift (ARO)

Things to Know

- Persistent Volumes supported via Azure Disk?
- Nodes / VMs are deployed to a “Hidden” resource group with the name of a guid
- Currently need reserved instances unless whitelisted subscription
- Cost Center
- Version 4.x coming soon!

Business Drivers for IT Leadership

- Adopting solutions that are certified, validated, and supported by enterprise service-level agreements (SLAs), services, and support
- Boosting innovation using existing staff skills and investments
- Accelerating time to value for new products and services
- Creating a global presence
- Scaling efficiently to meet growing demand
- Ensuring compliance through increased visibility and auditing
- Aligning your technology roadmap with business requirements

Operations Drivers

- Integrating new technologies into existing development pipelines and tools
- Ensuring that all applications meet deployment and security requirements
- Ensuring compliance across all operations and infrastructure
- Improving management and deployment efficiency with automation
- Implementing scalability on a global scale
- Implementing advanced monitoring, reporting, and traceability to improve visibility and understanding
- Ensuring users are authenticated for appropriate applications and resources

Development Drivers

- Moving projects from development to production more quickly and easily
- Implementing microservices, web-scale applications, and containers
- Quickly deploying your desired tools from a central repository
- Gaining access to resources more quickly and easily, i.e. deploying and controlling containers on demand
- Implementing scalability on a global scale
- Adopting open application programming interfaces (APIs) and software development kits (SDKs)
- Increased flexibility in choice of languages and Open Sourced solutions
- Integrated development and deployment experience
- Abstract logging and configuration management to the container run time

OpenShift on Azure eShop Demo

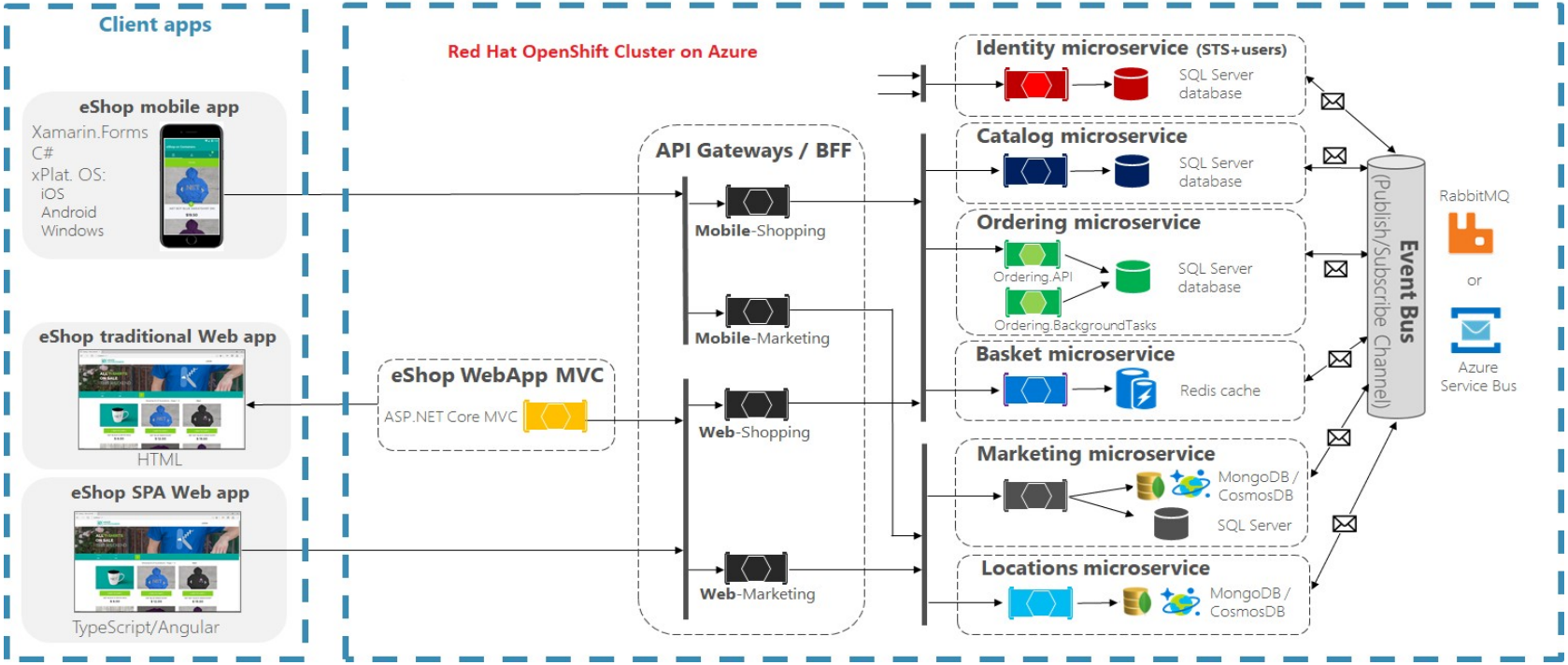
Enterprise solution demo

eShop on Containers Microservices reference application deployed to OpenShift on Azure

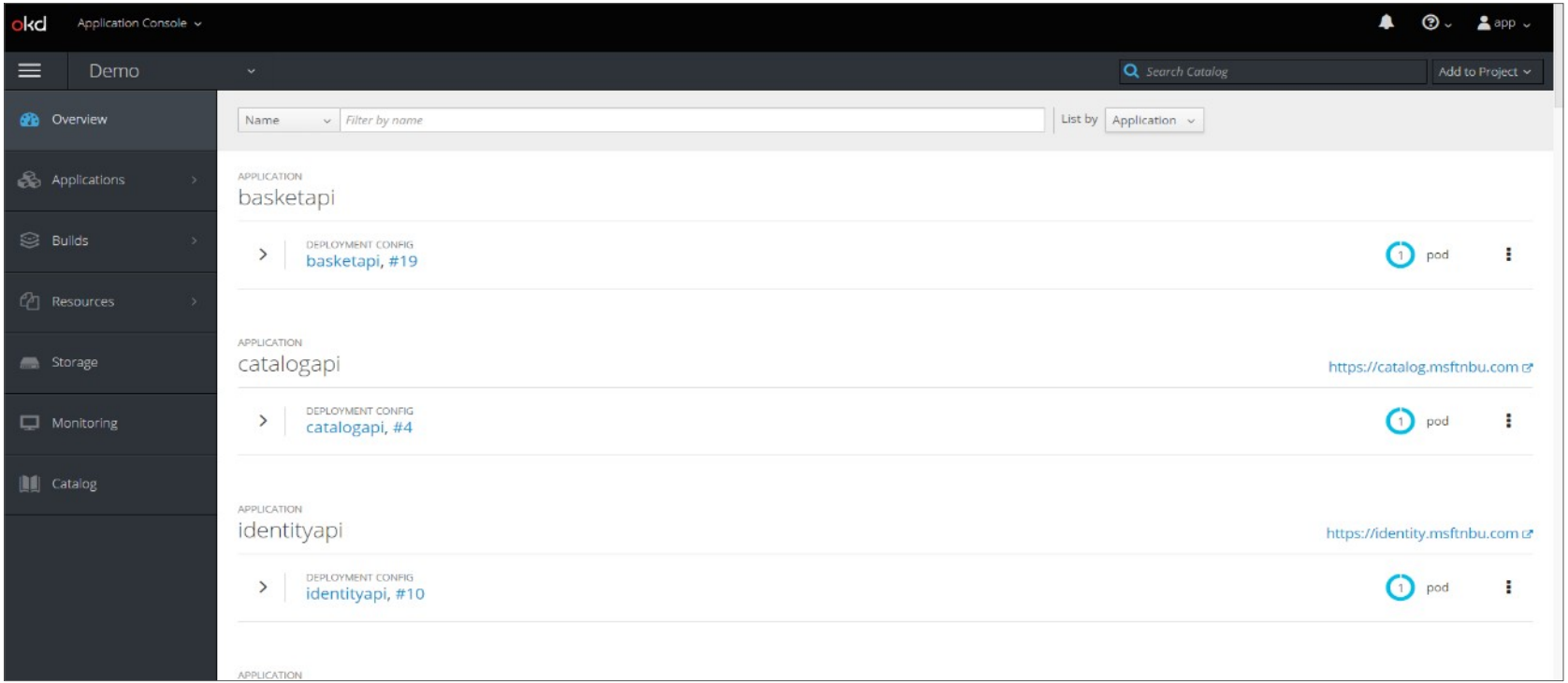
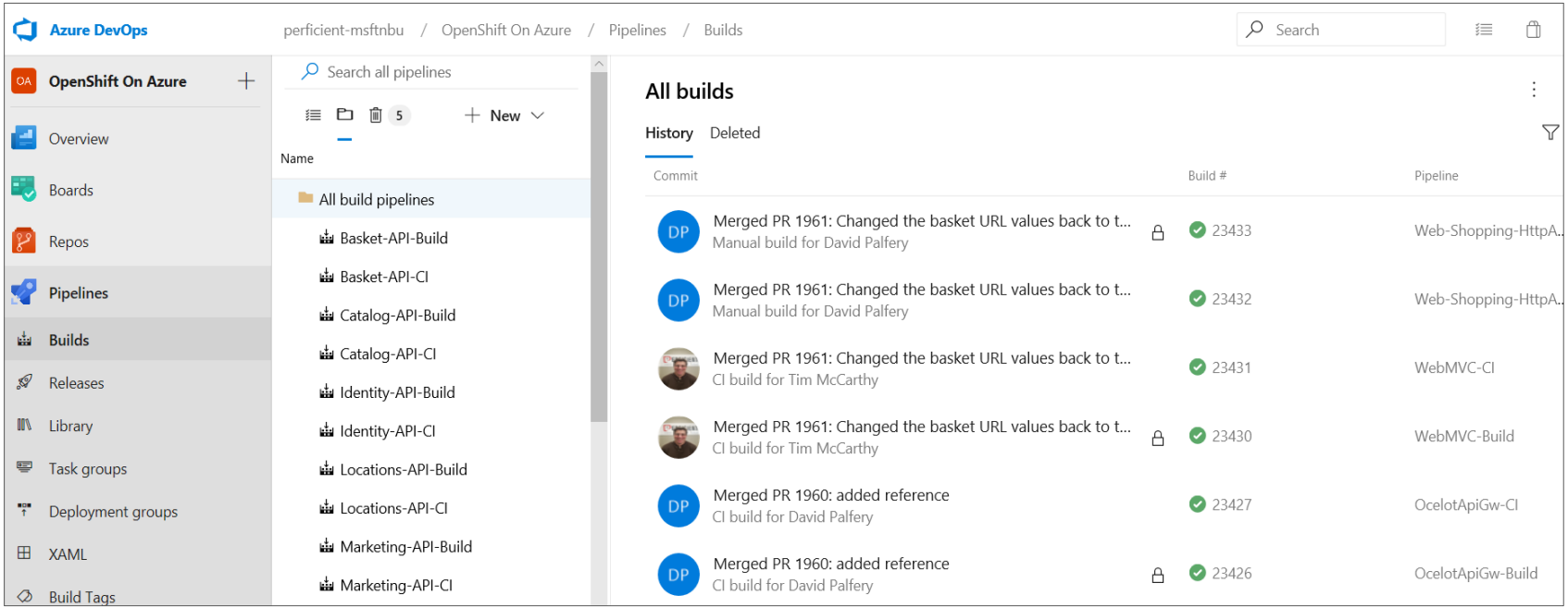
Demo Details

- Deployed to ARO (Azure Red Hat OpenShift)
- Production grade routes, certificates and domains
- 100% Azure DevOps automation through Builds and Release Pipelines
- 19 Services / Pods – provides real world complexity
- Integration with Azure PaaS services through Open Service Broker
- Allows us to fully demonstrate the features of OpenShift

App Architecture - eShop



OpenShift Cluster Architecture



Azure DevOps – CI/CD Pipelines