

SHI Ecommerce Transformation with Azure Kubernetes Services & NTT DATA

MCAPS 2023



Martin Blackburn



Ron Bremer

We're More Than Your Traditional IT Services Provider



330,000 professionals | \$108B

#83 on Fortune Global 500¹

#35 World's Most Valuable Brands²

NTT DATA

190,000 professionals | \$30B

Top 10³ global business & IT services provider

Top 10 Most Valuable IT Services Brands⁴

- NTT Corporation operates **200+ data centers** worldwide
- Process **100 million healthcare claims** annually
- Serve **25 of the leading financial institutions** in North America
- Serve **90+ federal agencies** and military branches
- Serve the **top 10 automotive** companies worldwide
- Apply **45+ years of applications experience**
- Support **4+ million end users** and **11+ million service desk contacts** annually

¹Source: Fortune Global 500 (2022)

²Source: Brand Finance Global 500 (2022)

³Source: Gartner, "Market Share: IT Services, 2021" published on April 8, 2022 – NTT DATA ranked at 6th place

⁴Source: Brand Finance IT Services 25 (2023)

Cloud Transformation Services

Cloud Advisory

Planning the cloud journey including business case, cloud strategy and architecture services.

Cloud Management

Supporting foundational cloud operations.

Cloud Security

Security consulting, implementing and managing cloud workloads.



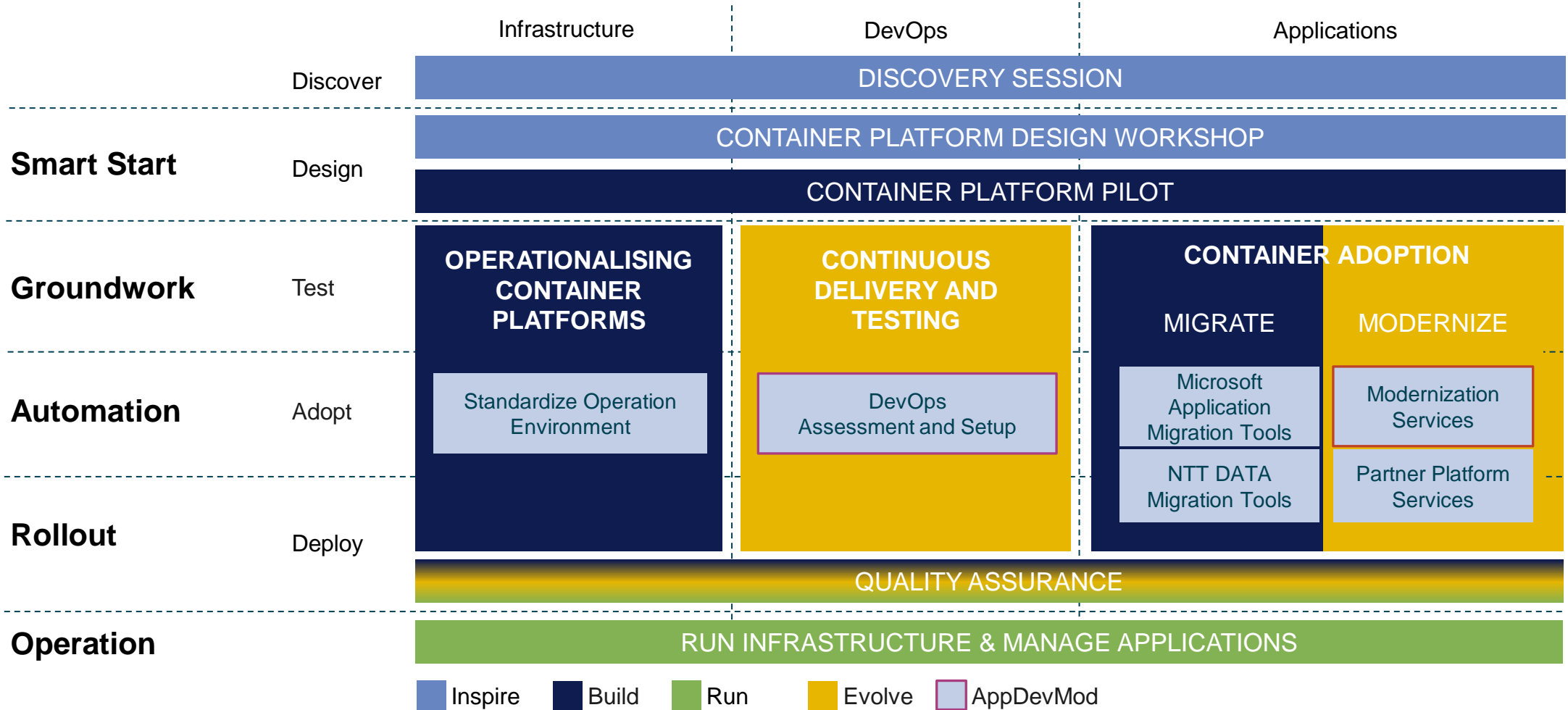
Cloud Implementation

Architecting, designing, implementing, and migrating cloud workloads.

Continuous Innovation

Managing prioritized backlogs, optimizing workloads and identifying improvements.

Framework Services Mapping for Containers





Ecommerce Transformation Accelerated by Cloud Technology

Business need

SHI International (SHI) needed to migrate its core ecommerce application from its on-premise infrastructure to the cloud to speed application development and reduce downtime and maintenance.

Solution

SHI partnered with NTT DATA to containerize SHI's ecommerce application and migrate it to the Microsoft Azure cloud platform. The solution helped create a CI/CD pipeline, increasing the speed and reliability of code deployment while delivering a more agile, robust application.

Outcomes

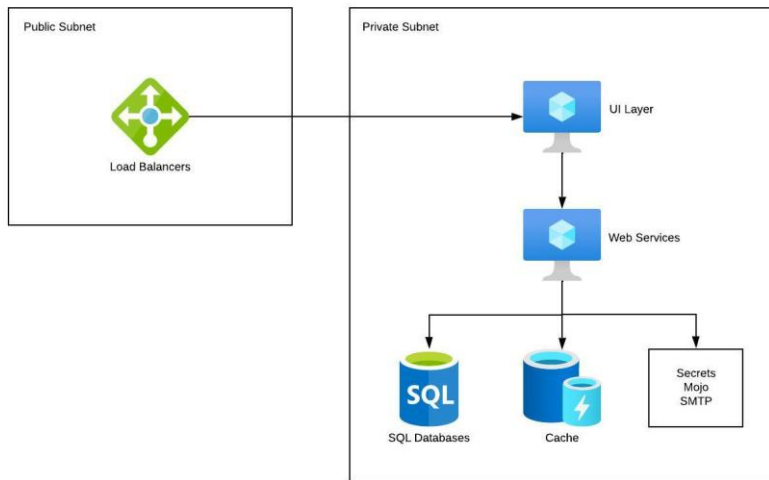
- Containerizes and migrates 35 microservices
- Reduces application deployment time from hours to minutes with automation
- Increases application development speed and ensures code quality through integrated unit testing, code quality analysis, performance testing and security scanning in the CI/CD pipeline
- Maintains 100% uptime using automated, elastic resource scaling with Kubernetes
- Improves app resiliency by enabling microservices that run seamlessly between Azure and on-premise

“Now that we’ve modernized and moved our ecommerce application to Azure with NTT DATA’s help, we’re able to take advantage of the innovations that Azure offers us: a CI/CD development pipeline that accelerates our speed to market, elastic resource scaling, minimized downtime and zeroed on-premise hosting expense. Those are massive improvements and just the beginning of our journey to the cloud.”

— Chris Wuestefeld, Software Development Manager, SHI International

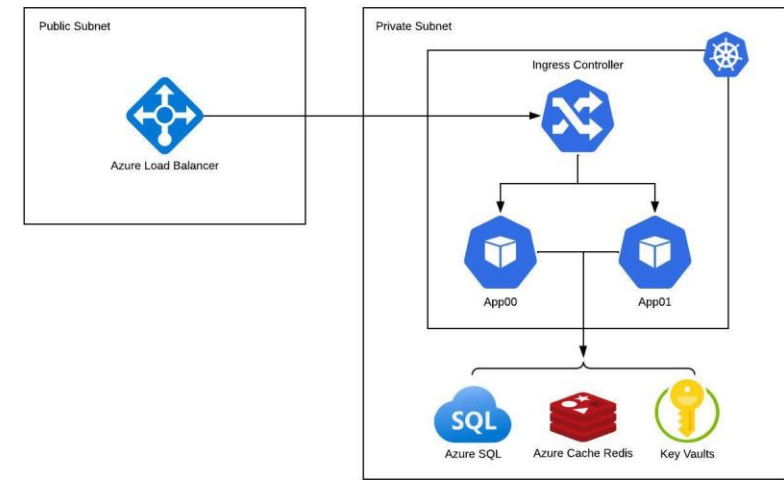
Migrate Application to Azure

Onprem Infrastructure

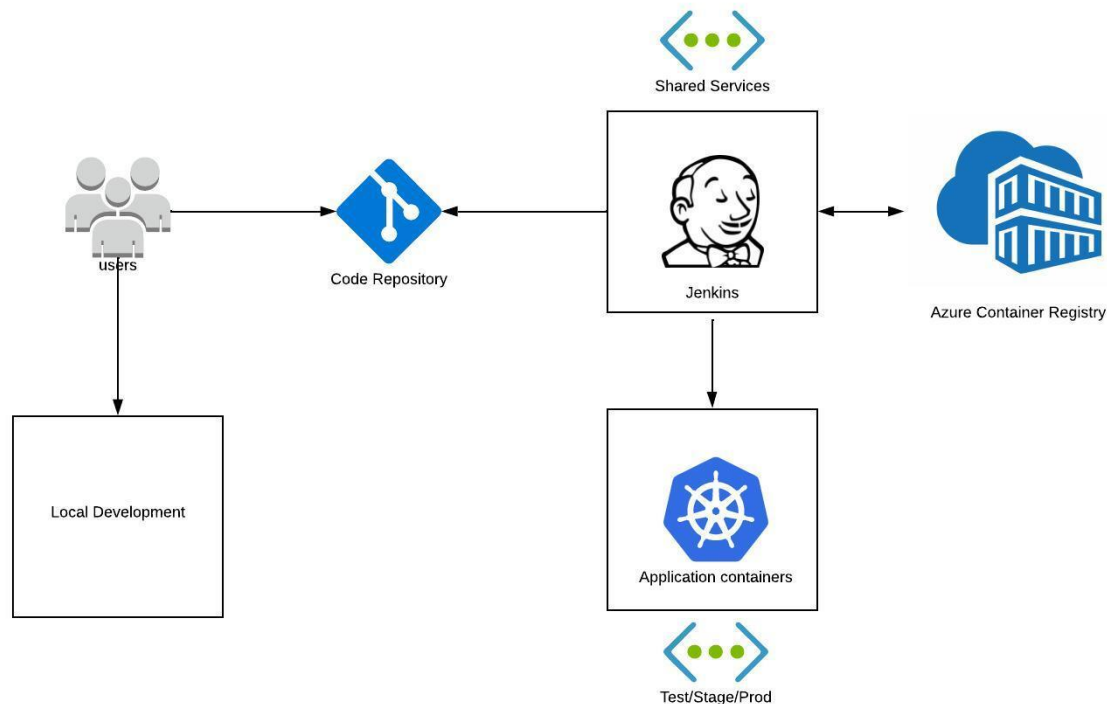


- Work with developers to update code for new dependencies and determine pod resource limits
- Migrate application image(s) to **Azure Container Registry** to centralize image registry
- Manage **authentication mechanisms** for applications to reach necessary secrets for functionality
- Implement communication path for Kubernetes applications to speak to onprem resources
- Write YAML for Kubernetes components and organize them for **Helm** integration
- Create **ingress controller** inside Kubernetes environment to route traffic to appropriate application

Azure Infrastructure



Modernize Application Deployment



- Local development completed and pushed to code repository
- **CI/CD tooling** listening for code changes in specific repositories
- Deployment triggered when needed conditions are found
- Code updates tested (**lint, Sonarqube, Artillery**) inside deployment pipeline ensuring desired functionality
- Proper **health checks** configured per application providing additional layer of stability
- Helm tooling integrated into application deployment pipeline to allow for reliable integration with Azure Kubernetes



NTT DATA

Trusted Global Innovator