



Connect



Multichoice's Migration & Modernisation Journey with OpenShift Virtualisation



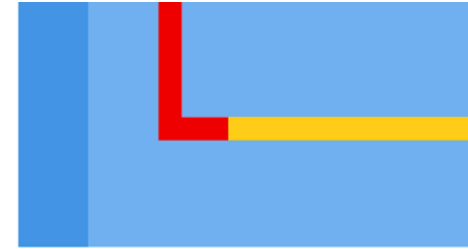
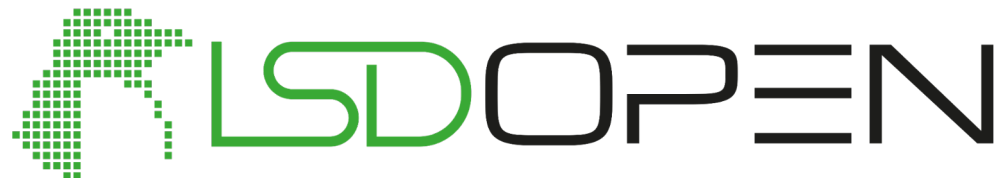
Red Hat

Tracy Lona

Account executive
Red Hat

Julian Gericke

CTO
LSD Open

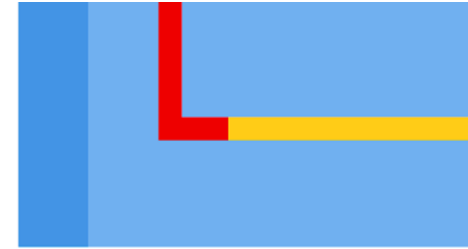




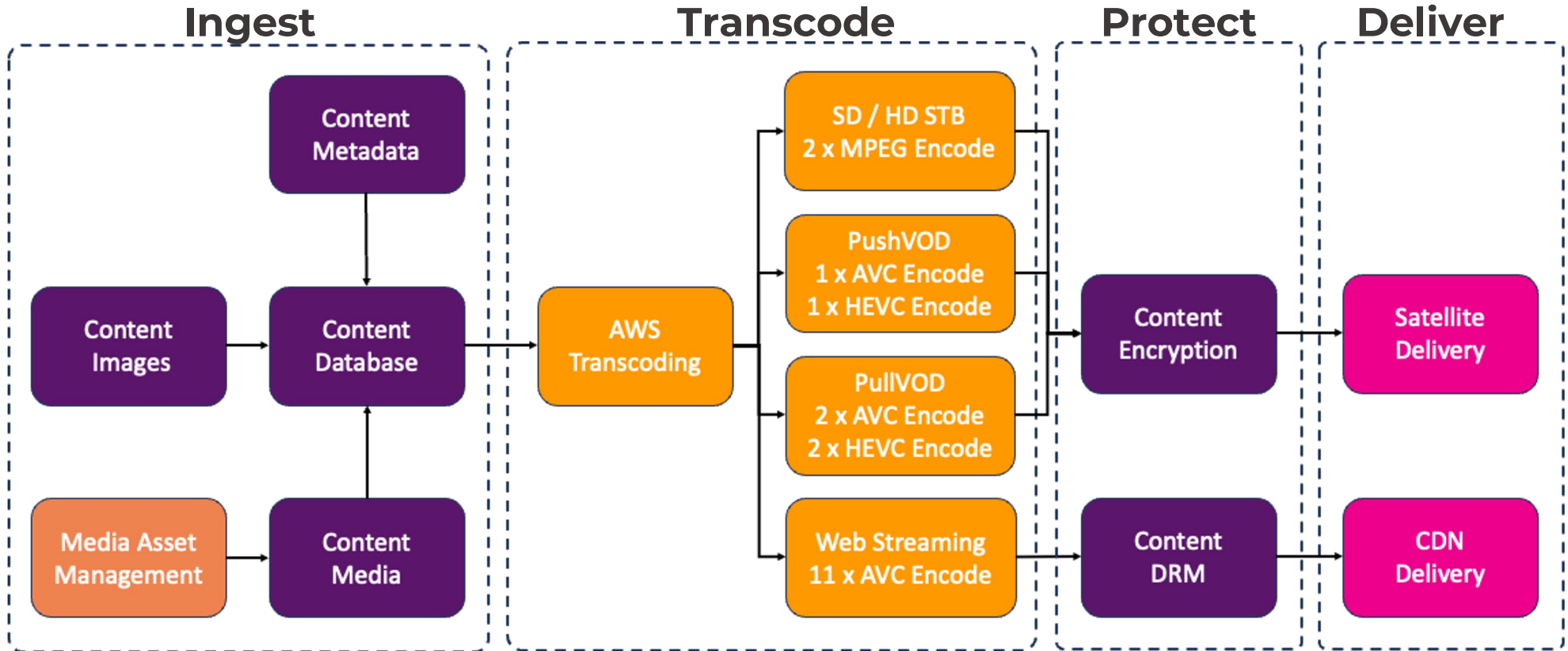
Red Hat

Hitesh Govind

Broadcast engineering technologist and manager
Multichoice



Video on Demand



Project Overview



Alignment in
infrastructure



CentOS to
RHEL
migration



Container
orchestration



CI/CD
pipeline




Monitoring
and
visualisation

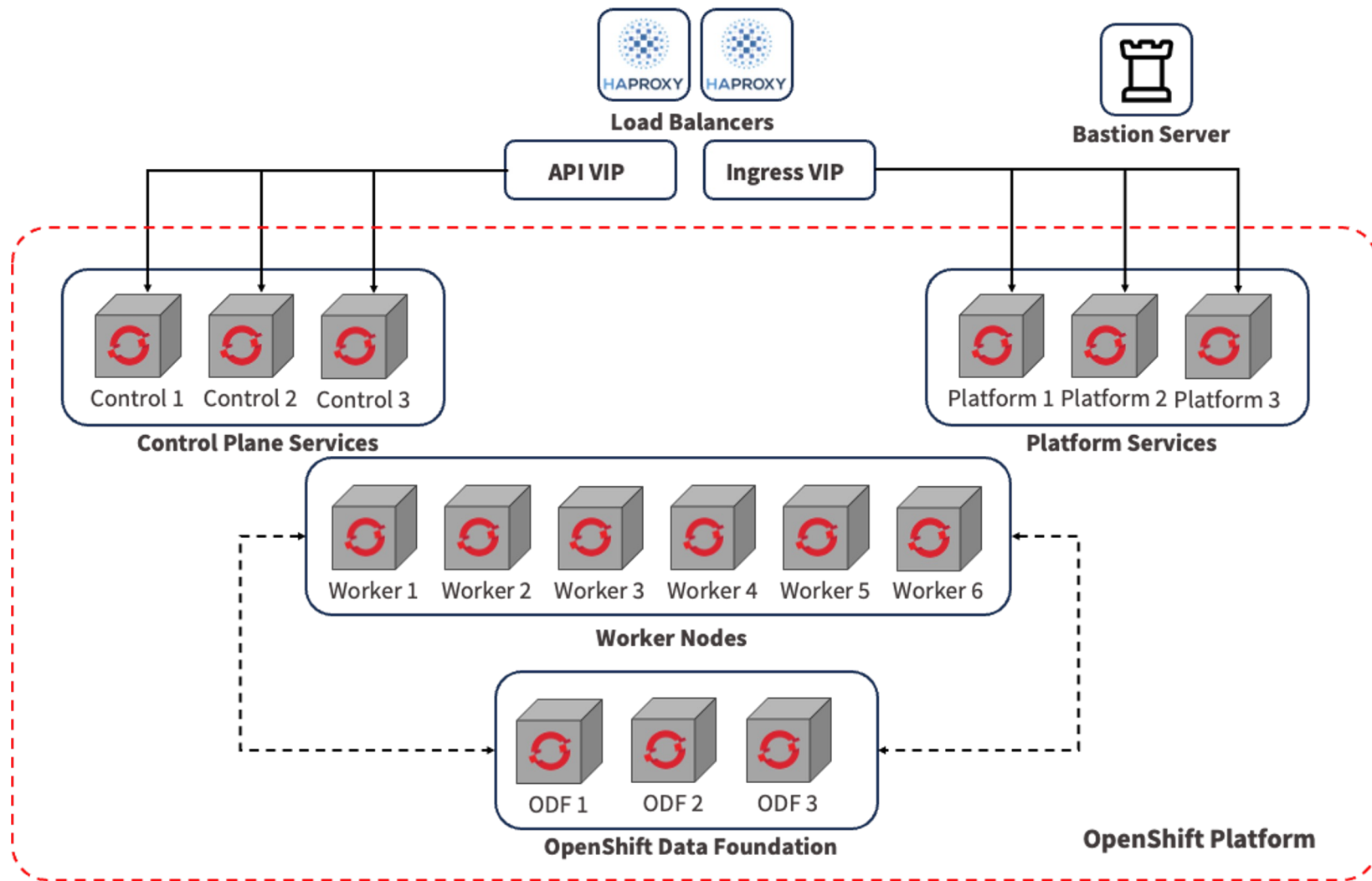
Product Consideration



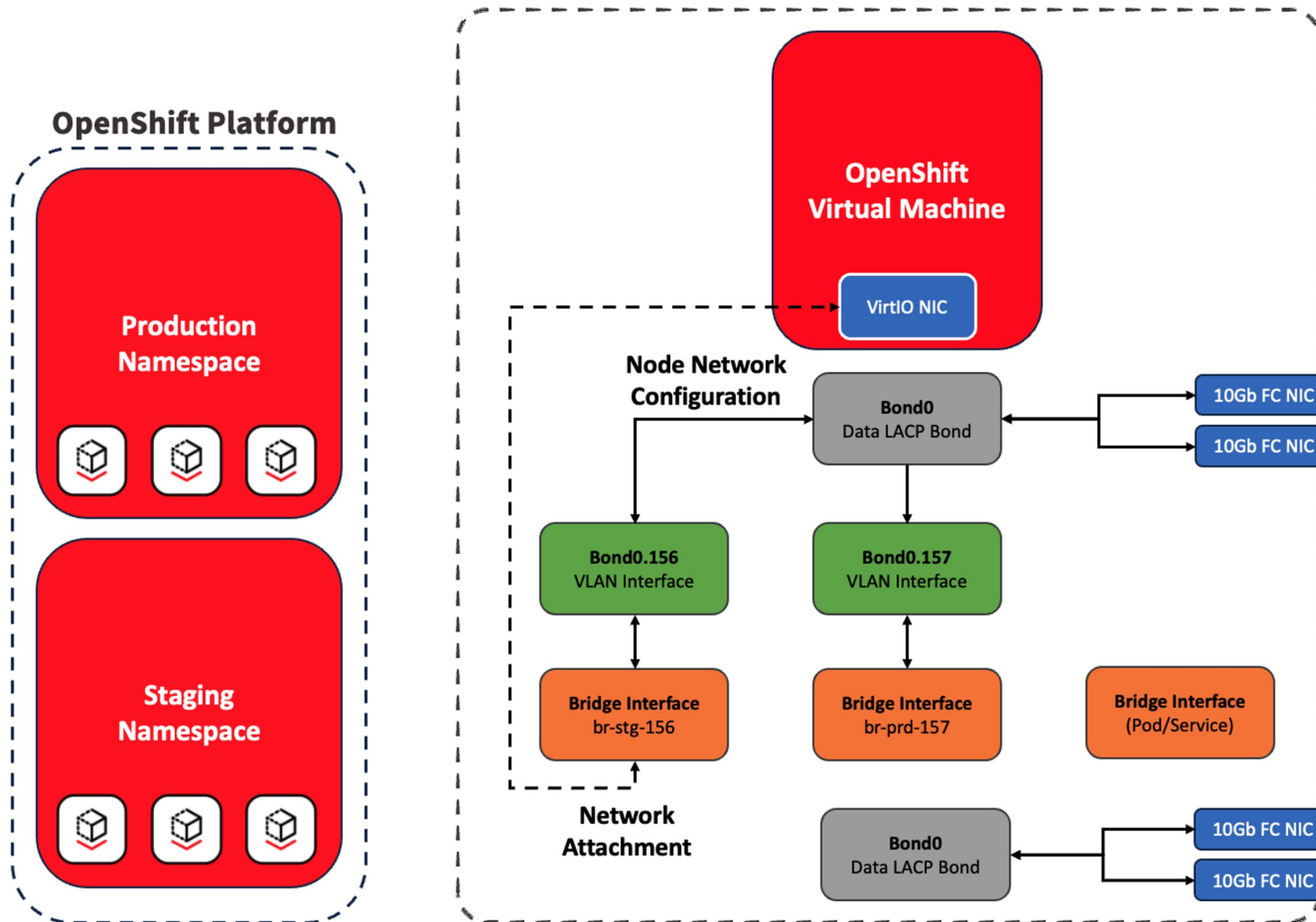
OpenShift Hardware Specification

Control/Master Nodes	Infrastructure Nodes	OpenShift Data Foundation	Compute Nodes
<ul style="list-style-type: none">• CPU: 2 x 16 core Intel Xeon (32 core total)• Memory: 64GB memory• Operating system storage: 2x 480GB SAS SSD/NVME drives• Network: 1x Dual Port 10GbE SFP+ NIC 	<ul style="list-style-type: none">• CPU: 2 x 32 core Intel Xeon or AMD Epyc CPU (64 cores total)• Memory: 256GB memory• Operating system Storage: 2x 480GB SAS SSD/NVME drives• Network: 2 x Dual Port 10GbE SFP+ NIC	<ul style="list-style-type: none">• CPU: 2 x 32 core Intel Xeon or AMD Epyc CPU (64 cores total)• Memory: 256GB memory• Operating system Storage: 2x 480GB SAS SSD/NVME drives and 16TB SSD/NVME Drives (ODF Storage)• Network: 2 x Dual Port 10GbE SFP+ NIC	<ul style="list-style-type: none">• CPU: 2 x 32 core Intel Xeon or AMD Epyc CPU (64 cores total)• Memory: 256GB memory• Operating system Storage: 2x 480GB SAS SSD/NVME drives• Network: 2 x Dual Port 10GbE SFP+ NIC

OpenShift Architecture



Segregating Staging and Production



A **namespace** is a Kubernetes concept used to organise and manage resources within a cluster.

It provides a way to divide cluster resources among multiple users or teams, ensuring that resources are organised and structured.

Application Migration

Convert2RHEL

Convert2RHEL tool is a utility provided by Red Hat to assist in migrating systems from CentOS to Red Hat Enterprise Linux.

We updated to the latest CentOS 7 version and used the Convert2RHEL tool to convert to RHEL 7.9.

OS conversion worked fine but we experienced application errors. Due to time constraints, we abandoned the idea of debugging.



Ansible Automation

Started with a RHEL 9 base image.

Consulted the DEV team on the applications required.

Wrote an Ansible playbook to deploy the applications and services to the host.

Required a bit of tweaking to get the right software application versions.



Container Migration



DOCKER
CONTAINER

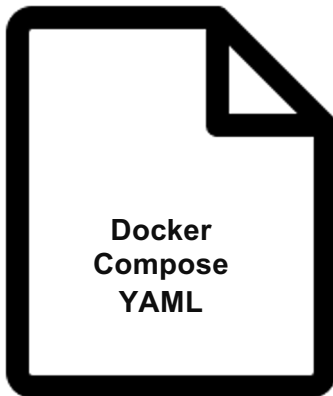


KOMPOSE



Red Hat
OpenShift

OpenShift POD



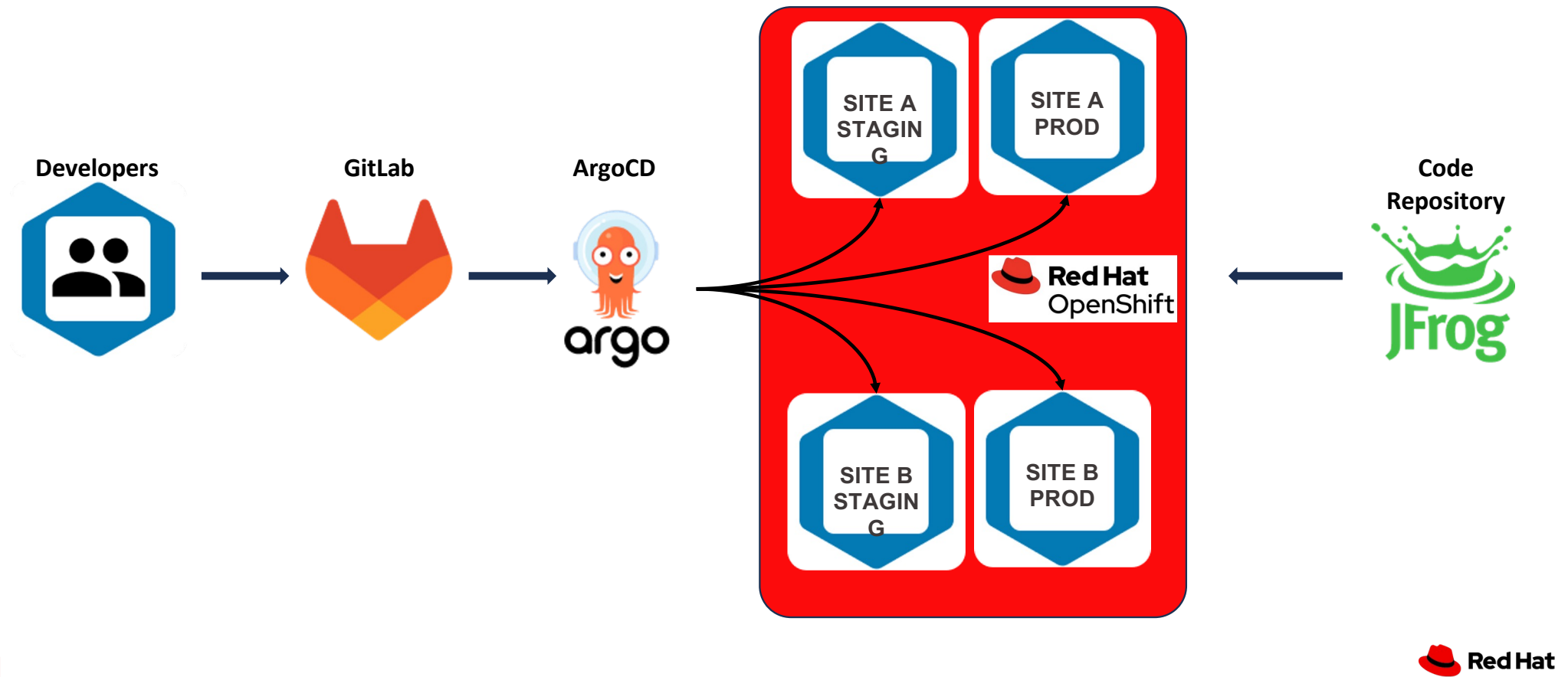
Docker
Compose
YAML

`kompose convert -f docker-compose.yml`



Deployment Config
Service Config
Storage Config
Image Stream
Secrets

OpenShift GitOps



What's next...



Red Hat

Re-base
containers
using RHEL
image



Focus on
certifications
and
upskilling



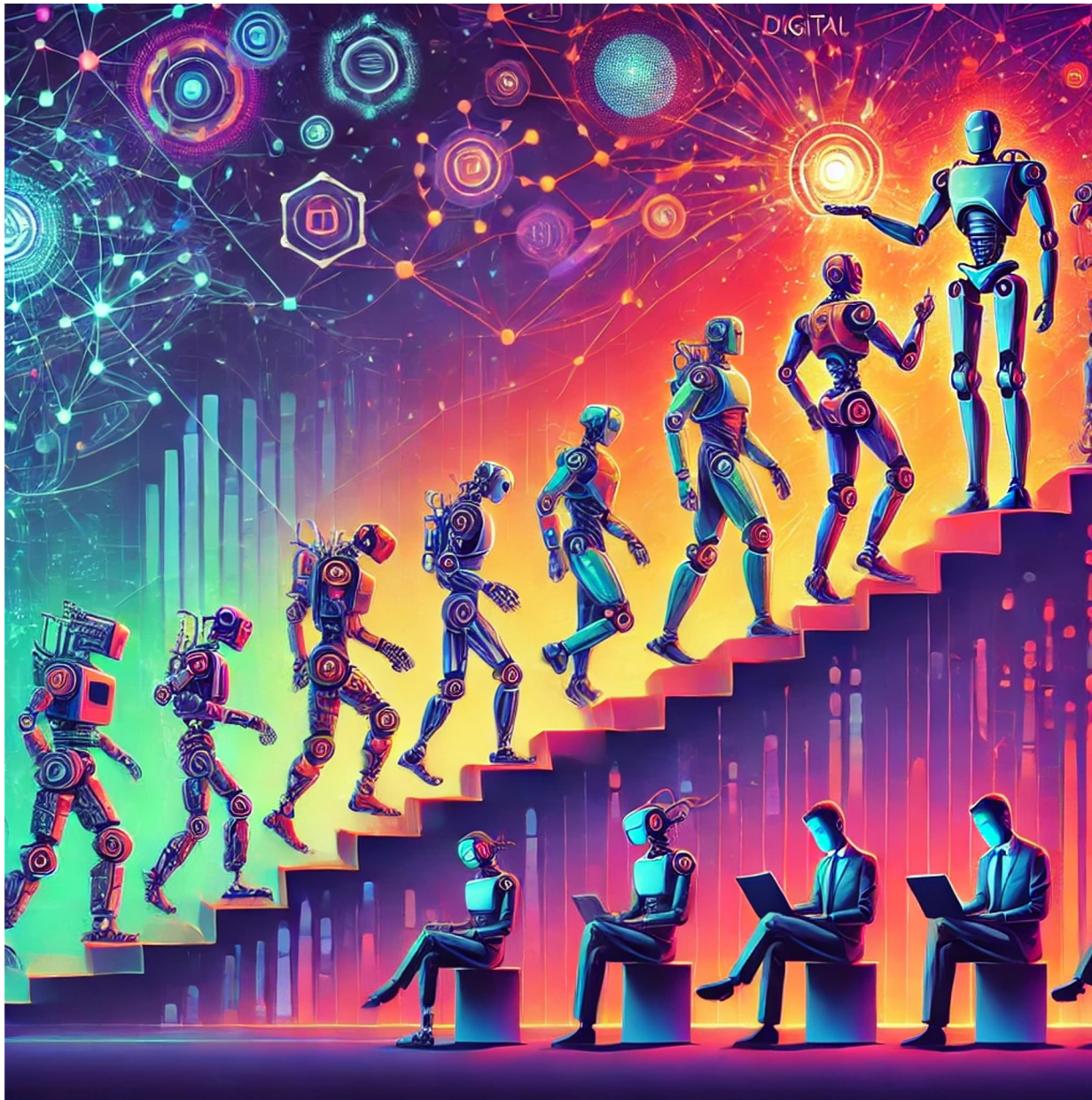
Automate,
Automate &
automate



The Modernisation Journey



Fostering a Culture of Collaboration



The Evolution Continues