

ORACLE



Verrazzano & DevOps

Introduction & Update

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Enterprise Cloud Native Java

Mar 15, 2022

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<http://bit.ly/AppDevWebcast>



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Moving an Java EE to Kubernetes with a WET UI tool

Date: January 18, 2022
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Extend Your Applications with Microservices

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Implement DevOps, Continuous Integration and Continuous Delivery

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New Features WorkLogic and WLS on OCI

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Application Modernization Pathways (Java & 3rd Party Apps)

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Modernize WebLogic based Applications and Hybrid Cloud Native management

Duration: 45 mins


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Application Development @ Oracle

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Java EE Custom App & Database Migration

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Modernizing Oracle Forms or Visual Builder?

Duration: 45 mins

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Challenges with Critical Applications Today

What is the problem we are addressing ?



Slow development

Business requirements
change faster than
development



High Cost to scale

Inelastic models that
require pay for resources
regardless the actual use



Difficult to extend

Cannot leverage
investments in *open-*
source



Operational Costs

Maintenance costs of
patching and upgrading
software

Benefits of Cloud Native Applications

Resilience by design



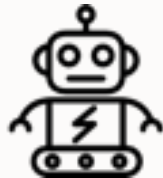
Extensible /
Opensource friendly



Elastic pricing



High automation



Lower
time-to-market



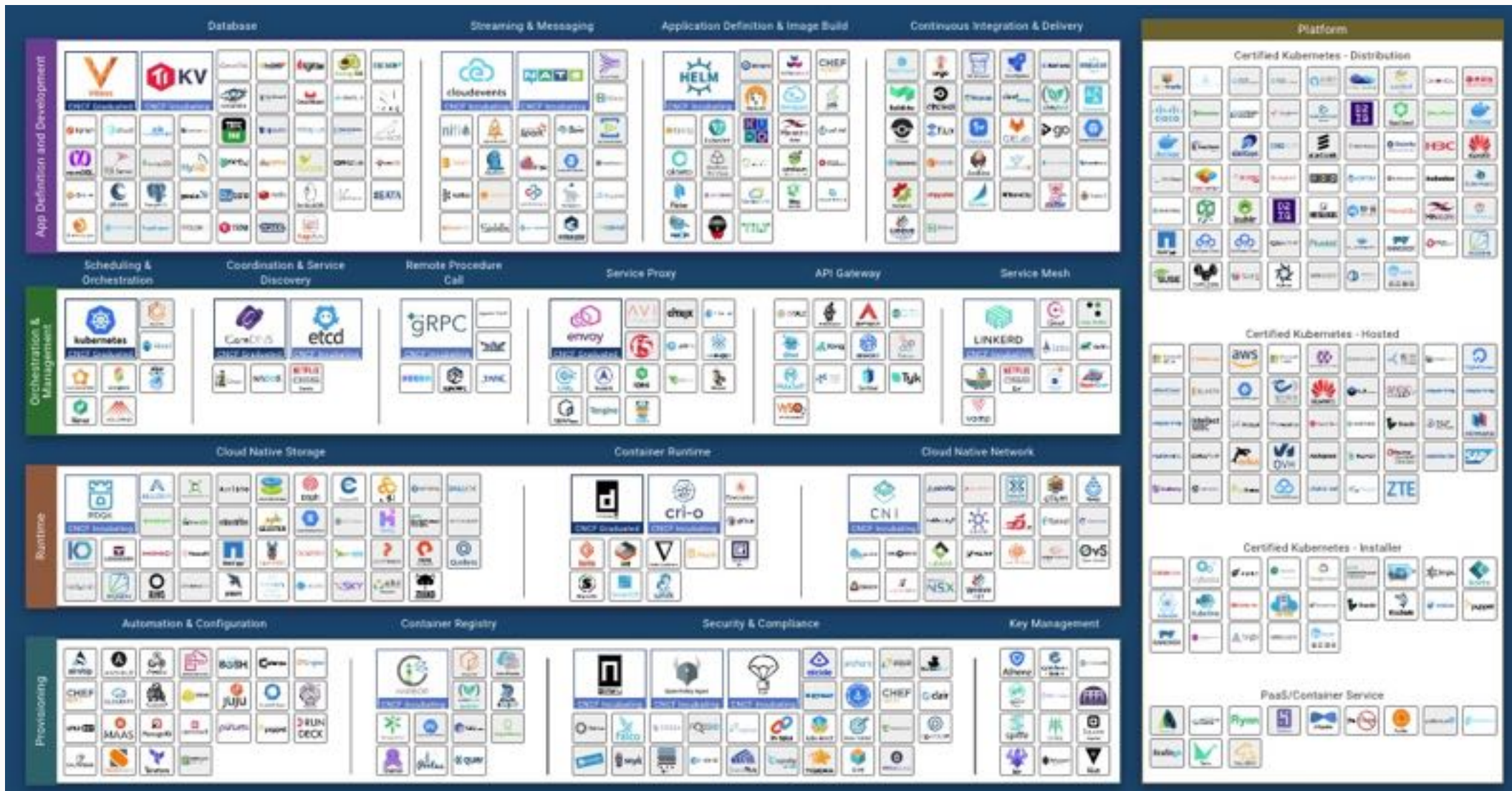
Horizontally scale



Full observability



Adopting Cloud Native is easier said than done



Oracle Enterprise Cloud Native Java



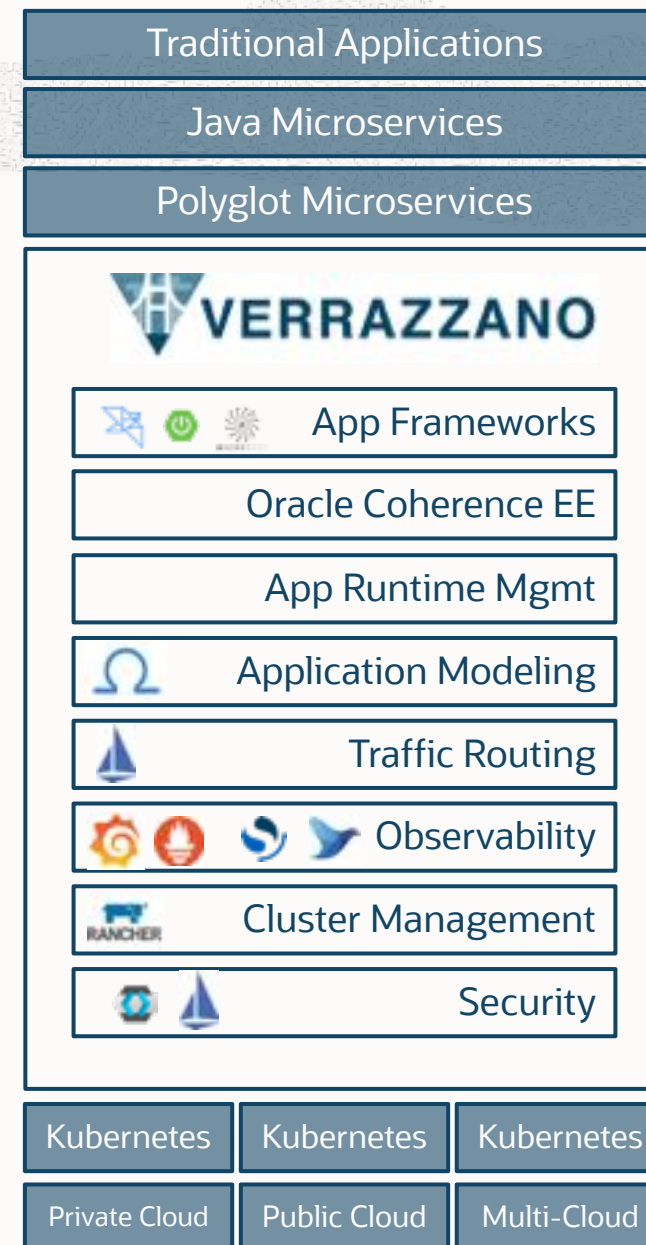
Supported on Kubernetes and the Cloud
Integration with Oracle Cloud, Database, FMW, Apps
New Releases and Innovation
Current and Future Application Needs

Oracle Verrazzano Enterprise Container Platform

What is it?

- **Complete opinionated secure container platform**
 - Istio, Rancher, Keycloak, observability stack, other CNCF components
 - Oracle-authored open source custom resources and controllers
 - Curated stack
 - Java frameworks support – Helidon, Micronaut, Spring Boot
 - Coherence EE entitlement for state management
- **Simplified, automated, rapid movement of WebLogic applications to Kubernetes**
 - WebLogic, Coherence, and Helidon intelligent workload handling
 - Tools to migrate WebLogic applications
 - Day 1 and Day 2 automated management
- **Microservices/polyglot/any container workload**
- **Multi Cluster/Multi Cloud/Cloud neutral**
 - Can run on premises or on any cloud
 - Consistent platform for all of your applications

A bridge between worlds...





VERRAZZANO

Enterprise Container Platform

Intelligent
Workload
Management
Across
Environments



Application
Lifecycle
Management/
DevOps
Enablement



Automated
Built-in
Observability



Multi-Cluster
Infrastructure
Management



Multi-level
Security

Cross-cloud Consistency



VERRAZZANO

Enterprise Container Platform



Traditional Applications



Java Microservices



Polyglot Microservices



Kubernetes

Kubernetes

Kubernetes

Public Cloud

On-Premise

Multi-Cloud

Open Application Model

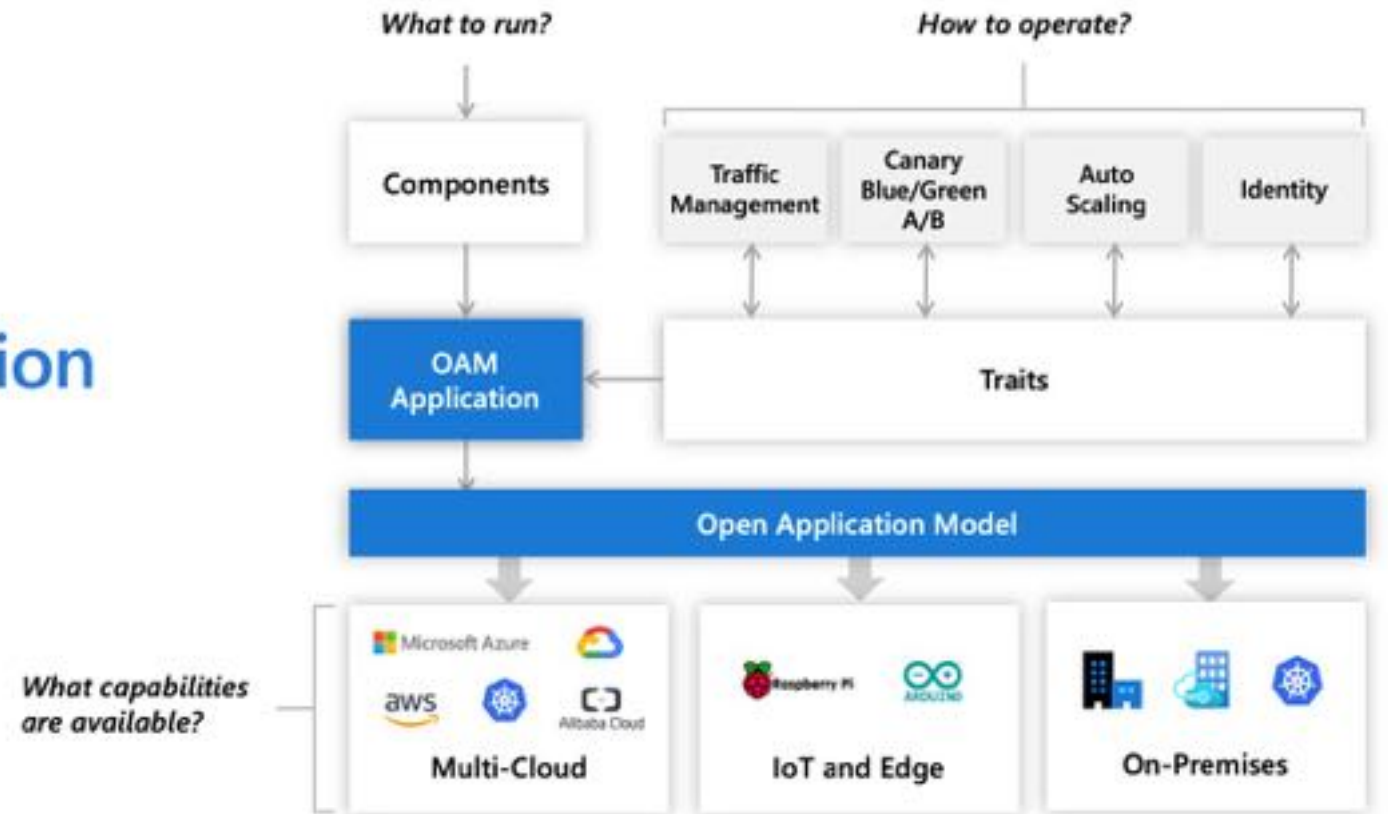
Community-driven application modeling specification, driven by Microsoft and Alibaba.

Oracle is participating in the community, looking to help drive the specification to meet enterprise customers' needs.

Goals of the spec:

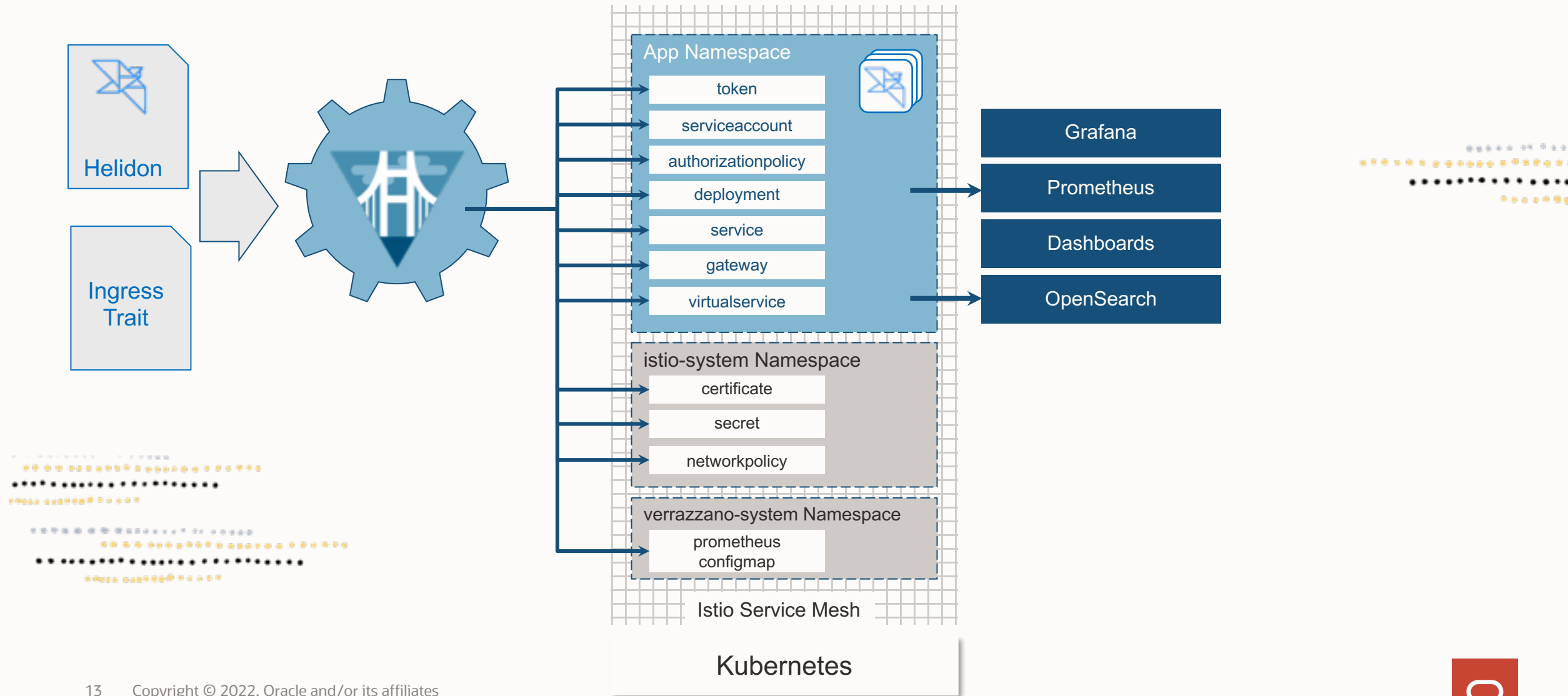
- Describe applications in an **environment-agnostic** way
- **Separate the concerns** for application developers, application operators, and platform operators
- Enable OAM platform providers to make use of native APIs

Open Application Model

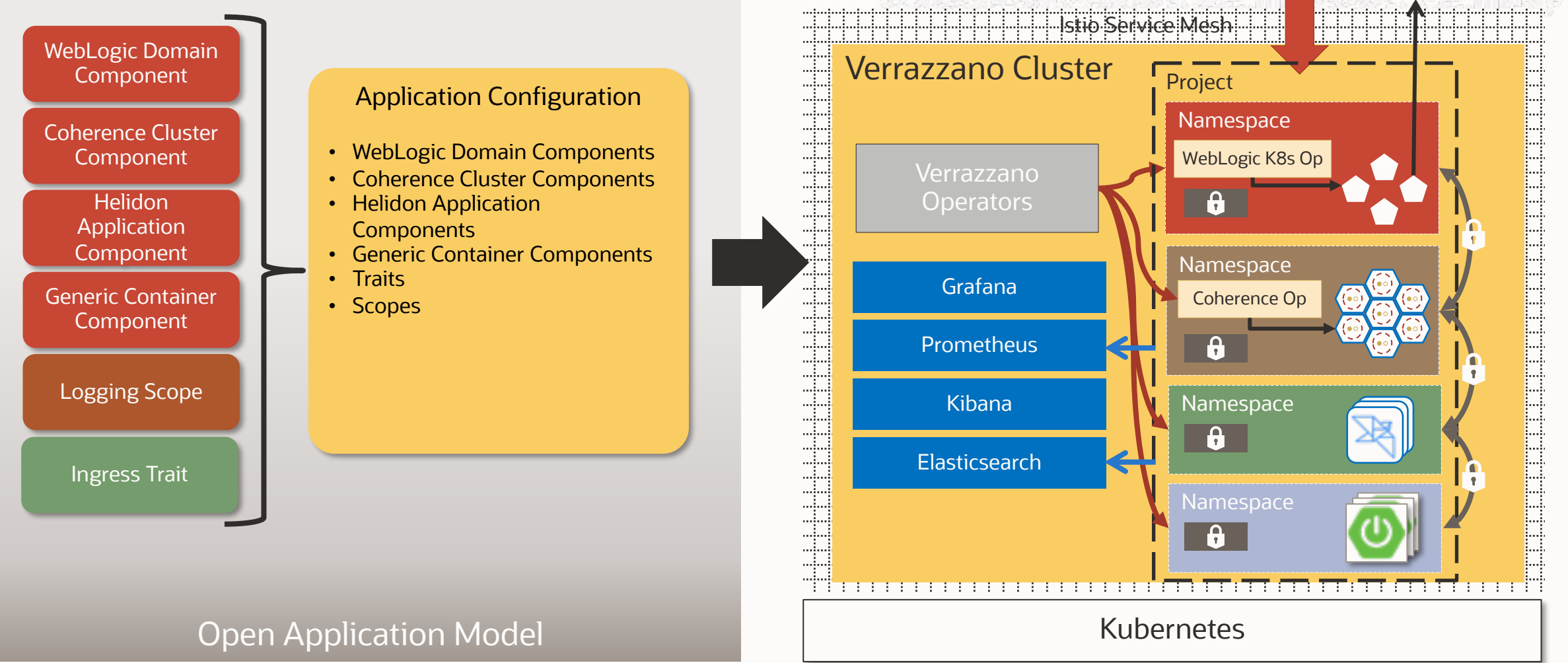


<https://github.com/oam-dev/spec/blob/master/assets/how-it-works.png>

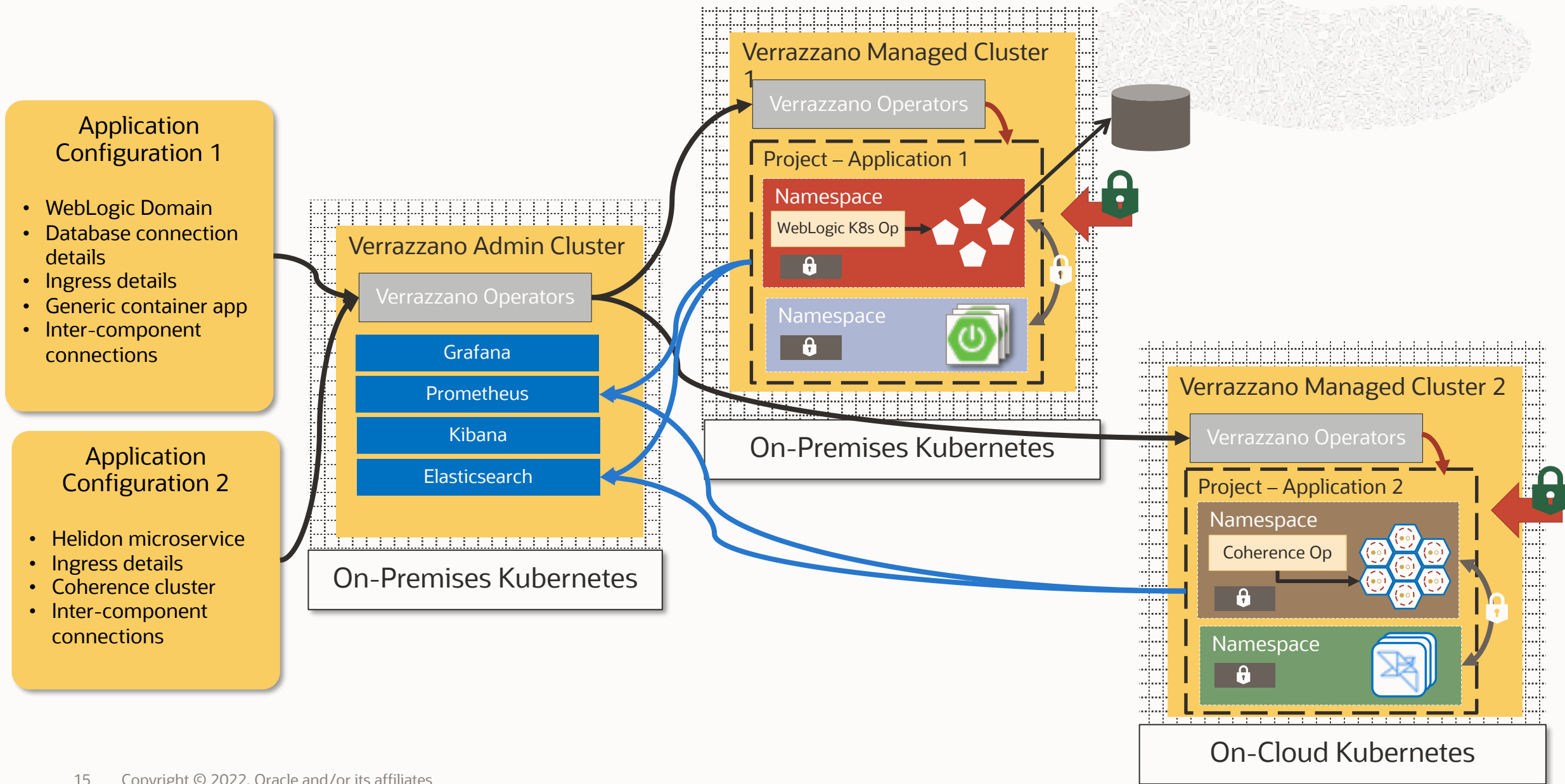
Verrazzano's Intelligent Workload Management



Application Deployment in Verrazzano

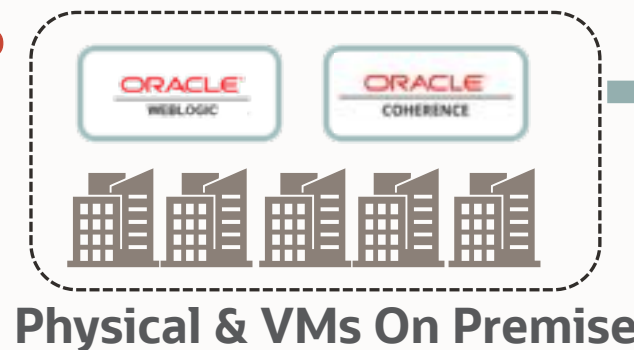


Multiple Kubernetes Clusters/Multiple Clouds

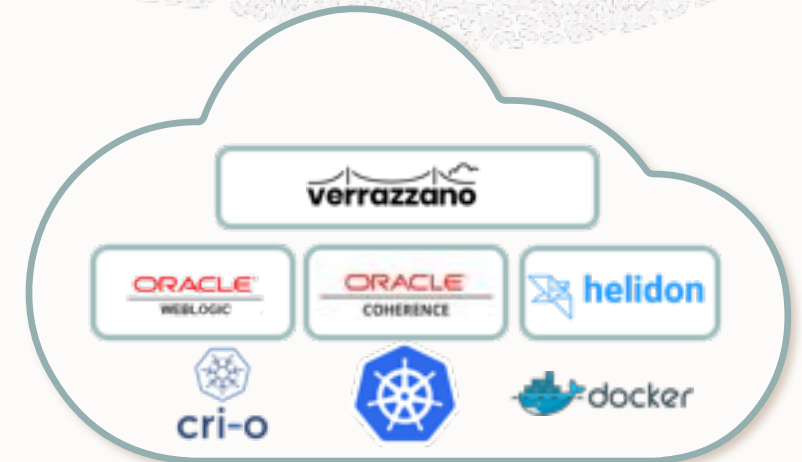


Oracle Enterprise Cloud Native Java

- Build and deploy **containerized** Java EE applications that run anywhere
- Build and deploy **microservices** alongside traditional applications
- Easily run and manage complex applications **combining existing and new**
- Boost the performance of Java applications, easily use **multiple languages** with **GraalVM**
- Select an approach that make sense for you
- Single Pane of Glass with **Verrazzano**



Migrate



Oracle Cloud and Other Clouds



Kubernetes on
Premise

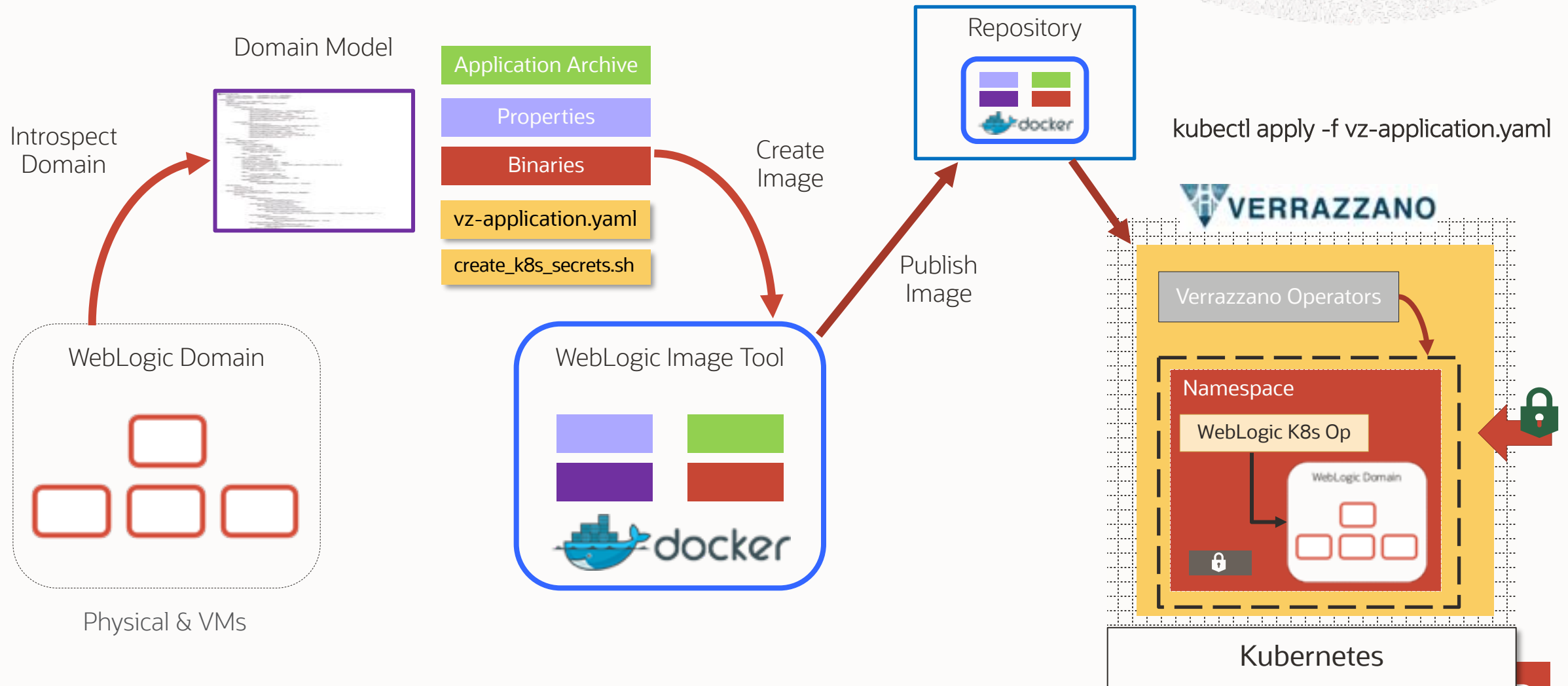
Build And Deploy Containerized Applications That Run Anywhere

- Easily deploy applications using **Docker** and **Kubernetes**
 - ✓ Containers are more efficient and easier to manage than using virtual machines
 - ✓ [Oracle Container Repository](#)
- Use certified open source, cloud-neutral toolchains
 - ✓ Oracle is aligned with Cloud Native Computing Foundation (CNCF)
 - ✓ Standard tools included in **WebLogic Kubernetes ToolKit** that can run anywhere
 - Manage **any Kubernetes** deployment using [WebLogic Kubernetes Operator](#)
 - Easily deploy to **any environment** using [WebLogic Deploy Tool](#)
 - Easily **create** and **update** container images using [WebLogic Image Tool](#)
 - Easily **monitor** with cloud native tooling using [WebLogic Prometheus Exporter](#)
 - Integrate with Elastic stack using [WebLogic Logging Exporter](#)
 - Simplified UI base Lifecycle Management for Toolkit with [WKT UI](#) – New*
 - Remote Management Console for WebLogic with [Remote Console](#) – New*
- Easily combine existing deployment options with newer ones using [Verrazzano](#)



Migrating an Existing WebLogic Application

Using the WebLogic Kubernetes Toolkit





VERRAZZANO

Enterprise Container Platform

Open Source

- Open-source container management platform, community support only

Included in WebLogic Suite

- Container management platform entitlement & Oracle Support

Oracle Verrazzano Enterprise Container Platform

- Annual subscription
- Oracle Verrazzano container management platform
- Coherence Enterprise Edition
- Java frameworks support:
 - Helidon
 - Micronaut
 - Spring Boot

DevOps



CI / CD

What is CI/CD?

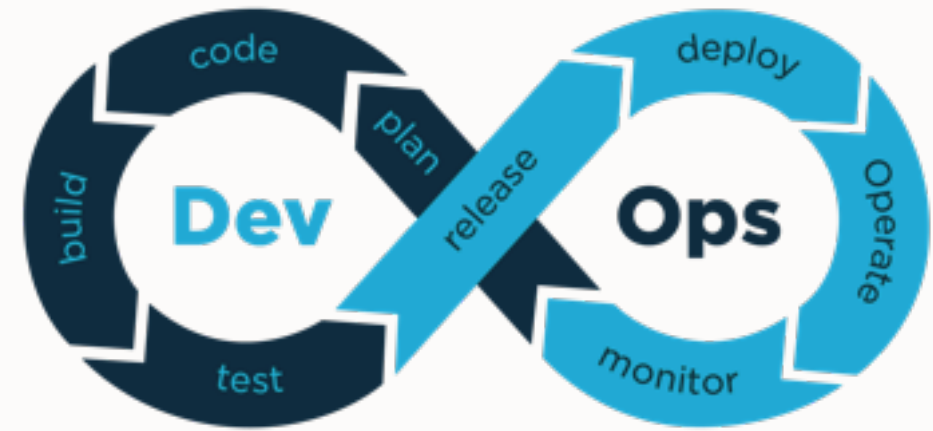
Why do we need it?

CI/CD is continuous integration, continuous delivery, and continuous deployment

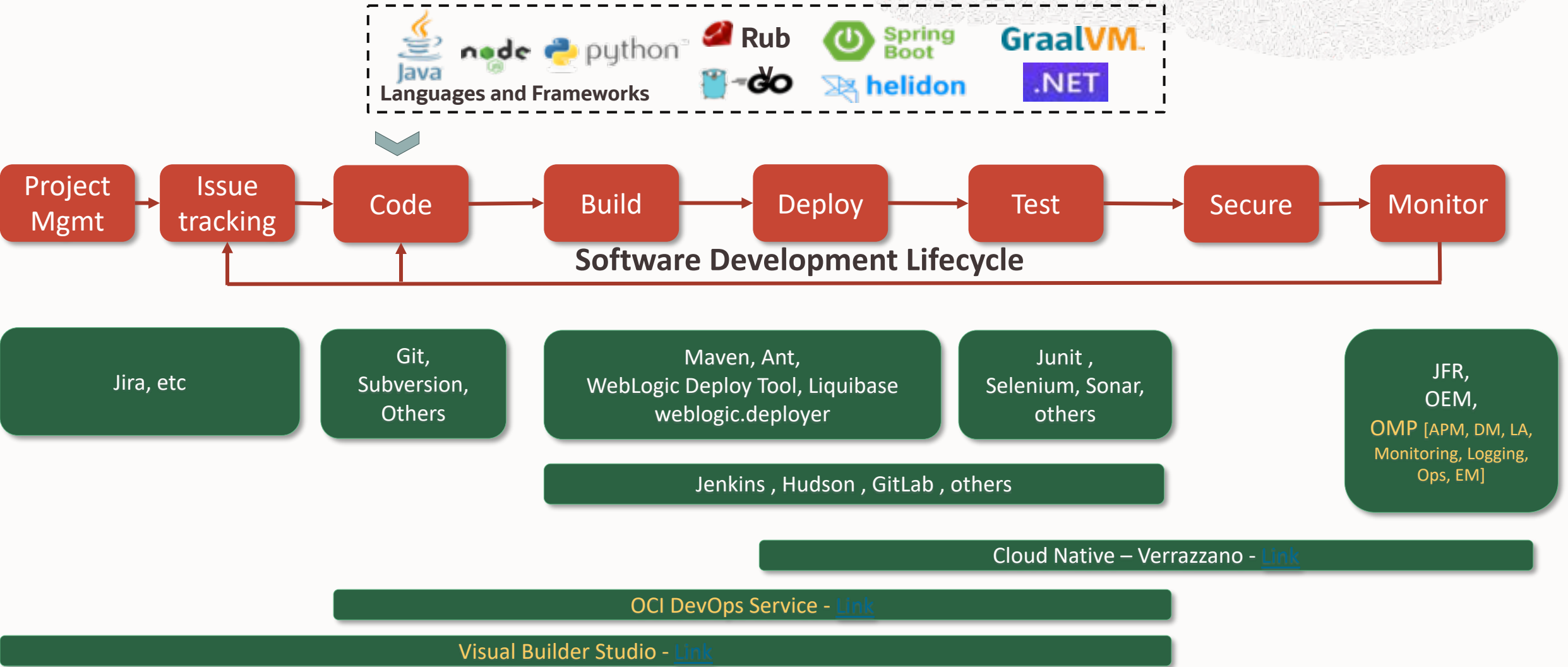
- Introduces automation into all stages of app/database development
- Helps developers work on the same app and merge their code changes back to shared branch frequently
- Development changes are automatically tested on push/commits and merges

Why?

- Consistency/Repeatability
- Accountability
- Security
- Standardization
- Find issues faster/Better code/Quality Releases
- More Frequent Releases

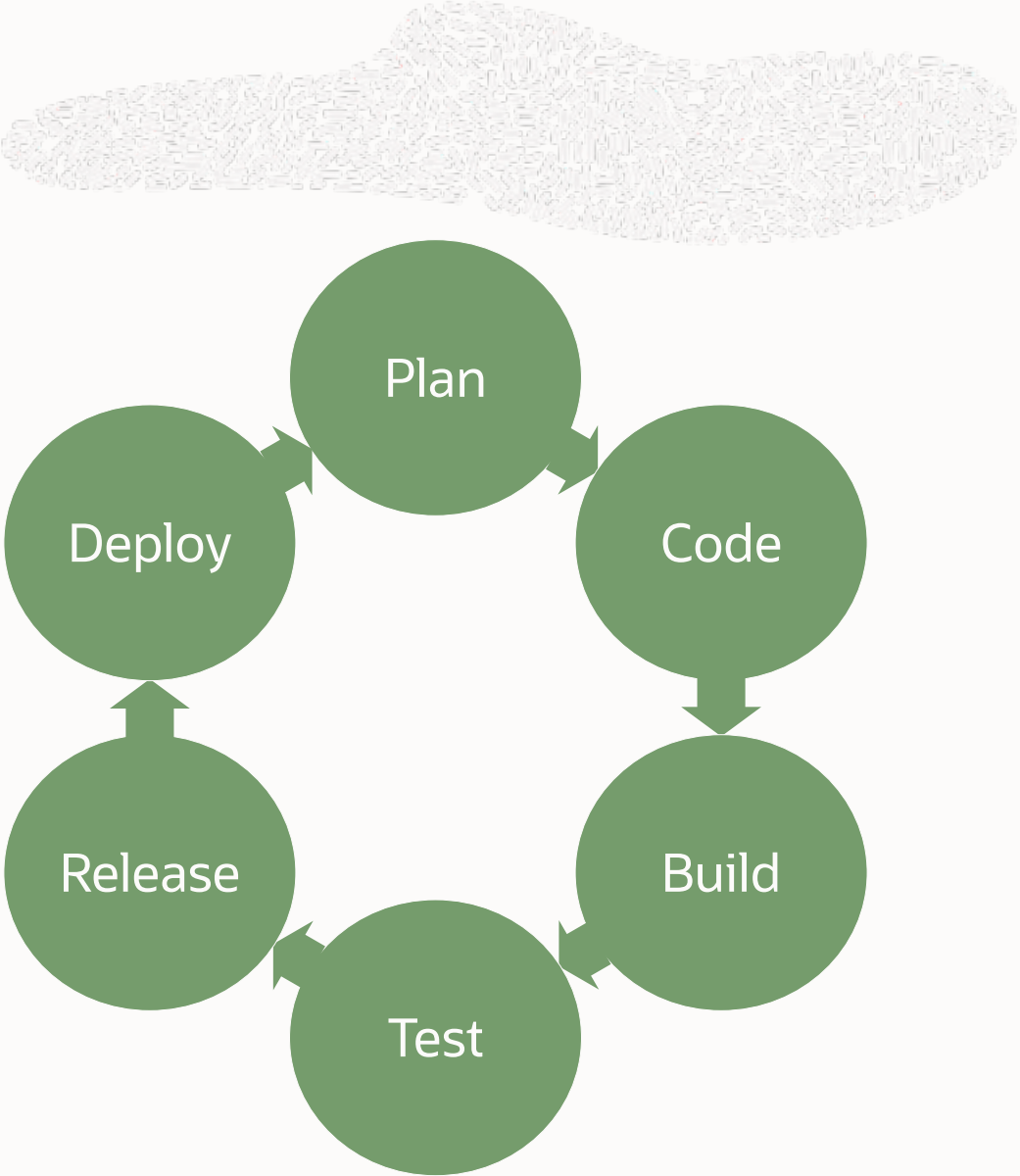
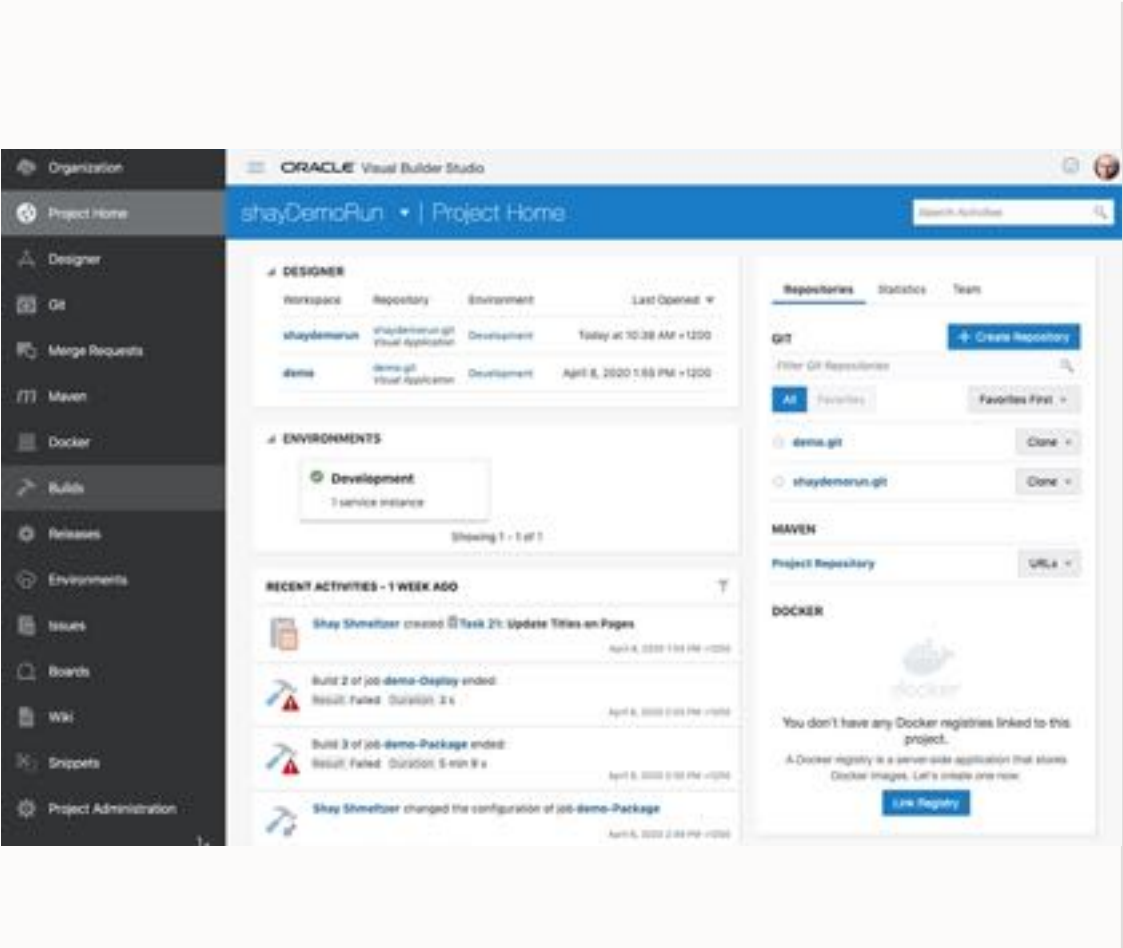


CI / CD – App Dev Hybrid



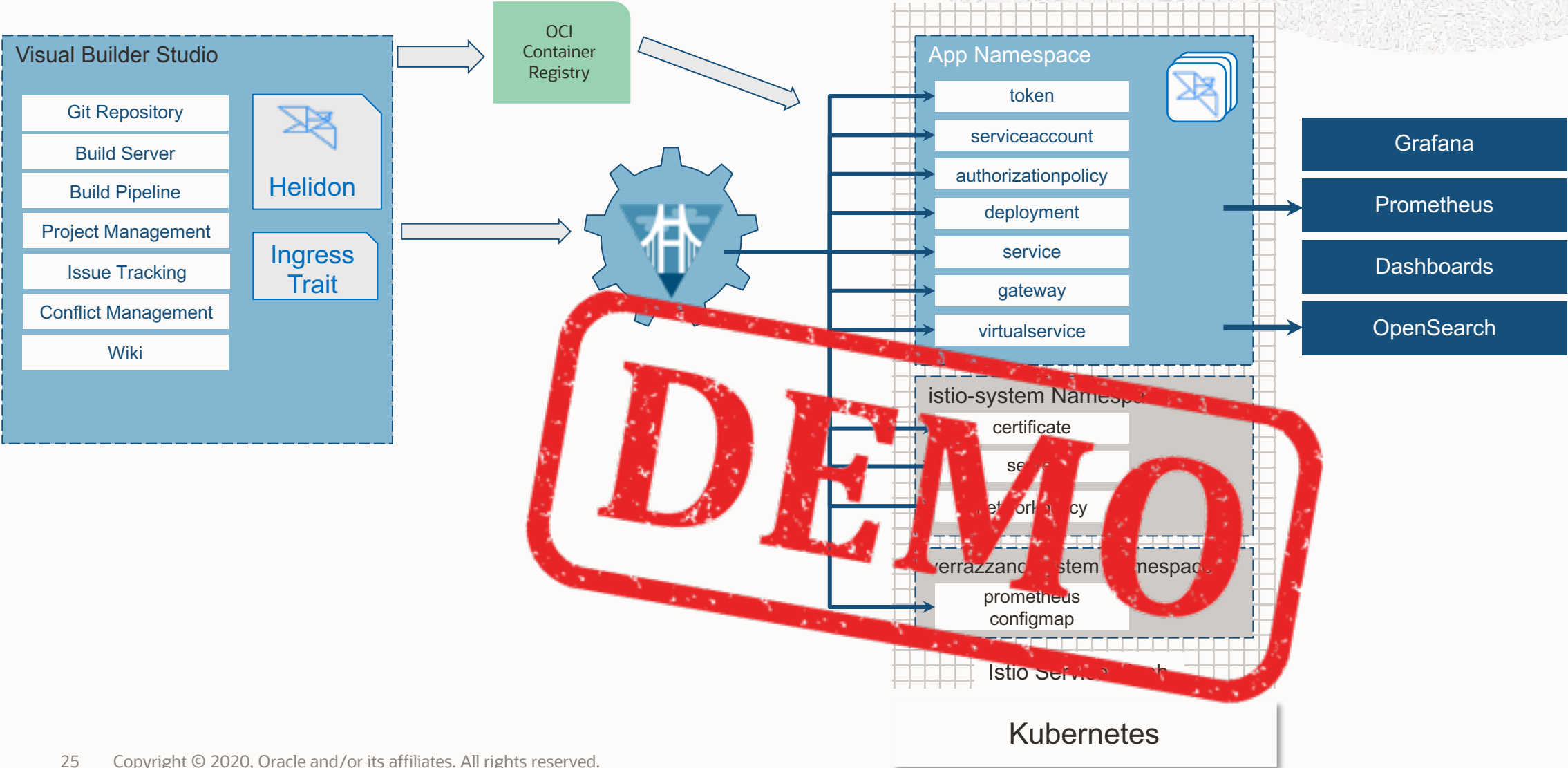
Visual Builder Studio

Integrated collaborative DevOps cycle



Demo

Verrazzano + Visual Builder Studio DevOps




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Resources

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Email	Send email to verrazzano_ww@oracle.com
Twitter	@verrazzano_io
YouTube channel	https://www.youtube.com/channel/UCZzwRgrOG5beGgsA7tn4LOw
Oracle Developer Live replays	https://youtu.be/iGMFQLrZGTc https://youtu.be/iWCKGILhsxU
Oracle Verrazzano product page	https://www.oracle.com/verrazzano/
Source code	https://github.com/verrazzano
Documentation	https://verrazzano.io/docs , https://docs.oracle.com/en/cloud/iaas/verrazzano/
Home page	https://verrazzano.io





Q & A

Thank You!



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