

ORACLE



App Dev Portfolio @ Oracle

One provider for all your development requirements



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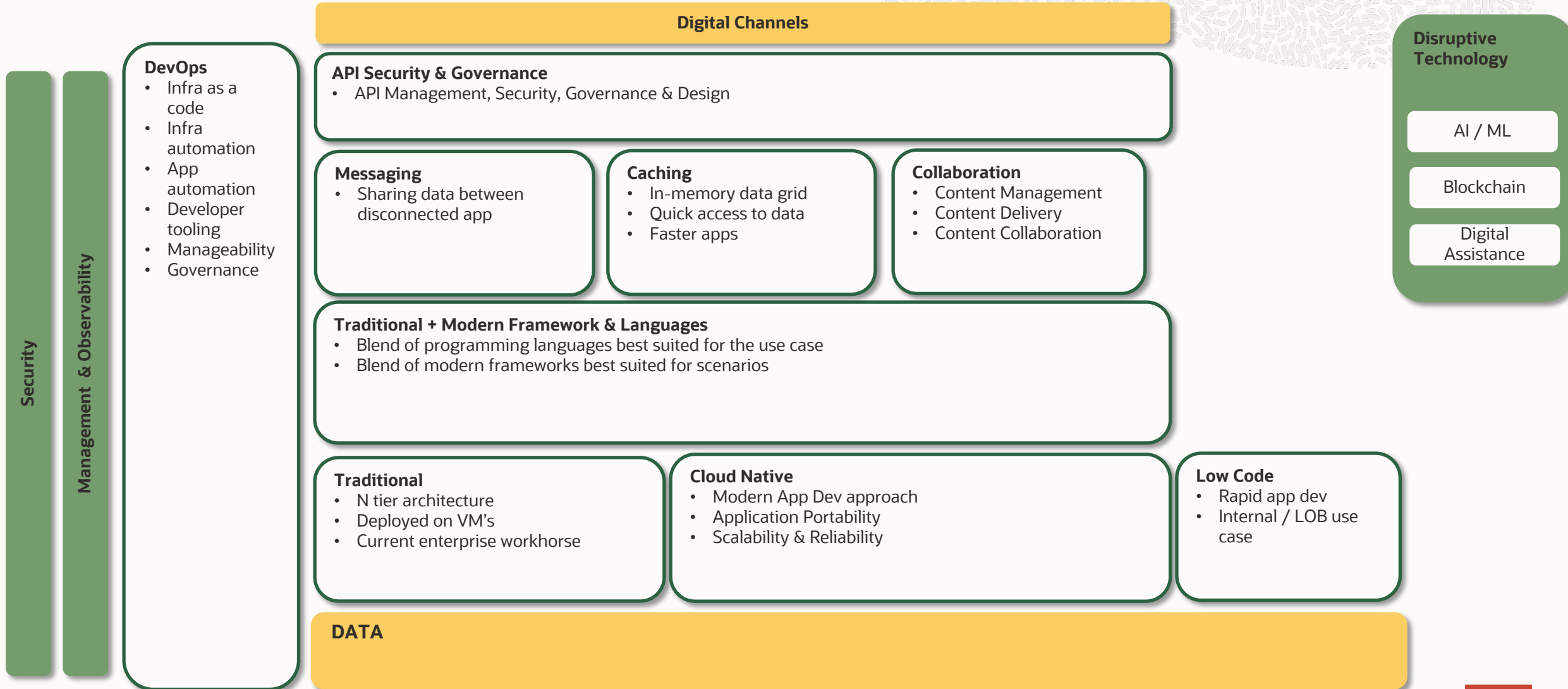
Jan Leemans

**EMEA Director
Technology Software Engineering**

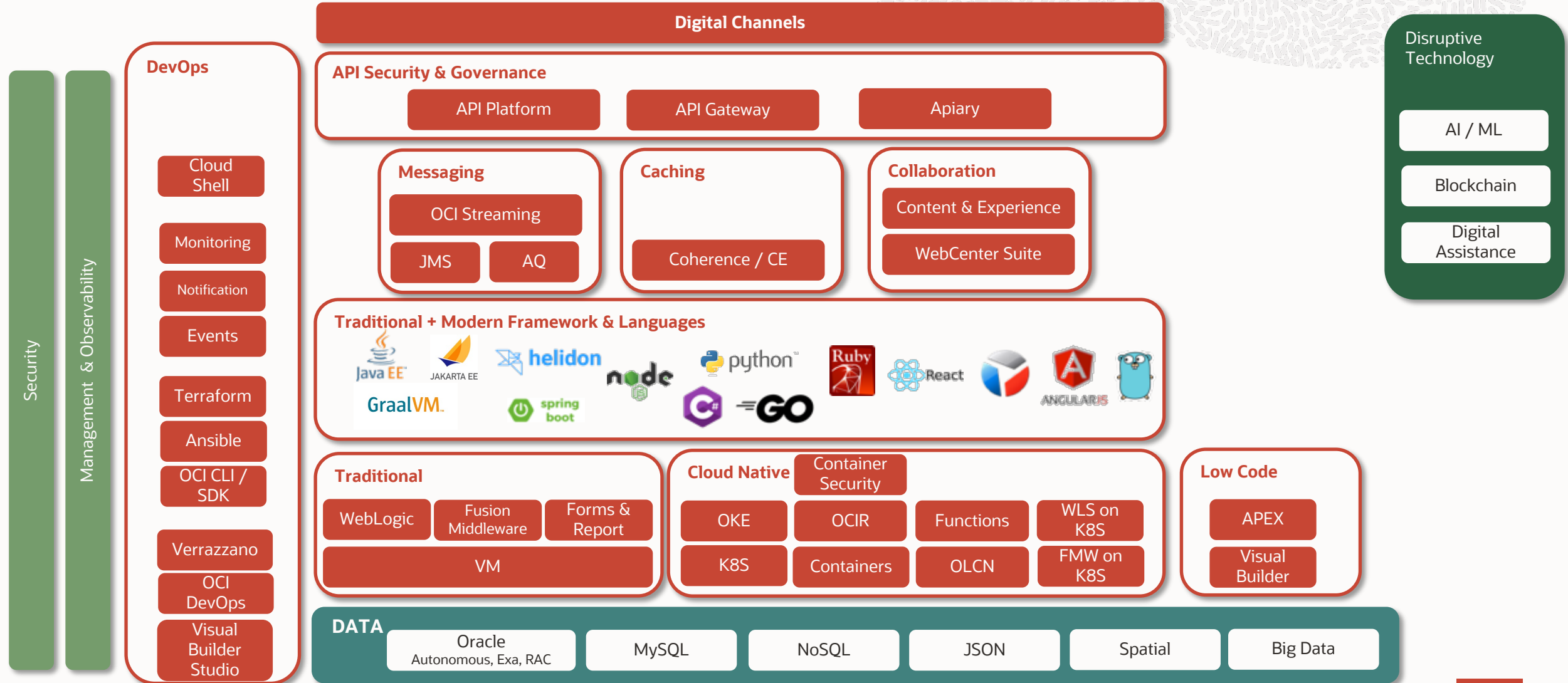
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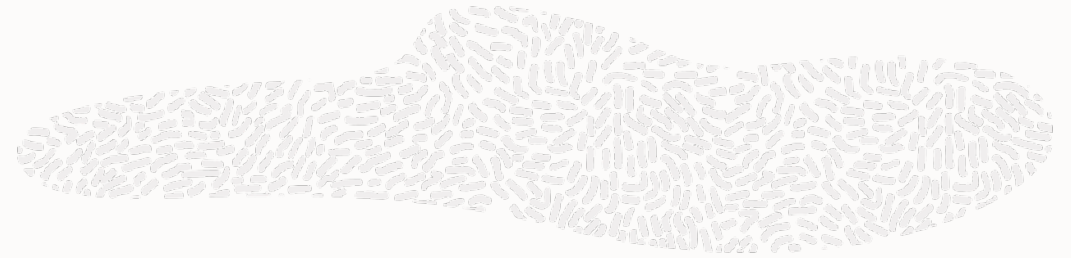
App Dev Capabilities Requirement



App Dev @ Oracle



App Dev @ Oracle : Cloud Native



Fully managed, certified, Kubernetes service available in all commercial regions

Serverless platform that lets developers create, run, and scale applications without managing any infrastructure

A highly available virtual network appliance that can receive to protect and manage your API

Hybrid Cloud Native management & observability platform combines the best of both worlds: a curated, standards-based suite of open source software technologies that is tested, integrated, and supported on-premises or in the cloud by Oracle for your enterprise– [Details](#)

Cloud Native

Oracle Managed Kubernetes

Functions

API Gateway

Verrazzano

WebLogic on K8S

Oracle Container Image Registry

Container Security

Streaming

Oracle Linux Cloud Native

Fusion Middleware on K8S

Certified docker container Images – [Container Registry](#)

Docker standard-based registry to reliably and securely store & share container images

Scanning Service to create recipes and targets that scan images in Oracle Cloud Infrastructure Registry for potential security vulnerabilities

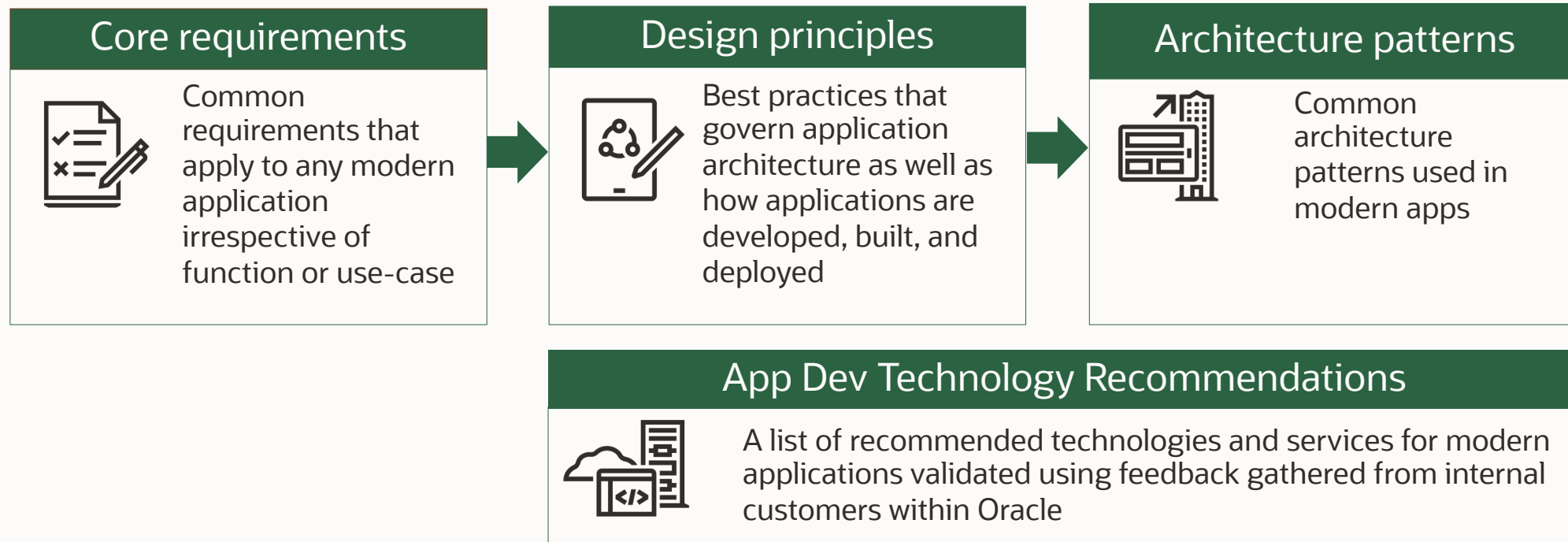
Apache Kafka-compatible data flow at-scale for web/mobile, logs, infrastructure/apps, and more

Oracle Cloud Native Environment combines the best of both worlds: a curated, standards-based suite of open source software technologies that is tested, integrated, and supported on-premises or in the cloud by Oracle for your enterprise– [Details](#)

Build New Cloud Native Apps

Simplify the architectural decision-making

Oracle's Modern Application Development approach



<https://www.oracle.com/cloud/architecture-center/modern-app-development/>

Build New

Oracle's Modern Application Design Principles



Use lightweight open-source frameworks and mature programming languages



Build apps as services that communicate through APIs



Package and ship apps as containers



Automate build, test, and deployment



Use fully managed services to eliminate complexity across application development, runtimes and data management



Keep application tier stateless



Use converged databases with full featured support across all data



Instrument end-to-end monitoring and tracing



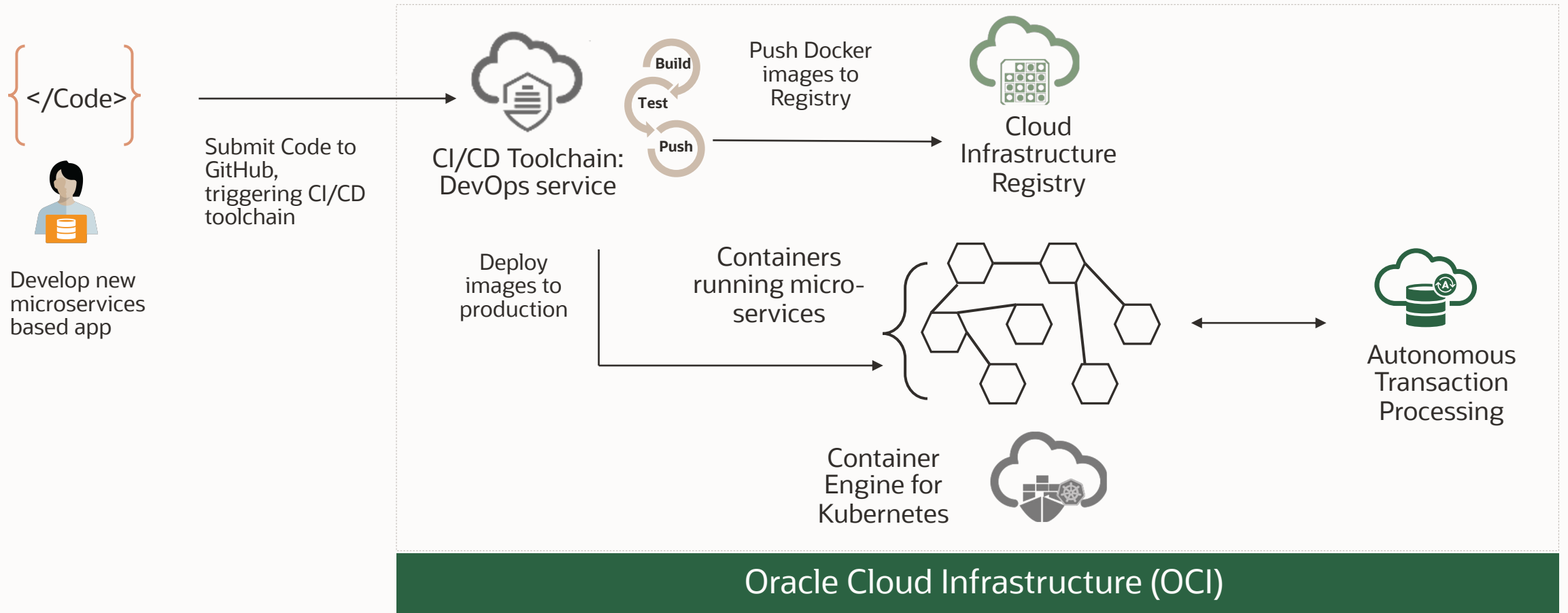
Eliminate single points of failure through automated data replication and failure recovery



Implement a defense-in-depth approach to secure the app lifecycle

Build New

Creating & deploying cloud native applications



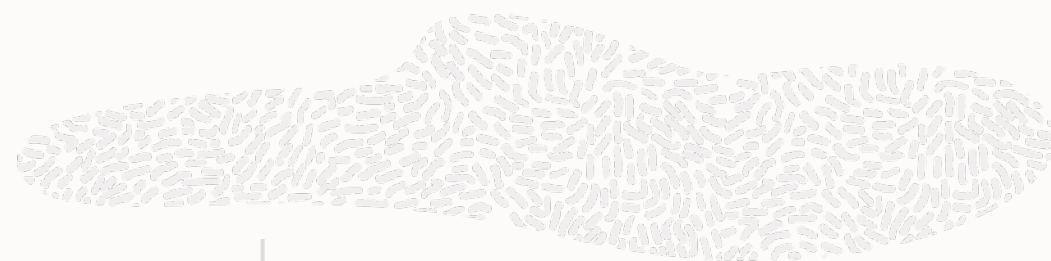
Oracle's Open Source Projects

- Verrazzano
- Kubernetes Toolkit for WebLogic & Coherence
- GraalVM
- Helidon.io
- Coherence CE
- Fn project
- Glassfish
- Open JDK
- MySQL
- NoSQL
- Dredd
- OCI clients and SDK's
- OCI Service Broker
- VirtualBox

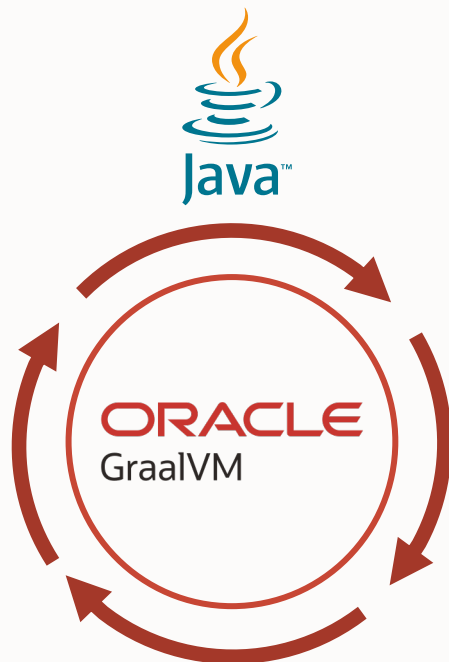
Many more at <https://github.com/oracle>
and <https://opensource.oracle.com/>



What is GraalVM Enterprise?



A high-performance optimizing
Just-in-Time (JIT) compiler



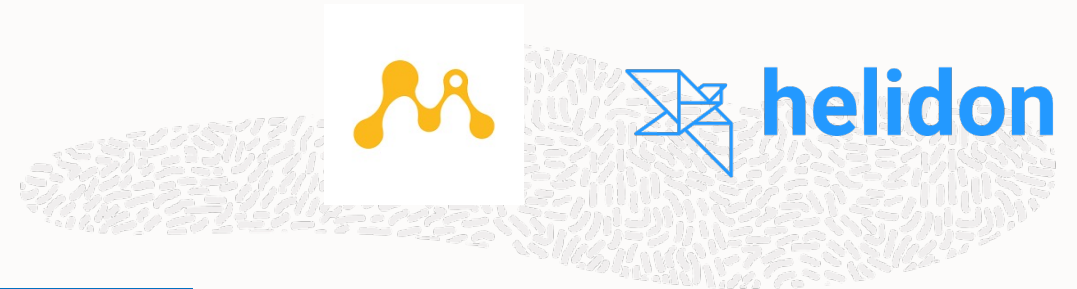
An Ahead-of-Time (AOT)
“native image” compiler



Multilingual Virtual Machine



Java Microservices with MicroProfile



- Helidon - Java libraries for microservices Standards-based, open source, cloud native, Support included with WebLogic, Coherence
- Helidon SE
 - Functional style, Reactive, Transparent
- Helidon MP (MicroProfile 3.3)
 - Declarative, Dependency Injection
 - Familiar to Jakarta EE Developers
- Extend, evolve or migrate Jakarta EE apps
 - “Strangler” pattern and other patterns
- GraalVM Native Image support

MicroProfile Config	MicroProfile JWT Auth	Jakarta JSON Binding	Jakarta WebSocket
MicroProfile Metrics	MicroProfile REST Client	Jakarta CDI	Jakarta Persistence
MicroProfile Health Check	MicroProfile Open API	Jakarta Restful Web Services	CORS
MicroProfile Tracing	MicroProfile Reactive Streams Operators	Jakarta JSON Processing	gRPC
MicroProfile Fault Tolerance	MicroProfile Reactive Messaging	Jakarta Transactions	

■ MicroProfile Components ■ Jakarta EE Components



VERRAZZANO

Enterprise Container Platform



A Complete, opinionated and secure container platform

- ✓ **Deploy, manage and secure** container-based applications in Kubernetes with support for Helidon, Spring Boot and Micronaut
- ✓ **Unify application lifecycle management** across microservices and traditional WebLogic Server applications.
- ✓ **Standardize management** across Kubernetes on premises, on Oracle Cloud Infrastructure, and on other public clouds.

More info:

- ✓ <https://www.oracle.com/java/verrazzano/>
- ✓ Video Tour: <https://youtu.be/DDhHBTkC3PQ>
- ✓ Try it out: <https://github.com/verrazzano>



VERRAZZANO

Enterprise Container Platform



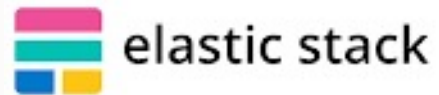
Traditional Applications



Java Microservices



Polyglot Microservices



Kubernetes

Kubernetes

Kubernetes

Public Cloud

On-Premise

Multi-Cloud

Oracle WebLogic Server

Proven, Industry-Leading Application Server



Standards – Thru Jakarta EE 8 and Java 8/11



Core – Performance, Data Integrity, Upgrade



Data Tier Support – RAC, EBR, Coherence



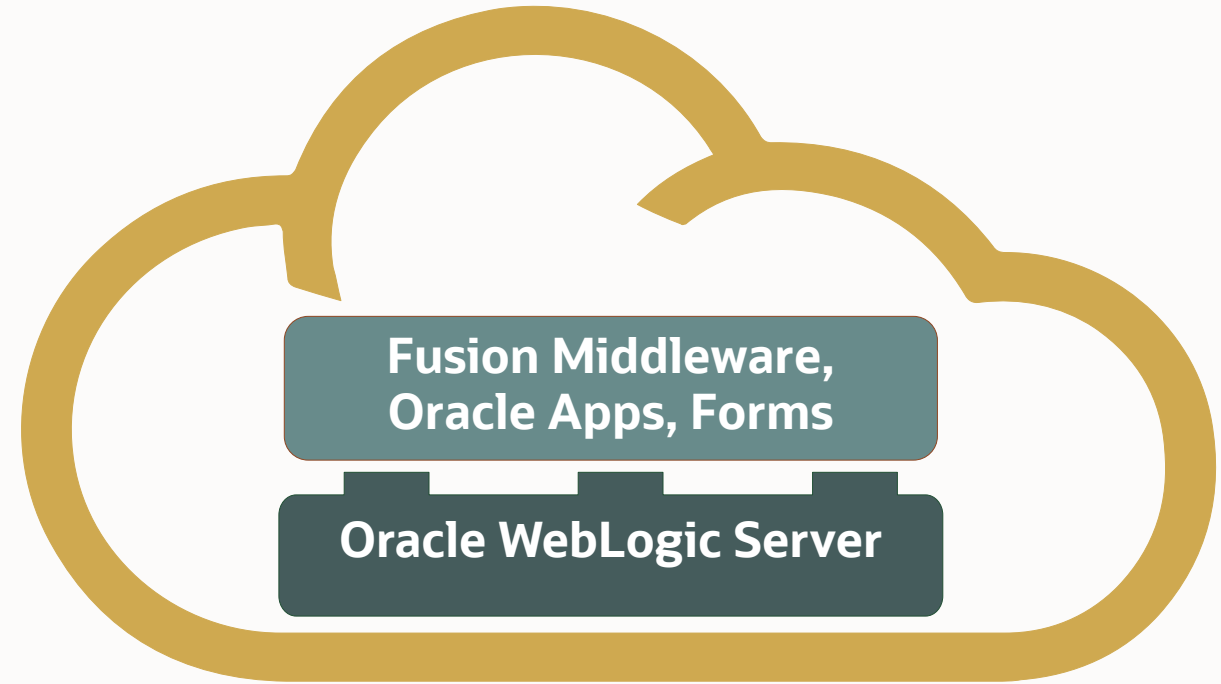
Manageability – Console, WLST, REST, WLDF



Availability – Clusters, DR, Migration, ZDT



Modernization – Kubernetes, Cloud, Migration



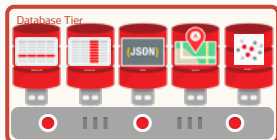
ORACLE
WebLogic Server

WebLogic for Cloud Native



- **Embrace Cloud Native**

- Key trend in Application Development
- Modernize your existing applications without code changes
- Large Opensource toolset to embrace modern development automation (CI/CD)
- Enable Modern Monitoring and Logging tooling



- **Micro Service Ready**

- Easy adoption of Java Microservices with Helidon
- Hybrid applications: WebLogic + Helidon combined
- Coherence: interaction between microservices

- **Converged Database**

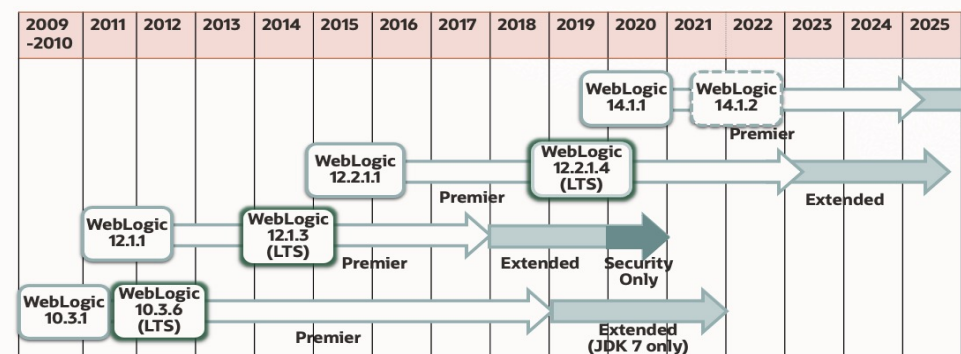
- Relational, Columnar, JSON, Spatial, ...



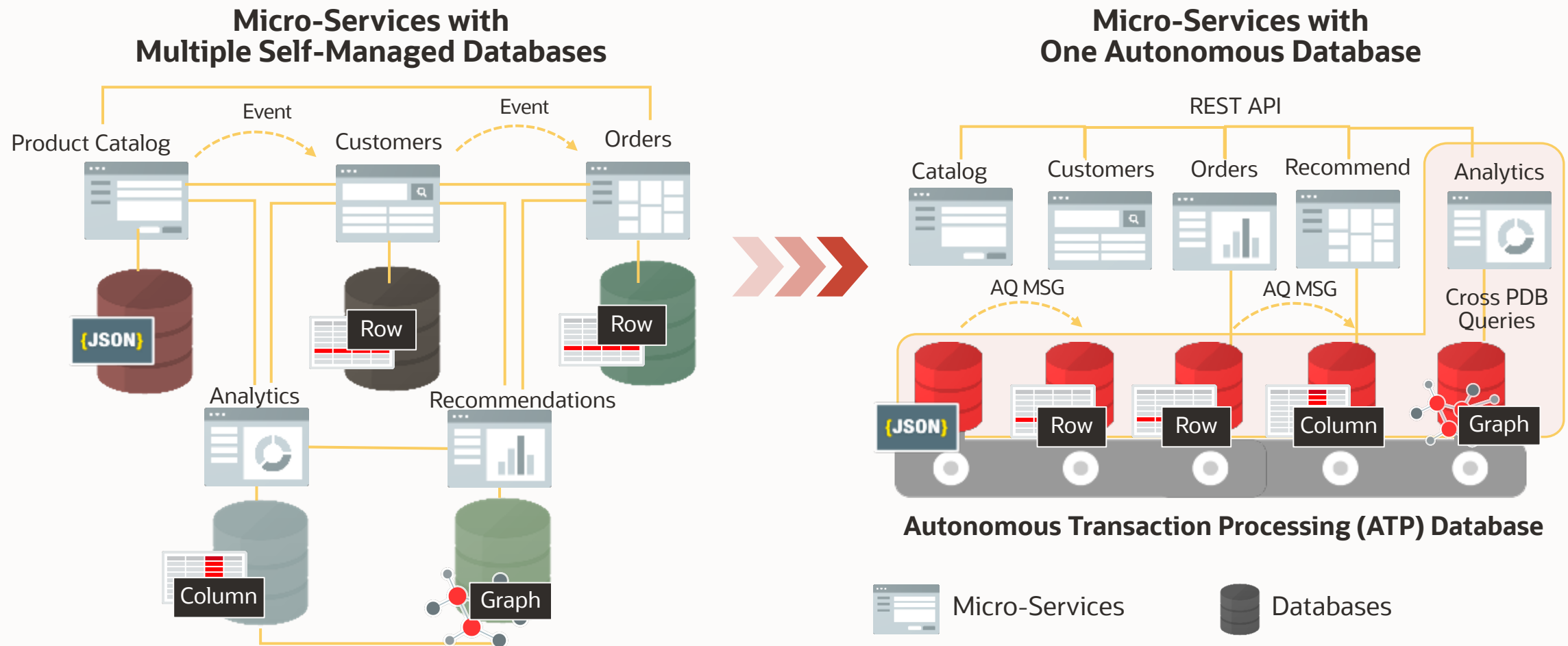
- **Ongoing evolution in 14.1.x**

- WebLogic Java EE 8 and Jakarta EE 8 Support
- Coherence, Tracing, GraalVM polyglot
- Java SE 8 and Java SE 11 Support
- Generic, slim and quick installers

- **Extensive (long-term) Support Roadmap**

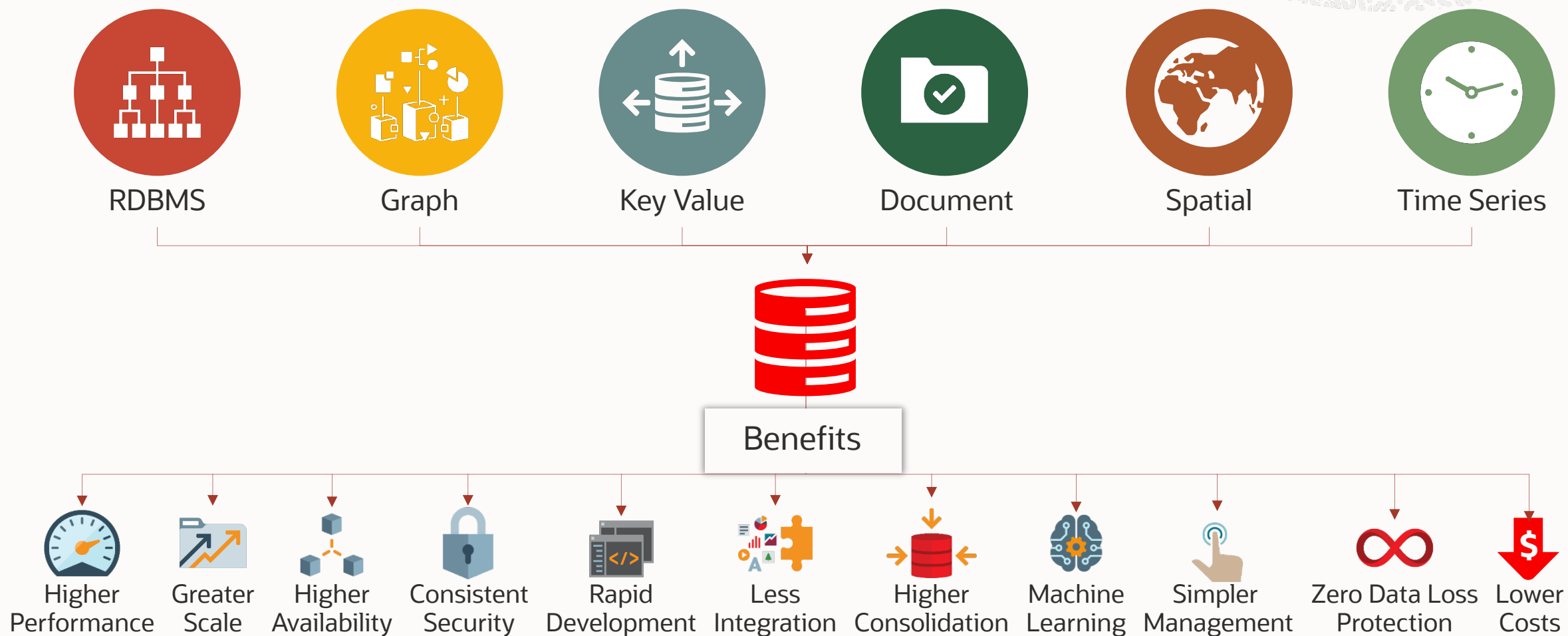


Simplifying Data Management for Cloud Native



Oracle Database Supports All Data Management Needs

Standardize on converged database to dramatically reduce complexity and cost



App Dev @ Oracle : Low Code

APEX

APEX is Oracle's strategic low code tool for creating data-driven applications

When to use:

- Build apps on Oracle Database, data from spreadsheets or RESTful web services
- Responsive Web and mobile apps
- Oracle Cloud, on-premises, 3rd party clouds

Who uses:

- Often familiar with SQL
- Back-end first. Start with data schema.



Visual Builder

Visual Builder is Oracle's strategic low code tool for creating and extending Oracle SaaS apps

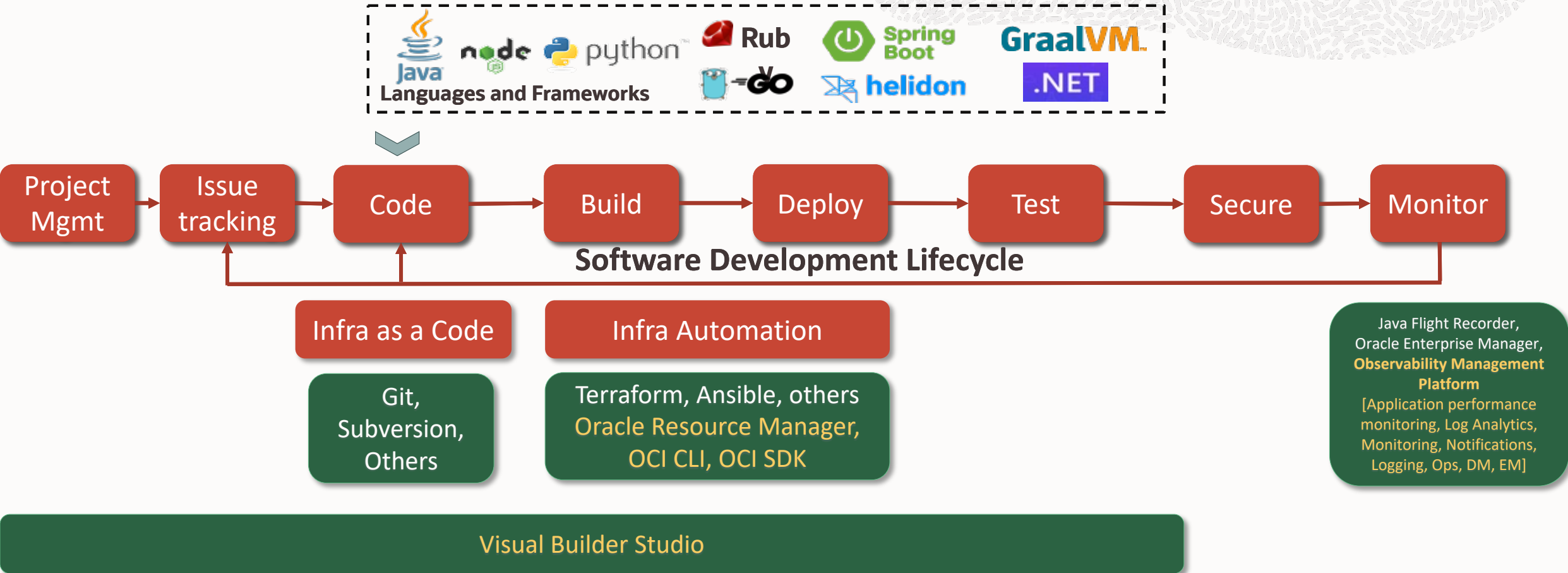
When to use:

- Extend Oracle SaaS functionality and channels using SaaS data
- Responsive Web apps, native mobile/PWA, chatbots
- Oracle Cloud

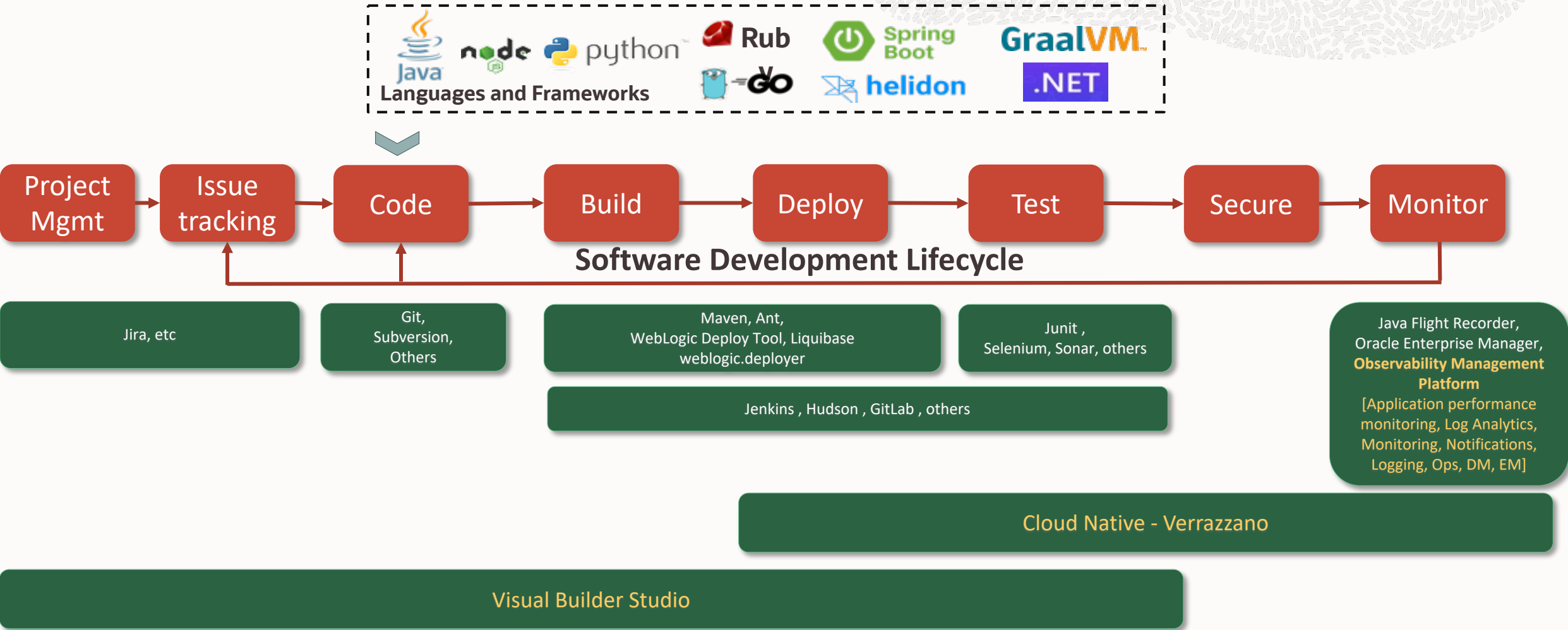
Who uses:

- Often familiar with JavaScript
- Front-end first. Start with the UI.

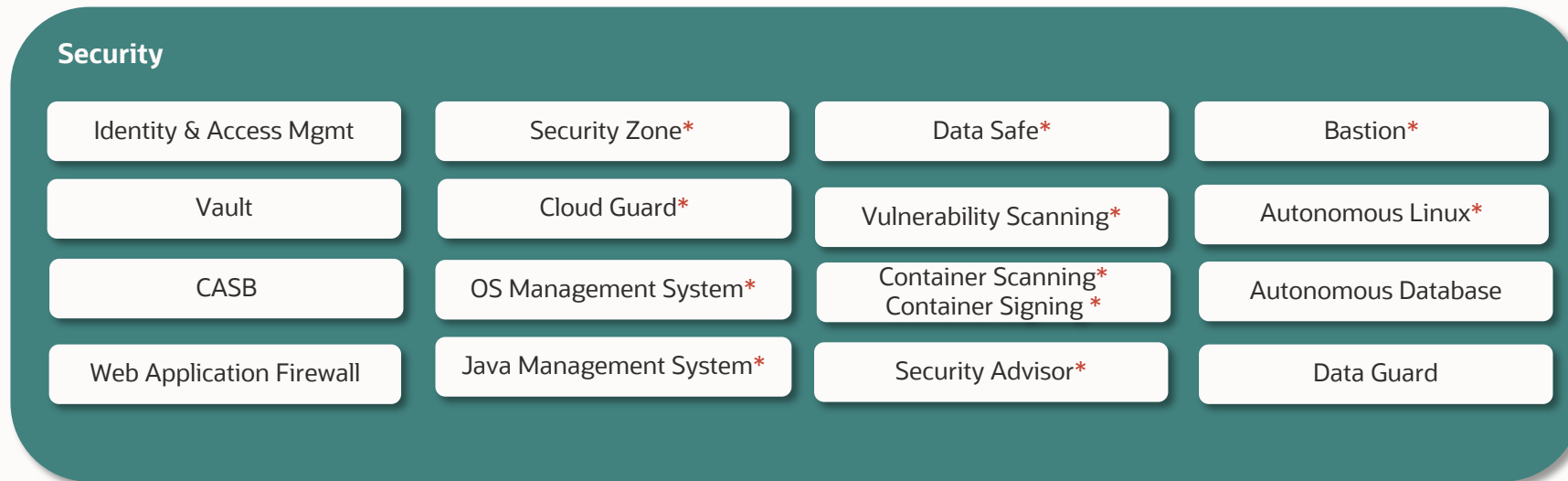
App Dev @ Oracle : Dev Ops – Infra Automation



App Dev @ Oracle : Dev Ops – App Automation



Security



* Free Security Services

Oracle Cloud Observability and Management Platform

Cross-stack visibility and rapid performance insights for any technology, deployed anywhere

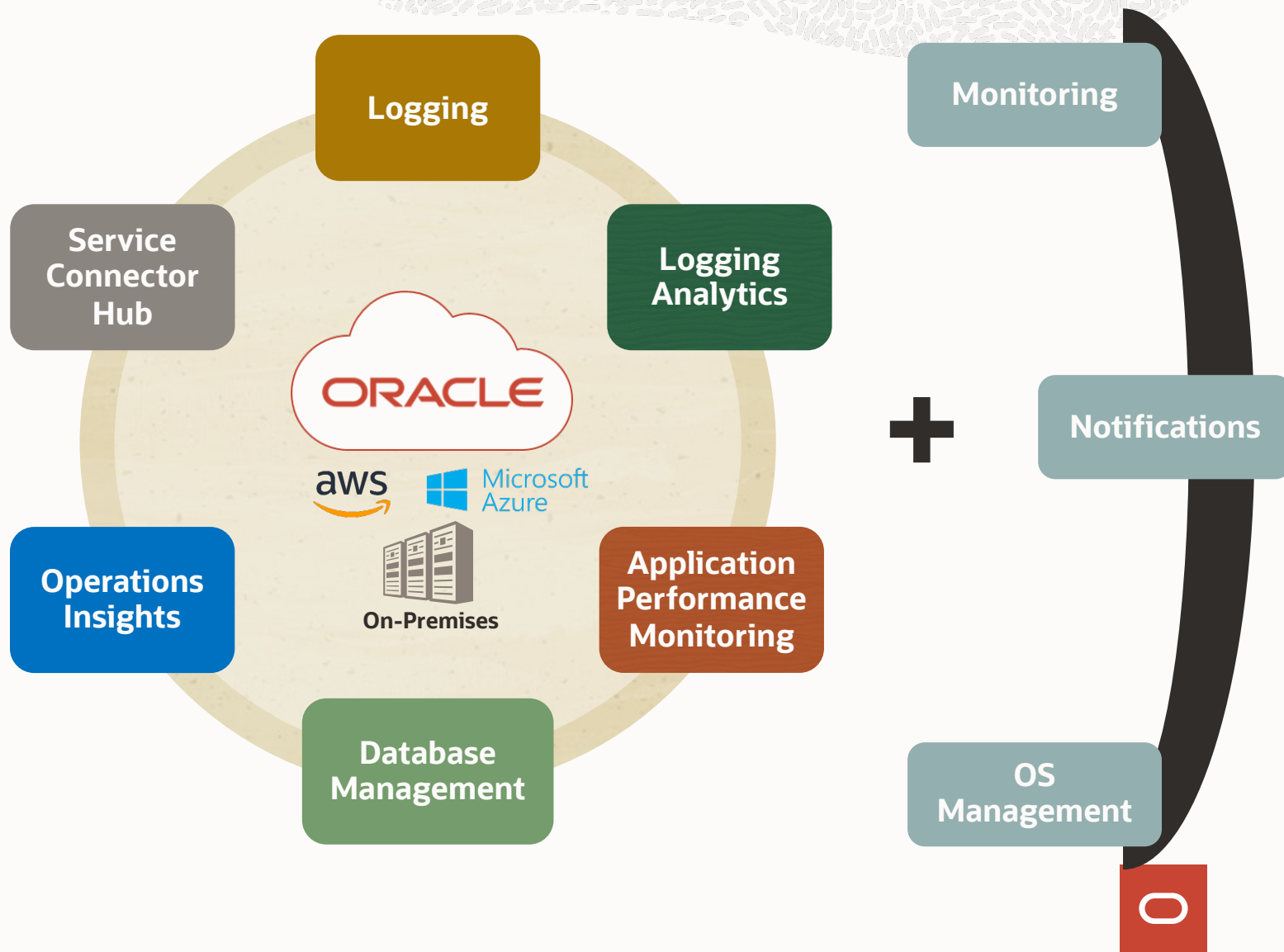
Integrated platform enables seamless analysis across all software components and types of telemetry

Cross-tier view of application, database and infrastructure performance

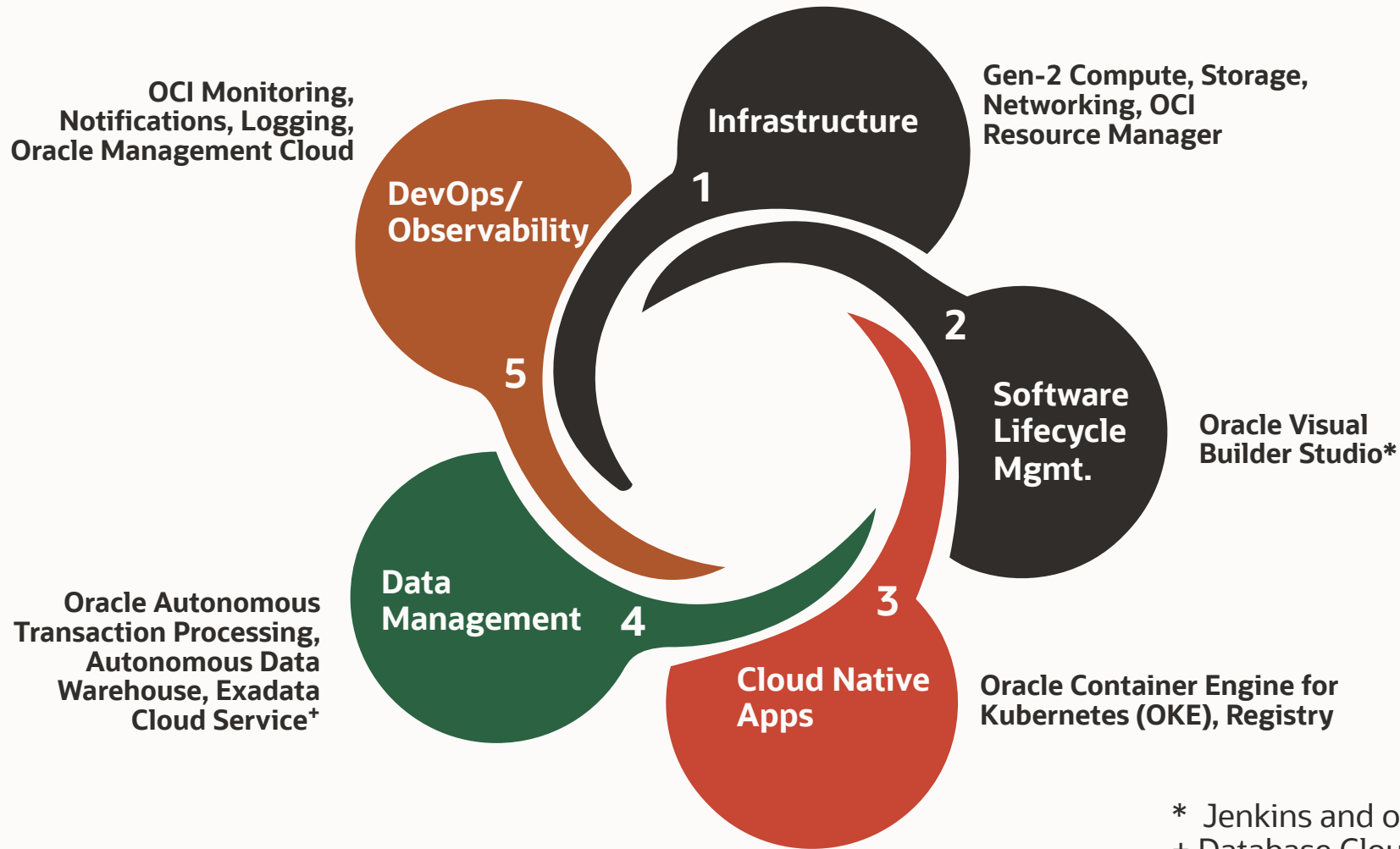
Cloud-native and traditional technology stack support

Enterprise-wide visibility across Oracle Cloud, third-party clouds and on-premises

Ecosystem interoperability through standards-based data exchange and collection



An end-to-end solution



Lifecycle management
from infrastructure setup
to software build & test
to production deployment
with databases
to DevOps/observability

* Jenkins and other CI/CD tools can also be used
+ Database Cloud Service can also be used

Customer examples : Cloud Native Apps



Simplifying online shopping with AI and cloud native

- Provides world-class visual search cloud native tools for retailers, publishers, and social media companies
- Using OCI resulted in **40% reduction** on hosting costs and **5X reduction** in deployment time



Precision agriculture with AI and Kubernetes

- Leverages Oracle Cloud for AI and aerial imaging technologies that detect and eliminate crop disease
- OCI provided **30X** app performance improvement over the previous vendor
- OCI reduced software delivery time from **24 hours to minutes**



Improving developer and end-user experience with microservices

- Deployed microservices on Kubernetes with Autonomous Database
- Delivered end-to-end system on OCI in just 75 days
- Achieved fast scalability, in minutes, to keep up with peak loads.

Oracle makes it easy to move to the cloud: from design to go-live

Maximize TCO, minimize risk, accelerate your success

Flexible licensing, Volume discounts

Bring Your Own License

BYOL from on-prem to OCI
Extend your Oracle apps
support to the cloud

Universal Credits

Credits that can be used for any
infrastructure or platform
services worldwide
Volume discounts
Ability to ramp consumption,
and increase predictability

Easy to migrate, no re-architecture, strong SLAs

No Re-Architecture

Application and data move as-is
Keep customizations,
integrations
No retraining required

Availability, Performance, and Manageability SLAs

Including high performance
compute, block volume, object
storage, and FastConnect
The first major cloud vendor to
guarantee performance

Oracle Cloud Lift

White glove services to help you move and go-live at no additional cost

Business Case Development
Architecture Design
Network/Security Review
Onboarding
Migration
Training
Go-Live Support

Oracle Support Rewards

Earn rewards to reduce your tech license support bill, even down to zero

Earn 25 cents for every \$1 you
spend on OCI
No limits to rewards you can
earn, or how much you can
apply

Oracle Always Free Cloud Service + 30 Day free trial

<https://www.oracle.com/uk/cloud/free/#always-free>



Always Free cloud services

Infrastructure

2 AMD based Compute VMs with 1/8 OCPU and 1 GB memory each.

4 Arm-based Ampere A1 cores and 24 GB of memory usable as one VM or up to 4 VMs.

2 Block Volumes Storage, 200 GB total.

10 GB Object Storage.

10 GB Archive Storage.

Resource Manager: managed Terraform.

5 OCI Bastions.

Databases

Your choice of Oracle Autonomous Transaction Processing, Autonomous Data Warehouse, Autonomous JSON Database, or APEX Application Development. Two databases total, each with 1 OCPU and 20 GB storage.

NoSQL Database with 133 million reads per month, 133 million writes per month, 25 GB storage per table, up to 3 tables.

Observability and Management

Monitoring: 500 million ingestion datapoints, 1 billion retrieval datapoints.

Application Performance Monitoring: 1000 tracing events per hour.

Notifications: 1 million sent through https per month, 1000 sent through email per month.

Service Connector Hub: 2 service connectors.

Additional services

Flexible Load Balancer: 1 instance, 10 Mbps.

Flexible Network Load Balancer.

Outbound Data Transfer: 10 TB per month.

Developer Resources

Reference Architecture and Solutions

All358

Reference Architectures161

Solution Playbooks176

Built & Deployed21

Customer-inspired

Automation Available

Modern App Development

Modern App Development

- Core requirements
- Design principles
- Architecture patterns
- Technology recommendations

Learn more

Reference Architecture

Modern App Development - Big Data and Analytics

Use this pattern to ingest, store, catalog, prepare, process, and analyze big data.

Modern App Development

Reference Architecture

Modern App Development - Event-Driven

Use this pattern to build event-driven apps on Oracle Cloud that subscribe to changes in cloud resources and t...

Modern App Development

Reference Architecture

Modern App Development - Low Code

Use this pattern to build opportunistic apps, data reporting and analysis apps, to extend SaaS...

Modern App Development

Reference Architecture

Modern App Development - SaaS Extensions

Use this pattern to build apps that seamlessly integrate with your Oracle SaaS applications

Modern App Development

Reference Architecture

Modern App Development - Data-Centric

Use this pattern to build data-centric apps that simplify maintenance of data integrity and consistency

Modern App Development

ORACLE

Built & Deployed

QRyde by HB&S

Customer Workloads in Single Tenancies on OCI

Built & Deployed

Reference Architecture

Learn more about Oracle Architecture Center content:

- Reference Architectures
- Solution Playbooks

Reference Architecture

Design CloudGuard Network Security for OCI and secure your workloads

Use CloudGuard CloudGuard

Cloud Adoption Framework

OCI

Services Solutions Why OCI Pricing Learn Developers Support Marketplace

Sign in to Oracle Cloud

Get started with OCI

Get Certified Track

Key OCI concepts and terminology

OCI tutorials

OCI documentation center

OCI getting started guide (PDF)

CIS OCI foundations benchmark

Try Oracle Cloud Free Tier

Migrate your workloads

Migrate on-premises Oracle apps to OCI

Migrate ISV apps to OCI

Migrate custom apps to OCI

Migrate databases to the cloud

Migrate VMware workloads

Start saving with Oracle Support Rewards program

Use Oracle Cloud Lift Services

Find a partner

Modernize applications

Developer guides

Oracle Developer Resource Center

Application modernization webcasts

Architect microservices-based applications

Migrate Oracle Forms applications to APEX

Oracle Fusion Cloud Applications

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Developer Resources

Oracle Live Labs

The screenshot shows the Oracle Live Labs website with a grid of available workshops. Each workshop card includes a title, a brief description, a 'Launch' button, the number of views, and the duration. A sidebar on the right allows filtering by Workshop Type, Role, Focus Area, and Product.

Workshop Title	Views	Duration
Scaling and Performance in the Autonomous Database	1625	30 mins
Oracle Database Hybrid Active Data Guard	2249	5 hrs
Provisioning an Autonomous Database	4188	15 mins
Building an App using REST Data Sources for Oracle Autonomous Cloud Services	1685	1 hr
Managing and Monitoring in Autonomous Database	915	2 hrs
Configuring Virtual Cloud Network Peering	3886	1 hr
Configuring Oracle Functions	2204	1 hr
Identity and Access Management	3237	30 mins
Creating an App based on Existing Tables for Oracle Autonomous Cloud Service	1491	1 hr, 15 mins
Building an App using a Remote Data Source for Autonomous Database	867	45 mins
Building an App from a Spreadsheet for Oracle Autonomous Cloud Service	4030	45 mins
Visualizing Your Data on Autonomous Database	1404	45 mins

<https://developer.oracle.com/>

The screenshot shows the Oracle Developer website with a dark theme. It features sections for 'Develop in your favorite language' with buttons for Java, JS, python, .NET, and Ruby. Below this is a 'Pick your sandbox' section with buttons for ORACLE Cloud Infrastructure, Open Source Projects, Linux, and Databases. At the bottom, there is a section for GraalVM with a description and a 'Learn more' link.

Develop in your favorite language

- Java
- JS
- python
- .NET
- Ruby

Pick your sandbox

- ORACLE Cloud Infrastructure
- Open Source Projects
- Linux
- Databases
- Machine Learning

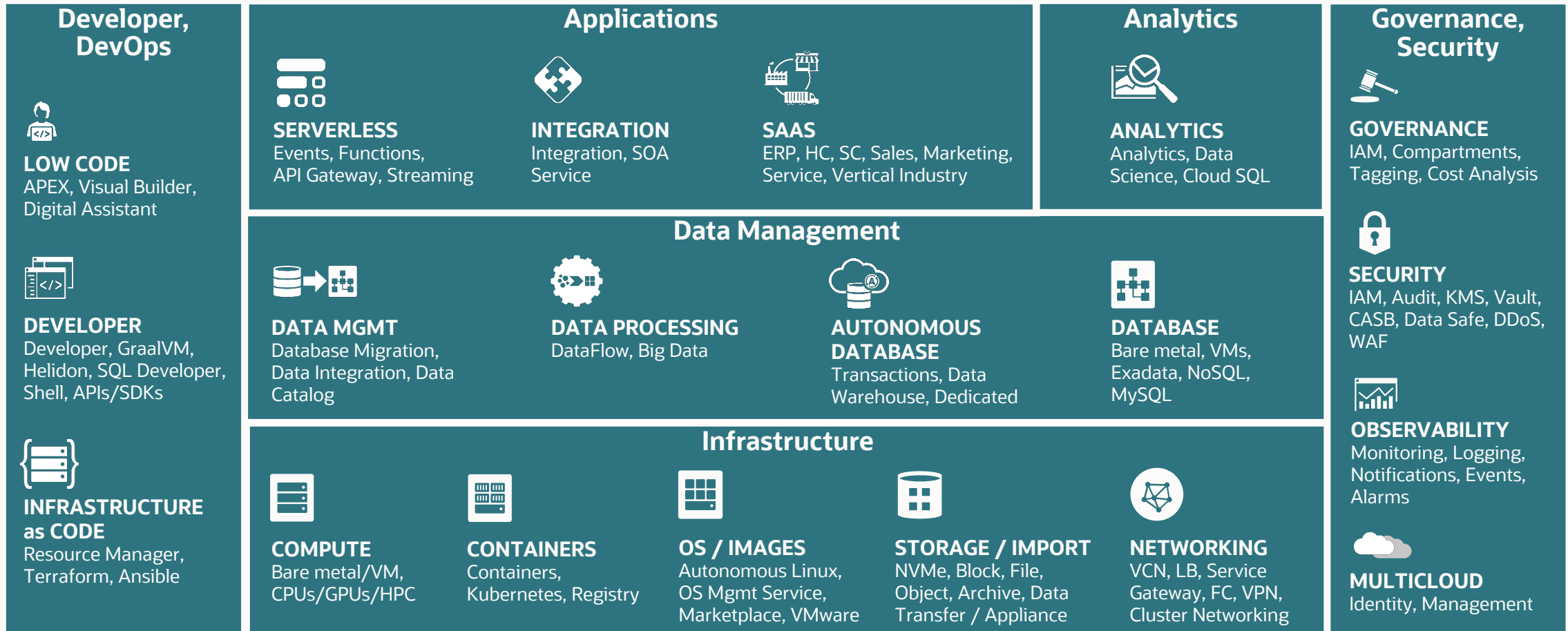
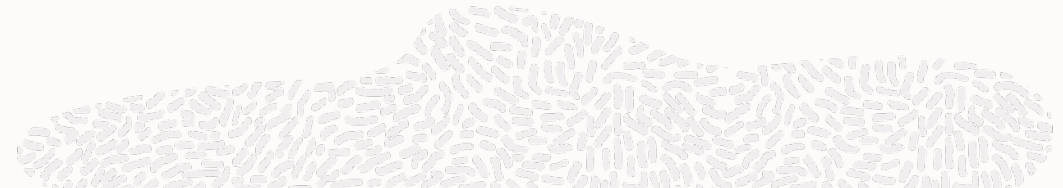
GraalVM™

Use a single high performance open-source runtime to remove the isolation between programming languages and compile code ahead of time.

[Learn more](#)



Complete cloud services



PUBLIC AND GOVERNMENT REGIONS / CLOUD AT CUSTOMER / AZURE



Oracle Cloud Infrastructure: Summary

Price | Performance Advantage



Oracle Cloud Infrastructure Up to 5x faster than AWS

Enterprise SLAs

Availability, Manageability & Performance



Autonomous Data Management

Cut administrative costs by up to 80%



Robust Security



Comprehensive Data & Access Controls, Monitoring & Auditing

Multicloud



Azure InterConnect, VMWare, 50+ connectivity partners



Cloud Deployment Flexibility

Oracle Cloud, Dedicated Region, Roving Edge

Enterprise Customer Base



#1 Enterprise SaaS business
80M daily users,
61B transactions

Complete Portfolio

Gen2 IaaS,
65+ PaaS Services, SaaS

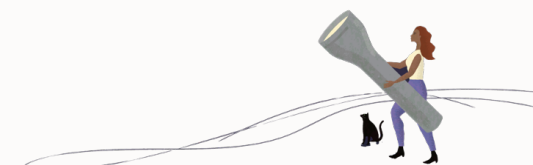


Ease of Purchase

Universal Credits, BYOL



Oracle Support Rewards




Upcoming Events : <http://bit.ly/AppDevWebcast>

Modernise WebLogic [Webinars](#)

Live webinars:


On-demand webinars:



Implement DevOps, Continuous Integration and Continuous Delivery

Date: May 11, 2021
Start Time: 10:00 BST/11:00 CEST/13:00 GST
Duration: 30 mins
[Read More](#)


[Register Now](#)



Overview of the Application Development portfolio and new features of WebLogic

Date: June, 2021
[Read More](#)


[coming soon](#)



WebLogic on Kubernetes : focus on deployment models and Open Source tooling

Date: July, 2021
[Read More](#)


[coming soon](#)



In-memory data sharing between Microservices and traditional applications

Date: Sept, 2021
[Read More](#)


[coming soon](#)



Cloud Native & Traditional App Dev Co-Existence with Verrazzano

Date: Oct, 2021
[Read More](#)

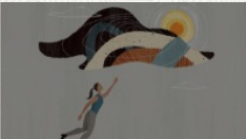
[coming soon](#)



WLS and Database migration

Date: Nov, 2021
[Read More](#)

[coming soon](#)




Modernizing Oracle Forms with Low-Code : APEX or Visual Builder?

Date: Dec, 2021
[Read More](#)

[coming soon](#)

Live webinars:


On-demand webinars:



Move On-Premises Applications to the Cloud: Overview of Available Options

Duration: 37 mins
[Read More](#)


[Watch Now](#)



Move On-Premises Applications to the Cloud Using Marketplace VMs

Duration: 39 mins
[Read More](#)


[Watch Now](#)



The Right Development Paradigm: Navigating Between Monoliths and Microservices

Duration: 42 mins
[Read More](#)

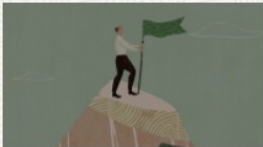
[Watch Now](#)



Run WLS Securely on Oracle Cloud

Duration: 30 mins
[Read More](#)


[Watch Now](#)



Moving Applications to the Cloud: How to Migrate Your Databases

Duration: 30 mins
[Read More](#)

[Watch Now](#)



Extend Your Applications with Microservices

Duration: 30 mins
[Read More](#)

[Watch Now](#)



Q & A

Thank You!



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