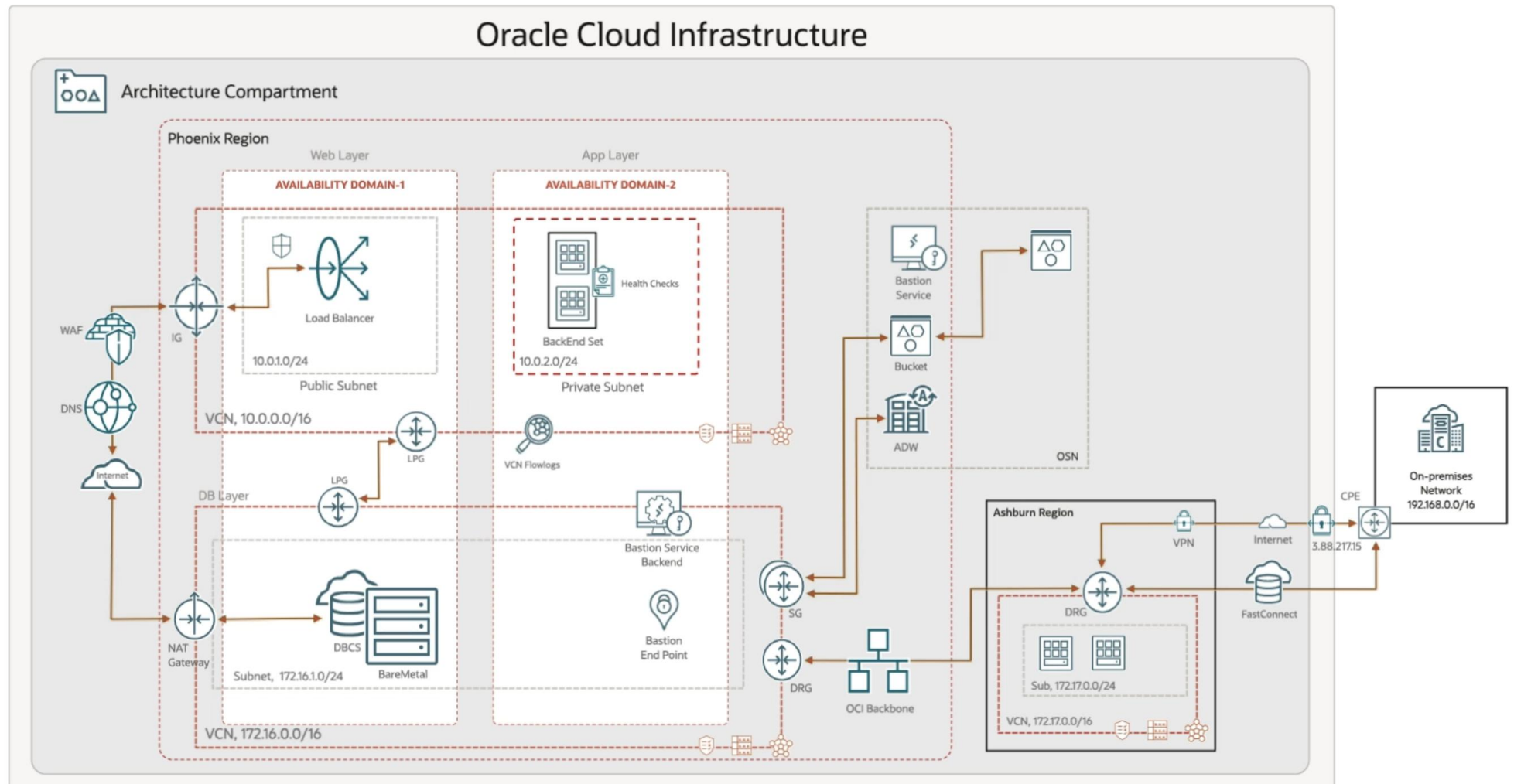
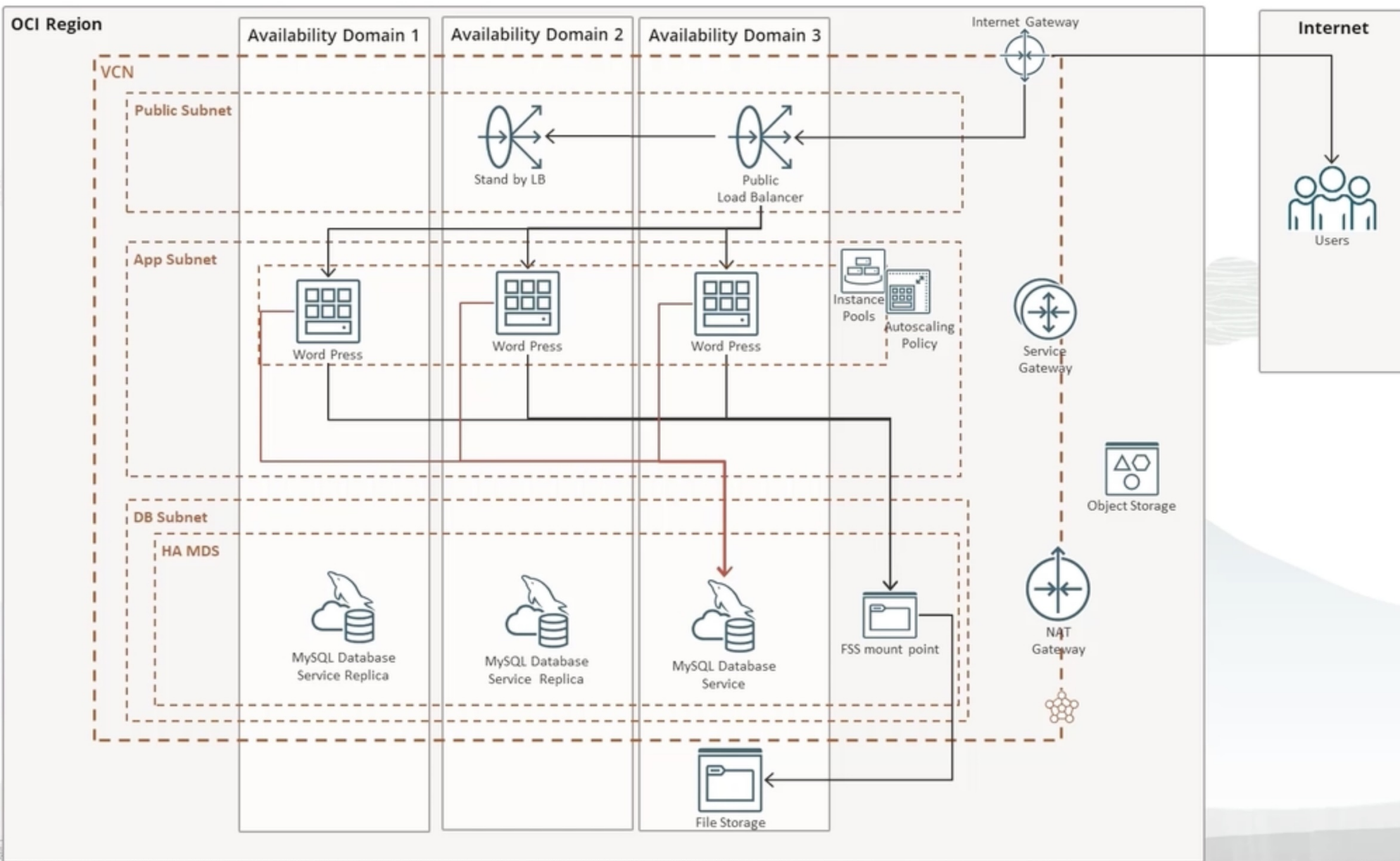
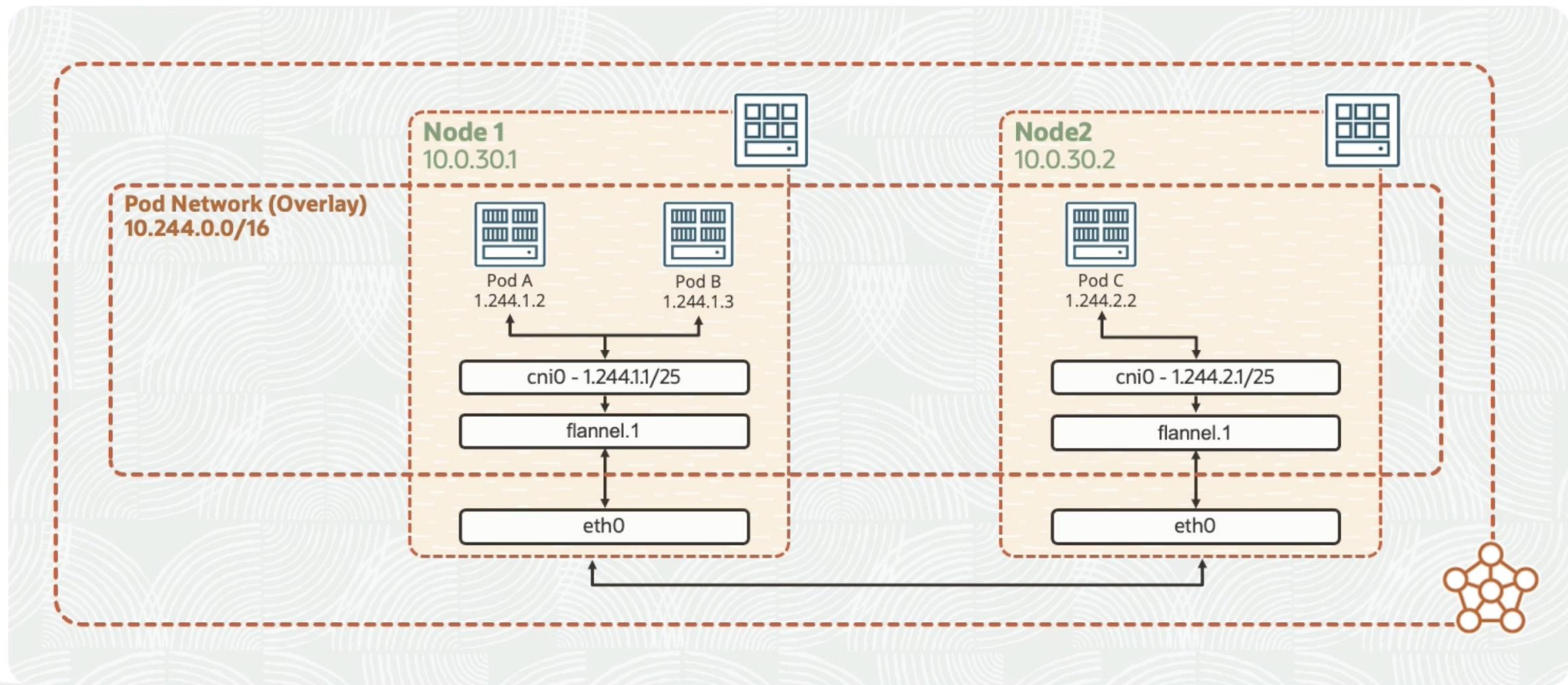


# OCI Networking Architecture



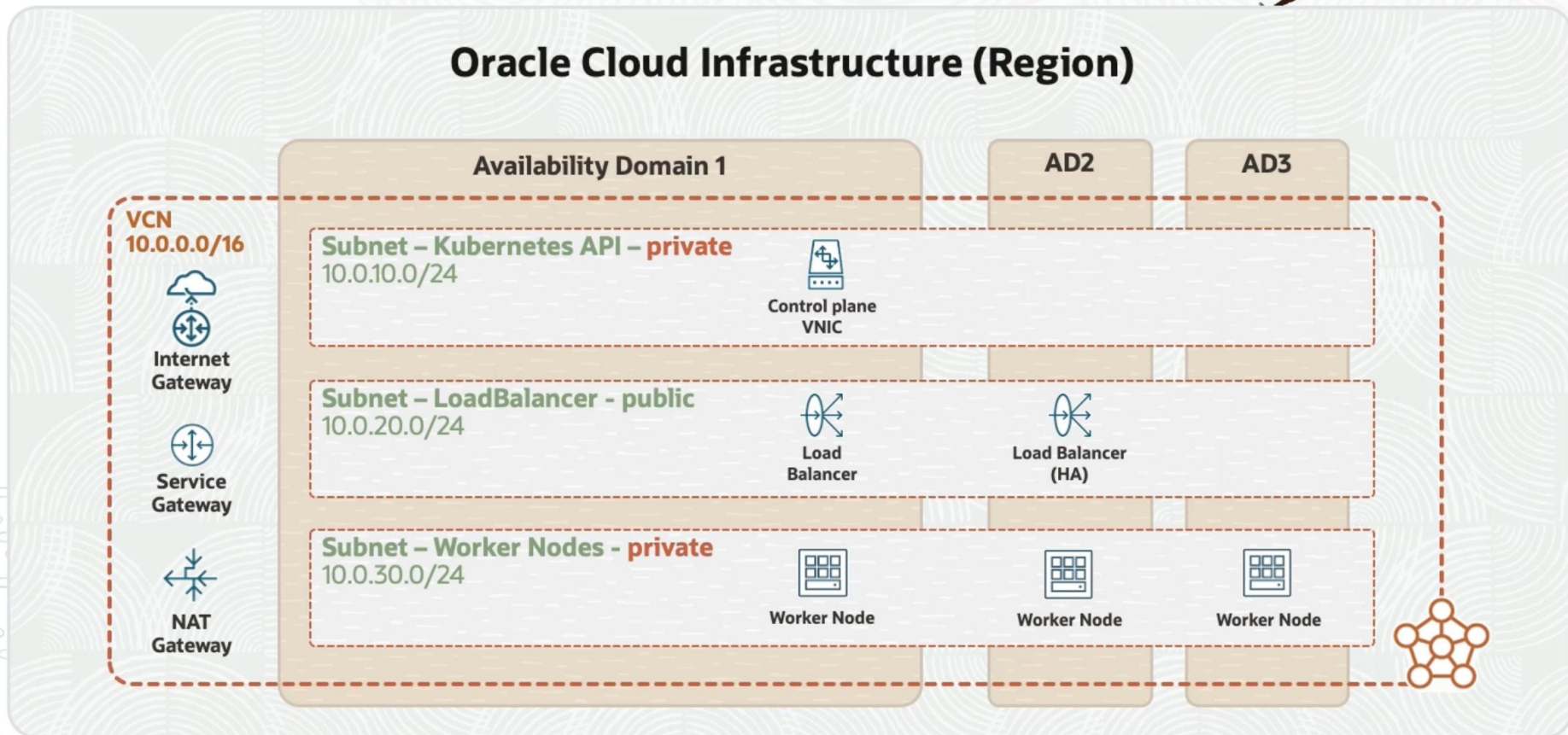


# Network Resource Configuration for Cluster Creation and Deployment

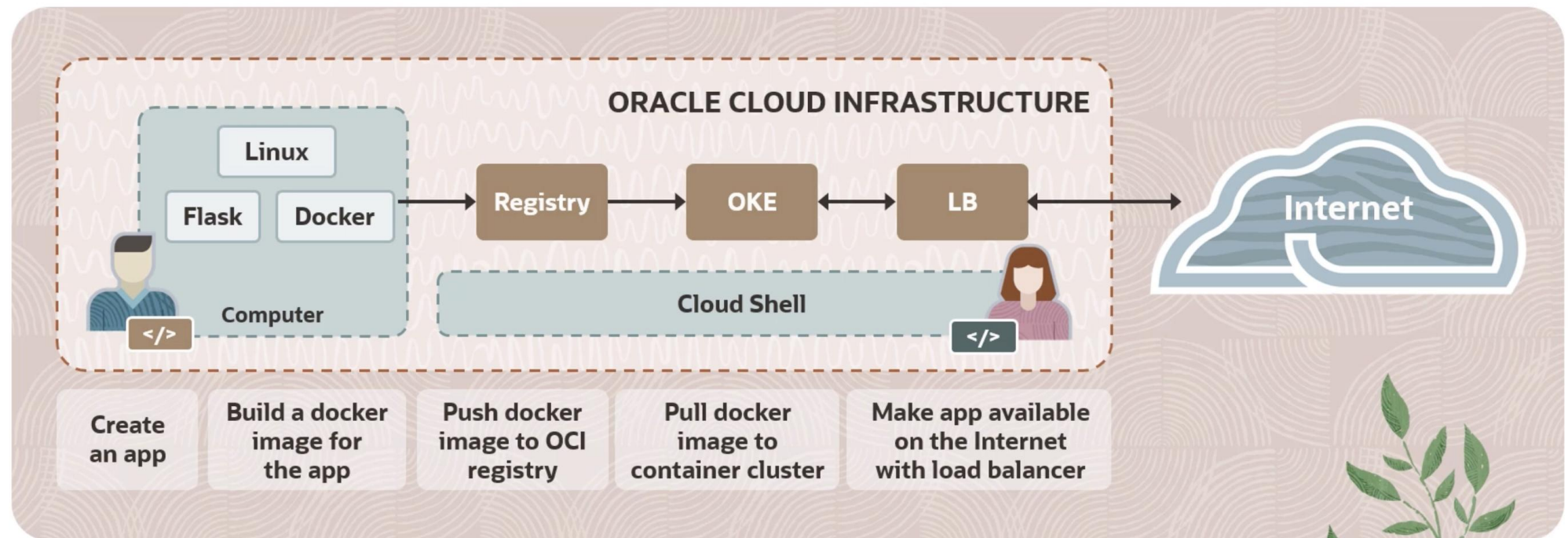




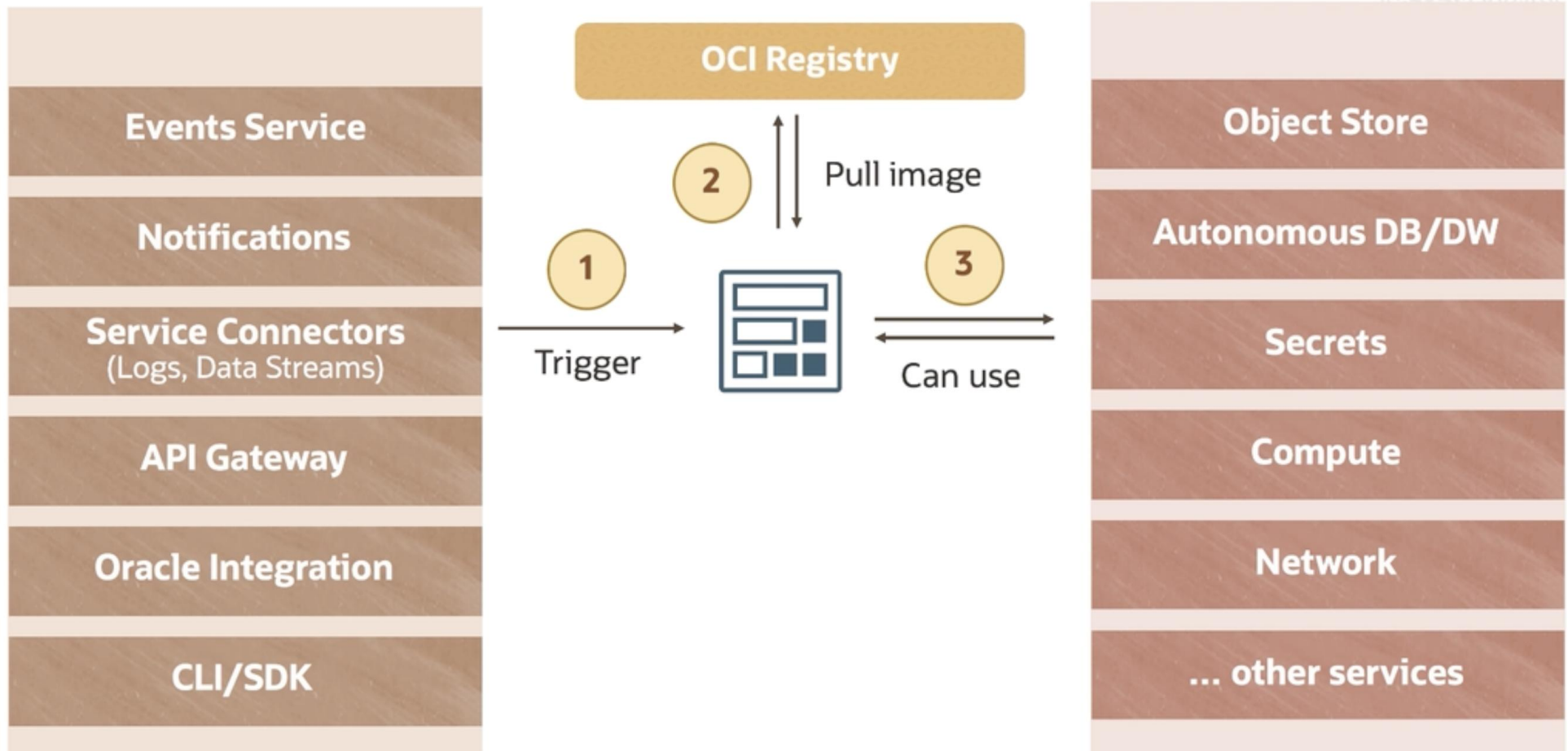
# Network Resource Configuration for Cluster Creation and Deployment



# Deploy a Python Flask Application

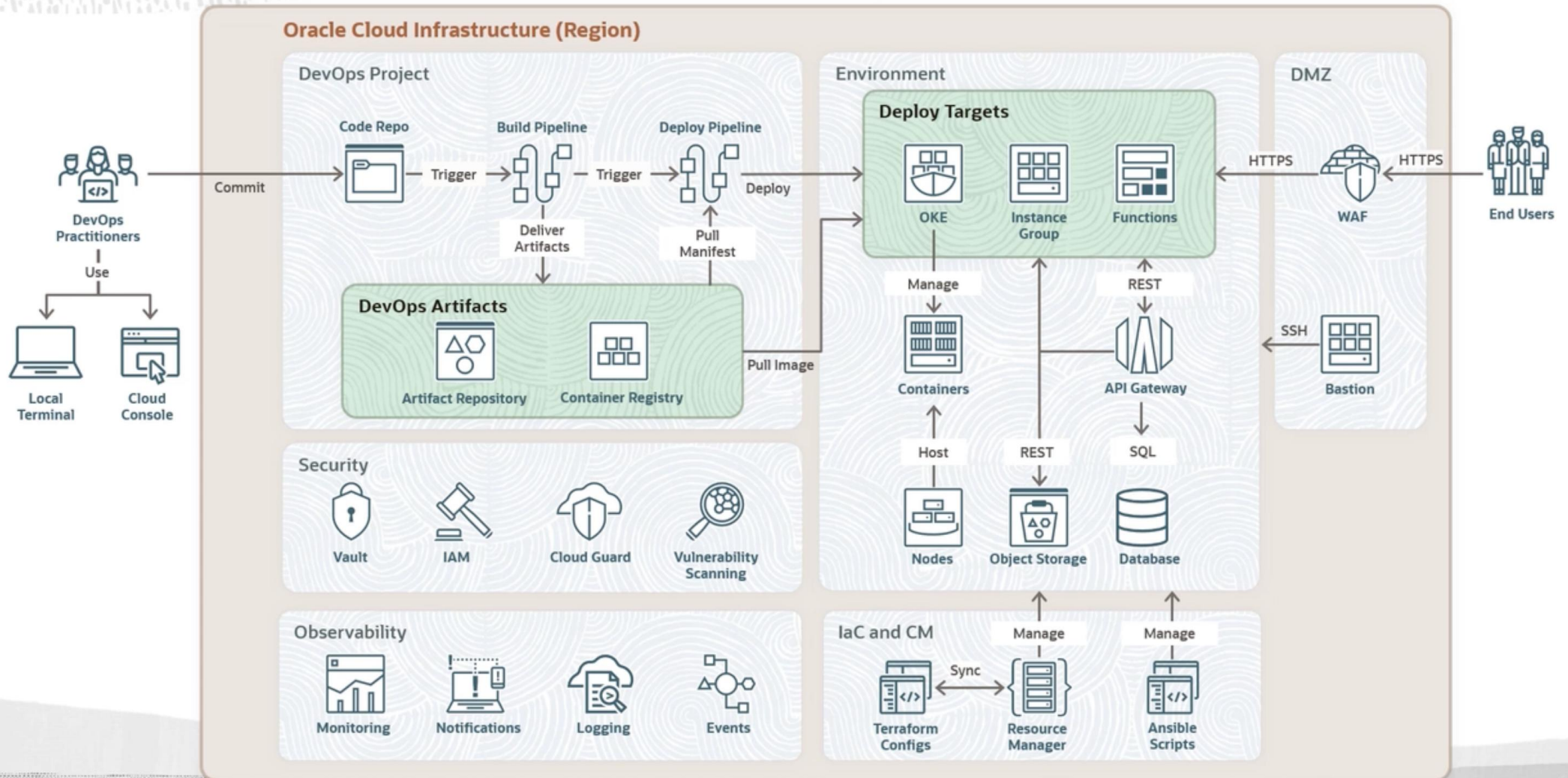


# Functions Integrations

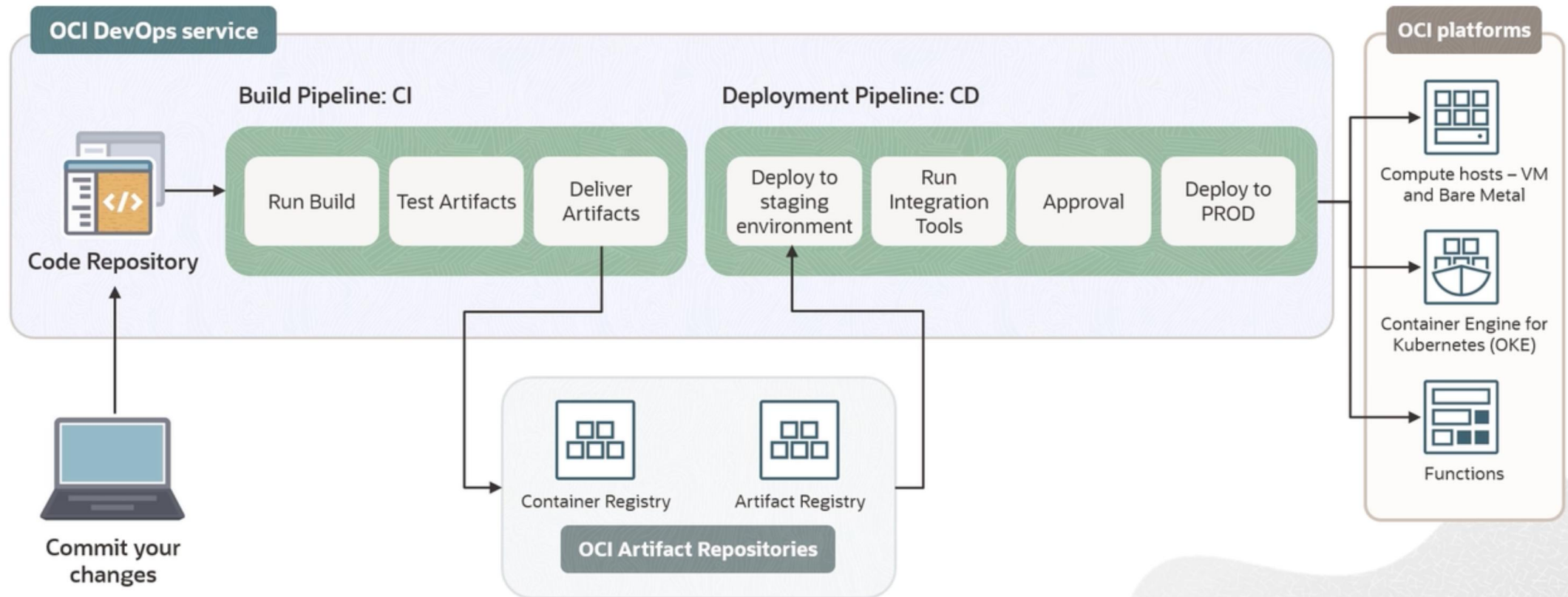




# OCI DevOps



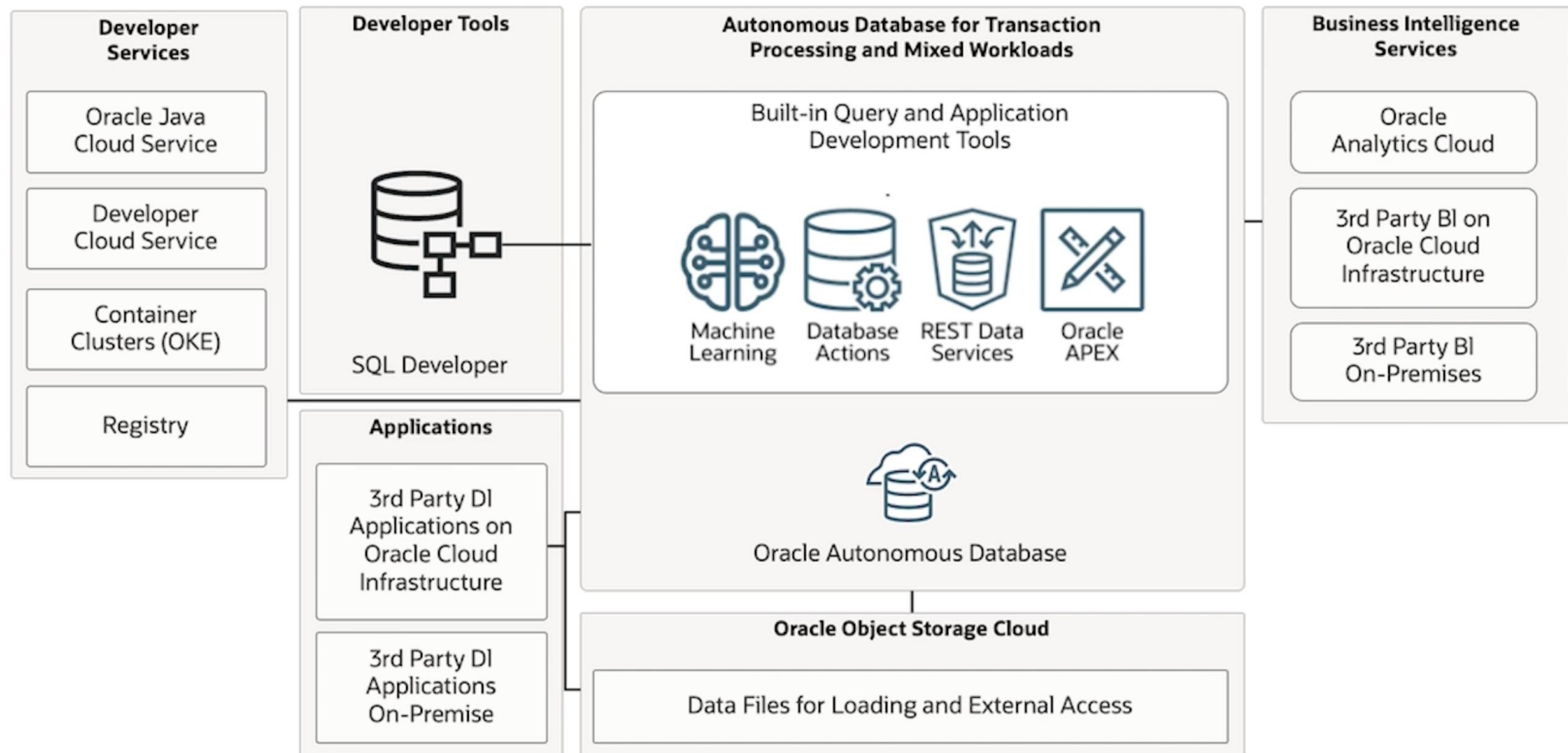
# OCI DevOps





# Autonomous Database

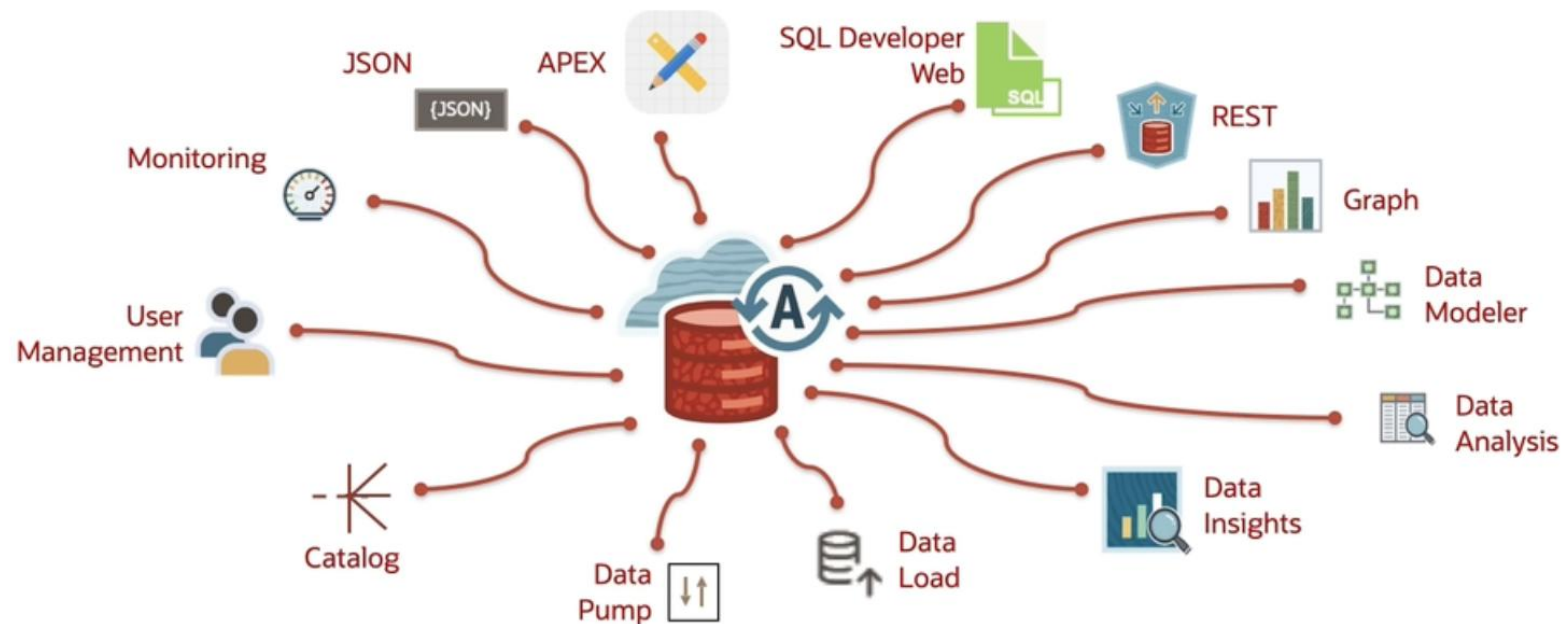
## Architecture and Supported Ecosystem

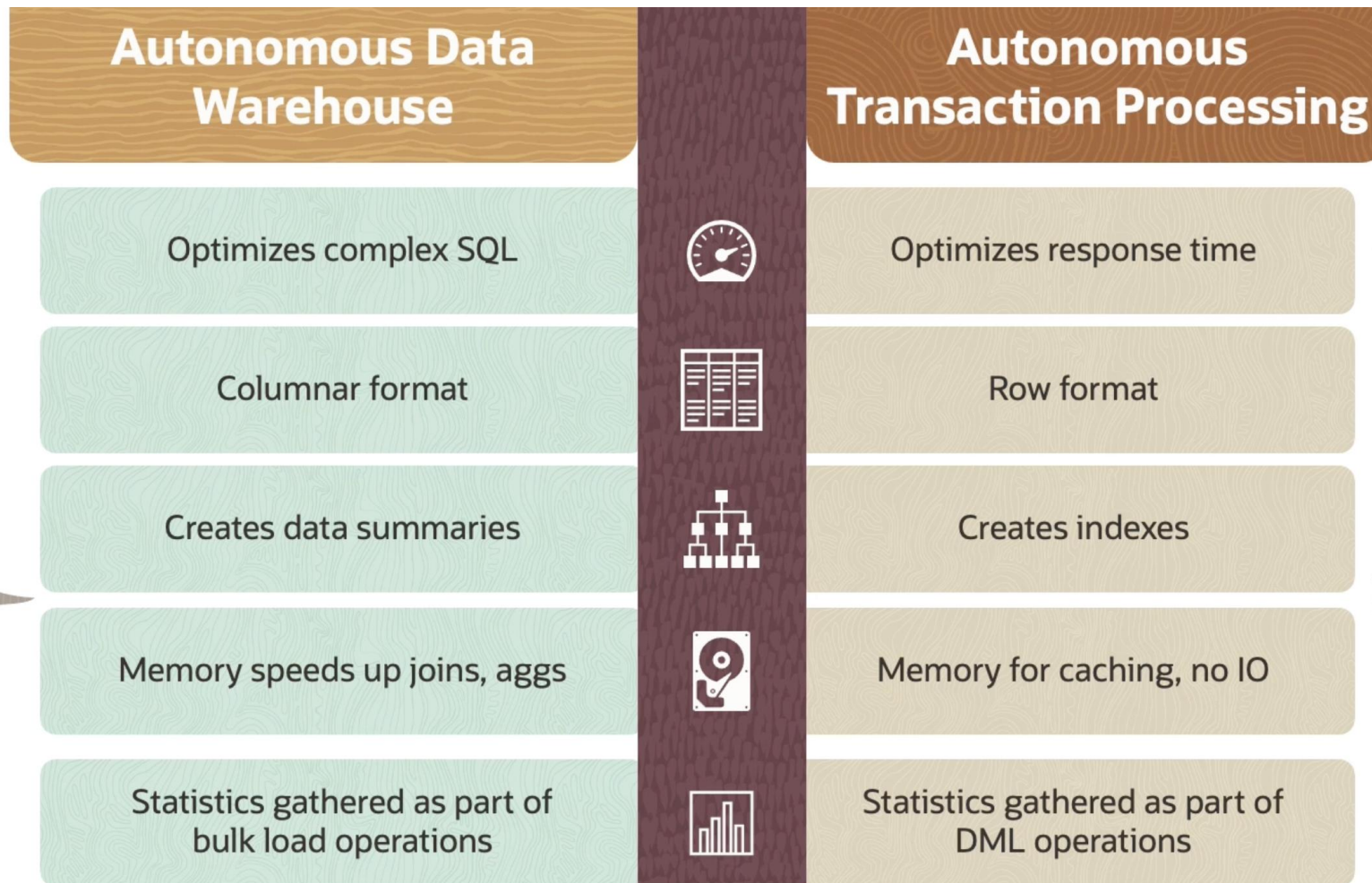


# Oracle Autonomous Database

## Database Actions

- Self-services tools for development, data, administration and Monitoring
- Web-based interface using REST Data Services





One Autonomous Database: **Optimized by Workload**



# Oracle Autonomous Database (Shared)

## Autonomous Data Guard : RPO and RTO

### Recovery Time Objective

Maximum time to restore connectivity to standby(new primary) after an automatic or manual failover is initiated

### Recovery Point Objective

Maximum duration (minutes) of potential data loss that can be tolerated during an automatic or manual failover

#### Local Standby

Failover Type	RTO (Minutes)	RPO (Minutes)
Automatic	2	0
Manual	2	Up to 1

#### Cross-region Standby

Failover Type	RTO (Minutes)	RPO (Minutes)
Automatic	NA	NA
Manual	15	Up to 1



# Autonomous Database Disaster Recovery

Backup-based : RPO and RTO

## Recovery Time Objective

Maximum time to restore connectivity to standby(new primary) after an automatic or manual failover is initiated

## Recovery Point Objective

Maximum duration (minutes) of potential data loss that can be tolerated during an automatic or manual failover

Local Backup copy	Failover Type	RTO	RPO (Minutes)
	Manual	1 Hr + 1 Hr Per 5 TB	1
↔			
Cross-region Backup copy	Failover Type	RTO	RPO (Minutes)
	Manual	1 Hr + 1 Hr Per 5 TB	1

# Upgrade a DB System

A database is a collection of data stored on a computer.

A database system is a computer program that allows one to access, interact with, and manipulate a database.



Updating the DB System does not update the operating system.  
After launch a DB system, must apply required OS security updates

- IAM Policy
  - Access compartments in Oracle Cloud Infrastructure
- Required for DB system
  - Oracle Linux
  - Use Oracle Grid Infrastructure
  - Complete standalone backup
- Plan and Schedule Upgrade
  - Involves some downtime (even on RAC DB systems)
- To update grid infrastructure on systems with Grid Infrastructure/ASM storage management, must update the DB System



# Shapes for Virtual Machine Database Systems

Platform	OCPU	Memory	Storage	Network	Nodes
VM	1-64	15 GB - 1 TB	256 GB – 80 TB	1 – 40 Gbps	1-2

- A VM shape determines the OCPU, Memory, and Network resources allocated to the DB system.

Shape	Type	OCPU	Memory
VM.Standard2.1	Fixed	1	15 GB
VM.Standard2.2	Fixed	2	30 GB
VM.Standard2.4	Fixed	4	60 GB
VM.Standard2.8	Fixed	8	120 GB
VM.Standard2.16	Fixed	16	240 GB
VM.Standard2.24	Fixed	24	320 GB
VM.Standard.E4.Flex	Flex	1 to 64	16GB to 1 TB