

ORACLE

Unpacking Oracle Database@AWS

Technical deep-dive and real-world integration

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Oracle

SOUG Day Bern - March 11th, 2026

Oracle and Amazon Web Services Announce Strategic Partnership

Simplify migration and deployment of enterprise workloads to AWS

**Austin, Texas and Seattle, WA –
September 9, 2024**

Oracle and Amazon Web Services, Inc. (AWS) today announced the launch of **Oracle Database@AWS**, a new offering that allows customers to access **Oracle Autonomous Database** on dedicated infrastructure and **Oracle Exadata Database Service** within AWS.

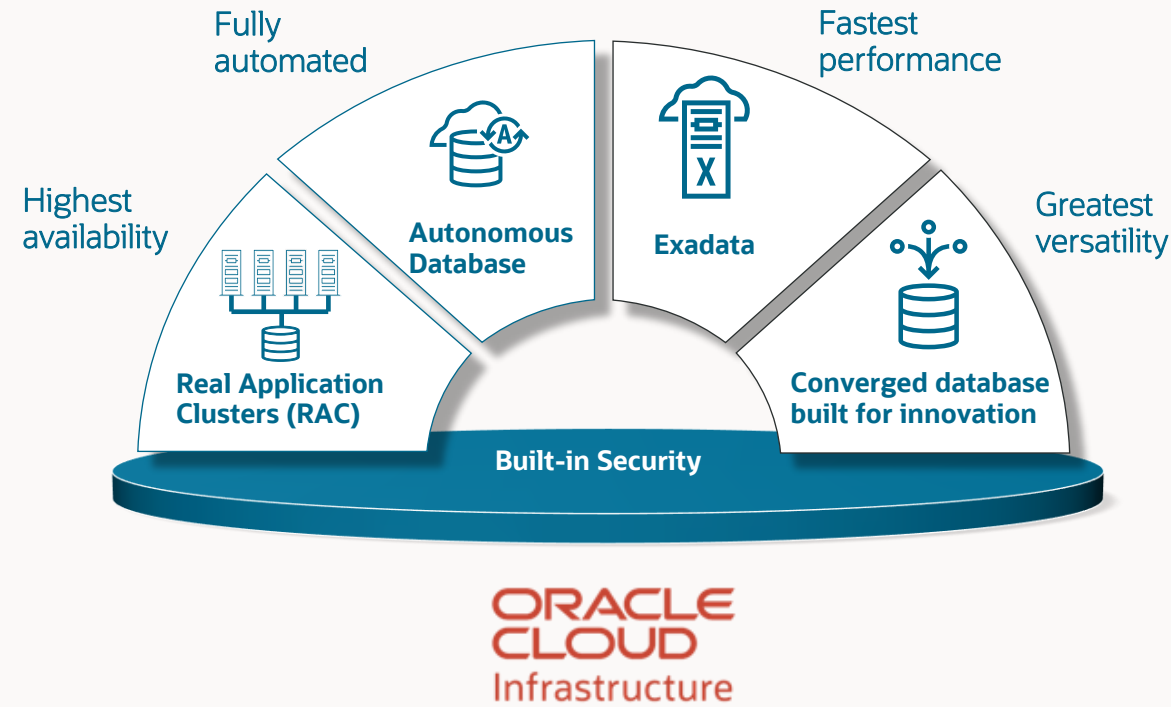


<https://www.oracle.com/news/announcement/ocw24-oracle-and-amazon-web-services-announce-strategic-partnership-2024-09-09/>

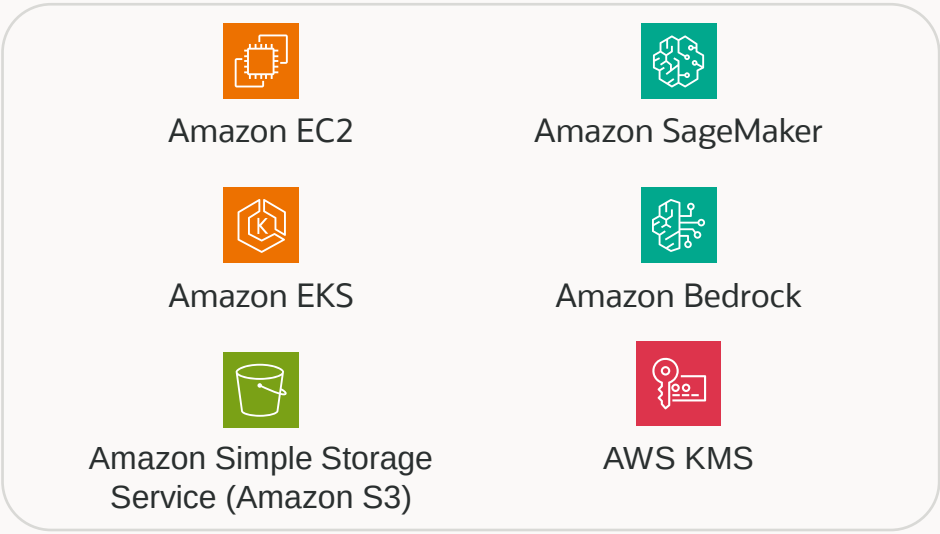
Oracle Database@AWS Overview

The best of both worlds

Enterprise-grade data Management



Most widely adopted cloud



Why is Oracle Database@AWS relevant?

Full Oracle capabilities



Optimized Oracle Exadata X11M hardware for performance and security

Real Application Clusters (**RAC**) capability

Migrate your on-premises workloads easily, quickly

Price parity with OCI

Low latency connections



Runs **within AWS data centers** to enable low-latency network connections

Modernize **mission-critical workloads** and develop new intelligent applications between Oracle Database capabilities and AWS services

Seamless experience



Provision OCI-managed Oracle Database services from the AWS Management Console or API

Collaborative support

Simplify monitoring, billing, & operations

Purchase through the **AWS Marketplace**

Native AWS services



Zero-ETL integration between Oracle Database services and AWS Analytics services

Connect enterprise data in Oracle Database to Amazon EC2, AWS Analytics services, and AI and machine learning (ML) services, such as Amazon Bedrock

Oracle Database@AWS offerings

Autonomous AI Database on Dedicated Exadata Infrastructure

Choose for administrative simplicity

- **Built on Oracle Exadata** infrastructure, including **Real Application Clusters** (RAC) and Maximum Availability Architecture (MAA) options
- **Fully managed and automated** provisioning, patching, upgrades, hardware refreshes with enterprise-grade business continuity
- **Pre-configured** for transactional or reporting workloads

Exadata Database Service on Dedicated Infrastructure

Choose for increased control of your environment

- **Dedicated Exadata Oracle-managed infrastructure** for the most challenging workloads and performance/isolation, including **Real Application Clusters** (RAC) and Maximum Availability Architecture (MAA) options
- **Scale-out design**, database-optimized compute, RDMA networking, storage, and caching
- **Full control of database** management and control plane



Oracle AI Database 26ai

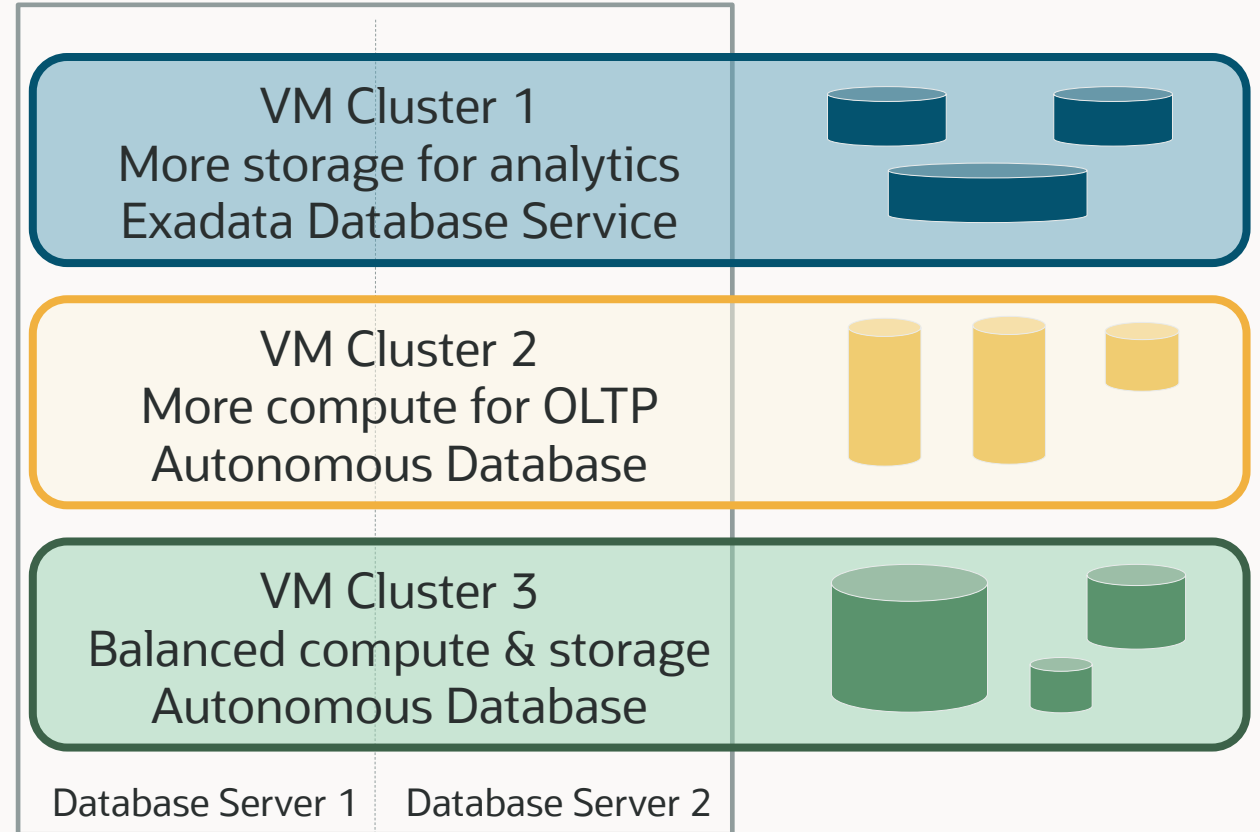
Included in both services

- Handles multiple data types and workloads
- Same capabilities as available on-premises
- Same licensing options as available on-premises, including **mobility** for **customer-owned licenses**

Multiple VM Clusters on dedicated Exadata infrastructure

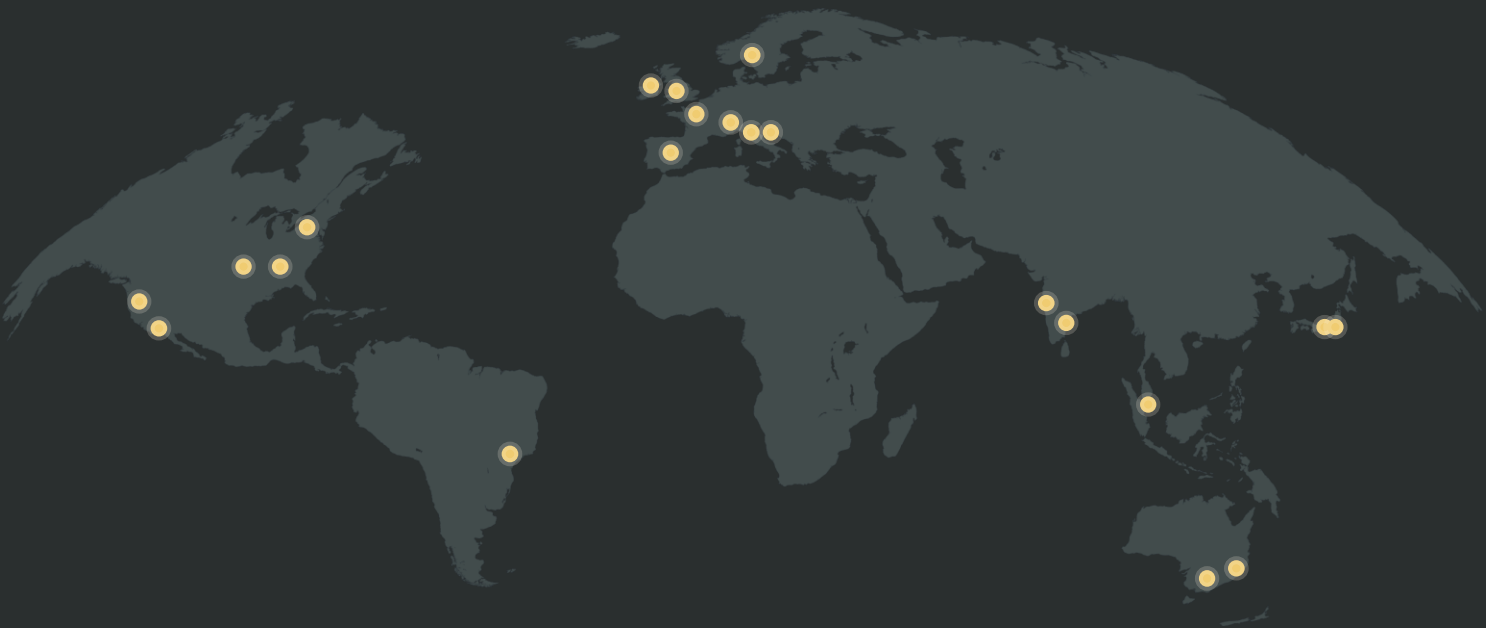
Improves database consolidation efficiency and cloud economics

Autonomous AI Database
and
Exadata Database Service
run concurrently
on the same infrastructure



Where? Who? How?

Oracle Database@AWS





22

8 live
14 planned
(2 AZs per region)

Available

- N. Virginia
- Oregon
- Ohio
- Tokyo
- Sydney
- Canada Central
- Frankfurt
- Ireland

Planned

- | | | |
|---------------|-----------|-----------|
| N. California | Milan | Melbourne |
| London | Spain | Mumbai |
| Paris | Stockholm | Hyderabad |
| | Zurich | Singapore |
| | Osaka | Sao Paolo |
| | Seoul | |



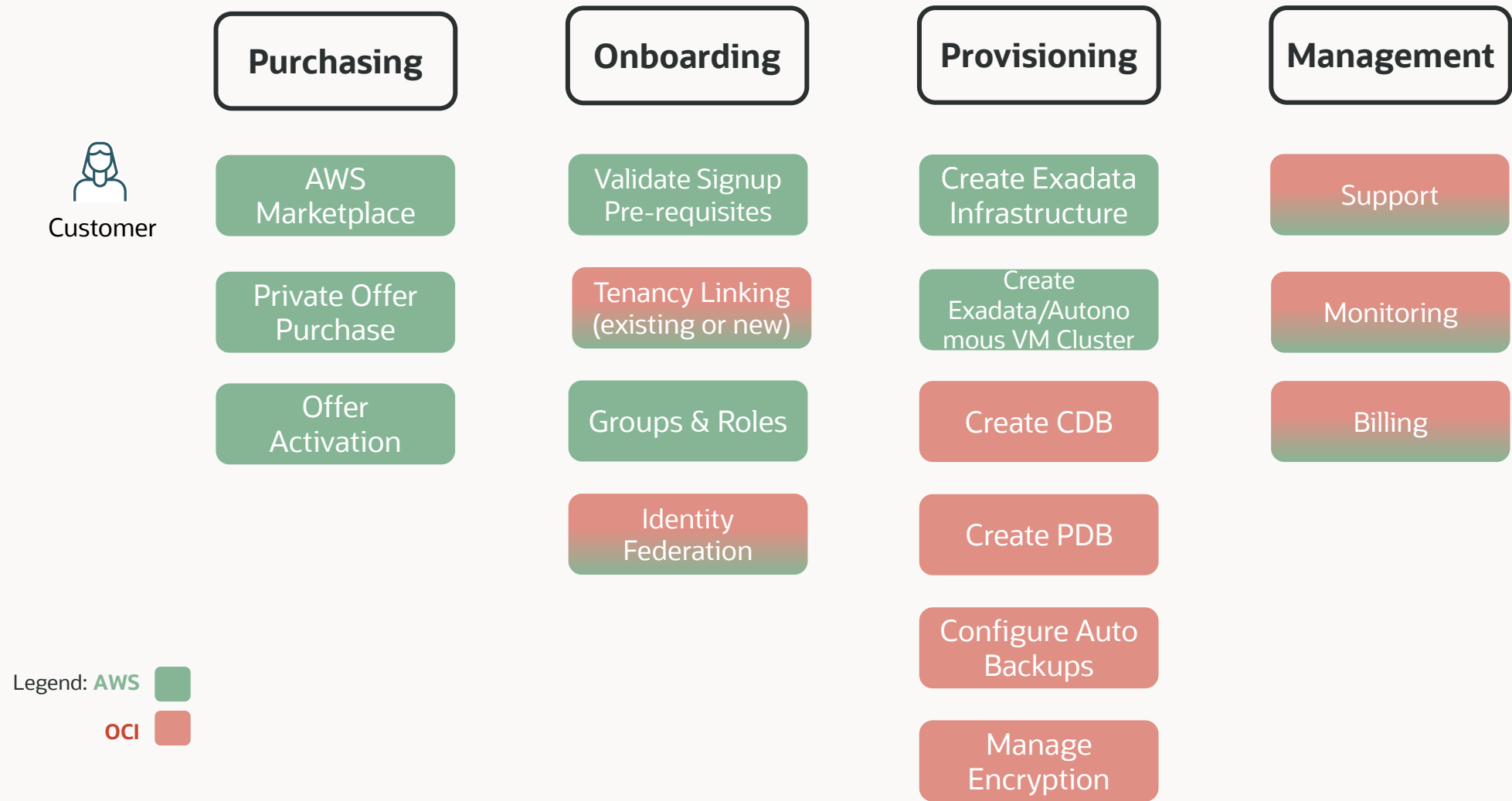
Shared Responsibility

ExaDB-D and ADB-D

	ExaDB-D@AWS Co-Managed	ADB-D@AWS Managed
PDB and the application data	PDB and Data	PDB and Data
Database Home and Container DB (CDB)	Database Software and CDB Updates and Upgrade	Database Software and CDB Updates and Upgrade
Grid Infrastructure Home	Grid Infrastructure Updates and Upgrade	Grid Infrastructure Updates and Upgrade
Virtual Machines in Exadata VM Cluster	Virtual Machines OS Image Updates	Virtual Machines OS Image Updates
Hardware and Virtual infrastructure	Infrastructure	Infrastructure
Physical network and accommodations	Data center	Data center
	AWS Responsibility	Oracle Responsibility
		Shared responsibility
		Customer responsibility

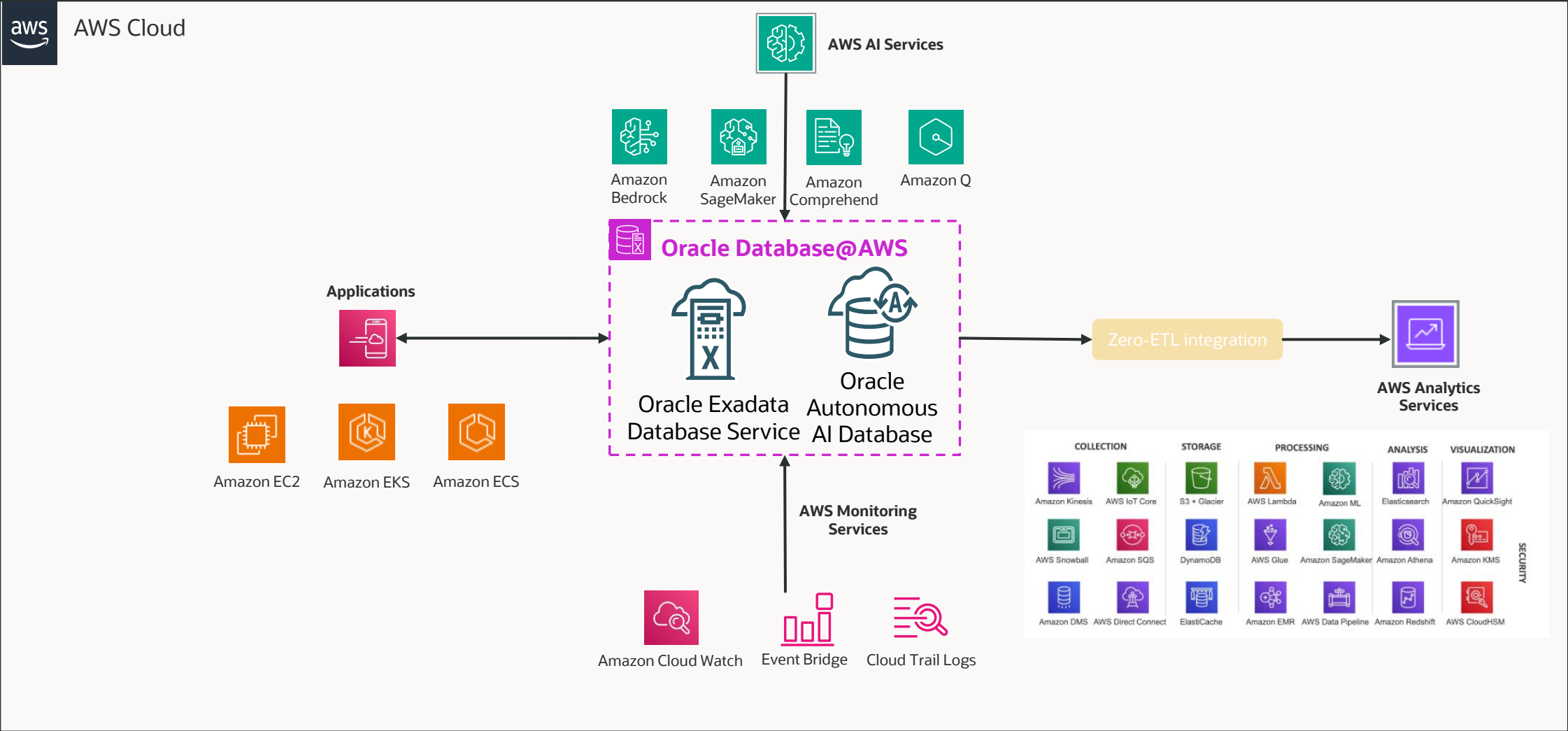


User Journey



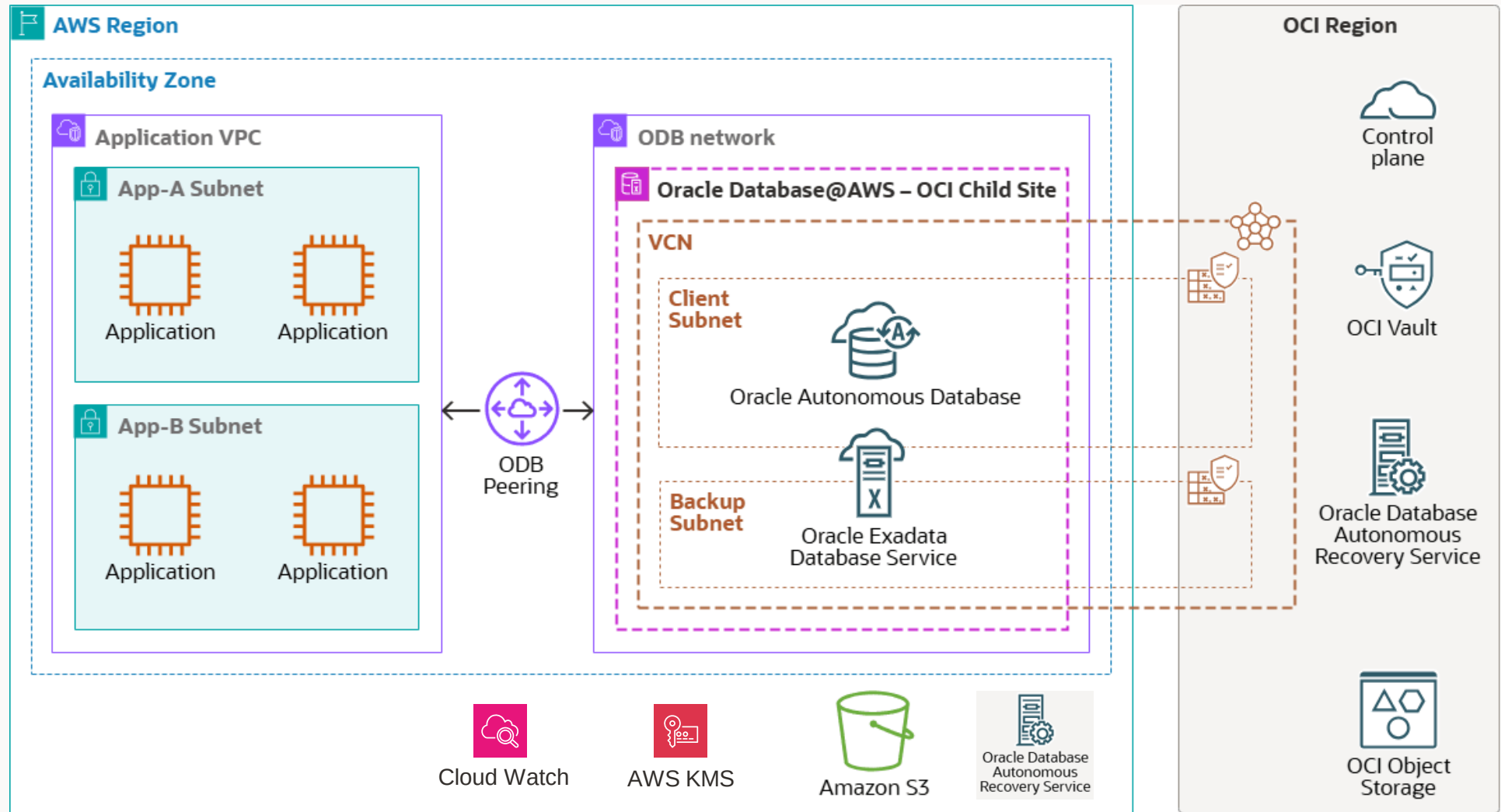
Integration & Architecture

Integration with AWS services

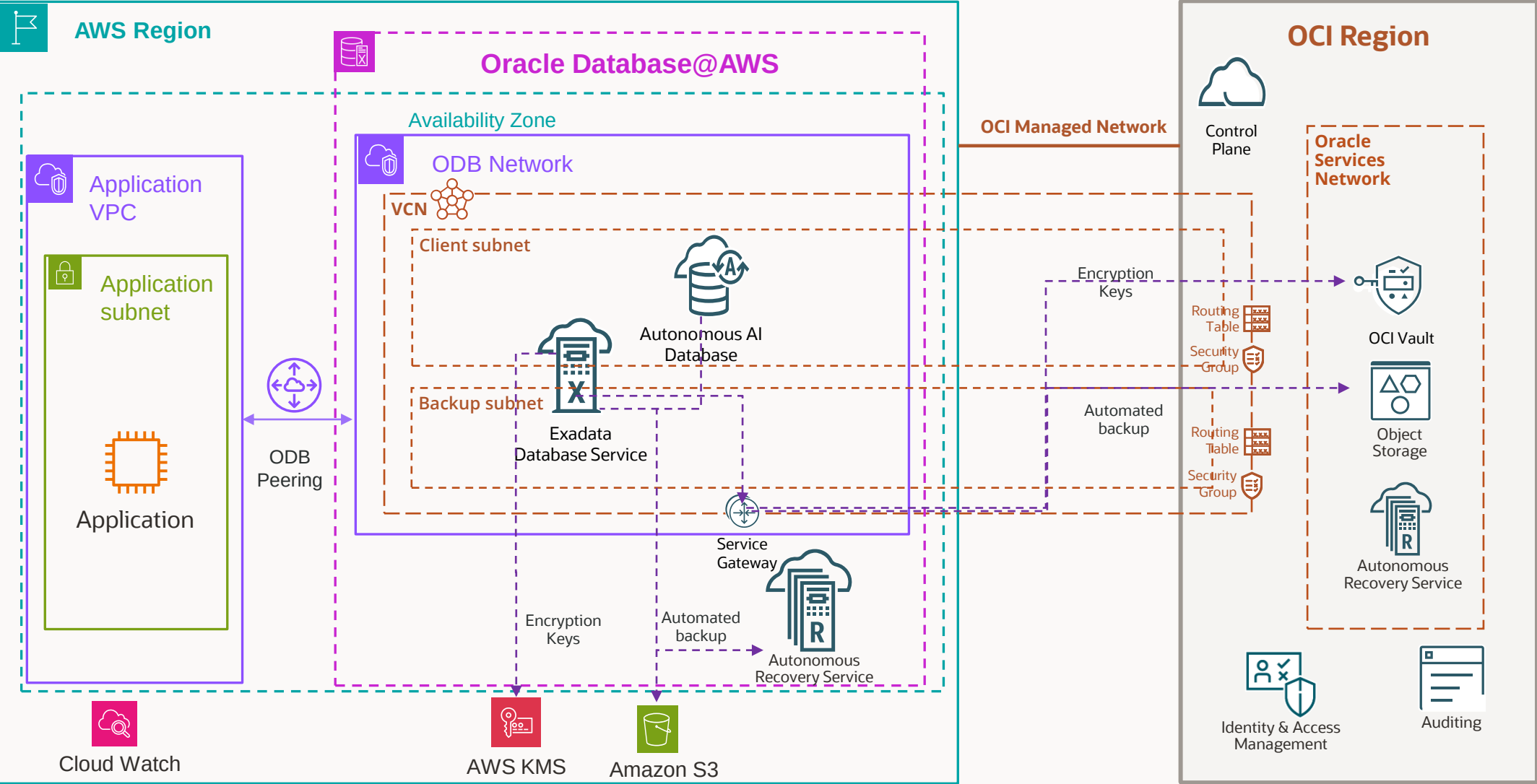


High Level Architecture

Child site



Detailed Architecture

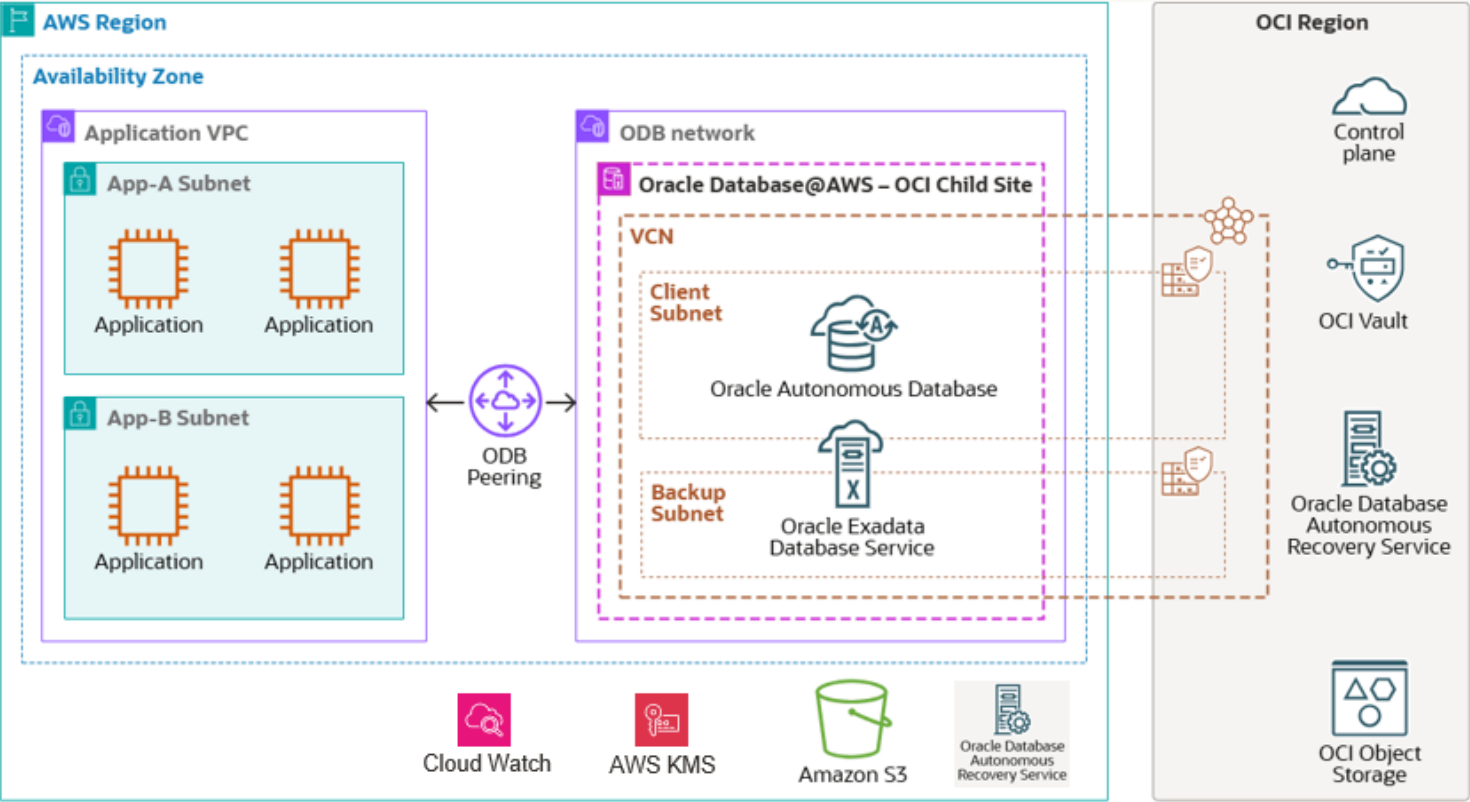


Network components

Amazon VPC & OCI VCN: Core private networks in AWS and OCI, each supporting subnets for resource organization and isolation.

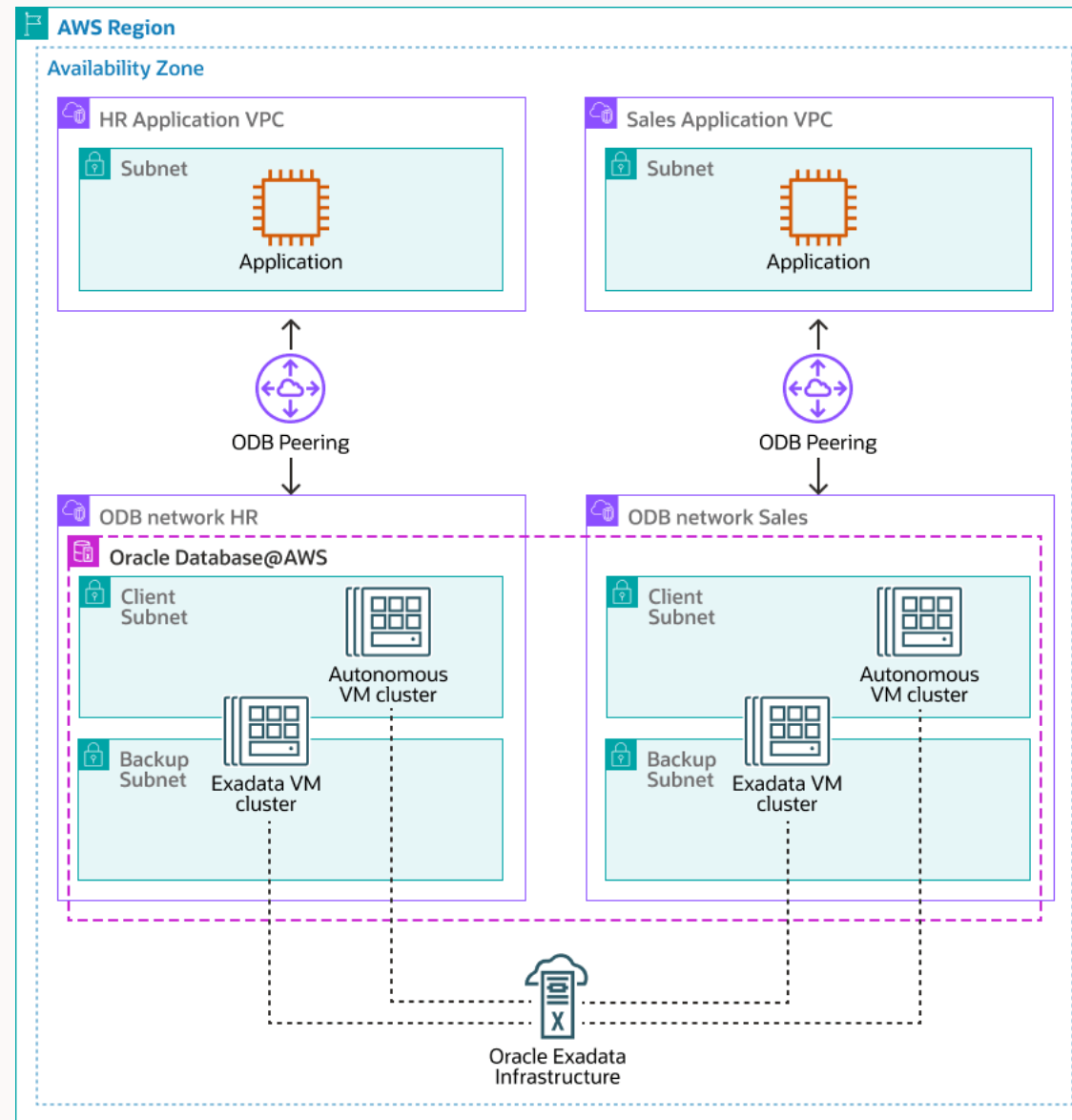
ODB Network: Dedicated, private network in AWS hosting Oracle Exadata and Autonomous VM Clusters; directly connected with the OCI child site

ODB Peering: Private routing link enabling secure, high-performance traffic between your Amazon VPC and the ODB Network - no public internet traversal.

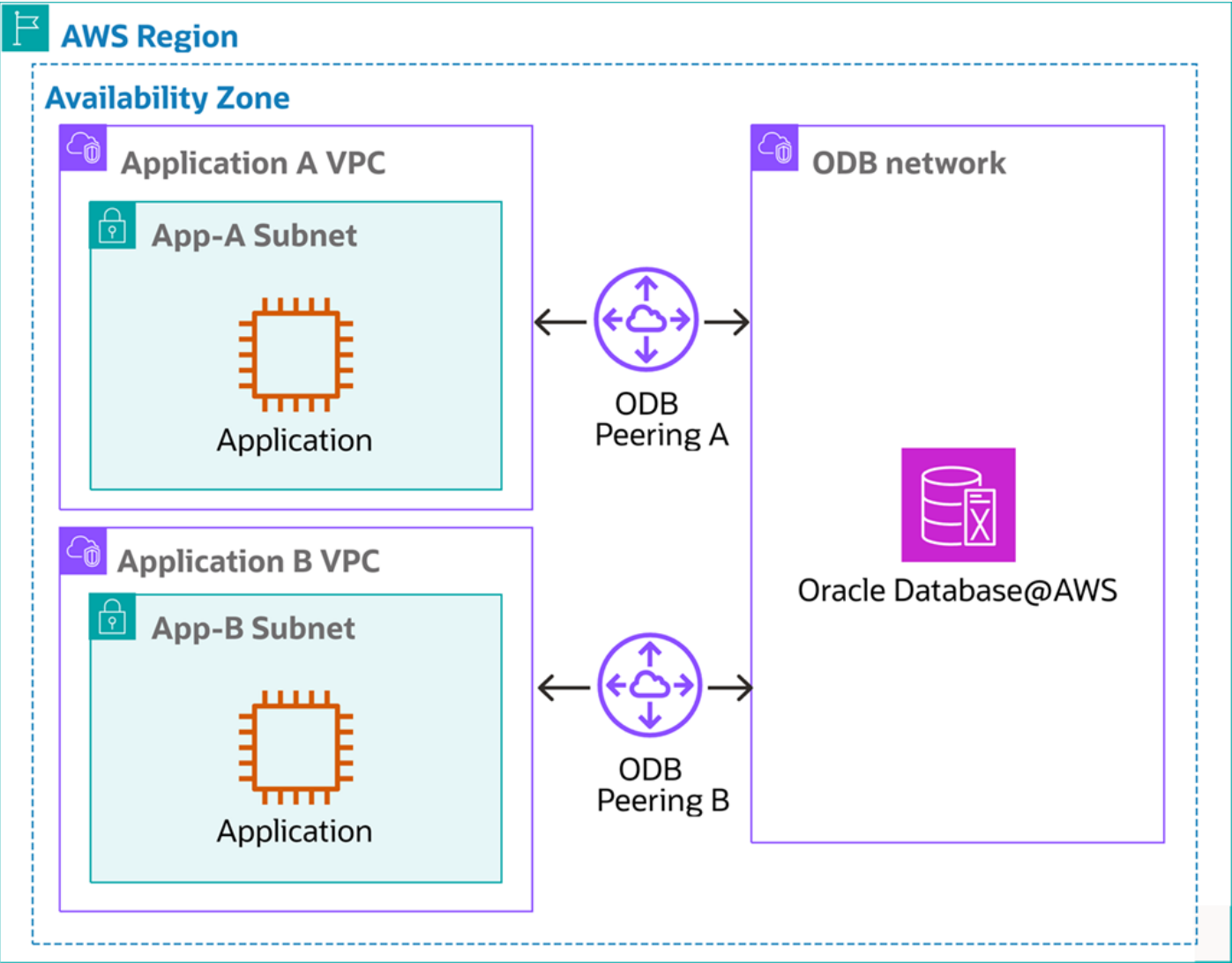


Network topologies

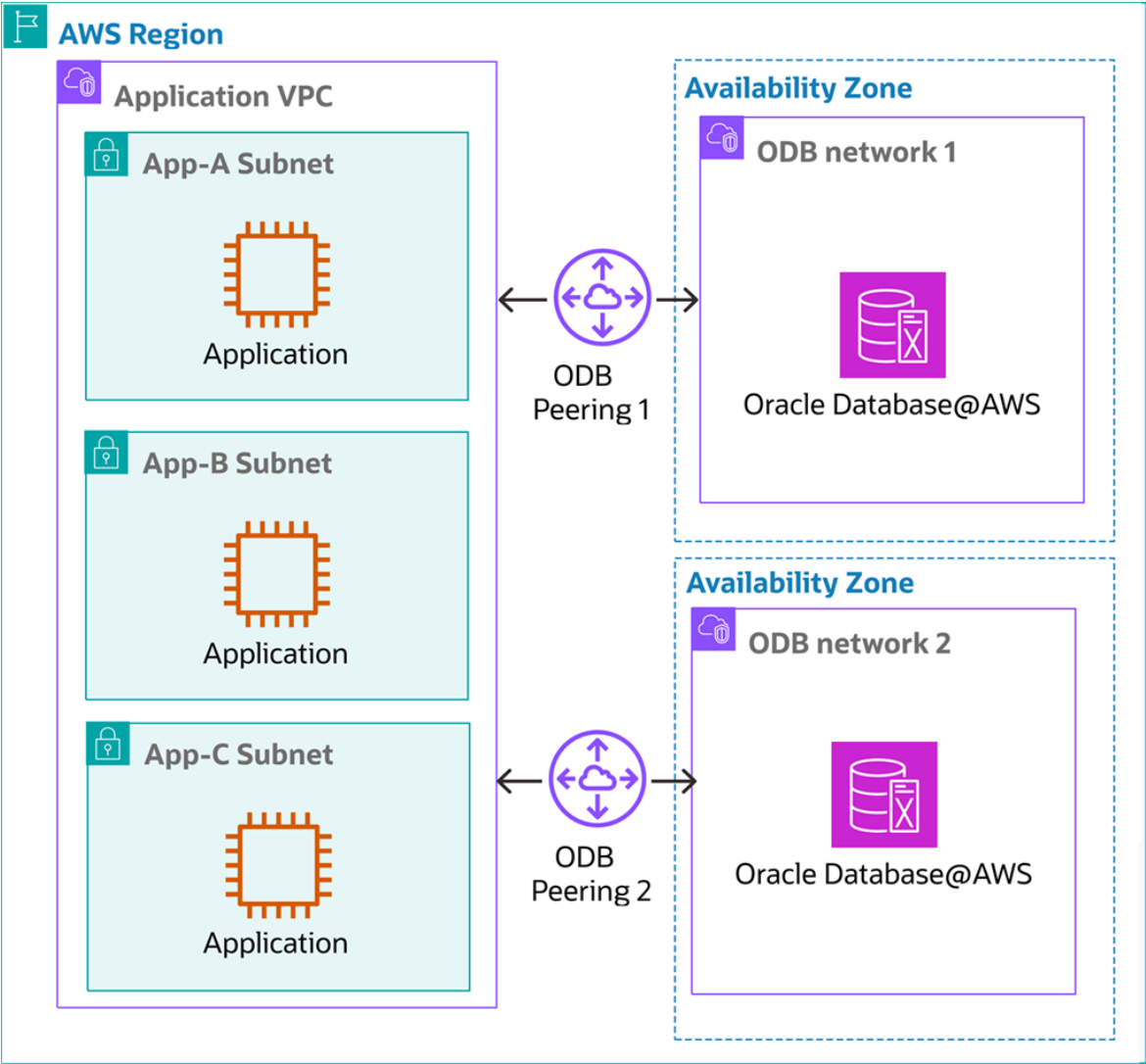
Same Availability Zone Connectivity with Multiple VM Clusters



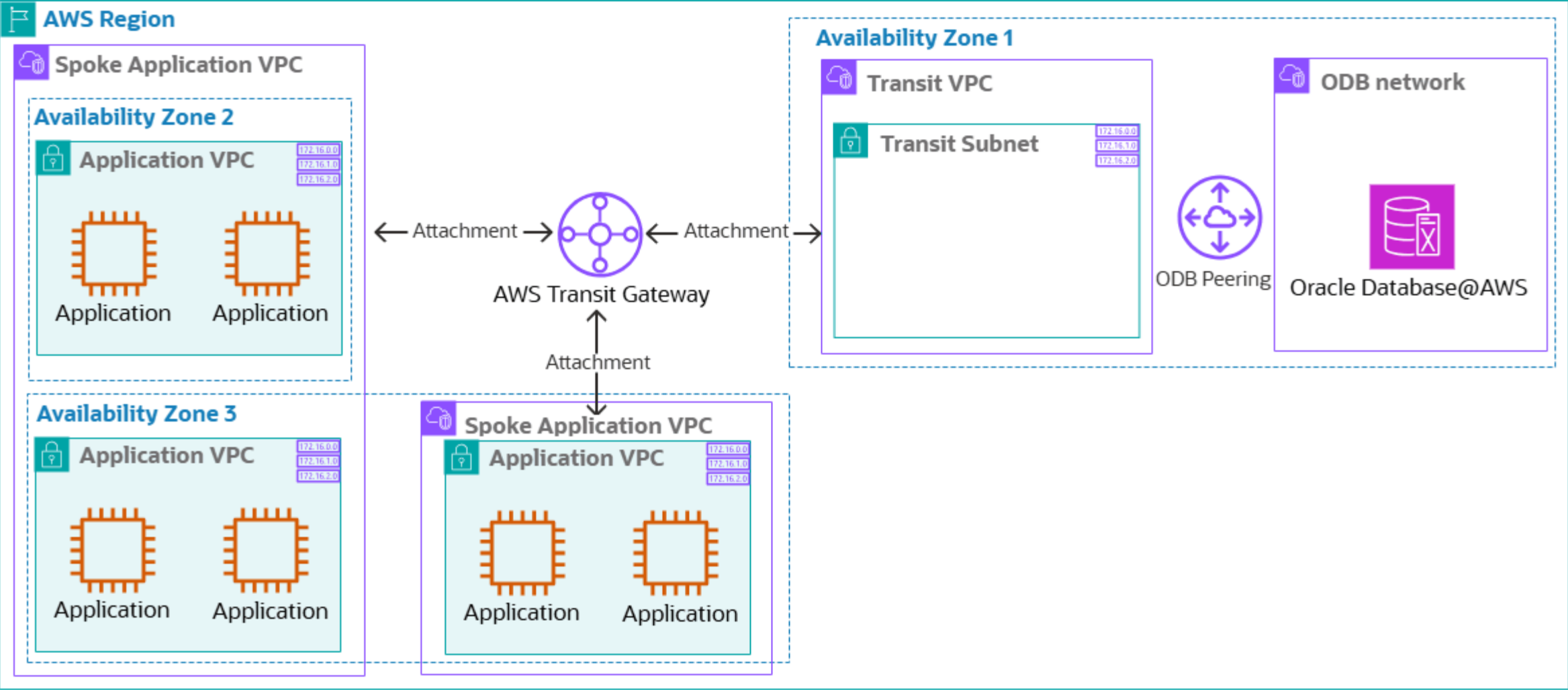
Multiple VPCs to One ODB Network



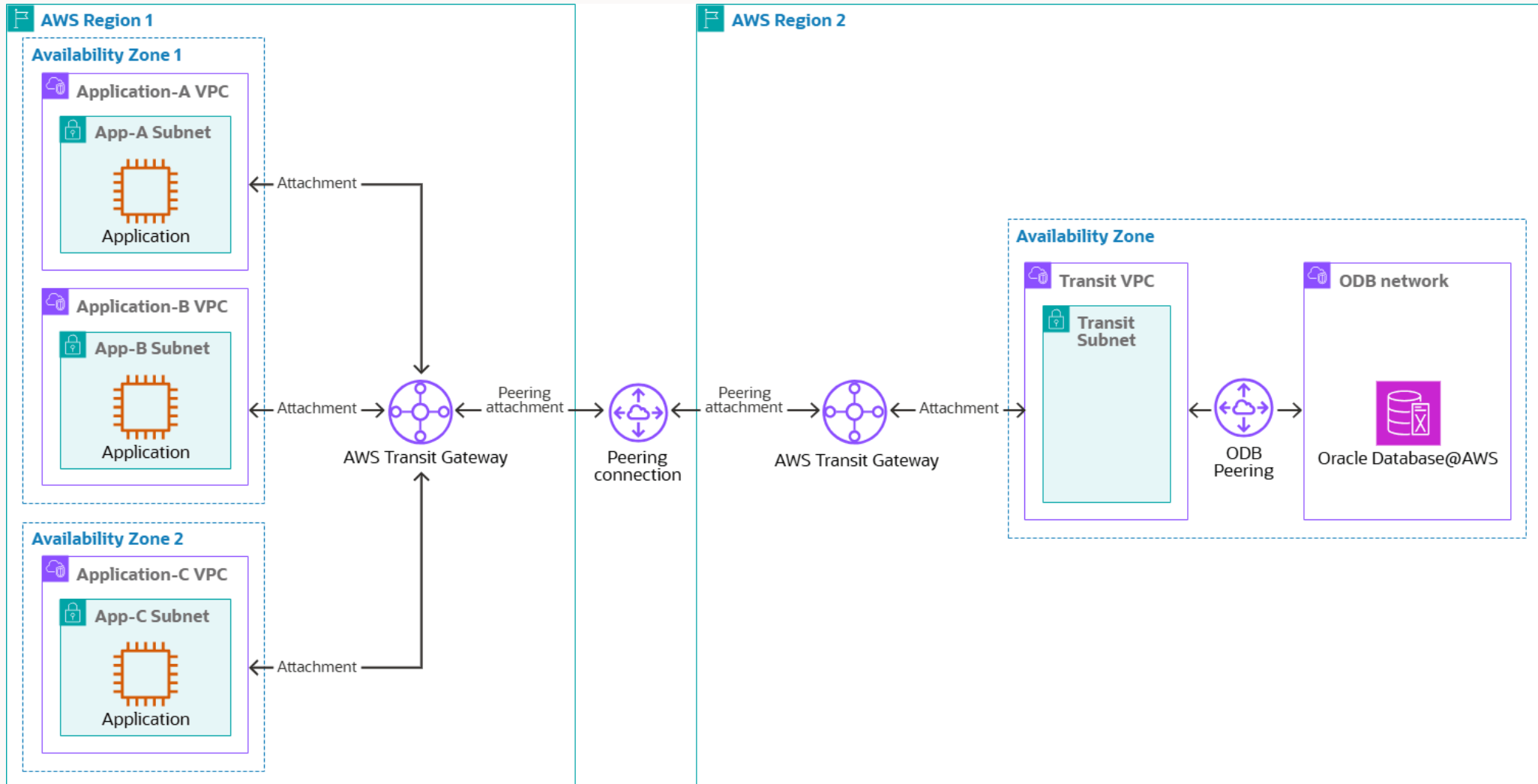
One VPC to Multiple ODB Networks



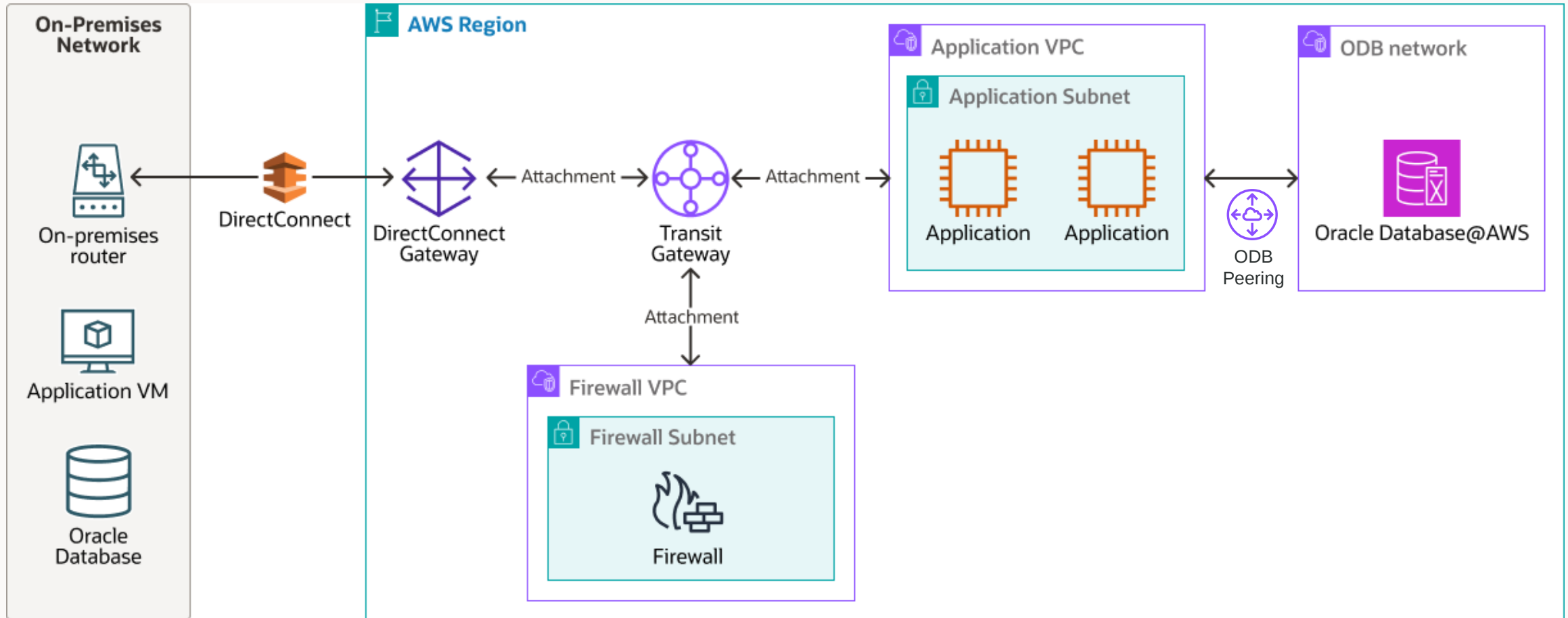
Cross-VPC Connectivity in Same Region with Hub and Spoke



Cross-Region Connectivity with Hub and Spoke



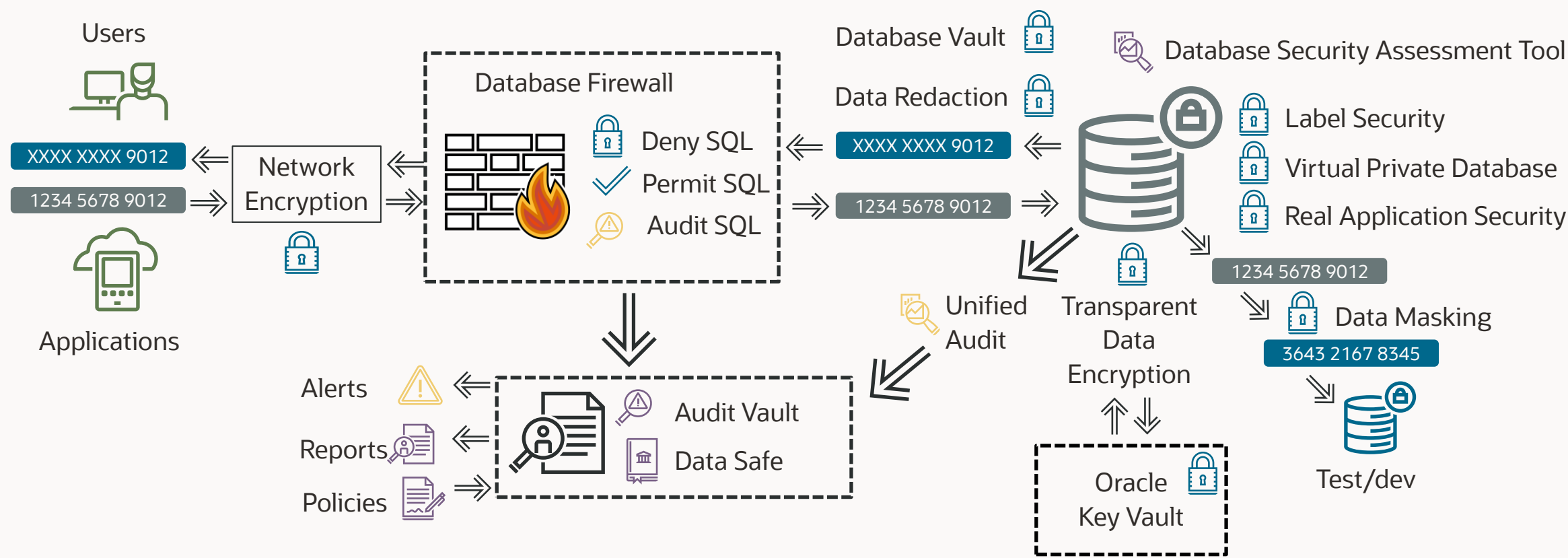
Hub-and-Spoke On-Premises Applications Topology



Security

Oracle Maximum Security Architecture

Defense in Depth to protect your data



AWS, OCI, Oracle AI Database security features

Security Feature	Granularity	Options
Encryption	Encryption at rest	TDE (Wallet, OCI Vault, Oracle Key Vault, AWS KMS)
	Encryption in transit	SSL/NNE based
Key management	Database level	OCI Vault Oracle Key Vault AWS KMS
Auditing	Database level	Unified Auditing/ Fine Grained Auditing
	Resource level	AWS CloudTrail
		OCI Audit Service
Network Isolation	Database level	Database ACL, Database Firewall
	VPC level	NACL, Security Groups
Access restrictions	Database level	Database Vault, VPD, RLS
	Resource level	AWS IAM Policies, groups/roles

Oracle Database
Feature

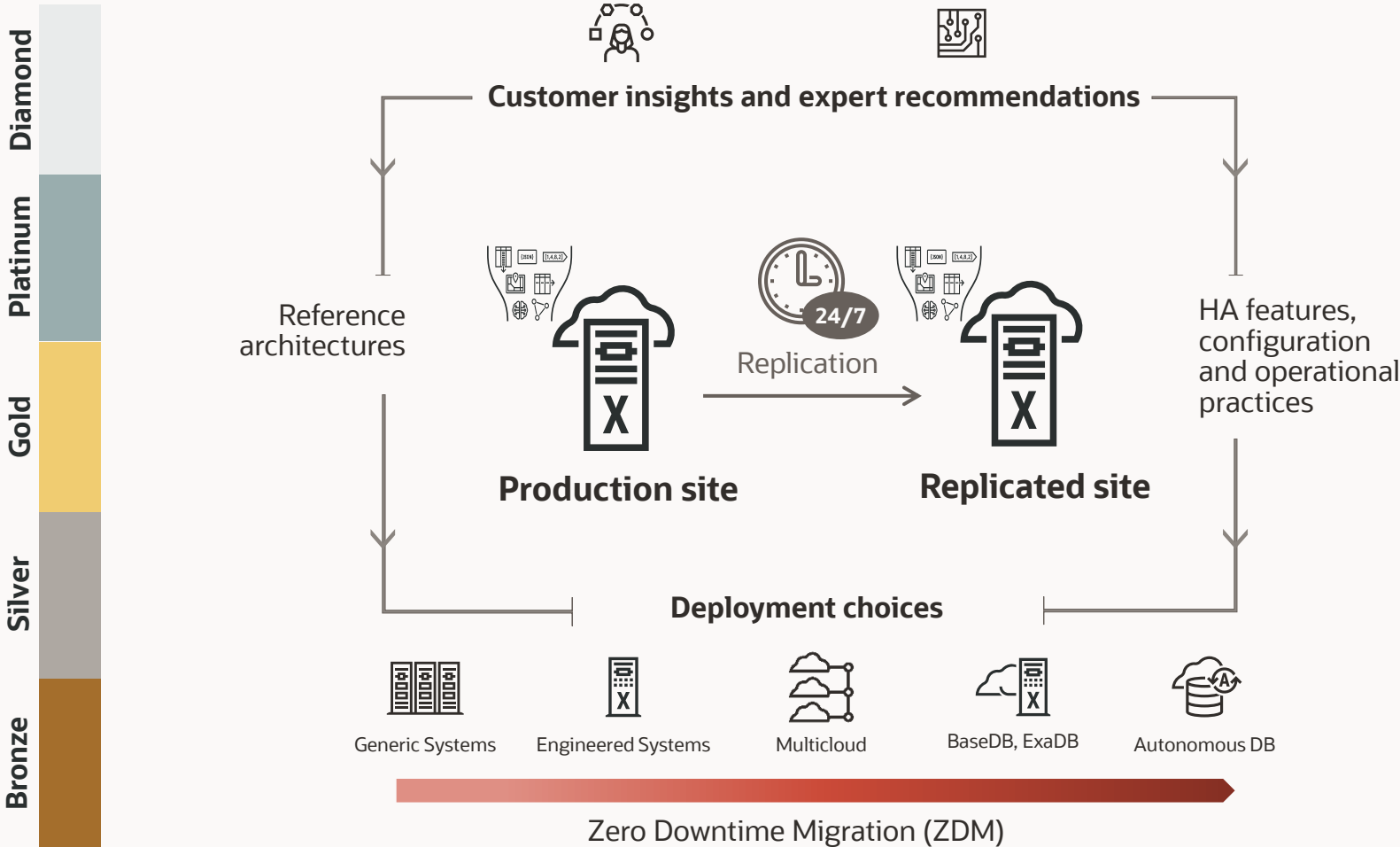
AWS feature

OCI feature

High-Availability & Disaster Recovery

Oracle Maximum Availability Architecture (MAA)

Standard Reference Architectures for Never-Down Deployments



High performance

Resource Management

Database In-Memory

True Cache

Continuous availability

Application Continuity

Online Redefinition

Edition-based Redefinition

Data protection

Flashback

RMAN

ZDLRA+ ZRCV

Active replication

Active Data Guard

Full Stack DR

GoldenGate

Scale out & Lifecycle

RAC

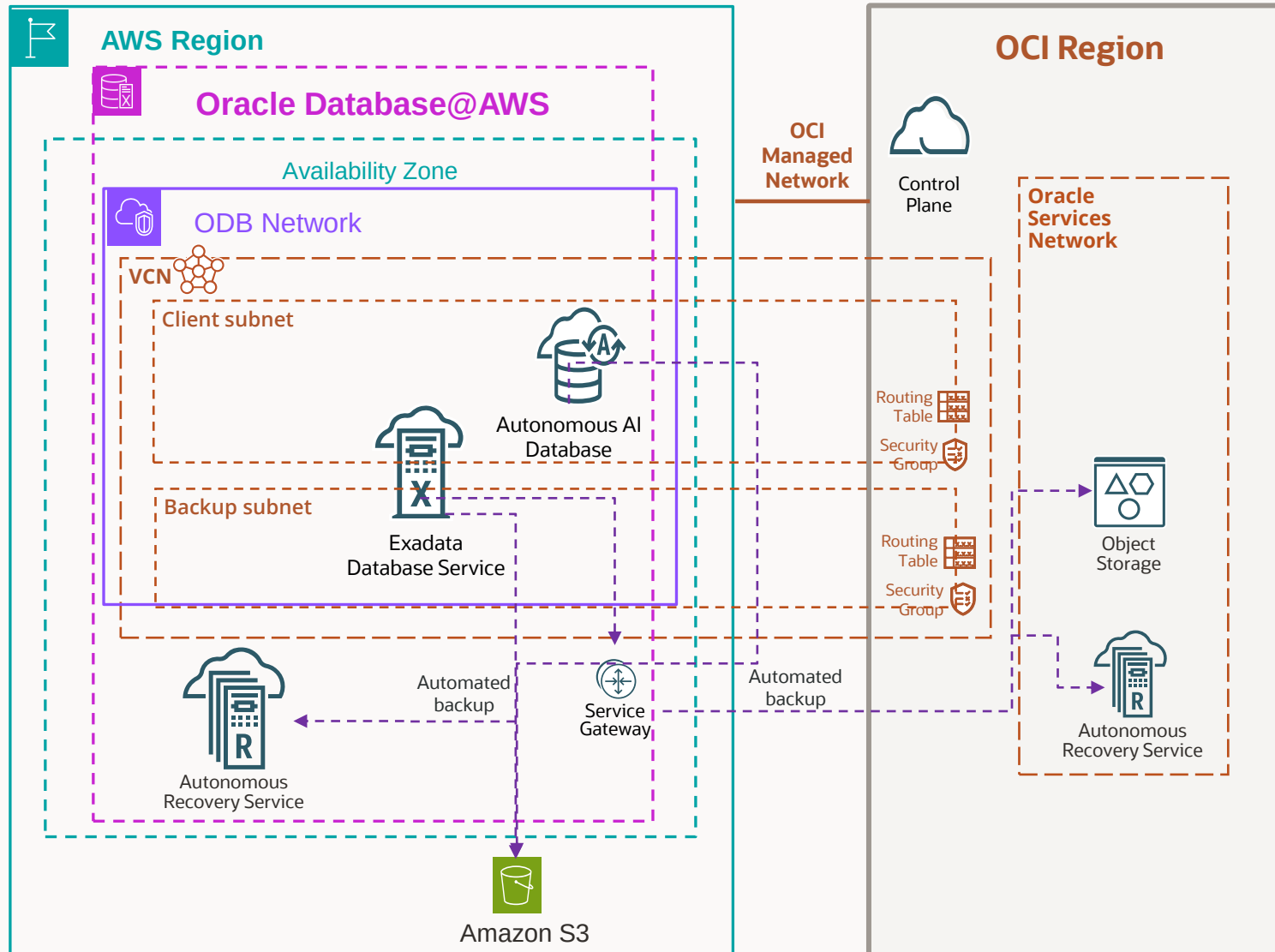
Globally Distributed Database

FPP

Real Application Testing



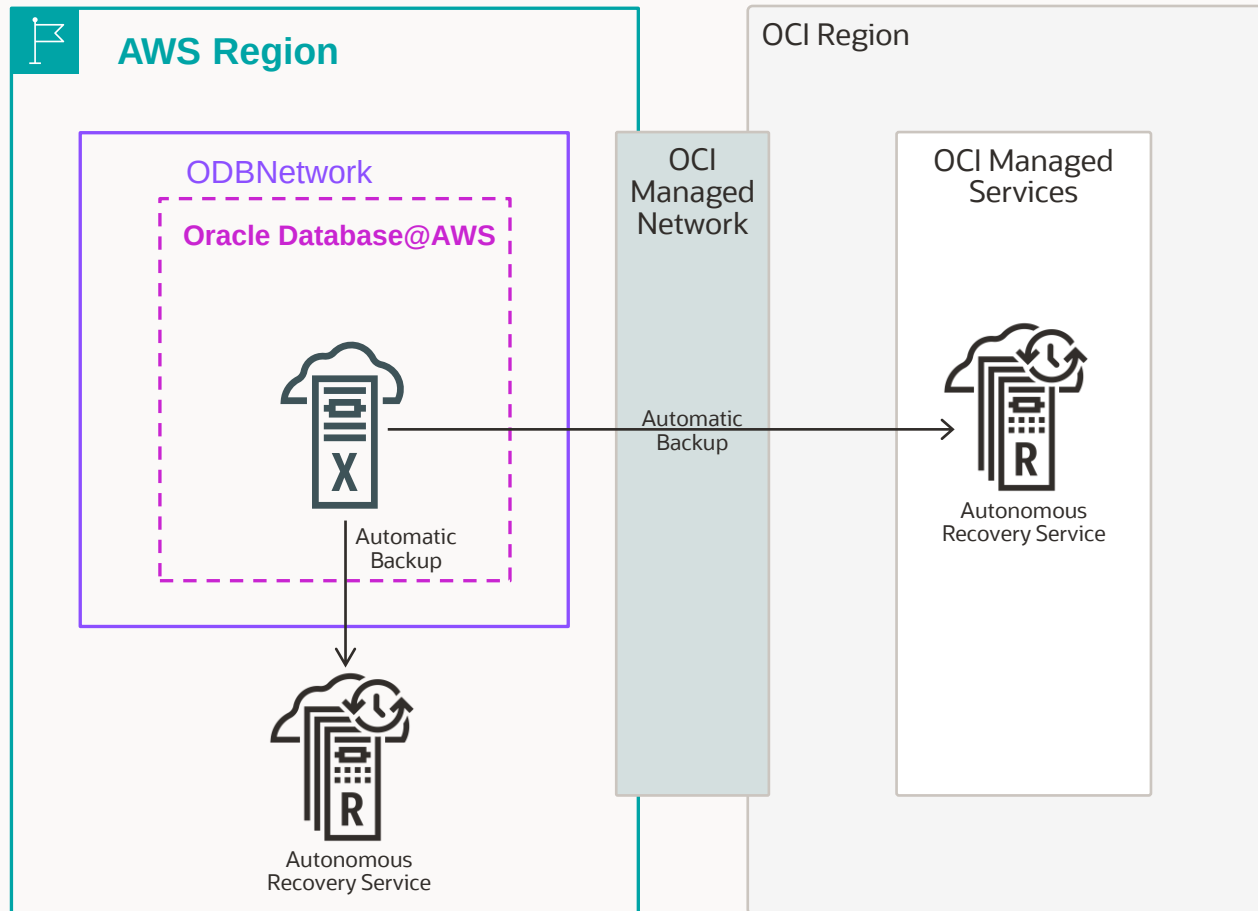
Automated backups options



Automated backups to:

- OCI Object Storage
- Amazon S3
- Autonomous Recovery Service
 - @OCI
 - @AWS

Zero Data Loss Autonomous Recovery Service (RCV)



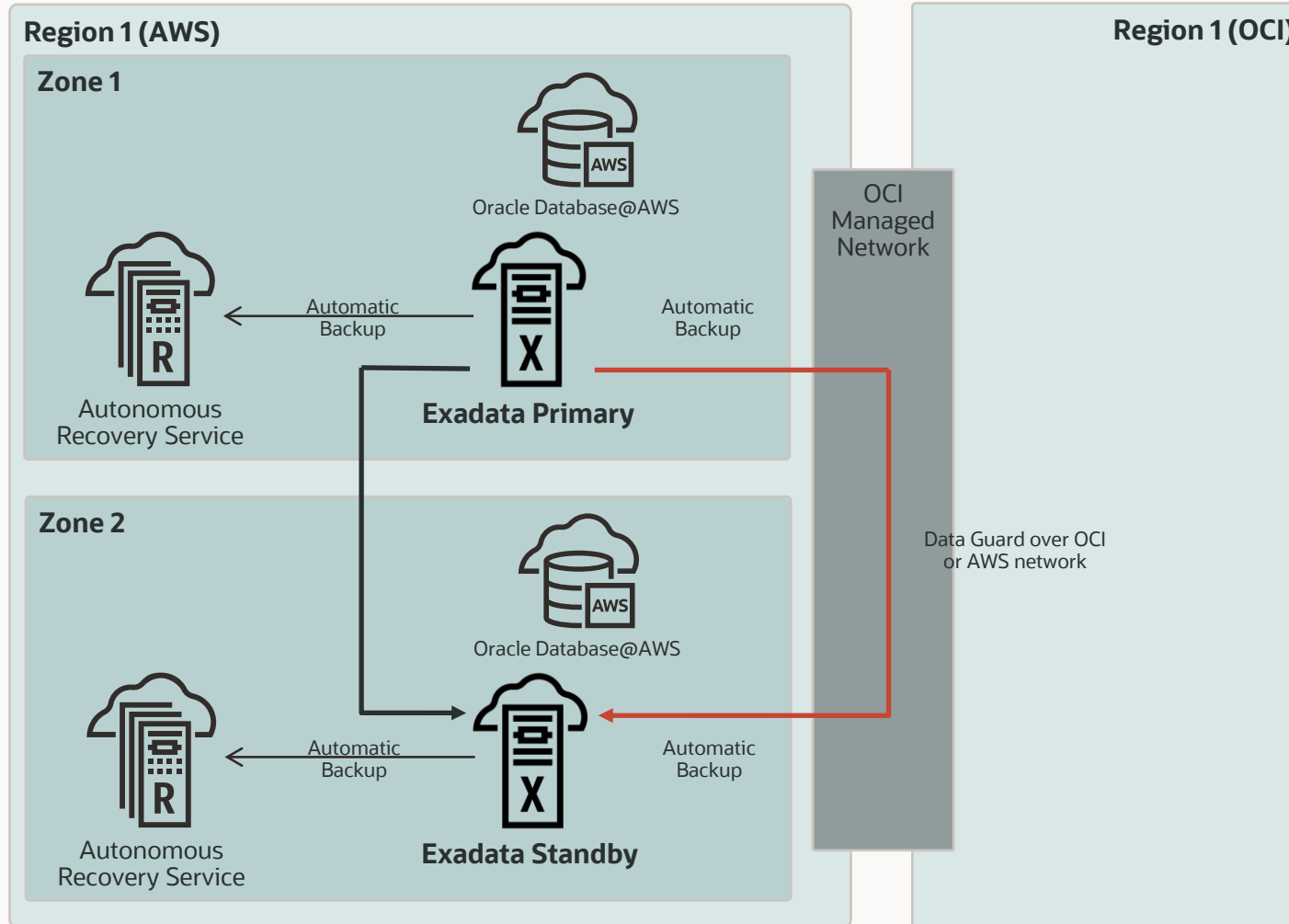
- Real-time data protection
- Continuous recovery validation
- Ransomware protection
- Incremental forever backup strategy
 - No weekly full backups
- Charged towards DB@AWS consumption
- Available in OCI and in AWS

☒ Store backups in the same cloud provider as the database ⓘ

- Supports ExaDB-D & ADB-D

Oracle Exadata Database Service on Dedicated Infrastructure

Oracle MAA Gold level cross-zones architecture



Enhancing availability and ensuring zero data loss

MAA Silver Level +

- ✓ Site failure protection
- ✓ Oracle Data Guard's In-Memory replication with zero data loss

+ Active Data Guard

- ✓ Comprehensive data corruption prevention
- ✓ Offload read-mostly workloads to standby
- ✓ Online updates

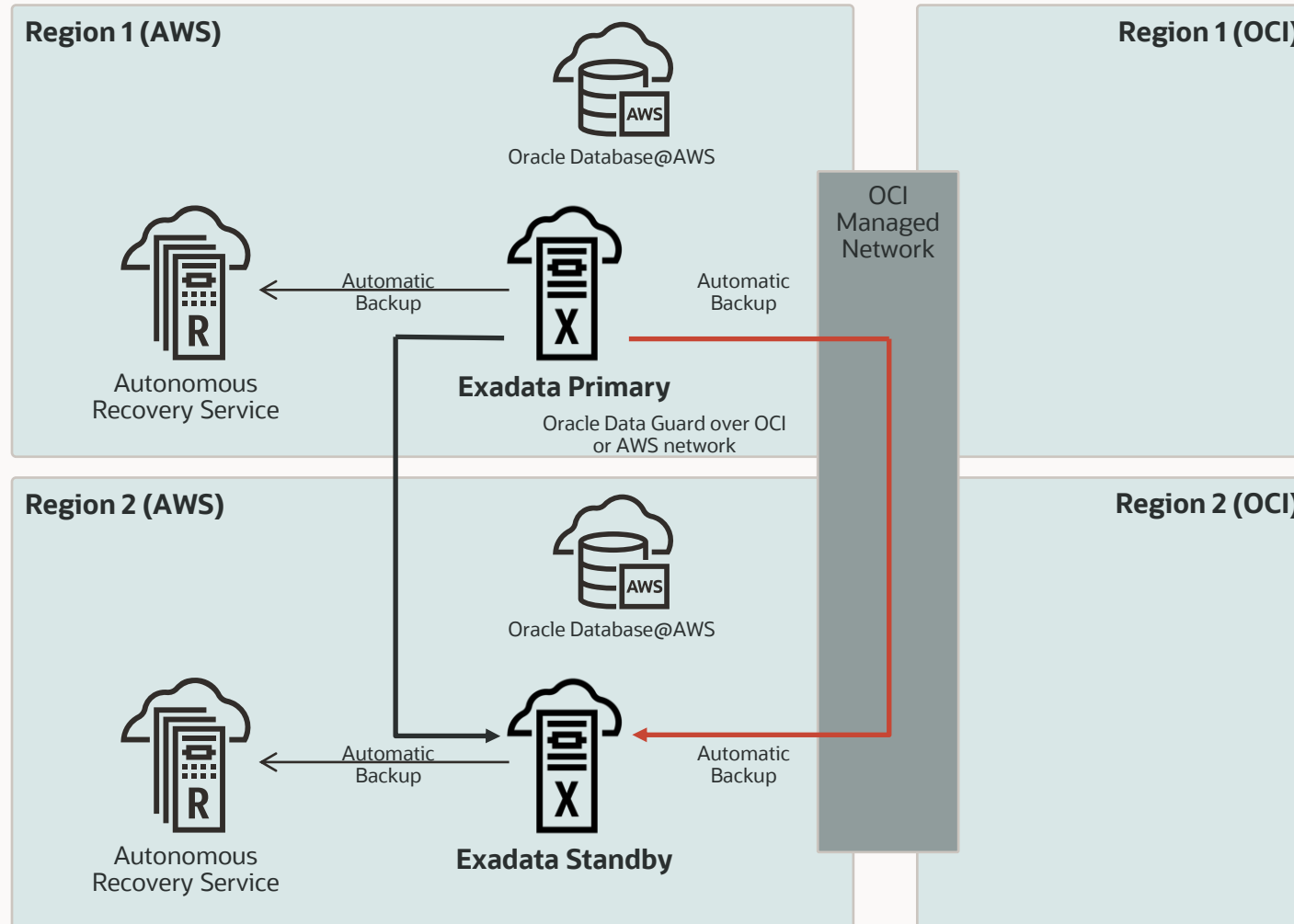
+ Multiple Standbys

- ✓ Read-mostly scale-out



Oracle Exadata Database Service on Dedicated Infrastructure

Oracle MAA Gold level cross-region architecture



Safeguarding continuous availability and real-time data protection

MAA Silver Level +

- ✓ Regional disaster recovery protection
- ✓ Oracle Data Guard's In-Memory replication with (near) zero data loss

+ Active Data Guard

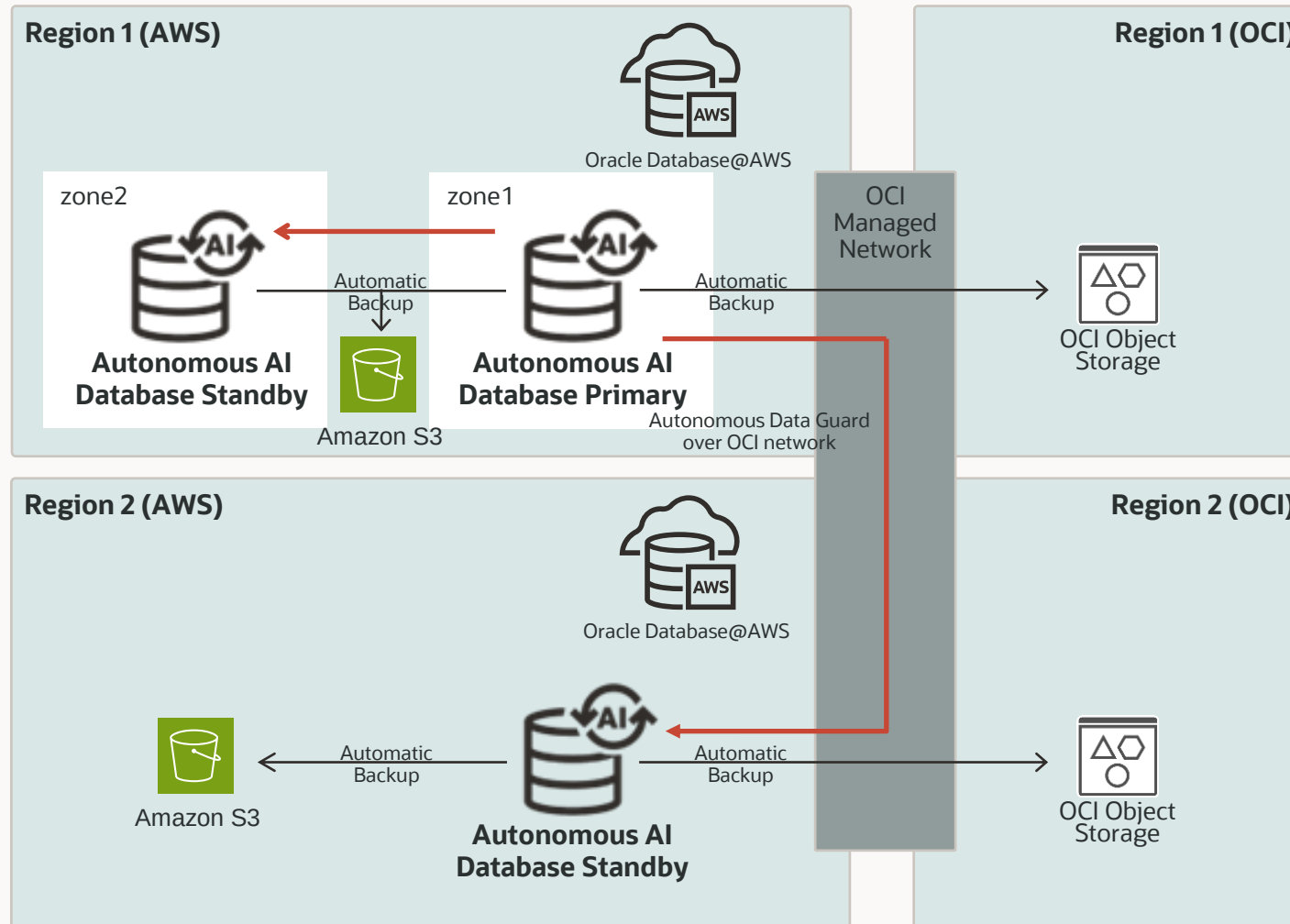
- ✓ Comprehensive data corruption prevention
- ✓ Offload read-mostly workloads to standby
- ✓ Online updates

+ Multiple Standbys

- ✓ Zero data loss across regions with minimal impact on primary performance
- ✓ Read-mostly scale-out

Oracle Autonomous AI Database Dedicated

High availability and data protection built-in by default



Oracle Exadata and Oracle RAC

- ✓ Full elasticity with online and auto-scaling of compute and storage
- ✓ Node failure protection
- ✓ Zero downtime maintenance
- ✓ 99.95% SLA

Backup-based disaster recovery

- ✓ Automatic backup by default

+ Autonomous Data Guard

- ✓ Local and regional standbys one-click setup
- ✓ Automatic failover for lower RTO
- ✓ Real-time data replication for lower RPO
- ✓ Synchronous replication for zero data loss
- ✓ Convert to snapshot standby for read/write
- ✓ 99.995% SLA

Monitoring & Automation

Monitoring Capabilities for OD@AWS

OCI

- OCI Database Management
- OCI Ops Insights

AWS

- CloudWatch
- CloudTrail
- EventBridge

External

- OEM
- Custom monitoring solutions

Monitoring Capabilities for OD@AWS: OCI services



Database Management

- Performance and configuration metrics across Oracle Database fleet
- Performance Hub's unified performance view
- AWR Explorer's charts
- Monitor and administer individual databases.
- Analyze metrics with customizable dashboards.



Ops Insights

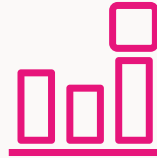
- Analyze resource usage of databases
- Forecast based on historical trends
- Compare SQL performance and identify trends
- Analyze AWR statistics
- Create and receive weekly News Reports

Monitoring Capabilities for OD@AWS: AWS services



Amazon Cloud Watch

- Metrics for VM Clusters
- Metrics for container databases
- Metrics for pluggable databases
- Tags: AWS/ODB namespace



Event Bridge

- Event bus – aws.partner/odb/
- Events from AWS
 - Creation, deletion of ODB network
- Events from OCI
 - Exa Infra, VM Cluster, CDB/PDB events



Cloud Trail Logs

- Management Operations
- ODB@AWS Control Plane operations such as CreateodbNetwork as management events

Automation Capabilities for OD@AWS

On AWS and OCI

AWS

For Exadata Infrastructure, VM Clusters, ODB Networks

- ☒ AWS CLI
- ☒ REST API/SDK
- ☒ CloudFormation
- ☒ Terraform

OCI

For CDBs & PDBs

- ☒ OCI CLI
- ☒ REST API/SDK
- ☒ Ansible
- ☒ Terraform
- ☒ [ExaDB-D only] Local VM CLIs: dbaascli, ExaCli

Oracle Database@AWS

Live demo

Key features



Customer experience feedback

—
ExaDB-D@AWS

Modernize a highly regulated platform without compromise

Customer context

- European technology provider
- Operating internationally
- 44+ TB, 19c 100+ PDBs, commodity servers
- Regulated mission-critical platform on AWS
- ➔ Meet market requirements
- ➔ Applicable regulations

Challenges

- Modernize without compromising on:
 - Reliability and low latency
 - Compliance and security
- Extreme pressure on timelines
- No architectural change

Modernize a highly regulated platform without compromise

Solution

- ExaDB-D@AWS - 2 Availability Zones
- OCI Vault, Autonomous Recovery Service, Database Management, Data Safe
- Amazon CloudWatch

Results

- Fast rollout (POC Q4 25 → Prod Feb 26)
- Reduced operational risk
- Regulatory requirements met
- Stability and HA without re-engineering
- On-time delivery through close collaboration between the customer, Oracle, and AWS

Oracle Database@AWS: unpacked



**Oracle AI Database
features, unchanged**



**Exadata extreme
Performance**



**Full integration with
AWS environment
and services**



All types of workloads

Thank you!

Any thoughts?

Let's chat over coffee (🍷) after the session

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