ORACLE

Oracle Cloud Infrastructure Database Services

Oracle Corporation

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Agenda

Oracle Cloud Infrastructure DB Options

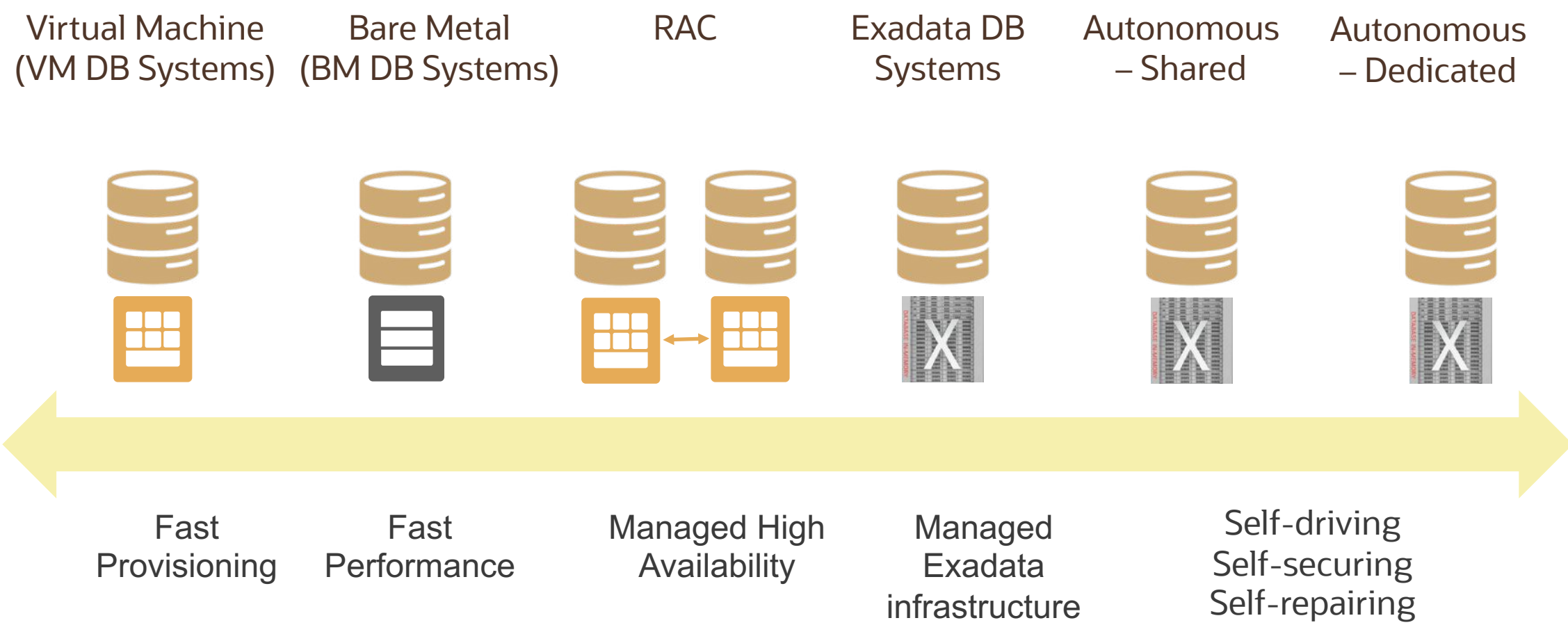
DB Systems

DB Systems Backup

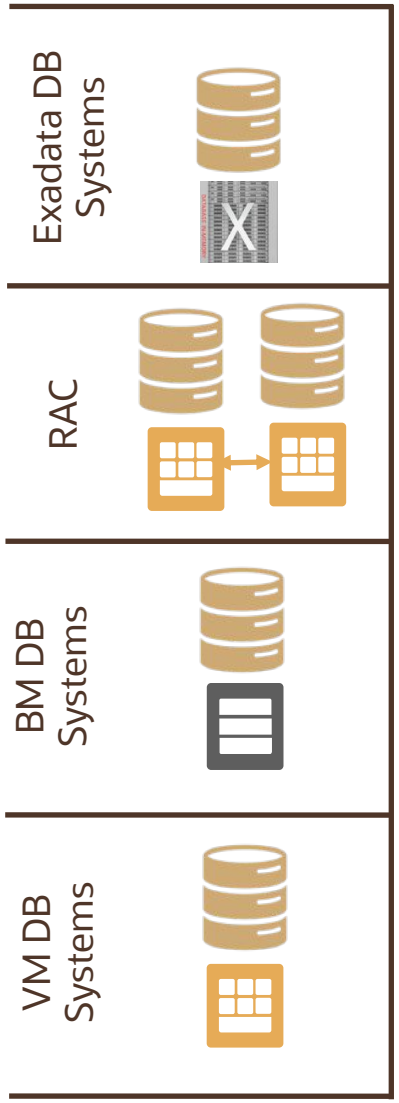
DB Systems HA and DR

Autonomous Databases

Oracle Cloud Infrastructure Database options



DB Systems



Managed DB Systems – Exadata, RAC, Bare Metal, VM

Complete lifecycle automation – Provisioning, Patching, Backup & Restore

High Availability and DR – RAC & Data Guard

Scalability – Dynamic CPU and Storage scaling

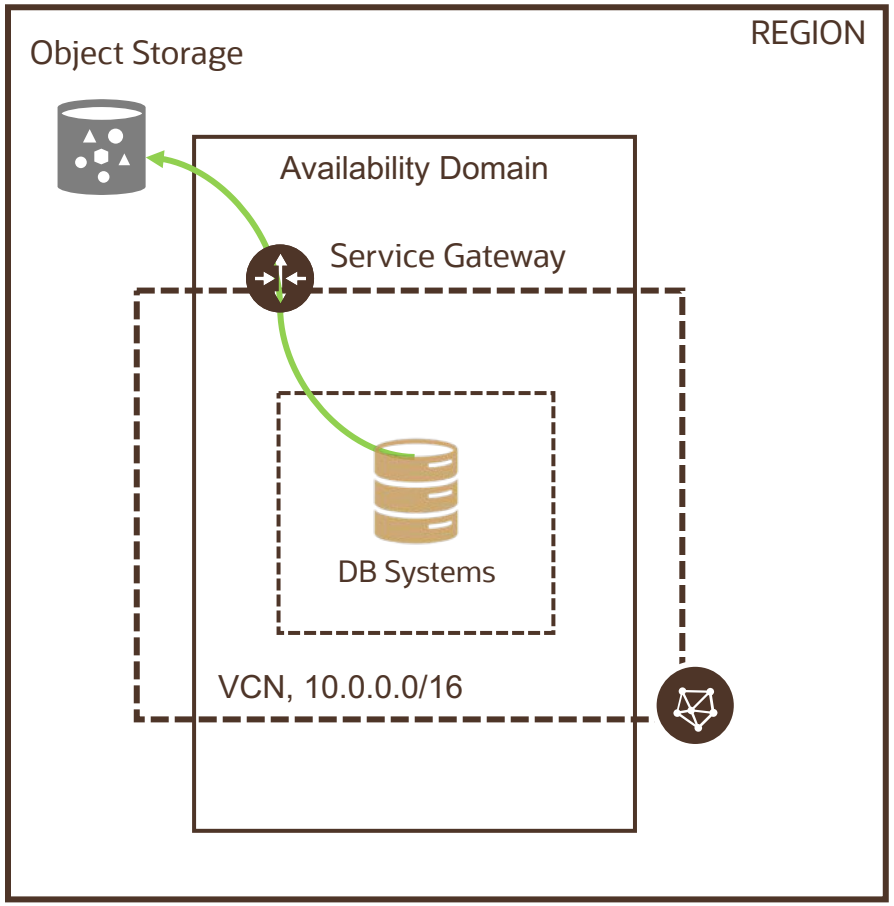
Security – Infrastructure (IAM, VCN, Audit), Database (TDE, Encrypted RMAN backup / Block volume encryption)

Bring Your Own License (BYOL)

DB Systems Operations

- Launch, start, stop, or reboot DB Systems
  - Billing continues in stop state for BM DB Systems (but not for VM DB)
- Scale
  - CPU cores – scale up the number CPU cores (BM DB systems only)
  - Storage – increase the amount of block storage with no impact (VM DB systems only)
- Patch
  - 2 step process – DB System patched first before the database is patched
  - For Exadata and RAC shapes, patches are rolling

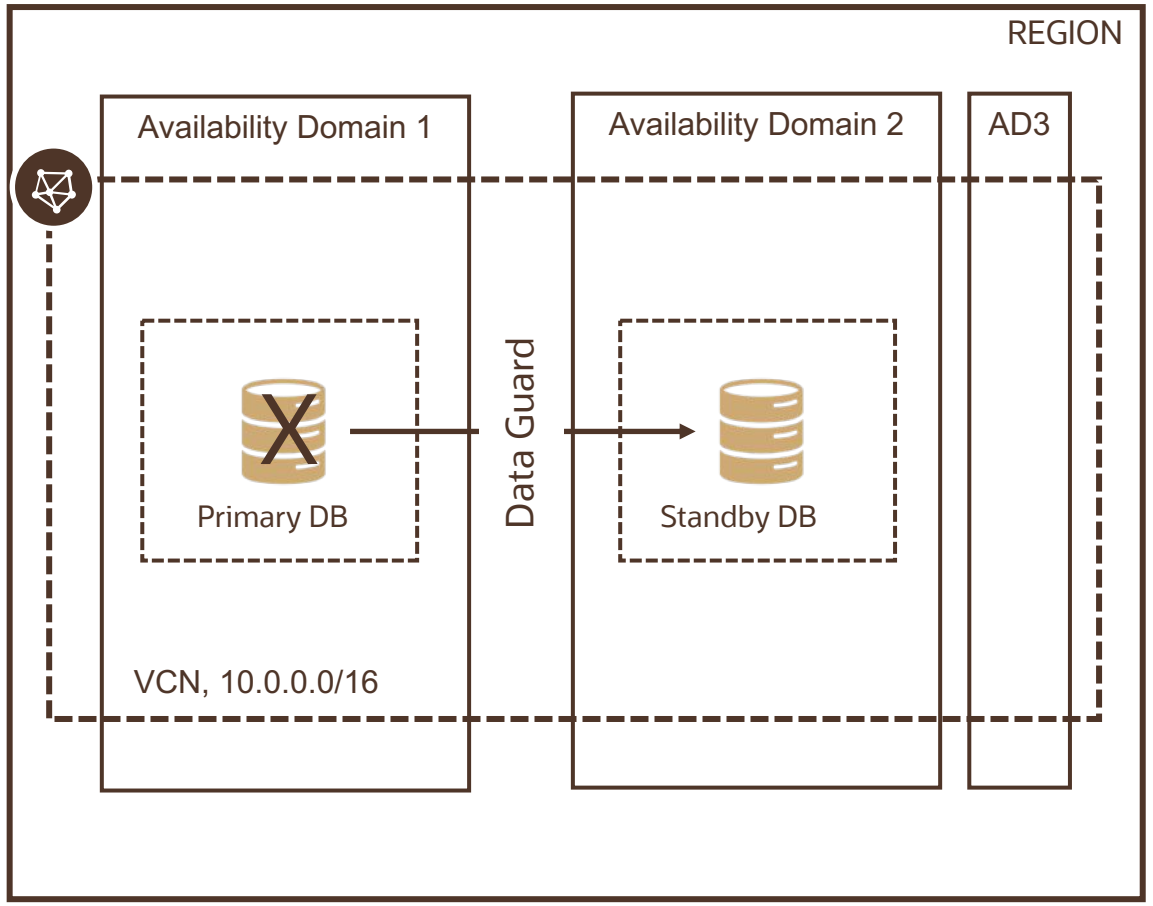
DB Systems Backup/restore



- Manual or Automatic backups
- Automatic backups written to Oracle owned object storage buckets (customers cannot view the backups)
- Backups run between midnight – 6:00 AM in the DB system's time zone (optionally, specify a 2 hr. window)
- Preset retention periods : 7, 15, 30, 45 and 60 days

- Recover a database from a backup stored in Object Storage
  - To last known good state with least possible data loss
  - Using the timestamp specified
  - Using the SCN specified

DB Systems DR



Oracle Data Guard provides a set of services that create, maintain, manage, and monitor one or more standby databases to enable Oracle databases to survive disasters and data corruptions. It maintains synchronization between the primary and the standby db

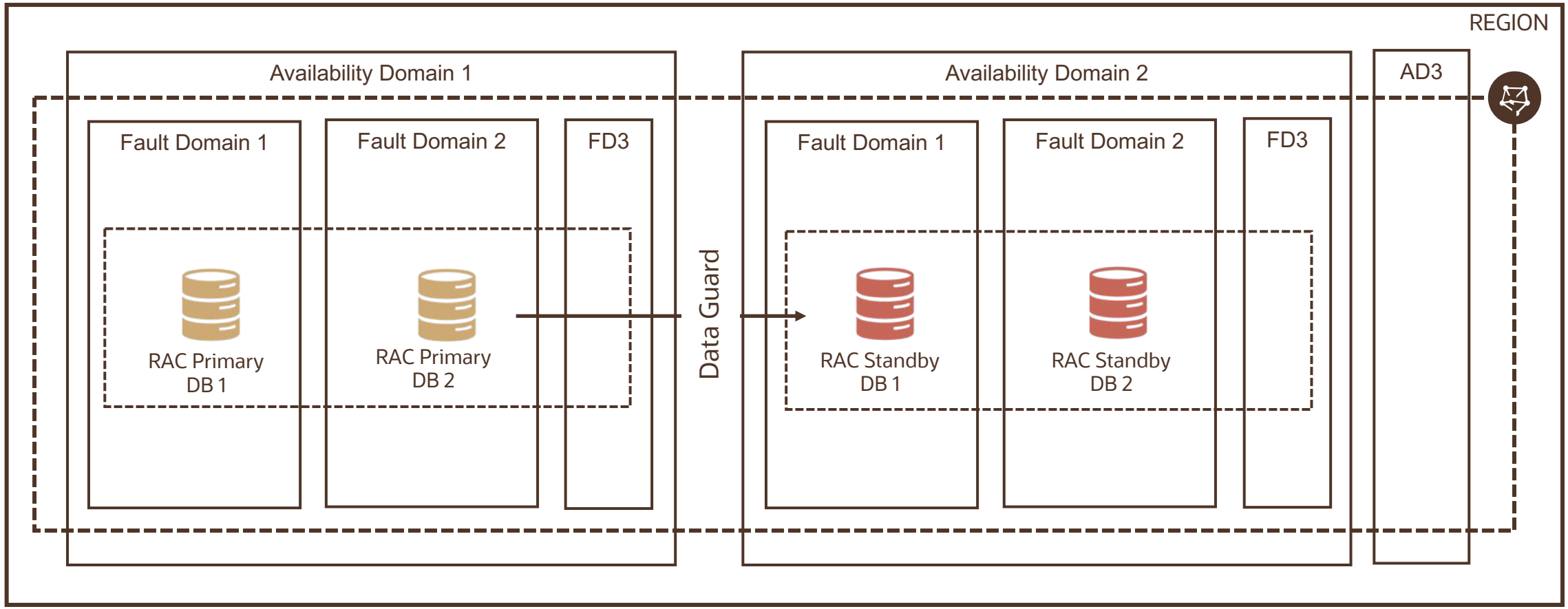
Active Data Guard extends Data Guard by providing advanced features for data protection and availability. It is included in the Extreme Performance Edition and Exadata Service.

Two modes – switchover and failover

- Switchover – planned migration, no data loss
- Failover – unplanned migration, minimal data loss

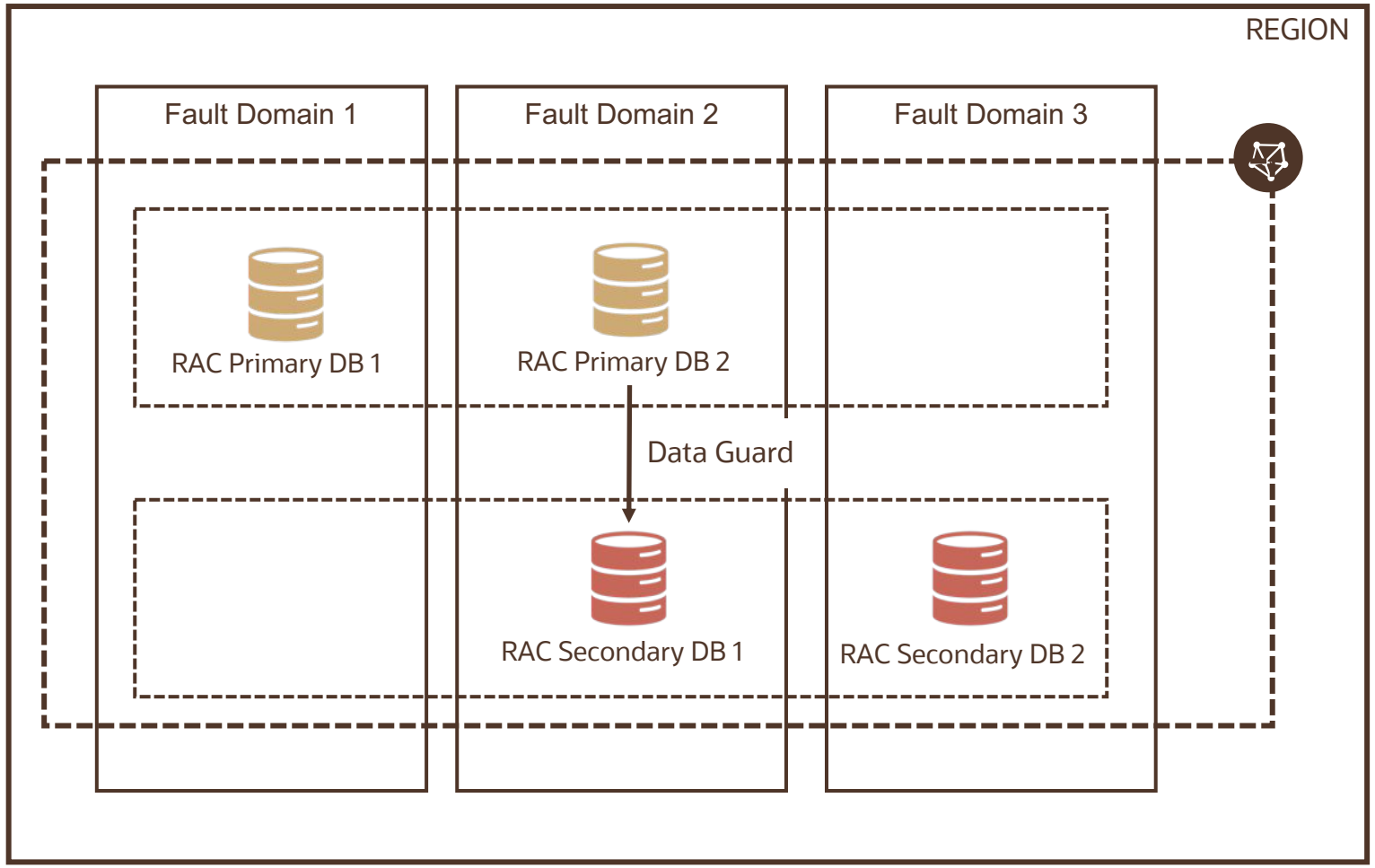
DB Systems HA and DR (Multi AD region)

Primary and standby databases can be either a single-instance Oracle database or a RAC database



DB Systems HA and DR (single AD region)

Primary and standby databases can be either a single-instance Oracle database or a RAC database

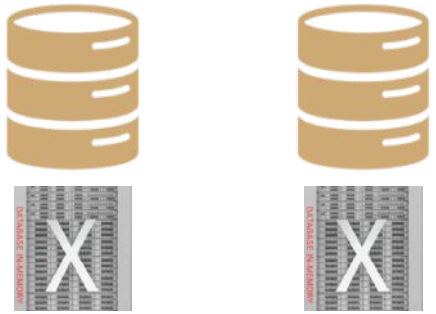


- If your primary and standby databases are 2-node RAC databases
- and both are in the same AD
- only one of the two nodes of the standby database can be in a fault domain that does not include any other nodes from either the primary or standby database.

Autonomous Database

Autonomous - Shared

Autonomous - Dedicated



Fully managed database with 2 workload types

- Autonomous Transaction Processing
- Autonomous Data Warehouse

Deployment options

- Dedicated: you have exclusive use of the Exadata hardware. Supported for both ATP and ADW.
- Shared: you provision and manage only the Autonomous DB, while Oracle handles Exadata infrastructure deployment and management. Supported for both ATP and ADW.

Automates the following tasks

- Backing up the database
- Patching the database (incl. maintenance w/o downtime)
- Upgrading the database
- Tuning the database

DB services

	VM DB Systems	BM DB Systems	Exadata DB Systems	Autonomous – Shared	Autonomous - Dedicated
Management	Customer	Customer	Customer	Oracle	Oracle
Updates	Customer initiated	Customer initiated	Customer initiated	Automatic	Customer policy control
Scaling	Storage (CPU cores cannot be changed)	CPU (storage cannot be changed)	Within Exa CPU, across Exa racks	Both CPU and Storage	Both CPU and Storage
Backups	Customer initiated	Customer initiated	Customer initiated	Automated	Automated
Storage	Block Storage	Local NVMe disks	Local disks and NVMe flash cards	Local disks and NVMe flash cards	Local disks and NVMe flash cards
RAC	Available (2-node)	Not Available	Available	Not Available	Not Available
Data Guard	Available	Available	Available*	Not Available	Not Available

*You can manually configure Data Guard on Exadata DB systems using native Oracle Database utilities and commands. dbcli is not available on Exadata DB systems

**The database can be a container database with multiple pluggable databases, if the edition is High Performance or Extreme Performance.

Summary

Oracle Cloud Infrastructure DB Options

DB Systems

DB Systems Backup

DB Systems HA and DR

Autonomous Databases

Oracle Cloud always free tier:
oracle.com/cloud/free/

OCI training and certification:
cloud.oracle.com/en_US/iaas/training
cloud.oracle.com/en_US/iaas/training/certification
education.oracle.com/oracle-certification-path/pFamily_647

OCI hands-on labs:
ocitraining.qloudable.com/provider/oracle

Oracle learning library videos on YouTube:
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Thank you