Appendix E Infrastructure Update

Oracle Databases@AWS

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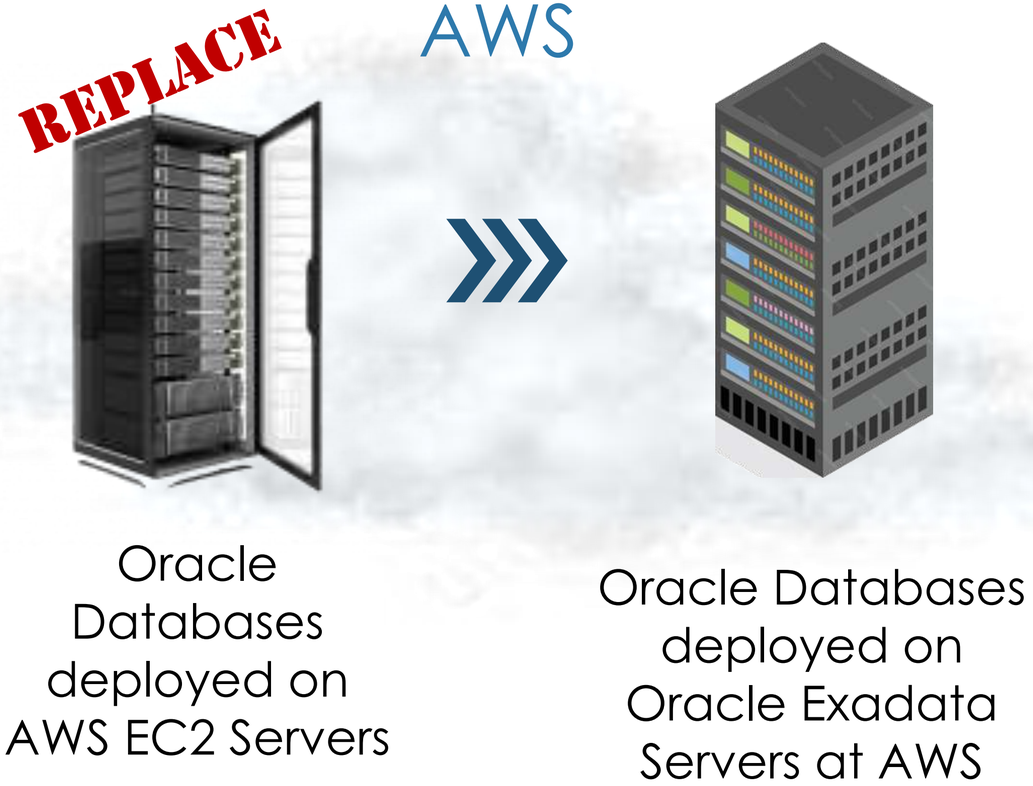
What Is It and Why Change?



Oracle Databases deployed on AWS EC2 Servers

Oracle Databases deployed on Oracle Exadata Servers at AWS

Why Change?

- ✓ **Improve Performance** – Auto adjusts workloads and scaling to improve online and batch
- ✓ **Improve Reliability** - Ability to operate when individual components fail through Real Application Clusters (RAC)and elimination of separate software
- ✓ **Increase Capacity** – Ability to scale up easily and avoid a size limitation in AWS
- ✓ **Increase Capability** – Allows usage of advanced Oracle features such as optimized compute

Oracle Databases@AWS

When? - Database Server Migration Only

Planning

Conduct procurement and planning activities

Non-Production Environment Readiness

Prepare for and deploy non-production environments

Go Live

Implement with August release and provide hyper care

Environment Standup

Standup servers, configure test environment connectivity and conduct testing

Production Readiness

Prepare for Production deployment and conduct disaster recovery testing

Decommission

Decommission retired database servers

Oracle Databases@AWS

Project Watch Items

Change Management and Non-Technical

- **Awareness of the Upcoming Change**
  - No user changes expected
  - Communication at JPA/PSC and Regional meetings
- **Environment Constraints**
  - CalHEERS and HR1 releases
  - Coordinating with M&E and reviewing environment schedules

Technical

- **Encryption Key Availability - COMPLETE**
  - Oracle KMS Cross region support not available until May/June 2026
  - Escalated to Oracle management on meeting the delivery date
- **Performance and Connectivity - COMPLETE**
  - Conducting functional, performance, endurance and operational testing
  - Performing configuration comparisons and connectivity testing

Risk 336
Move of Database Servers to Oracle Databases@AWS May Result in User Impact

Risk:

If database server configurations are not effectively identified, implemented and tested, and the mitigation plan is not effective, users could experience CalSAWS system outages or poor system performance.

Mitigation Actions:

1. Constructing a detailed project plan to include testing for functionality, performance, batch and connectivity
2. Engaging in multiple testing runs in partnership with the M&E vendor
3. Incorporating the new database server into the release such that development and release testing cycles make use of the new technology
4. Determining the rollback plan in the case of unexpected significant problems