

Leveraging OCI Cloud for Enterprise Workload Transformation



The client is a global manufacturer specializing in custom color and additive masterbatches. They produce single pigment dispersions, color and additive concentrates, and custom compounds, serving customers worldwide.

Executive Summary

Faced with aging infrastructure and the conclusion of Oracle support for critical systems, a global manufacturing company embarked on a transformative journey to modernize its Oracle E-Business Suite platform. Leveraging the scalability, security, and performance of Oracle Cloud Infrastructure (OCI), the organization aimed to future-proof its operations while streamlining costs and enhancing system efficiency.

The company utilizes Oracle E-Business Suite applications to manage Financials, Purchasing, Process Manufacturing, Order Management, and ASCP modules. While the production environment operated on-premises, the non-production environment had already been migrated to Oracle Cloud. Given the aging (11+ years old) hardware in production and the organization's growth, a comprehensive upgrade of its EBS platform and migration to OCI were essential.

The project spanned 26 weeks, focusing on high availability, security, and scalability. Apps Associates, as their trusted managed services provider, was chosen as the implementation partner for cloud infrastructure hosting, migration, and upgrades due to their consistent quality and proven expertise. The scope included upgrading the Operating System, Oracle E-Business Suite, and Database, along with implementing Transparent Data Encryption and installing Blitz.

The migration and upgrade were successfully completed in October 2024, with the production environment going live on October 7, 2024. Apps Associates executed five iterations, covering three non-PROD environments, a dry run, and the final production rollout.

Environment

The organization has Oracle E-Business Suite with one production and three non-production environments.

Environment Details:

- **OCI Servers:** 10 Compute Instances, Block/Object Storage, File Storage, FastConnect, Load Balancer, VPN
- **Products:** EBS 12.2.13 with 19c
- **Operating Systems:** Oracle Linux 8

Driving Factors

The organization aimed to modernize its E-Business Suite infrastructure by ensuring high availability, including a disaster recovery option. They also wanted to leverage Oracle Cloud's features to reduce costs, streamline support efforts, and eventually retire their on-premises data center. The OCI cloud platform was chosen for its performance, agility, scalability, and modern infrastructure, providing the capacity to support the organization's future growth.

High Level Steps of the Upgrade

During the OCI migration phase, Apps Associates architected and optimized existing OCI resources to better utilize the Oracle Cloud network and infrastructure for both production and non-production environments. The migration process included several key steps:

- Upgrading the Operating System from Oracle Linux 7 to Oracle Linux 8.

- Migrating and upgrading the E-Business Suite applications from R12.1.3 to R12.2.13 and the database from 11.2.0.4 to 19c.
- Addressing prerequisites for the database upgrade and creating a physical standby database to enable minimal downtime during migration.
- Migrating the EBS System schema to eliminate dependencies on SYS or SYSTEM schemas.
- Applying security patches, implementing Transparent Data Encryption, installing Blitz, and performing updates to applications and integrations.
- Conducting Unit, Integration, and User Acceptance Testing in collaboration with the client's IT/end-user team.
- Providing two weeks of Hypercare support post-go-live and transitioning to managed services support teams

Challenges

Several challenges were encountered during the migration process. Issues arose during the installation of the Blitz report, most of which were resolved by the upgrade team. However, one issue was identified as a bug in the newer version, which was addressed with a workaround provided by Blitz support.

With the adoption of the new Hardware Security Module (HSM), Java code signing is now managed externally to the EBS application system and requires ongoing management by the client. After the initial JAR signing is completed, all subsequent JAR files introduced through product patches or other client-specific requirements must also be signed. This process necessitates vigilance from the support team.

The environment also features extensive customizations, many of which included hard-coded values. To mitigate future risks, significant effort was invested in replacing these hard-coded values with variables.

“Partnering with Apps Associates has been a remarkable experience. Their exceptional project management and teamwork have led to successful outcomes, earning praises across our organization. The transition of our systems to Oracle and enhancements in our operations have been seamless, thanks to their expertise. Their handling of a complex ERP project and transition has solidified our decision to continue collaborating. We are excited about future projects and confident in the ongoing positive impact on our operations.”

- Head of Global Operations, A Manufacturing Company

Migration Benefits

- Advantages with Cloud agility and increased server capacity (vertical/horizontal) as per the business needs.
- Increased resilience with new fault tolerance architecture.
- Regional Disaster Recovery capabilities with 15-minute RPO and 4-hour RTO.
- Future readiness for business growth.
- Eliminated hardware support costs for in-scope applications.
- Moved further along in the journey to sunset the data center.

About Apps Associates

Apps Associates is a premier enterprise applications and technology advisor, counseling and executing across every stage of the enterprise transformation journey - not just the destination. For more than two decades, Apps Associates has closely collaborated with decision makers across nearly every industry, offering end-to-end integration, modernization, and cloud migration services. By helping to break down the silos within today's most complex business challenges, Apps Associates is unlocking solutions and efficiencies that scale into future opportunities.

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