

Re-platforming for Agility: How a Global Medical Device Manufacturer Migrated Oracle EBS from AWS to OCI



The customer is a global medical technology company that develops, manufactures, and markets innovative noninvasive patient monitoring technologies, hospital automation solutions, and consumer wearables.

35% Savings on infrastructure costs compared to AWS

Executive Summary

A global medical technology company planned to transition their Oracle E-Business Suite (EBS), ShipConsole, and Palo Alto (Firewall) environments hosted on Amazon Web Services (AWS) to Oracle Cloud Infrastructure (OCI). To support this migration and modernization effort, the company engaged Apps Associates LLC to provide architectural and technical expertise for setting up a new OCI tenancy and Migration.

The engagement established a secure and scalable foundation by building the OCI tenancy, including purpose-built Virtual Cloud Networks, VPN connectivity, latest OCI Security Services and Network Security Groups. The Apps Associates team implemented a structured compartment model to align with security and compliance requirements. Highly available Palo Alto firewalls were deployed across both primary and disaster recovery (DR) environments. In parallel, an Oracle license assessment was completed to optimize compute sizing for database workloads, ensuring both cost efficiency and performance.

A phased migration approach was executed, delivering four environments including DR, with database standby and application synchronization implemented to minimize downtime. Multiple migration and upgrade iterations were completed to refine cloning processes, backup strategies, and operational scripts. Custom and third-party integrations were successfully migrated and remediated, with full support provided across System Integration Testing (SIT), User Acceptance Testing (UAT), and production testing cycles. Post go-live, monitoring, backup, and OCI Cloud Guard were enabled and tailored to customer requirements to support stabilization and ongoing operations.

Driving Factors

The customer planned a structured modernization of its EBS environment by transitioning from AWS to OCI, aligning with future growth and evolving operational needs. The initiative was executed on an accelerated timeline, driven by the AWS Savings

Plan expiring within five months, which included a one-month stabilization period post-go-live prior to expiration.

As part of this transformation, OCI enabled flexible compute configurations, allowing precise alignment of CPU and memory resources based on workload requirements. This removed the limitations of AWS fixed instance types and supported more efficient and diverse testing scenarios across environments.

These changes are expected to improve system performance, enhance scalability, and simplify long-term maintenance through OCI's optimized cloud services.

Cost optimization was a key driver for this initiative. By migrating from AWS to OCI, the customer is expected to achieve approximately a 35% reduction in monthly infrastructure costs while also improving overall operational efficiency.

Environment

Oracle E-Business Suite:

- 12.2.10
- 19.23
- (1) Prod, (4) Non-Prod, (1) DR
- Servers (7)
- Size of the Database (1.1 TB)

Shipconsole: (Prod and Non-Prod)

- Tomcat 10
- (1) Prod, (2) Non-Prod
- Latest cloud based ShipConsole services
- Servers (2)

Palo Alto Firewall:

- (1) Prod HA Pair, (1) DR
- Virtual Appliances (3)

High Level Steps of Migration

The project started with mapping workloads from AWS to OCI, including an Oracle license assessment. After the customer's review and approval, detailed server build sheets were created for the implementation team. The OCI foundation was established with tenancy setup, Virtual Cloud Networks for primary (Phoenix) and disaster recovery (Ashburn), and compartments to properly segregate workloads. Secure connectivity was implemented between AWS and OCI, across OCI regions, and with the customer's locations. Palo Alto firewalls were deployed, upgraded to the latest version, and configured for high availability and disaster recovery with defined security rules.

In the next phase, a standardized hardened image was created with all required packages, libraries, and configurations for Oracle workloads. Using this image, environments were provisioned starting with production standby in OCI, along with application replication to reduce downtime. This approach was reused to build all required environments. The migration phase then transitioned into production systems, including EBS and ShipConsole, by building new servers, synchronizing data through standby, and completing full application and data migration. Testing cycles, including functional validation, performance tuning, and user acceptance, ensured stability. A centralized monitoring solution was also deployed to cover both production and DR environments.

The final phase focused on post-migration stabilization and operational readiness. Continuous monitoring was performed, user issues were addressed, and performance was reviewed to ensure system reliability. Monitoring, backup, and security services were enabled and aligned to the customers' needs. The project concluded with a structured handover to the customer's operations team, ensuring a smooth transition and long-term sustainability of the environment.

Challenges

During project planning, the customer set a target to complete the migration within five months, aligned with the expiration of the AWS Savings Plan, including a one-month stabilization period in the OCI environment. Given the tight timeline, Apps Associates mobilized multiple resources and executed activities in parallel to accelerate delivery.

During the initial testing cycle, the customer indicated that internal development activities were at peak, limiting their ability to validate the migrated environment. Considering the constrained timeline and ongoing development efforts, both

Apps Associates and customer teams agreed to revise the approach and migrate EBSDEV from AWS to OCI instead of rebuilding it from a PROD copy as originally planned. Based on this alignment, the EBSDEV environment was successfully migrated within ten days, including budgetary numbers, change order, approvals, and execution.

During subsequent testing cycles, it was identified that several third-party integrations could not be validated during SIT and UAT and would require validation during the PROD phase. Apps Associates and the customer jointly reviewed, documented, and implemented all integration points during the production iteration, resulting in a successful go-live with no integration issues.

Post go-live, a printing issue was identified where label printing was not functioning. Troubleshooting revealed that BarTender software, required for label printing, had not been documented or included in earlier test cycles. After allowing the required BarTender IPs through Network Security Group (NSG) and firewall rules, the issue was resolved and printing functionality was restored.

Despite these challenges, the Apps Associates team successfully delivered all requested components in line with customer priorities, demonstrating strong adaptability and flexibility—key strengths in managing dynamic and time-constrained migration projects.

Benefits Realized after Migration to OCI

- Increased application availability by scaling the production application tier to four nodes
- Enabled Parallel Concurrent Processing (PCP) to improve performance, scalability, and high availability while reducing single points of failure
- Reduced application maintenance effort by implementing a shared application tier using OCI File Storage (FS)
- Optimized compute resources with higher vCPUs and memory to improve overall performance
- Enhanced security and simplified workload segregation for better management and control
- Reduced cloud infrastructure spend by 35%, even after adding PROD capacity and increasing memory through flexible instances
- Oracle Support Rewards – Cloud credits offsetting Oracle support

About Apps Associates

Apps Associates is the premier middle-market OneOracle partner with a full-service business built on advisory, implementation, managed services, and AI services delivered across Oracle Cloud Infrastructure (OCI) and Oracle Cloud Applications. With more than 20 years of experience, Apps Associates services clients across all major industries, specializing in Life Sciences, Manufacturing, Financial Services, Healthcare, High Tech, Consumer Media Entertainment, and Energy and Utilities. With experience from 900+ cloud projects for 400+ customers worldwide, we deliver proven results that drive growth and innovation. With a customer retention rate consistently above 94%, Apps Associates is trusted as a long-term strategic partner, focusing on building lasting partnerships.

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