Move and modernize your custom and third-party applications to Oracle Cloud Infrastructure (OCI)
Your challenge

Custom applications are deployed by organizations to support unique business processes. They can range from homegrown IT applications to departmental applications and are frequently built on application servers, such as Oracle WebLogic Server®, Apache Tomcat®, Red Hat® JBoss®, and IBM WebSphere®. Custom applications may be difficult and inefficient to deploy and maintain on-premises. Additionally, custom applications often require specialized clustering, networking, dedicated resources, and low latency. Because of this, IT and line-of-business leaders consider migrating these applications to the cloud to ensure that they can efficiently support organizations. However, not all vendors offer migration solutions that can be executed without business interruption and result in agility, improved performance, and greater cost savings.

Our solution

Custom applications can be migrated to Oracle Cloud Infrastructure (OCI) with minimal re-architecture, re-integration, or business process changes. This results in a flexible and reliable solution that delivers higher performance and agile development at a lower cost than deployments running on-premises or with other cloud providers. By migrating custom applications to OCI, you can:

- Achieve superior economics: >3x better price-performance than Amazon Web Services (AWS)
- Protect yourself with industry-first, comprehensive SLAs for availability, performance, and manageability
- Support major application platforms, including Java EE, Apache Tomcat and WebLogic Server
- Use the Oracle Cloud Marketplace for Oracle and third-party applications for a one-click deploy from OCI across cloud management, networking, security, and several other categories
- Leverage Oracle Cloud Native services for Kubernetes, serverless, and Kafka, in addition to platform offerings such as Integration and Digital Assistant
- Innovate with the most comprehensive database service options in the industry, including Autonomous Database, that is only available on OCI
- Leverage Oracle’s “Bring-Your-Own-License” (BYOL) policy to protect your investment in on-premises databases and Oracle WebLogic
- Protect your data with security-first design from the core to the edge
- Enhance infrastructure and application monitoring with Oracle Cloud Observability & Management
- Enable multi-cloud with the Oracle and Microsoft strategic partnership

“...The story with Oracle Cloud Infrastructure is that it’s better, cheaper, and faster than what we had on-premises. We’re seeing jobs that used to take a couple hours to run, getting completed in minutes now on Oracle Cloud Infrastructure.”

Ron Hunsaker
Vice President of Enterprise Application Services, Maritz
Lower cost
Migrated Oracle & non-Oracle workloads, including Informatica & Cognos, from AWS to OCI at 30% lower TCO.

Greater agility
Nidec Motor moved Oracle and non-Oracle applications to OCI & reduced provisioning time by 70%.

Greater efficiency
Reduced system administration and development costs, while getting a highly available and scalable platform with end-to-end security.

Improved scalability
Zoom went from deployment to live production in just nine hours, transferring upwards of seven petabytes (10^{15} bytes) through Oracle Cloud Infrastructure servers each day.

Move your applications
Gain higher performance, improve scalability, and shift from CapEx to OpEx

Optimize your applications
Reduce manual work with platform services, improve agility with containerization, and automate your application lifecycle

Extend your applications
Improve user experience with new interfaces, expand app use with new APIs, and increase value with integrations to other apps

Start getting cloud benefits without rearchitecting your applications

Comprehensive hybrid choices
Dedicated Region, Exadata Cloud@Customer
Easily run services & apps on-prem, with cloud benefits
Oracle Cloud VMware Solution
Native VMware in public cloud, government cloud, or dedicated regions

Lower cost
Flex Infrastructure
Precisely provision compute resources with no waste
Lowest Cost Bandwidth
Move significant volumes of data at up to 80% lower cost vs other clouds

Easy cloud migration
Oracle Cloud Lift Services
Cloud experts help you move at no additional cost
Consulting and Advanced Support
Use Oracle’s paid offerings for the toughest migrations and most demanding operational needs

Improved performance
Oracle Exadata Cloud Service, Database RAC
Best cloud platform for running Oracle Database
Bare Metal Compute
Dedicated bare metal servers provide maximum performance, isolation, & control
Migration scenarios

Depending on business priorities, customers may choose from a few different approaches for migrating on-premises applications to the cloud. Oracle Cloud Infrastructure provides reference architectures that support a broad spectrum of options.

**Move as-Is (Lift and Shift)**

This approach makes as few changes to the application as possible. It reduces the chances of introducing differences in behavior, while still delivering the cloud benefits of improved performance from using the best hardware, storage and networking, as well as the financial benefits of moving from CapEx to an OpEx model. This includes overall lower TCO than on-premises infrastructure (up to 50% lower), enhanced security, compliance, and >3x better compute price-performance.

**Move and Optimize**

This approach uses Cloud Native and DevOps technologies such as containers, serverless, and event streaming to refactor the existing application. With Oracle Container Engine for Kubernetes (OKE), Oracle’s managed Kubernetes service, it is easy to build highly resilient, scalable infrastructure, while leveraging existing application code. Additionally, this approach can provide greater efficiency through services such as Autonomous Database, MySQL with Heatwave, Infrastructure-as-Code, and security technologies such as Cloud Guard and Security Zones.

**Move and Extend**

Multicloud customers can move their workloads to OCI and extend them to Microsoft Azure using the Oracle Azure interconnect. AI technologies such as Digital Assistant, Data Science, and Machine Learning help build smarter applications and drive innovation. End-users can get more value from their data through services for data analytics and data management. Integration is simpler with Oracle Integration Cloud and API Gateway.

Oracle Cloud Infrastructure supports all migration scenarios

Gonzaga University IT estimates 25% savings by migrating to OCI

Gonzaga migrated an on-premises 700 GB Oracle Database and Ellucian’s Banner Campus Solutions software system running on Tomcat application server to OCI

Improved performance by running on bare metal servers in the cloud

Lowered infrastructure costs by 25% and reduced time spent on maintaining hardware by 75% compared to on-premises

“We were 95% moving to AWS. [But] at the end of the day, our Infrastructure team, our ERP team, our Project Management team voted – it was unanimous for OCI.”

Darren Owsley
CTO, Gonzaga University

“PostgreSQL

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**Oracle Cloud Infrastructure supports all migration scenarios**

- **Packaged Applications**
  - SAP
  - Manhattan Associates
  - Siebel

- **Custom Applications Technologies**
  - PHP
  - Spring
  - Apache Tomcat
  - Java
  - Python

- **Databases**
  - Oracle Database
  - MySQL
  - MongoDB
  - Cassandra

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The most successful customers engage with cloud specialists from the start. Oracle Cloud Lift Services provide guidance from cloud engineers on planning, architecting, prototyping, and managing cloud migrations. Clients can move critical workloads in weeks, or even days, instead of months by leveraging these included services for customer tenancies.

Dedicated engineering resources

A comprehensive cloud solution includes infrastructure, software, processes, and people. As part of the Oracle Cloud Lift program, Oracle dedicates its top engineers that will help customers with their adoption of Oracle Cloud, including guidance on business value and TCO analysis, architecture design, networking/security review, onboarding and migration assistance, training resources, and go-live support.

Support from planning through go-live

A dedicated group of Oracle Cloud Infrastructure experts will assist customers from inception through go-live activities, including assessment, designing, and prototyping, migration, and management to accelerate your time to value.

Program access is included with tenancy

The Oracle Cloud Lift program includes available services globally and is a part of the customer’s tenancy on Oracle Cloud Infrastructure.

Migration made easy with Oracle Cloud Lift Services

“We are delighted that this project with Oracle has enabled Oracle and Rice to contribute this resource back to the Open Nebula community. The close collaboration between Oracle technical experts and my team has provided learning opportunities and enabled us to explore new and innovative technical solutions.”

Klara Jelinkova
CIO, Rice University

“Providing the best customer experience is extremely important to Experian. Moving the workloads to Oracle Cloud will enable us to use and analyze the data and positively impact our customers. Oracle architects partnered with our engineering team to accelerate workload migrations collaboratively and make it as simple and seamless as possible.”

Mervyn Lally
SVP and Chief Corporate Architect, Experian

“At Cargill, we’re constantly looking for new ways to improve and expand our business. Oracle’s cloud architects took us from zero to production through the Oracle Cloud Lift Services work and made it a smooth transition to launch new Cargill services in their cloud all while maintaining a strong focus on security. Oracle Cloud Infrastructure offered us the performance and support we needed to get off the ground and into the cloud.”

Terence Schofield
Quantitative Trading Technology Director, Cargill

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Klara Jelinkova
CIO, Rice University

Supported workload migrations

Oracle Packaged Applications
E-Business Suite, JD Edwards, PeopleSoft, Siebel, Hyperion, and others

Custom Apps on Oracle Database
Custom applications built on an Oracle Database or Exadata

Cloud Native Applications
Cloud Native integration including OKE, Data Science, Streaming, Functions, etc.

HPC
High performance computing (HPC) applications

VMware
Oracle Cloud VMware Solution

Data Warehouse & Analytics
Oracle Data Warehouse, Oracle Analytics Cloud, or 3rd party analytics workloads

Learn more
L

Oracle Architecture Center

Oracle Cloud Lift Services
Customer Success

Oracle Packaged Applications
Custom Apps on Oracle Database
Cloud Native Applications
HPC
VMware
Data Warehouse & Analytics

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Solution Overview / Migrate Custom Applications to Oracle Cloud / Version 2.2
OCI offers the lowest prices in almost every category

<table>
<thead>
<tr>
<th>Service</th>
<th>Oracle</th>
<th>AWS</th>
<th>Azure</th>
<th>GCP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flex Virtual Machine (Hourly, 2 core, 16 GB RAM)</td>
<td>$0.074</td>
<td>+132%</td>
<td>+159%</td>
<td>+104%</td>
</tr>
<tr>
<td>Bare Metal Standard ($/OCPU/Hour)</td>
<td>$0.0638</td>
<td>+82%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Bare Metal Dense IO ($/OCPu/Hour)</td>
<td>$0.1275</td>
<td>+64%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Kubernetes Cluster (Monthly, 50 cores, 750 GB RAM)</td>
<td>$2,297</td>
<td>+56%</td>
<td>+47%</td>
<td>+31%</td>
</tr>
<tr>
<td>Block Storage High IO (Monthly, 400 GB, 25k IOPS)</td>
<td>$23.80</td>
<td>70X</td>
<td>54X</td>
<td>77X</td>
</tr>
<tr>
<td>Public Bandwidth Transferred Out (50 TB/Month)</td>
<td>$340</td>
<td>12X</td>
<td>12X</td>
<td>12X</td>
</tr>
<tr>
<td>Private Line Network (Monthly, 1 Gbps, 100 TB data)</td>
<td>$155</td>
<td>14X</td>
<td>36X</td>
<td>14X</td>
</tr>
<tr>
<td>Managed MySQL (Monthly, 100 OCPUs, 1 TB data)</td>
<td>$5,486</td>
<td>3X</td>
<td>3X</td>
<td>2.5X</td>
</tr>
</tbody>
</table>

Green = Lowest cost
Based on published pricing as of May 13, 2021

Security from core-to-edge

Oracle Cloud Infrastructure employs a security-first design that is resilient to firmware-based attacks and offers a comprehensive set of security solutions from core all the way to edge services. Architected from the ground up for maximum isolation and protection, Oracle Cloud Infrastructure re-envisioned security with:

**Isolated network virtualization**
In OCI, Oracle can’t see customer data and customers can’t see Oracle management code. Oracle uses custom hardware to guarantee clean resources for each customer.

**Maximum security zones**
Preconfigured mandatory security best practices for critical production workloads, which helps eliminate customer misconfiguration.

**Zero-trust architecture**
OCI offers identity and access management, data and application security, visibility into data movement, and an automated threat response.

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1st generation clouds
Most prevalent today

- VM/Guest OS
- Server Virtualization
- Hypervisor
- Network Virtualization
- Host OS/Kernel

To/From Other Tenants

2nd generation clouds
Oracle Cloud Infrastructure-wide

- Container (Optional)
- Separates Network and Tenant Environment
- Host OS/Kernel
- Isolated Network Virtualization

To/From Other Tenants
## Broad set of OCI services

### Interfaces and automation
- Console, CLI, API/SDKs, cloud shell, resource manager (Terraform)

### Databases
- Oracle Autonomous Database, MySQL services

### Machine learning
- Full lifecycle ML service (data prep, training, inference)

### Streaming
- Kafka-compatible service

### API management
- API design/
- API gateway

### Containers
- Container registry,
- Container Engine for Kubernetes

### Serverless
- Functions for serverless code execution

### Ops
- Continuous deployment, observability, management, monitoring

## Everything you need to build modern cloud native applications

### Greater efficiency
- **Autonomous services**
  Automate database and Linux tasks & improve operational efficiency w/ ML
- **Infrastructure-as-Code**
  Improve DevOps productivity with open standard Terraform

### Greater agility
- **Container Engine for Kubernetes**
  Reduce the time and cost to deploy modern applications
- **DevOps**
  Streamline your software development and deployment

### Higher performance
- **MySQL with Heatwave**
  Adds high performance analytics to MySQL apps, reducing costs and time to insights
- **Ampere A1 Compute**
  Best price-performance compute in the market, and a strong ecosystem to build new apps

### Simpler security
- **Cloud Guard**
  Quickly/continuously monitor & report on security posture at no extra cost
- **Security Zones**
  Easily enforce maximum infrastructure security with all your applications

## Deep tools ecosystem

- **Terraform**
- **GitHub**
- **paloaltonetworks**
- **Fortinet**
- **cybereason**
- **JFrog**
- **RANCHER**
- **Grafana**
- **DATADOG**
Resources

Learn more about the solution

- Migrate Custom and Third-Party Applications to OCI Webpage
- OCI: Purpose-built for the Enterprise
- Oracle Cloud Infrastructure customer successes
- 7 roads to cloud success with Oracle Cloud Infrastructure

Demos & Workshops

- OCI Move and Improve Workshop
- Move Custom Applications Overview Demo
- Live Labs for Application Developers

Industry Reports

- IDC Report: OCI’s Value for Heterogeneous Workloads
- Omdia Report: All Clouds Are Not the Same
- Gartner Report: It’s Time to Include Oracle as a Viable Option When Evaluating Public Cloud Providers
- Dao Report: Securing Data and Applications in the Cloud

Technical Assets

- Database Migration Reference Architectures
- Migrate your On-Premises Oracle WebLogic Server Workloads to the Cloud
- Migrate a WebLogic Server Instance to OCI
- Oracle Architecture Center

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