



Market Insight Report Reprint

Oracle Cloud Infrastructure offers feature-rich, cloud-native experience for developers and DevOps engineers

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The company is quickly expanding its developer services to provide the kind of cloud-native constructs required for modern application development and modernization environments, including containers, serverless and managed services. The organizing principle for Oracle's approach to cloud native centers on its broad ecosystem of partners, open source tools and Oracle managed services.

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Introduction

Oracle is quickly expanding its developer services to provide the kind of cloud-native constructs required for modern application development and modernization environments, including containers, serverless and managed services. The organizing principle for Oracle's approach to cloud native centers on the broad ecosystem of partners, open source tools and Oracle managed services it has created, plus a simplified design point, running on flexible infrastructure, together with a broad ecosystem of partners.

THE TAKE

Oracle is building a rich experience for cloud-native application development, modernization and migration to support all use cases (see figure below). This reinforces the compelling proposition the company is building around applications and enterprise cloud more generally. Although it is a late entrant to the cloud computing market, Oracle is pitching a strong corporate narrative around the cloud, and can now position its combined cloud-native, cloud infrastructure and application assets as a partner-strong, integrated offering that intersects with the industry replatforming onto technologies such as Kubernetes and serverless.

Technology

Oracle provides a modern application development framework for building modern applications, and a platform for building, moving, optimizing and modernizing applications. In addition to Oracle managed services and tools, it offers open source services and frameworks, and a range of DevOps tools, plus integrated security across IaaS, PaaS and SaaS.

This runs on the company's Gen-2 Oracle Cloud Infrastructure (OCI), the infrastructure platform for Oracle, custom and ISV applications. Oracle managed services that run on OCI include Oracle Kubernetes Engine (container engine for Kubernetes), container registry, serverless functions (via Oracle Functions), streaming, events service, API management, observability and management, and database services (Oracle Database, MySQL, NoSQL).

Oracle believes its approach is differentiated with its use of a simplified model for application development, its OCI flex infrastructure that provisions only the precise resources required, the MySQL Database Service with Heatwave and Verrazzano, its general-purpose open source-based container platform. Verrazzano includes and builds on the WebLogic Kubernetes Toolkit, enabling customers to modernize existing WebLogic applications, and move them to containers or the cloud without rewriting them.

Verrazzano manages the WebLogic Kubernetes Operator lifecycle, database connections and ingresses. Verrazzano also automates the service mesh and observability setups for WebLogic applications, and enables customers to deploy and manage container workloads on-premises or in the cloud. Oracle provides 20+ free, cloud-native services that can be used in 30+ regions including support, Cloud Lift services and Support Rewards.

The company offers a CNCF-conformant Kubernetes distribution as Oracle Container Engine for Kubernetes (OKE) managed service, which has been updated for the following.

Security

- Support for network security groups
- Encrypted communication and encryption of data at rest and in-transit
- Support for image scanning and signing
- Support for mapping OCI IAM groups to Kubernetes RBAC
- Private Masters

Development

- Automated build and deployment pipelines through OCI DevOps service
- Support for ARM shapes
- Support for GPU shapes

Operations

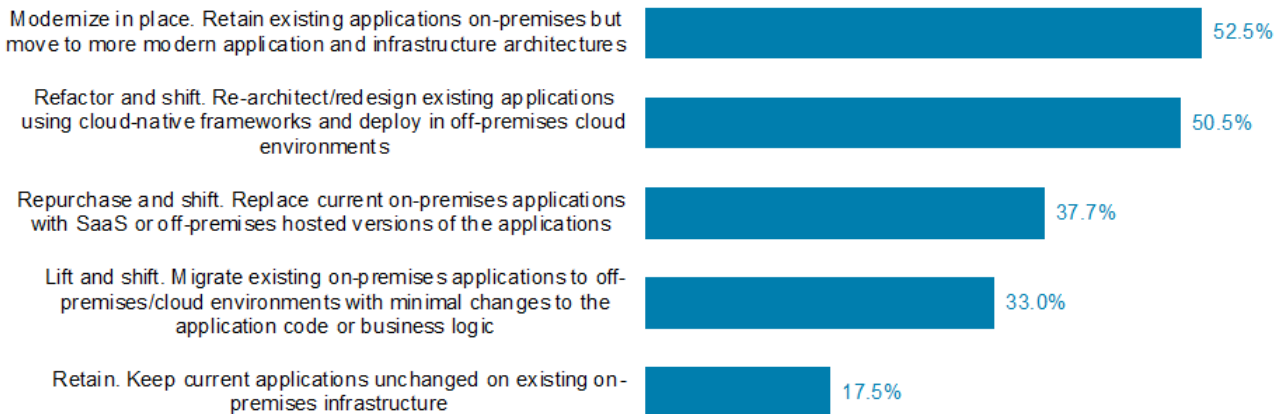
- Node Doctor Support for reserved public IPs on load balancers
- Cluster Node Autoscaling Newer Kubernetes versions (1.20)

Oracle's OKE investments include serverless Kubernetes and preemptible worker nodes for development (on the roadmap); simplified upgrades, native pod networking and tagging of cluster resources for operations; and OCI service operators for Kubernetes (MySQL, streaming, Autonomous DB) along with deeper integrations with partners in terms of extensibility. It offers the Oracle WebLogic Server for OKE for refactoring and optimizing WebLogic applications. Datascan is running on-premises WebLogic on Kubernetes using Oracle tools.

Oracle enables customers to create microservices that use multiple self-managed databases or a single instances of its Autonomous DB. It enables web/mobile microservice development (the Pompeii park has a cloud-native visitor app developed on OCI and OKE). There is also the addition of AI via prebuilt models (language and anomaly detection now, with speech and vision to follow). Customers can continuously improve and incrementally refactor applications using Oracle's optimization, observability and integrated security tools.

Enterprises Use a Range of Modernization Motions

Thinking of your organization's overall application modernization efforts, which of the following approaches will likely be part of that modernization effort? Please select all that apply



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Base: Organizations expressing need for some degree of modernization (n=297)

Source: 451 Research Voice of the Enterprise: Digital Pulse, Application Modernization 2021

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Competition

In the cloud infrastructure and platform realm, Oracle OCI competes with AWS, Microsoft Azure, IBM Cloud, Google Cloud Platform and Alibaba Cloud. Each cloud provider has its own suite of cloud-native and modern application development services.

In addition, VMware has a strong cloud-native development portfolio, while Hewlett Packard Enterprise is building out its developer services. Hybrid clouds offer promising integrated on- and off-premises IT operations, including Oracle Cloud@Customer, AWS Outposts, Microsoft Arc, Google Anthos, IBM Cloud and Alibaba's Cloud Enterprise Network.

SWOT Analysis

<p>STRENGTHS</p> <p>Oracle's cloud-native business revolves around fully managed container and serverless offerings built on the Oracle Gen2 cloud offering. It is backed by an expansive ecosystem of partners, open source frameworks and Oracle managed tools and services. Clean, simple stories are going to be most effective in a market that is thrashing, complex and confusing. Oracle positions its portfolio of services as a more simplified approach than offered by competitors.</p>	<p>WEAKNESSES</p> <p>The question is whether Oracle Cloud Infrastructure can continue on its trajectory as a destination for new logos with cloud-native workloads, or whether it will be used primarily by existing customers. To be sure, it has successfully onboarded startups, as well as large organizations like Zoom, FedEx, 7-Eleven and Toyota.</p>
<p>OPPORTUNITIES</p> <p>Replatforming to cloud native is similar to replatforming to the internet and web, which every business undertook in the 1990s and 2000s. It is going to take some years, and there is a huge opportunity.</p>	<p>THREATS</p> <p>The richness of the cloud-native ecosystem presents a daunting number of things for developers to learn and buyers to choose between. Talent is becoming a major constraint. All in all, there is a developer experience crisis that threatens to slow organizations down.</p>

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