Perspectives on Cloud Migration

Minimize Disruption, Maximize Returns: A Guide for Business and IT
The Opportunity

Most organizations see the potential of cloud computing to extend their IT capabilities, but there are some obvious questions they need to answer before making a major shift to the cloud. How much storage capacity will I need? Will my on-premises compute capabilities translate to cloud-service compute models? Can I reuse my existing software licenses in the cloud? How much will we save on hardware, software, and data-center facilities?

In reality, most organizations have embarked on a gradual journey to the cloud, which means they must maintain on-premises technology and cloud-based assets simultaneously. Line-of-business managers want new functionality, fast, which often draws them to new SaaS solutions. Meanwhile, IT leaders want to minimize shadow IT processes and establish an enterprise strategy for cloud deployments. They don’t just want new functionality, but a comprehensive platform for cloud computing.

Oracle has the technology and services organizations need to stage a successful transition. Its entire cloud strategy pivots around a workable, hybrid-cloud strategy. Oracle IaaS, PaaS, DaaS, and SaaS offerings utilize the same standards, technology, tooling, and skillsets across on-premises and cloud deployments, which dramatically simplifies the transition of applications, data, and infrastructure.
"Choosing the right cloud provider is no longer just about technology at a single layer of the solution," suggests Marek Ranis, principal at Pique Solutions, a management and strategy consulting firm that works with Fortune 500 companies on cloud and other business cases. "It's more about the cohesiveness and completeness of the offering, from infrastructure to platform to applications. Companies like Oracle have an advantage here because they have decades of experience solving business problems and they understand the complex business challenges. This type of expertise is becoming more and more valuable to companies migrating to [the] cloud."

This guide describes the technology and services you need to migrate all your IT workloads to the cloud while maintaining optimum capabilities and service levels. It offers advice from analysts, IT experts, and Oracle executives—along with five case studies from companies like yours that have embarked on a successful cloud journey.
One way to avoid lock-in with a cloud provider is to ensure that your applications can be seamlessly moved between data center and cloud, and back again. Especially for existing applications that are built on the Oracle technology stack, moving to the cloud minimizes disruption because the migration doesn’t require recoding. You will enjoy complete compatibility between your cloud and on-premises workloads, allowing you to preserve your existing Oracle investment even as you modernize your business.

For example, Oracle has standardized its management tools to give administrators a common experience, whether they’re used in the data center, a private cloud, or a public cloud. That’s a huge advantage for enterprise workloads that straddle multiple cloud and on-premises domains.

Oracle also eases the transition of enterprise application workloads with tools that automate the migration of applications and data to Oracle Cloud, and a tight level of service integration across its IaaS, PaaS, and SaaS offerings.
How Do Cloud Providers Stack Up?

Dao Research interviewed key business and IT stakeholders at a dozen large companies to better understand their respective journeys to the cloud. They gathered experiential feedback on three key vendor cloud platforms—Amazon Web Services (AWS), Microsoft Azure, and Oracle Cloud—with focus on the business value realized and expected from their cloud strategy, and their future plans related to cloud deployments.¹

The choice of a provider is no longer about the one great technology at a single layer of the solution stack, but rather about the completeness of the offering from infrastructure to platform to applications, the report advises. It’s about understanding complex business challenges and making it all work together, be supported together, and be billed together.

Recent research from RightScale found that on average, cloud users were using eight clouds: running apps in four, and experimenting with four more. The spread of use across public and private clouds was pretty even, as was the use for apps and experimenting.²

“Customers in our study cited key advantages for Oracle relative to Azure and AWS including performance on its cloud infrastructure, and a service pricing and governance approach that far better supports chargebacks critical for global operations.”


Oracle has the lead on the hybrid-cloud front because they’re approaching it from a business applications perspective, not simply an infrastructure or technology perspective.”

Dao Research

Five reasons market leaders migrate to the cloud.

1. Boost operational efficiency
2. Improve information flow
3. Establish an industrial-strength technology platform
4. Increase business agility
5. Accelerate application development

Read the feature article: “Five Ways an Integrated Cloud Platform Gives You the Competitive Edge.”

Oracle
Think Strategically

According to analysts at Ovum, for enterprise customers looking to adopt cloud services, the journey must be carefully planned so that cloud adoption is strategic, not just tactical. Big companies have hundreds of applications, dozens of databases, millions of lines of code, and hugely complex IT configurations. Moving to the cloud requires them to rip up the connective tissue and redo it all.

Marek Ranis agrees. “It is important to have a roadmap in place and a long-term vision to guide you—not just short-term, but in five years,” he notes. “That should include a target architecture and some understanding about how a cloud provider would support that architecture.”

A cohesive architecture is especially important for big companies that need to preserve lots of application code, middleware, and databases—from Oracle and other vendors. Lift-and-shift migrations for large IT shops are extremely complex, since they invariably involve multivendor technology stacks with consequent integration, application development, systems management, and security. Complex billing models can complicate these migrations.

“It can be hard to unravel what you will have to pay for, how to establish the right configuration, and how much it will cost when you move to the cloud,” says Marek. “Overprovisioning can lead to unnecessary costs, yet you can’t assume that you will need the same configuration in the cloud as you do on premises, since cloud providers often have much more effective computing resources.”

Ovum, 2017
To lower ongoing maintenance costs, it’s important to select a cloud provider that can help move your entire application stack to the cloud—and easily manage and enhance that stack using modern DevOps processes. In many cases, these migrations begin with establishing a new platform for application development and testing, and then proceed to business applications and data. Of course, cloud platforms must also include business applications and database services that deliver comparable performance, scalability, and reliability to your on-premises versions.

According to Roy Illsley, Principal Analyst of Infrastructure Solutions at Ovum, critical business workloads such as databases, ERP systems, and CRM apps are quickly becoming a high priority to move to cloud environments. The challenge with those core applications is that they are not cloud-native and therefore require more of a platform approach so that they can be integrated into a cloud environment to enable operational efficiency.\(^3\)

What does that mean on the front lines? While many cloud vendors are experienced with infrastructure deployments (IaaS), they lack integrated services and unified support models for the associated applications (SaaS), databases (DBaaS), and platforms (PaaS). Illsley believes the journey to the cloud starts with IaaS and quickly expands to PaaS. In that vein, he encourages customers to ask two key questions:

- Does this provider understand and have experience of running mission-critical systems?
- Do the reliability and uptime statistics show that the provider delivers above-average service?

Moving applications to the cloud sometimes requires changes to applications, databases, and tools—a complex and costly endeavor that can mean throwing away years of IT investments. Analysts at Ovum believe it is critical that cloud vendors offer a streamlined path to move these workloads to the cloud.

To help pave the way, Oracle designed a TCO calculator that can help you determine the current cost of your Oracle Database deployments, and compare them to the cost of operating a similar Oracle Database footprint on Oracle Database Cloud.

**Oracle Cloud Database TCO calculator.**

Determine how much you will save with Oracle Cloud

1. Simply input the details about your on-premises compute and storage requirements
2. The tool calculates TCO and shows potential savings of migrating database operations to Oracle Database Cloud
3. It provides a detailed breakdown of the costs by software, business (operations, personnel), server, storage, and facilities

### Three Years TCO Savings with Oracle Database Cloud: 33% cost reduction = US$ 133K

Here are the potential savings for **Edge Direct Government Application Reseller**. Below is further detailed listing of your savings.

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<th>Environment</th>
<th>On-Premises</th>
<th>Oracle Cloud</th>
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<td>16</td>
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<td>StorageTB</td>
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<th>TCO</th>
<th>On-Premises</th>
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Three Years TCO Savings with Oracle Database Cloud: 33% cost reduction = US$ 133K
“We are completely transforming the way all companies buy and use [the] cloud.”

Larry Ellison, Oracle Chairman and Chief Technology Officer
Many organizations are eager to adopt Oracle Database in the cloud but are unsure how to balance spending among various types of deployment options. Oracle recently introduced two new programs to make it easier to buy and consume cloud services, helping you get more value from your hardware and software investments.

Oracle Universal Credit Pricing allows you to access current and future Oracle Cloud Platform and Oracle Cloud Infrastructure services under a single umbrella contract. In addition, Oracle’s new Bring Your Own License program allows you to apply your on-premises software licenses to equivalent Oracle services in the cloud.

These popular programs alleviate cloud-adoption challenges by simplifying the way your organization purchases and consumes cloud services.

Rapid consumption of cloud resources.

Now that it’s so easy and affordable to move your Oracle assets to the cloud, you have greater flexibility than ever for how, what, and where you use cloud services. This is a unique opportunity to attain license mobility and unlock greater value from your Oracle investments. Customers with on-premises licenses can now use Oracle Database Cloud at a fraction of the old PaaS price. Oracle Database running on Oracle Cloud Infrastructure delivers unmatched performance and the industry’s lowest total cost of ownership.

In addition to the convenience, reliability, and scalability of operating your database-management systems in Oracle Cloud, you’ll be able to apply Oracle’s Universal Credits to all current and future PaaS and IaaS services. This allows you to establish a complete cloud platform for development, migration, and management of your critical hardware and software assets.

Learn more at oracle.com/byol
Cloud Migration Stories

Let’s take a look at the real-world experiences of five Oracle Cloud customers.

Use Case #1: Oracle Apps

ClubCorp is modernizing its IT environment by migrating a mix of Oracle and non-Oracle workloads to Oracle Cloud, enabling business leaders to onboard newly acquired clubs more quickly and to control IT costs as the company expands. While migrating a complete application stack to the cloud may seem like a daunting task, ClubCorp’s IT leaders got behind the project when they learned that all of Oracle’s on-premises applications and databases are 100 percent compatible with the versions running in Oracle Cloud.

Oracle offers proven technology to simplify these migration projects, including:

- A complete, integrated cloud platform that can be instantly scaled as needed
- Connectivity with Oracle and third-party SaaS offerings
- The same familiar management tools that system administrators use on-premises
- The ability to modernize a large environment incrementally

Migrating Oracle E-Business Suite and other production systems to Oracle Cloud has freed up ClubCorp’s IT staff to focus on bringing innovative technology to more than 200 golf and country clubs, business clubs, sports clubs, and alumni clubs.

Featured video: ClubCorp completes a “lift-and-shift” migration to Oracle Cloud.

“We anticipate that moving our entire IT environment to Oracle Cloud will have an incredible impact on our business model in many ways, including our ability to serve our clubs and their members.”

Patrick Benson, CIO, ClubCorp
Use Case #2: Custom Apps

Most organizations depend on diverse, multivendor IT environments that include applications from a range of vendors, along with custom apps developed to satisfy unique business requirements. By bringing these environments together in the cloud, they can realize multiple benefits, including:

- Tighter integration between applications and business operations
- More-comprehensive application-management capabilities
- Advanced technologies for mobile computing, social networking, and business-driven analytics

Consider Larger Than Life, a midsize out-of-home digital printing company that produces banners, billboards, vehicle wraps, bus and taxi advertisements, and more.

Using Oracle Database Cloud Service and Oracle Compute Cloud as a development and production environment, Larger Than Life’s IT team built a tightly integrated cloud-based ERP system and online ordering portal that links to real-time processes on the manufacturing floor via mobile devices. Oracle Cloud hosts a custom-developed ERP system and online ordering portal that automates order-entry, fulfillment, shipping, and invoice generation—streamlining internal processes and improving the customer experience. Larger Than Life has expanded its business by 25 to 30 percent without adding new staff, keeping overhead expenses down.

Read the success story: Larger Than Life Leverages Cloud Services to Run Efficient Manufacturing Process

“With a minimal IT staff and Oracle Cloud, we are transforming the way we do business—running our entire manufacturing process using Wi-Fi, with Oracle Cloud behind it.”

Paul Davidson, Director of Applications Development, Larger Than Life
Telecommunications giant AT&T has embarked on a cloud migration project that involves transferring 40,000 internal databases, plus their associated application workloads, to Oracle Cloud. The decree for this massive endeavor came from the top levels of the organization, when AT&T Chief Strategy Officer John Donovan realized that AT&T depended on hundreds of database administrators to back up, restore, scale, patch, and monitor the company’s data assets. AT&T decided to adopt Oracle Autonomous Database in Oracle Cloud to automate these routine maintenance activities.

AT&T now has global access to Oracle’s cloud portfolio, both in the public cloud and on AT&T’s Integrated Cloud, which will increase productivity, reduce IT costs, and bring a new wave of SaaS applications to its global enterprise. Oracle is helping AT&T migrate these databases and extend the reach of its critical applications using Oracle’s innovative development, management, and migration tools.

**Featured Article:** AT&T Taps Oracle Cloud Services In “Historic” Agreement (Forbes)

“This collaboration with Oracle accelerates our network transformation and migration to the cloud to expand efficiency and performance, and reduce costs, while improving overall customer service.”

John Donovan, Chief Strategy Officer and Group President of AT&T Technology and Operations
Use Case #4: Backup and Recovery

Oracle conducted a survey of midsize to large companies to learn about their data-management challenges. A few common themes emerged:

- Workloads are increasing: 39 percent of DBAs handle 50 or more databases
- Automation is lacking: 95 percent of DBAs create or upgrade databases manually
- Outages are common: 78 percent of DBAs will experience unplanned downtime from untested database changes during their careers
- Backups are a chore: Two out of three organizations use multiple tools to back up a single database

Fortunately, help is at hand. Backing up business data to the cloud not only prevents data loss and safeguards critical information, but also helps these organizations maintain productivity and cut costs.

Elton Oil Company’s journey to the cloud began with securing remote disaster-recovery services. “All of our business data must be available in the event of a disaster,” reported Abdoulaye Dieng, chief information officer at Elton Oil. “Oracle offered an external, secure, safe, encrypted database in the cloud. Oracle Cloud services are very affordable compared to other cloud vendors.”

All of Elton Oil’s sensitive data—including financials, management, transportation, distribution, and logistics—resides in a relational database that underpins the company’s Oracle JD Edwards applications. Now it is seamlessly transmitted to Oracle Cloud. Elton’s widely dispersed staff has gained uninterrupted access to timely distribution data, while eliminating concerns about data loss via a natural disaster or other mishap—with no capital investments or additional hardware required. Furthermore, by replicating data across multiple storage nodes within the same data center, Elton Oil gained protection from hardware failures, and has minimized the chance of data corruption.

Read about Elton Oil’s innovative cloud backup strategy in Oracle Magazine.

“Oracle Cloud is not only a strategic element of Elton Oil’s IT strategy. It is an essential part of our business.”

Abdoulaye Dieng, Chief Information Officer, Elton Oil
The growing demand for data and analytics is driving organizations to move data warehouse workloads to the cloud. According to the respondents of a recent CIO Research report, two-thirds of organizations had difficulty managing the growth of data and users, and 60 percent of the organizations surveyed claimed that their data warehouses were too complex to manage effectively. Many others complained about high IT acquisition and maintenance costs, while some respondents said their data warehouse solutions were too slow, difficult to deploy, or lacked the flexibility necessary to handle varying data types.

Tim Vlamis, an Oracle ACE and vice president at Vlamis Software Solutions, sees tremendous potential for organizations that move data warehouse workloads to the cloud. These organizations need fewer onsite support staff to manage data and analytics processes, and have less IT overhead. He is especially enthusiastic about Oracle Autonomous Database, which makes creating a data warehouse a simple load-and-go process. All management tasks are fully automated, including database-tuning chores. Elastic capacity means you can scale up or down instantly, with no downtime.

Popular use cases for data warehouse clouds include “sandbox” environments, line-of-business data marts, and database backups. Other use cases include high-performance data-management projects, data warehouses coupled with cloud computing analytics, and big data cloud implementations.

Watch the video with Tim Vlamis to learn about the potential of Oracle Autonomous Data Warehouse.
Looking to the Future with Oracle Cloud

As Oracle President of Product Development Thomas Kurian told Profit in a recent interview, today’s customers understand the value of cloud computing—how much money they can save, how fast they can deploy workloads, and how easy it is to run and use applications without having to manage the systems themselves. Kurian knows that cloud technologies will continue to transform modern businesses, and he believes Oracle’s job is to make sure customers have the platform they need to adopt these technologies as they see fit.¹

According to Kurian and other Oracle executives, three pillars separate Oracle Cloud from competitive offerings:

1. Oracle Cloud offers industry-leading performance, allowing you to compete more effectively, differentiate your services, and reduce operational costs.

2. Oracle’s “100 percent compatibility” promise gives you the flexibility to run solutions on-premises, in the cloud, or in a hybrid-cloud model.

All Oracle Cloud solutions allow for flexible deployment models, enabling you to seamlessly migrate your IT workloads from an on-premises data center to the cloud and back again. Best of all, Oracle offers competitive cloud pricing for all types of businesses in every industry, with affordable solutions for companies of all sizes.

For more information, visit oracle.com/migrate-workload or sign up for a free trial at cloud.oracle.com/tryit.