Among the many “as a service” offerings that have emerged in the cloud computing era, infrastructure as a service (IaaS) and platform as a service (PaaS) are among the most widely adopted. IaaS offers hardware infrastructure components on which companies can deploy their corporate software and workloads, whereas PaaS provides a full-stack environment containing the core hardware and software elements required for different tasks.

Growing numbers of companies have migrated some or all of their on-premises IT infrastructure deployments to IaaS and PaaS cloud environments and are realizing a range of benefits as a result. Among the many benefits: anywhere/anytime access, open-ended scalability, infrastructure flexibility, rapid deployment, and shorter time to market.

One of the most sought-after benefits, not surprisingly, is cost reduction. By migrating applications to the cloud, companies can save money by reducing IT equipment purchases, and shifting the operational burdens of maintaining, upgrading, and securing the IT infrastructure from their own IT professionals to those employed by the cloud providers.

Furthermore, because some cloud providers implement next-generation hardware, software, and technologies such as artificial intelligence more rapidly and effectively than corporate data centers can manage, companies may also be able to achieve significant performance advantages, AI benefits, and reduced costs.

**Cloud pricing and cost structures a hurdle**

Although cloud economics can be compelling in theory, many companies have found it difficult in practice to anticipate and manage their actual cloud costs. In fact, in a recent IDG survey of more than 530 IT and business decision-makers, 40% of the respondents identified controlling costs as their top public cloud challenge.
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Part of the challenge in determining and optimizing cost efficiencies is that cloud cost structures and pricing tools vary considerably among the major cloud providers. Furthermore, some providers charge different prices for services based in different geographic regions, as well as data ingress and egress into and out of the cloud, and data storage.

Add to that variability the many individually priced cloud infrastructure elements, each with its own configuration and functional options, and it’s no wonder that companies can find themselves facing daunting cost complexities.

Also factoring into the choice of a cloud infrastructure provider are the billing models providers offer. Most large cloud providers offer two or more billing options, and the terms and flexibility of each can vary considerably.

In fact, flexibility—in making desired changes to the cloud infrastructure configurations and capabilities as well as in billing methods—is one of the most critical differentiators among cloud offerings.

Oracle was determined to address economic as well as functional demands when it designed its cloud. It architected Oracle Cloud to minimize variable, hard-to-predict costs; deliver consistent pricing across regions; provide service and billing flexibility; and offer industry-leading price/performance and business value.

Oracle also developed policies and tools—including an online cloud cost estimator to help customers achieve maximum cost efficiency and predictability. The result, as the customer examples cited below make clear, is that Oracle Cloud delivers the economic benefits companies seek, along with unparalleled service performance, utilization, and security.

Navigating the maze of cloud options and costs

Reducing IT expenses may be a universal goal, but it can’t take precedence over IT functionality, availability, and reliability. In some cases, companies have signed on to purchase cloud services, only to discover that these services lack the visibility and flexibility needed to achieve the optimal balance between their core business requirements and reduced costs.

Indeed, to ensure that they achieve the necessary service levels, companies often overpurchase cloud capacity. If they then realize that their environments aren’t fully utilized, they may find that their service contracts make it hard to readjust their deployments.

Often, determining the proper infrastructure configurations and options can prove difficult. Unlike software-as-a-service (SaaS) offerings, which typically come with relatively straightforward per-user/per-month pricing models, IaaS and PaaS deployments involve many variables and can be quite complex.

At a macro level, companies must assess the core infrastructure they need for supporting any workloads at the required service and availability levels. Those decisions involve not only the capacities of compute servers, storage platforms, and networking elements, but also other component and service choices, ranging from cybersecurity options to application and middleware variations.
Tallying the cost of any given cloud configuration can easily involve dozens of variables, including whether servers are dedicated (bare metal) or shared (virtual machines), the number and types of server CPUs and GPUs, the amount and type of memory and storage used, and the network bandwidth available. Actual costs can fluctuate, depending on the amount of storage used, the number of transactions executed, the volume of data transmitted, and other operational factors.

As if things weren’t complicated enough, some cloud providers vary their pricing between the geographic regions in which the infrastructure resides. And, as noted, cloud pricing models may promise flexibility up front but then prove difficult to modify when a customer’s needs change.

**Flexibility and transparency in pricing**

With Oracle Cloud, Oracle knew that it needed to provide more than just cutting-edge cloud functionality. It also had to price its services in a way that delivered unmatched price/performance metrics while making it easy for customers to manage and adjust the cloud configuration and its associated expenses.

Oracle removes much of the pricing scheme complexity common in the cloud marketplace. For example, Oracle Cloud:

- **Delivers consistent pricing** across regions. Customers pay the same price no matter the location.
- **Eliminates many variable charges.** For instance, Oracle offers 2 to 10 times as many data transfers for free than competitors, in part because there is no data volume charge for transmissions between on premise data centers and use of the Oracle Cloud Infrastructure **FastConnect network**.
- **Offers up to 10 TB of data storage** per month at no charge (whereas its main competitors offer only 1 to 5 GB per month of free storage).
- **Doesn’t charge extra** for enterprise support.

Beyond the free tiers of service, Oracle Cloud typically costs one-tenth to one-fifth as much as competitive cloud offerings.

When it comes to pricing out a potential Oracle Cloud configuration, companies can easily determine the cost by using Oracle’s cloud cost estimator. When pricing out a potential Oracle Cloud configuration, companies can easily determine the cost by using Oracle’s cloud cost estimator. Customers can select compute, storage, and networking elements as well as complementary services such as analytics, security, and integration functions.

With the cloud cost estimator, companies can also drill down to specify the number of users, the average days/hours of use, the desired performance levels, and other variables. The price of each element and the cumulative costs are tallied as selections are made.

Beyond cost transparency, Oracle Cloud offers customers the choice of three billing models:

- **Pay as you go** – Services are billed in arrears, based on consumption, making this option the best for organizations trying new services, performing rapid prototyping, or desiring elastic price scaling.
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The rise of multicloud

Oracle Cloud competes against Gen 1 cloud providers such as Amazon Web Services (AWS), Microsoft Azure, and Google Cloud Platform, among others. The IDG cloud survey makes clear, however, that companies don’t want to rely solely on a single vendor.

Of the 530-plus decision-makers IDG surveyed, more than half (302) use two or more public clouds. Companies with deployments in one cloud are increasingly exploring alternative platforms when existing contracts expire or when deploying new workloads into the cloud.

As they adopt multiple cloud environments to address specific needs, companies increasingly require interoperability between clouds as well as on-premises infrastructure and workloads. In 2019, that growing need led Oracle and Microsoft to form an interoperability partnership that built a bridge between Oracle Cloud and Microsoft Azure.

Thanks to the partnership, customers can run part of a workload in Oracle Cloud and part of the same workload in Azure. Among other capabilities, the seamless integration between the two cloud environments supports unified identity and access management, a collaborative support model, and the deployment of certified Oracle applications on Azure.

Proven price/performance

Besides its pioneering partnership with Microsoft, Oracle has disrupted the existing cloud landscape in other ways. Two years ago, for example, StorageReview ran separate and independent tests of Oracle Cloud and AWS EC2 (Elastic Compute Cloud) bare metal performance. Among StorageReview’s findings (as detailed in a subsequent Oracle blog post): Oracle Cloud delivered up to 5X the performance of AWS EC2 at 19x lower cost when running on comparable remote block storage configurations.

Today, comparisons of the pricing charts from major cloud providers show that Oracle Cloud continues to deliver price advantages of up to 65% or more versus its competitors for many common configurations and services.
Customers routinely realize significant price/performance advantages over on-premise deployments and other cloud providers.

Oracle Cloud customers routinely realize significant price/performance advantages over on-premise deployments and other cloud providers. Among the growing list of customer success stories:

**8x8** – 8x8 is transforming the future of business communications as a leading software-as-a-service provider of voice, video, chat, contact center, and enterprise-class API solutions powered by one global cloud communications platform. 8x8 moved its video meetings services from AWS to Oracle Cloud for substantial performance enhancements—experiencing more than a 25% increase in performance per node on Oracle Cloud Infrastructure, compared to the previous cloud provider—global reach, and savings of more than 80% in network outbound costs.

**OceanX** – This provider of a subscription commerce platform for brands offering direct-to-consumer services migrated its data analytics platform from AWS to Oracle Cloud and Oracle Database Exadata Cloud Service. The result: 30% lower costs and 300% faster performance.

**CARE** – The global humanitarian nonprofit CARE moved its operations to Oracle Cloud to achieve needed scalability, transparency, and efficiency objectives. Its cloud-based workloads include financial management software for handling varying tax laws and complex grant and compliance requirements, as well as a time and expense reporting system for thousands of employees and contractors. CARE estimates that it is saving $250,000 each year thanks to Oracle Cloud, money it can apply to its core missions.

**McAfee** – This leading cybersecurity vendor needed to significantly scale its own services as its customers moved their workloads to the cloud. When one customer asked McAfee to monitor hundreds of thousands of sources and as many as 150,000 events per second, it turned to a highly scalable bare metal Oracle Cloud Infrastructure solution. With Oracle Cloud Infrastructure, McAfee was able to monitor 600,000 sources and handle close to half a million events per second, all at one-quarter the cost of running the solution on other cloud infrastructures.

**HID Global** – This multibillion-dollar provider of identity management solutions faced a major digital transformation as it shifted its business model from one based on perpetual licensing to subscription services. As part of this transition, HID Global knew that it needed to move its IT operations to the cloud. After evaluating both AWS and Oracle Cloud, the company selected Oracle Cloud, in part because it was able to migrate its on-premise Oracle E-Business Suite to Oracle Cloud in less than 12 hours. HID Global estimates that it will save 50% to 66% in operating expenses over four years by eliminating data center costs.

**Cisco** – Cisco tried running its Tetration workload protection platform on two leading cloud provider platforms, but low CPU utilization rates forced the company to add more virtual machine instances, increasing its costs. By moving to Oracle Cloud, Cisco was able to steadily achieve 70% CPU utilization rates, enabling it to cut its customers’ costs. Furthermore, Oracle Cloud delivered 60X better performance and 90% lower total costs for Tetration SaaS customers compared to on site. Watch video

**N2N** – N2N initially deployed its flagship Illuminate Cloud Integration Platform on AWS but found that its cloud costs escalated rapidly, despite attempts to rearchitect its service to reduce those costs. The company decided to deploy Illuminate on Oracle Cloud and estimates that the move has slashed costs by 40%. N2N has also benefited from Oracle’s enterprise expertise as well as from its superior technical support.

To learn more about how Oracle Cloud can lower costs, provide more flexibility, and deliver industry-leading price/performance, go to [https://www.oracle.com/cloud/](https://www.oracle.com/cloud/).