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Oracle Infrastructure as a Service:

A Guide to an Integrated Approach to Today's IT Issues

Introduction

Digital developments are forever shaping the way we work, bringing new innovations through our office doors almost every day. These high-demand technologies have increased expectations, with organizations now having to drive business agility at unprecedented levels.

Although we're presented with enormous opportunity, we also face new obstacles that can block the path to success; obstacles such as the need to innovate quickly, keep costs down, and actively respond to competitive pressures.

As a result, staying ahead in today's markets is becoming increasingly difficult. In order to succeed, you need to free yourself from the IT-infrastructure shackles that restrict you and your company's growth.

Introducing Infrastructure as a Service (IaaS): the fastest growing segment of the cloud (compared to other segments Software as a Service (SaaS), Platform as a Service (PaaS) and Data as a Service (DaaS)). Enterprises are moving their workloads to the cloud infrastructure and retiring their datacenters. Around 80 percent of today's CIOs now deem IaaS an infrastructure option, with 10 percent already considering it their default infrastructure choice,[1] which speaks volumes about the potential its solutions can deliver.

[1] http://www.oracle.com/us/solutions/cloud/platform-as-a-service/oracle-cloud-iaas-brief-2994342.pdf

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1 Don’t Let Infrastructure Obstacles Obscure Your View

In the past, companies have been able to adopt and utilize a business-as-usual IT infrastructure and get away with it. They purchased hardware to keep pace with data growth, managed multiple servers, and hired an ever-increasing workforce to ensure their organization succeeded. But with diminishing budgets and fewer resources, these institutions can no longer afford to carry out each and every one of these processes to maintain their IT infrastructure.

Standard Public-Cloud IaaS

A step up from traditional corporate infrastructures, public-cloud IaaS offerings outperform their understudies, yet still fall short of the mark when it comes to addressing today’s market demands and expectations. Away from development and testing environments, many large organizations don’t use these infrastructures, because their software stacks differ from those of corporate data centers. This makes them highly complex and extremely expensive to maintain, and often, these large enterprises can’t migrate their existing data center and software. They also deliver completely different automation toolsets and APIs across a wide range of infrastructure clouds, and struggle to adapt to existing technology and architects.

Traditional Corporate Infrastructures

With traditional rigid, siloed corporate infrastructures, IT leaders found that their data centers were completely isolated, often containing inelastic compute, storage and network pools that limited utilization and led to overprovisioned hardware. These tricky environments also provided an incomplete picture of infrastructure costs… yet efficiently and effectively operating them cost IT professionals more than they could imagine.

2 Take a Leap Into the Unknown… Most CIOs Are!

As more and more organizations realize the need to update their IT in order to keep their competitive edge, the move to IaaS is becoming increasingly appealing. Between 2015 and 2020, the compound annual growth rate of global spending on IaaS is expected to rise from approximately US$15 billion to US$56 billion. This new demand has prompted a number of high-profile businesses to provide these innovative infrastructure services, with 2016's IaaS global spending likely to grow 38 percent to US$22.5 billion.[2]

These comprehensive infrastructures eliminate the cost and complexity that comes with traditional solutions—corporate and public-cloud infrastructures—especially when managing compute, storage, and networking environments. Sourcing and deploying the right IaaS solution empowers IT leaders to accurately bill users for specific resources, allowing them to keep up-to-date tabs on their infrastructure costs. Plus, they improve flexibility—where users can shift these costs from capital to predictable operational expenses—enabling IT professionals to easily scale environments to exceed their business needs.

IaaS in a nutshell:

One of three main categories of cloud-computing services (alongside SaaS and PaaS), IaaS offers infrastructure capabilities like compute (virtualized and bare metal), storage, and networking to enable enterprises to run their workloads in the cloud.

[2] http://www.oracle.com/us/solutions/cloud/platform-as-a-service/oracle-integrated-iaas-infographic-2996348.pdf

3 Oracle's Industry-Leading and Integrated Approach to IaaS

Working in unison with Oracle Cloud PaaS, Oracle's Cloud IaaS offering—consisting of Oracle Compute, Storage, and Network Cloud—allows IT leaders to run any workload in the cloud. Putting today's IT capacity worries out of sight, it delivers an elastic, secure, complete, integrated and cost-effective infrastructure in the cloud, which enables easy scalability with business growth.

Oracle Cloud IaaS makes migration straightforward and hassle-free, empowering IT leaders to quickly move their existing on-premises workloads to the cloud without incurring additional costs or having to spend valuable time on application and architecture changes. It provides on-demand access to environments, a choice of any operating system, an open standard-based platform, and the ability to scale capacity elastically.

In addition, Oracle Cloud Infrastructure seamlessly integrates with Oracle Cloud PaaS and SaaS to reduce costs and speed up business-application deployment in the cloud, delivering predictable precision performance and enterprise-grade security at the same time.

4 Oracle Compute Cloud Service

At competitive costs, this platform provides access to the same servers and infrastructure used to deploy and run Oracle's public clouds, along with SaaS applications and PaaS tools. IT staff can make the most of complete network isolation and exclusively assigned servers to maximize performance.

Business Benefits:

- Speed up innovation and agility by spinning up virtual-machine instances in minutes through an on-demand, self-service portal that's based on your business demands
- Utilize precision performance by using a predefined, isolated environment to run legacy Oracle or third-party workloads
- Achieve enterprise-grade security that doesn't compromise performance or high-availability (HA) capabilities
- Securely access your IT through a dynamic firewall that safeguards your virtual-machine instance and SSH keys from fraudulent activities

5 Oracle Storage Cloud Service

With zero capital expenditure, Oracle Storage Cloud delivers easy-to-use storage capacity to IT professionals, allowing them to store and retrieve files and data in Oracle's secure and highly scalable public cloud whenever and wherever they wish.

Business Benefits:

- Take advantage of a highly available storage solution that scales with your company growth
- Gain an industry-leading IaaS platform with zero upfront hardware expenditure or investment
- Access data simply and securely, anytime, anywhere, across any device
- Regulate who has read and write access to your business-critical documents, thanks to granular access control
- Provide efficient archival storage for applications and workloads that require long-term retention

6 Oracle Storage Cloud Software Appliance

Oracle Storage Cloud Software Appliance provides sufficient storage to enterprise-grade applications without any upfront costs. By bringing traditional data-access protocols closer to contemporary cloud storage, businesses can effectively save on capital expenditure without having to change their existing data-center applications and workflows.

Business Benefits:

- Simply deploy in minutes through a lightweight Docker-based image appliance
- Unlock near-local NAS performance through buffer caching: a configurable cache that supports enterprise-workload management
- Transfer files simply and securely to and from Oracle Storage Cloud with automatic segmenting of large files into smaller files
- Buy as much storage capacity as you need and eradicate overprovisioning, thanks to Oracle Storage Cloud Software Appliance's elastic nature (which traditional network-attached storage (NAS) appliances don't have)

7 Oracle Network Cloud Service

A secure, high-performance, high-bandwidth solution, Oracle Network Cloud Service empowers enterprises to freely connect any on-premises data center to Oracle Cloud. It includes site-to-site VPN service and FastConnect offerings to cater for both latency-sensitive and data-heavy applications.

Business Benefits:

- Safely and securely extend your on-premises network to your dedicated Oracle Compute zone through site-to-site VPN
- Gain high-bandwidth connections between your data center and Oracle Cloud services thanks to FastConnect
- Simplify your processes to create a robust yet easily accessible VPN gateway and connection in just a few steps
- Enhance security and performance by using symmetric key encryption

8 Oracle Bare Metal Services

The latest addition to the Oracle Cloud Platform, Bare Metal Cloud Services, integrates the attributes of a highly scalable public cloud with the capabilities of on-premises infrastructure to deliver industry-leading performance and availability. Bare Metal Cloud Services—including bare-metal compute, storage, virtual network, and more—empowers organizations to retain the visibility, governance and enterprise-grade security they are accustomed to with the on-premise data center, while adding the cost control, raw performance and scalability of cloud.

Business Benefits:

- Run business-critical workloads in the cloud with the unrivaled performance of bare-metal compute and NVMe local storage
- Efficiently control complex administration with identity management and governance, isolation, and billing competencies
- Ensure resources are secure—yet easily controllable—through integrated hardware, firmware, software, and network layers that meet and exceed extreme security and compliance standards
- Enable workloads to run reliably on fully independent infrastructure domains that overcome failure isolation and provide high availability

9 Oracle Ravello Cloud Service

Oracle Ravello Cloud Service simplifies taking VMware applications to public clouds. What's more, it automatically discovers, preserves and runs multiple VMs and networking topology in the cloud, eliminating the need for time-consuming modifications and enabling businesses to scale and accelerate their journey to the cloud.

Business Benefits:

- Simple lift and shift of VMware applications to the cloud without requiring any modifications
- Diminish CapEx and OpEx thanks to simple and fast migration of applications from on-premises to the public cloud
- Improve productivity by using familiar tools and skill sets from on-premises applications
- Easily scale with on-demand large deployment in all geographic locations

10 Oracle Container Cloud Service

A platform that provides a simple and quick way to develop and deploy an enterprise-grade Docker container infrastructure, Oracle Container Cloud Service extends business-agility benefits. Its comprehensive tools help compose, install, orchestrate, and manage Docker container-based applications on Oracle's Cloud for Dev, Dev/Test, DevOps, and Cloud Native.

Business Benefits:

- Rapidly provision personal Docker environments to get started building apps more quickly
- Easily get going with your container infrastructure by utilizing straightforward interfaces and connoisseurs, removing the need to learn complex orchestration
- Gain complete control over your operations, regardless of what stage you're at—development, testing, staging or production
- Kick-start your own containerized applications by leveraging example services and stacks

11 Oracle SPARC Model 300 Dedicated Compute

Integrated with Oracle Cloud, Oracle SPARC Model 300 provides computing, block storage, and networking services that allow enterprises to run application, database, and analytics workloads for production, development, and test environments faster.

Business Benefits:

- Easily and flexibly integrate with your existing systems to make the most of Oracle SPARC Model 300's powerful new capabilities without complex change
- Enhance productivity and accelerate projects with cloud-based DevOps
- Eliminate off-site backups thanks to transparent database backups to the Oracle Cloud
- Enjoy maximum security and performance, whilst creating your VMs and deploying workloads in the cloud

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Oracle Cloud IaaS: Today's Solution for Tomorrow's IT Challenges

Complementing and integrating both Oracle Cloud PaaS and SaaS, Oracle Cloud IaaS is your solution to overcoming tomorrow's IT obstacles. It enables you to move away from any third-party applications, instead developing and deploying your own, and take advantage of enhanced flexibility and security.

Forget about having to manage an out-of-date IT infrastructure; free your organization from complex chains; and focus on sourcing and supporting new business opportunities. Migrate your IT environment today, and prepare your company for tomorrow.

To find out more about Oracle IaaS, visit: oracle.com/iaas