

Oracle Cloud Overview

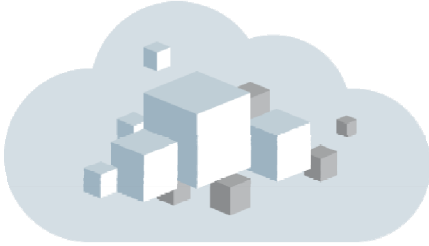
An Overview

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Agenda



- 1 What Is Cloud Computing?
- 2 Cloud Evolution
- 3 Components of Cloud Computing
- 4 Characteristics and Benefits of Cloud
- 5 Cloud Deployment Models
- 6 Cloud Service Models
- 7 Industry Shifting from On-Premises to Cloud
- 8 Oracle Cloud Services

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What Is Cloud?

The term Cloud refers to a Network or Internet.

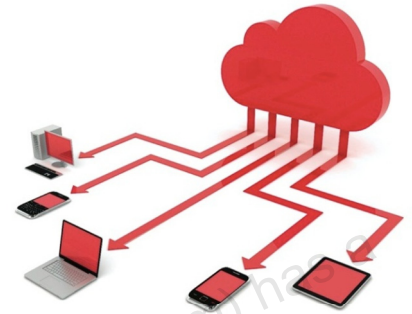
It is a means to access any software that is available remotely.

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What Is Cloud Computing?

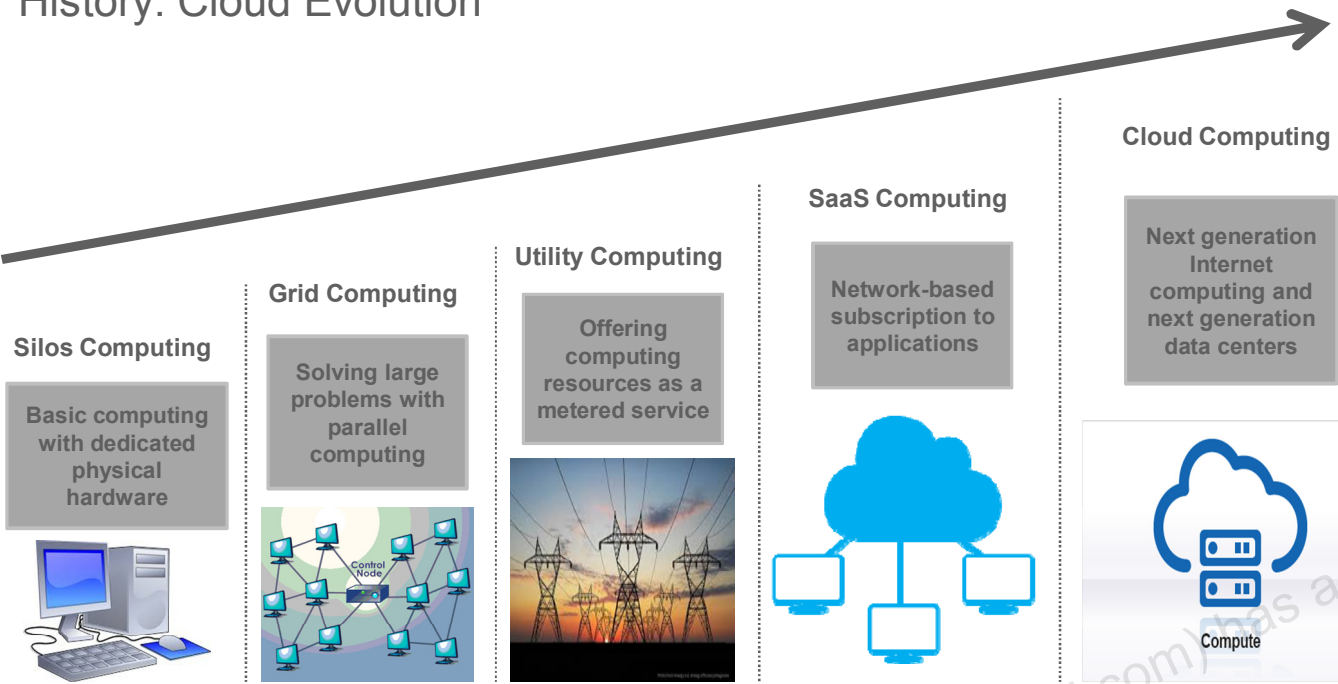
- It is a means to access any software that is available remotely.
- It refers to the practice of using remote servers hosted on the Internet to store, manage, and process data.
- When you store your photos online instead of on your home computer, or use webmail or a social networking site, you are using a “cloud computing” service.

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The definition of cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable and computing resources, such as networks, servers, and storages that can be rapidly provisioned and released with minimal management effort or service provider interaction.

History: Cloud Evolution



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Components of Cloud Computing

Client Computers



These are devices that end users use to interact with cloud. The type of clients include thick, thin (most popular), and mobile.

Distributed Servers



Often servers are in geographically different places, but the servers act as if they are next to one another.

Data Centers

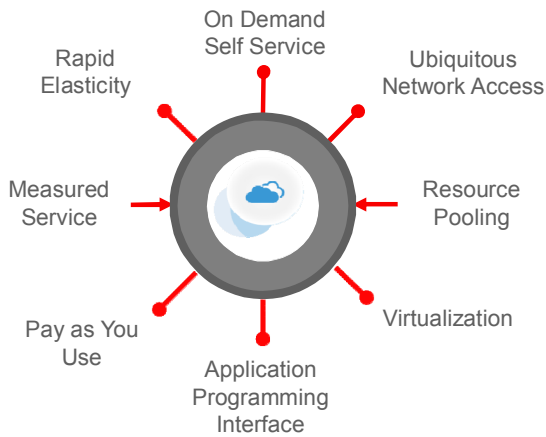


This is a collection of servers where an application is placed and accessed via the Internet.

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Characteristics of Cloud



Description

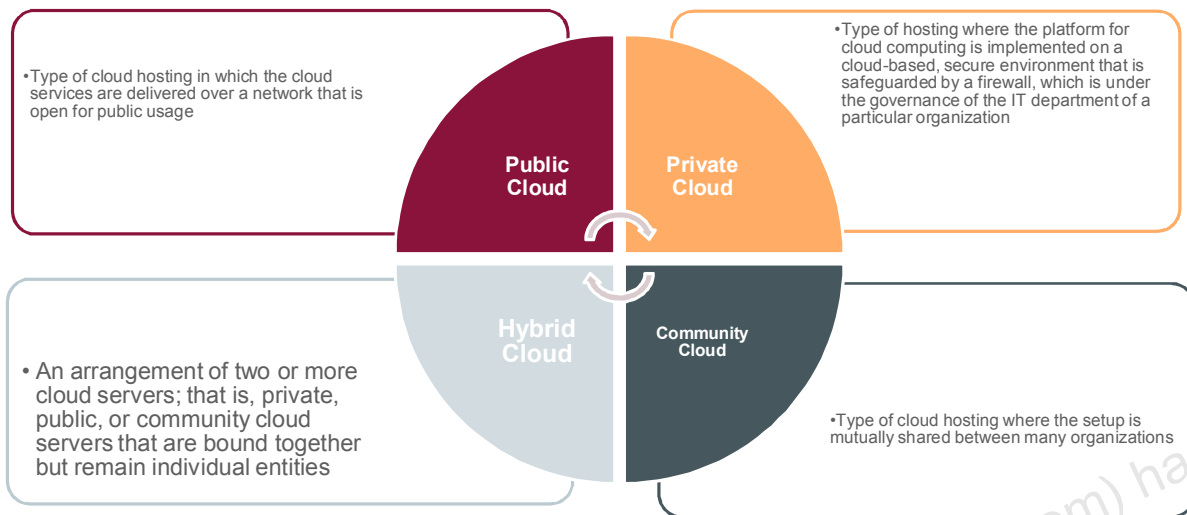
- Users are allowed to use the service on demand.
- Anywhere, Anytime and Any Device
- Users can draw from a pool of computing resources, usually in remote data centers.
- They can request and manage their own computing resources.
- The service is measured and customers are billed accordingly.
- Users can select a configuration of CPU, memory, and storage.
- The services can be scaled up or down.

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Cloud Deployment Models

Deployment models define the type of access to the Cloud.



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Public Cloud:

- The public cloud deployment model represents true cloud hosting. In this deployment model, services and infrastructure are provided to various clients. Google is an example of a public cloud. This service can be provided by a vendor free of charge or on the basis of a pay-per-user license policy. This model is best suited for business requirements wherein load spikes need to be managed and applications that are consumed by many users need to be managed that would otherwise require large investments in infrastructure by businesses.

Private Cloud:

- This model doesn't bring much in terms of cost efficiency: it is comparable to buying, building, and managing your own infrastructure. But it brings tremendous value from a security point of view. The infrastructure that is required for hosting can be on-premises or at a third-party location. Security concerns are addressed through secure-access VPN or by the physical location within the client's firewall system.

Hybrid Cloud:

- This deployment model helps businesses to take advantage of secured applications and data hosting on a private cloud, while still enjoying cost benefits by keeping shared data and applications on the public cloud.

Community Cloud:

- In the community deployment model, the cloud infrastructure is shared by several organizations with the same policy and compliance considerations. This helps to further reduce costs as compared to a private cloud, because it is shared by a larger group.

Cloud Service Models

All three tiers of computing delivered as service via a global network

- **Applications:** Software as a Service (SaaS)
- **Platform:** Database, Middleware, Analytics, Integration as a Service: Platform as a Service (PaaS)
- **Infrastructure:** Storage, Compute, and Network as a service: Infrastructure as a Service (IaaS)



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Infrastructure-as-a-Service:

- Cloud infrastructure services, known as Infrastructure as a Service (IaaS), are self-service models for accessing, monitoring, and managing remote data center infrastructures, such as compute (virtualized or bare metal), storage, networking, and networking services (for example, firewalls). Instead of having to purchase hardware outright, users can purchase IaaS based on consumption, similar to electricity or other utility billing.

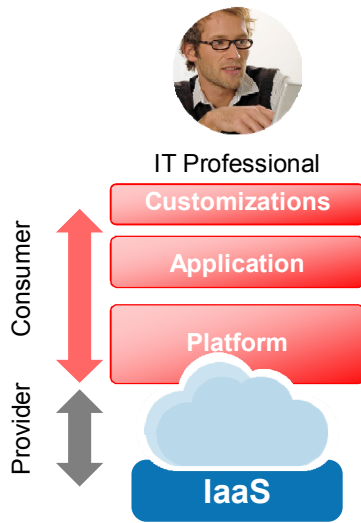
Platform-as-a-Service:

- Cloud platform services, or Platform as a Service (PaaS), are used for applications, and other development, while providing cloud components to software. What developers gain with PaaS is a framework that they can build upon to develop or customize applications. PaaS makes the development, testing, and deployment of applications quick, simple, and cost-effective. With this technology, enterprise operations, or a third-party provider, can manage OSes, virtualization, servers, storage, networking, and the PaaS software itself. Developers, however, manage the applications.

Software-as-a-Service:

- Cloud application services, or Software as a Service (SaaS), represent the largest cloud market that continues to grow quickly. SaaS uses the web to deliver applications that are managed by a third-party vendor and whose interface is accessed on the clients' side. Most SaaS applications can be run directly from a web browser without any downloads or installations required, although some require plug-ins.
- Because of the web delivery model, SaaS eliminates the need to install and run applications on individual computers. With SaaS, it's easy for enterprises to streamline their maintenance and support, because everything can be managed by vendors: applications, run time, data, middleware, OSes, virtualization, servers, storage, and networking.

Cloud Service Models: IaaS

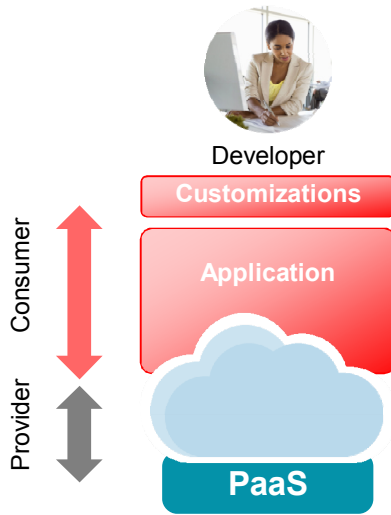


- Computer hardware (servers, networking technology, storage and data center space) provided as a web-based service
- Virtual Machines with pre-installed Operating Systems
- Target: Administrators
- Ready to rent

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Cloud Service Models: PaaS

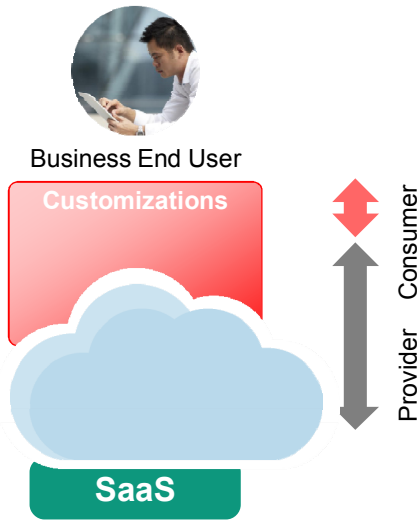


- Platform to develop and deploy applications provided
- Up-to-date software
- Target: Application developers
- Ready to use

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Cloud Service Models: SaaS



- Usage of software remotely as a web-based service allowed
- Software automatically upgraded and updated
- All users on the same version of software
- Target: End users

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Industry Shifting from **On-Premises to Cloud**

Transition to Cloud is driven by a desire for:

- **Agility:** Self-service provisioning; deploying a database in minutes
- **Elasticity:** Scaling on demand
- **Lower cost:** Reduction in management and total cost; paying for what is used
- **Back to core business:** Focusing on core activities
- **More mobility:** Access from any device

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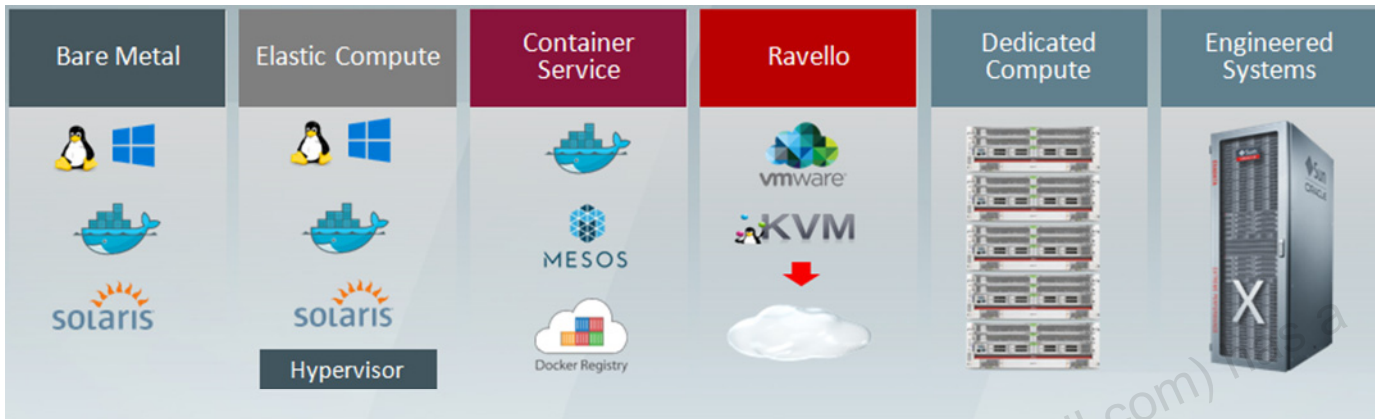
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Oracle IaaS: Overview

IaaS

Designed for large enterprises, which can scale up their computing, networking, and storage systems into the cloud, rather than expanding their physical infrastructure

- Allows large businesses and organizations to run their workloads, replicate their network, and back up their data in the cloud



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- Oracle IaaS provides a set of elastic compute offerings like bare-metal offering that allows customers to get hold of the server with or without a non-volatile memory and allows them to run workloads.
- We also have general purpose computers that provide elastic compute capabilities, which you can start with as low as 10 cpu. Both the meter model and the subscription-based model are available and can run various kinds of workloads to meet your application and business needs.
- We also have the dedicated computer offering, which is an isolated hardware zone that is available with no noisy neighbors. All your applications that need predictable and consistent performance can get the requirements met by this dedicated computer environment.
- The container cloud service allows you to optimize the DevOps pipeline and enables you to leverage capabilities in terms of container management, orchestration of container management setup, and so on. Primarily, the focus here is to provide productivity improvements in terms of the DevOps pipeline.
- Another computer offering that we have centers around engineered systems, and consists of two core components that are available today: Exadata Cloud Service and Big Data Cloud Service.

Oracle PaaS: Overview

PaaS

- Develop, deploy, integrate, and manage applications on cloud.
- Seamless integration is possible across PaaS and SaaS applications.



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- Delivers greater agility through faster application development
- Leverages standards-based shared services, and elastic scalability on demand
- Includes database functionality based on Oracle Database and Oracle Exadata Database Machine
- Features middleware technology based on Oracle Fusion Middleware and Oracle Exalogic Elastic Cloud
- With engineered systems such as Exadata and Exalogic provides extreme performance and efficiency for mixed workloads.

Benefits

- Asset utilization is increased by using a shared platform for the database and middleware technologies, and complexity is reduced with a standardized PaaS architecture.
- Industry-leading clustering and virtualization technologies provide elastic capacity on-demand, which is required of a Platform as a Service environment.
- The built-in security capabilities in Oracle Database and Fusion Middleware enable a PaaS environment to comply with stringent security, privacy, and regulatory requirements.
- The engineered systems deliver unparalleled speed and the highest consolidation efficiency.
- Oracle PaaS includes capabilities for cloud application development and deployment, cloud management, cloud security, and cloud integration.

Oracle SaaS: Overview

SaaS

Delivers modern cloud applications that connect business processes across the enterprise

- Only Cloud integrating ERP, HCM, EPM, and SCM
- Seamless co-existence with Oracle's On-Premise Applications



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- Streamline your enterprise business processes with Enterprise Resource Planning (ERP) Cloud. With ERP Cloud's Financials, Procurement, Project Portfolio Management, and more, you can increase productivity, lower costs, and improve controls.
- Built from the ground up for the cloud and for the modern supply chain, Oracle SCM Cloud delivers the visibility, insights, and capabilities that you need to create your own intelligent supply chain. With capabilities that include product innovation, strategic material sourcing, outsourced manufacturing, integrated logistics, omni-channel fulfillment, and integrated demand and supply planning, Oracle SCM Cloud is the most comprehensive SCM suite in the cloud. Oracle SCM Cloud allows you to deploy functionality incrementally, with minimal risk, lower cost, and maximum flexibility—all with the benefit of ongoing functional innovation.
- Modern HR differentiates the business with a talent-centric and consumer-based strategy that leverages technology to provide collaborative, insightful, engaging, and mobile HR, employee, and executive experience. Oracle HCM Cloud enables modern human resources to find and retain the best talent and increase global agility.
- Oracle's market-leading Enterprise Performance Management (EPM) applications combined with the innovation and simplicity of the cloud enable companies of any size to drive predictable performance, report with confidence, and connect the entire organization.

Summary

In this lesson, you should have learned how to:

- Describe cloud computing, its characteristics, history, and technology
- List the various components, deployment models, and service models of cloud computing
- Describe Oracle Cloud services



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