ECAP470: Cloud Computing

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Learning Outcomes

After this lecture, you will be able to,

✓ know about cloud service providers.

✓ learn about the services, platforms and technology offerings of different cloud service providers.

Service Providers

- Also called as SERVICE VENDORS.

- A vendor that provides IT solutions and/or services to end users and organizations. This broad term incorporates all IT businesses that provide products and solutions through services that are on-demand, pay per use or a hybrid delivery model.

Service Providers

- Incorporates all IT businesses that provide products and solutions through services that are on-demand, pay-per-use or a hybrid delivery model.

- A service provider's delivery model generally differs from conventional IT product manufacturers or developers.

Different Service Providers

Examples of **different service providers** include:

Hosting Service Provider,

Cloud Service Provider,

Storage Service Provider,

Software-as-a-Service (SaaS) Provider.

Cloud Service Providers

- A third-party company offering a cloud-based platform, infrastructure, application, or storage services.

- Cloud services can reduce business process costs when compared to on-premise IT. Such services are managed by the Cloud Service Provider (CSPs).

Cloud Service Providers

CSP companies establish public clouds, manage private clouds, or offer on-demand cloud computing components (also known as cloud computing services) like IaaS, PaaS, and SaaS.

Need for a Cloud Service Provider

Using a cloud provider is a helpful way to access computing services that you would otherwise have to provide on your own, such as:

Infrastructure.

Platforms.

Software.

CSP Platforms and Technologies

- Development of a cloud computing application happens by leveraging platforms and frameworks of the CSPs.

- CSPs provide different types of services, from the bare-metal infrastructure to customizable applications serving specific purposes.

CSP Platforms and Technologies

Google AppEngine.

NetApp.

Amazon Web Services (AWS).

Microsoft Azure.

CSP Platforms and Technologies

Force.com and Salesforce.com.

IBM.

Hadoop.

Manjrasoft Aneka.

CSP Platforms and Technologies- Google App Engine

Google App Engine

- Often referred to as GAE or simply App Engine.

- Is a Cloud-based PaaS for developing and hosting web applications in Google-managed data centers.
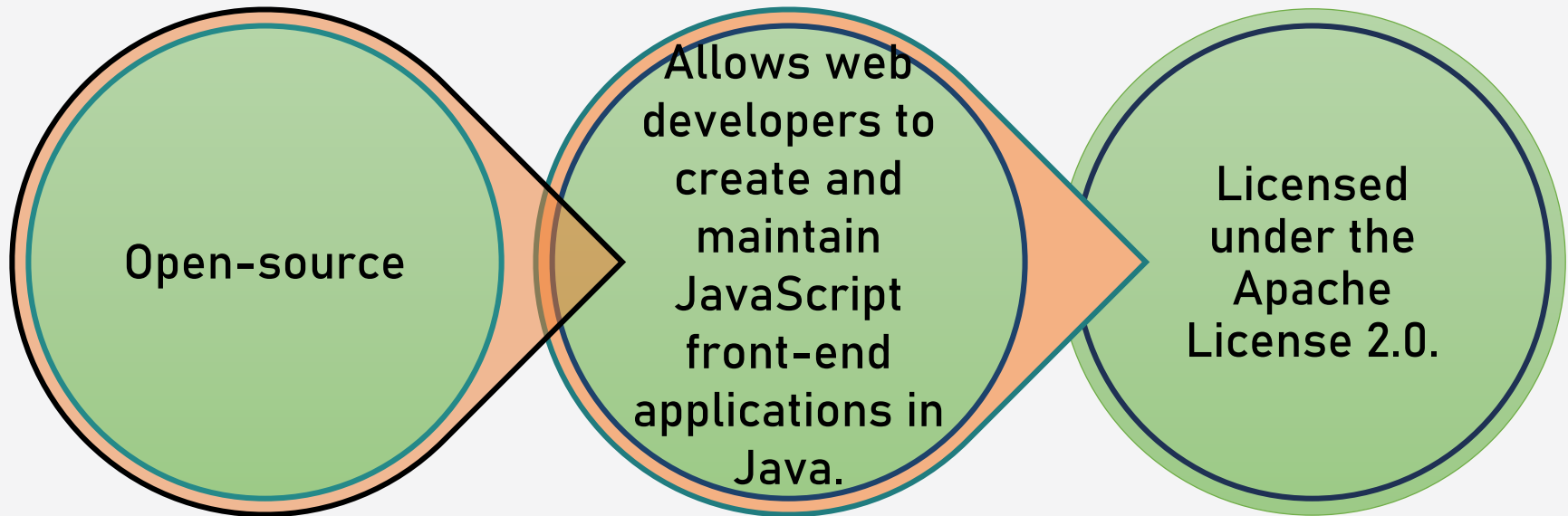
Google App Engine

- Primarily supports Go, PHP, Java, Python, Node.js, .NET, and Ruby applications, although it can also support other languages via "custom runtimes".

CSP Platforms and Technologies- Google App Engine

- First released as a preview version in April 2008 and came out of preview in September 2011.

- Scale your applications from zero to planet scale without having to manage infrastructure.

- Free up your developers with zero server management and zero configuration deployments.

CSP Platforms and Technologies- Google

Google Web Toolkit (GWT)

Open-source

Allows web developers to create and maintain JavaScript front-end applications in Java.

Licensed under the Apache License 2.0.

CSP Platforms and Technologies- NetApp

NetApp, Inc. is an American hybrid cloud data services and data management company headquartered in Sunnyvale, California.

CSP Platforms and Technologies- NetApp

NetApp Products:

Automation.

Docker.

Backup and Recovery.

CSP Platforms and Technologies- Amazon Web Services (AWS)

Amazon Web Services (AWS) is a subsidiary of Amazon providing on-demand cloud computing platforms and APIs to individuals, companies, and governments, on a metered pay-as-you-go basis.

CSP Platforms and Technologies– Amazon Web Services (AWS)

- Amazon offers services on many different fronts, from storage to platform to databases.

- As of 2021, AWS comprises over 200 products and services including computing, storage, networking, database, analytics, application services, deployment, management, machine learning, mobile, developer tools, and tools for the Internet of Things (IoT).

CSP Platforms and Technologies–
Amazon Web Services (AWS)

Amazon Elastic Compute Cloud (Amazon EC2)

Amazon SimpleDB (Simple Database Service)

Amazon Simple Storage Service (Amazon S3)

Amazon CloudFront

Amazon Simple Queue Service (Amazon SQS)

Amazon Elastic Block Store (Amazon EBS)

CSP Platforms and Technologies- EMC

- EMC Corporation is the world leader in products, services, and solutions for information storage and management that help organizations extract value from their information.

- Offerings

CSP Platforms and Technologies- Microsoft

Microsoft Cloud Offerings:

Azure Services Platform,

SQL Services,

.NET Services,

Exchange Online,

SharePoint Services,

Microsoft Dynamics CRM.

CSP Platforms and Technologies-Salesforce.com

Three primary areas of focus:

Sales Cloud.

Service Cloud.

Your Cloud.

CSP Platforms and Technologies- Salesforce.com

Offerings:

Force.com.

Salesforce.com CRM.

AppExchange.

CSP Platforms and Technologies- IBM

- IBM offers cloud computing services to help businesses of all sizes take advantage of this increasingly attractive computing model.

CSP Platforms and Technologies- IBM

Some of their services include:

- Industry-specific business consulting services for cloud computing.

- Technology consulting, design, and implementation services.

- Cloud security.

CSP Platforms and Technologies- Hadoop

- Apache Hadoop is a collection of open-source software utilities that facilitates using a network of many computers to solve problems involving massive amounts of data and computation.

- Uses MapReduce programming model.

How does Cloud Play into This?- Hadoop

- Cloud is ideally suited to provide the big data computation power required for the processing of these large parallel data sets.

- An ideal platform for the on-demand analysis of structured and unstructured workloads.

CSP Platforms and Technologies- Aneka

ANEKA Cloud Platform-

Software platform and a framework for developing distributed applications on the cloud.

Collaborations and Partnerships in Cloud Computing

Yahoo! and Computational Research Laboratories (CRL)

SAP and IBM

Collaborations and Partnerships in Cloud Computing
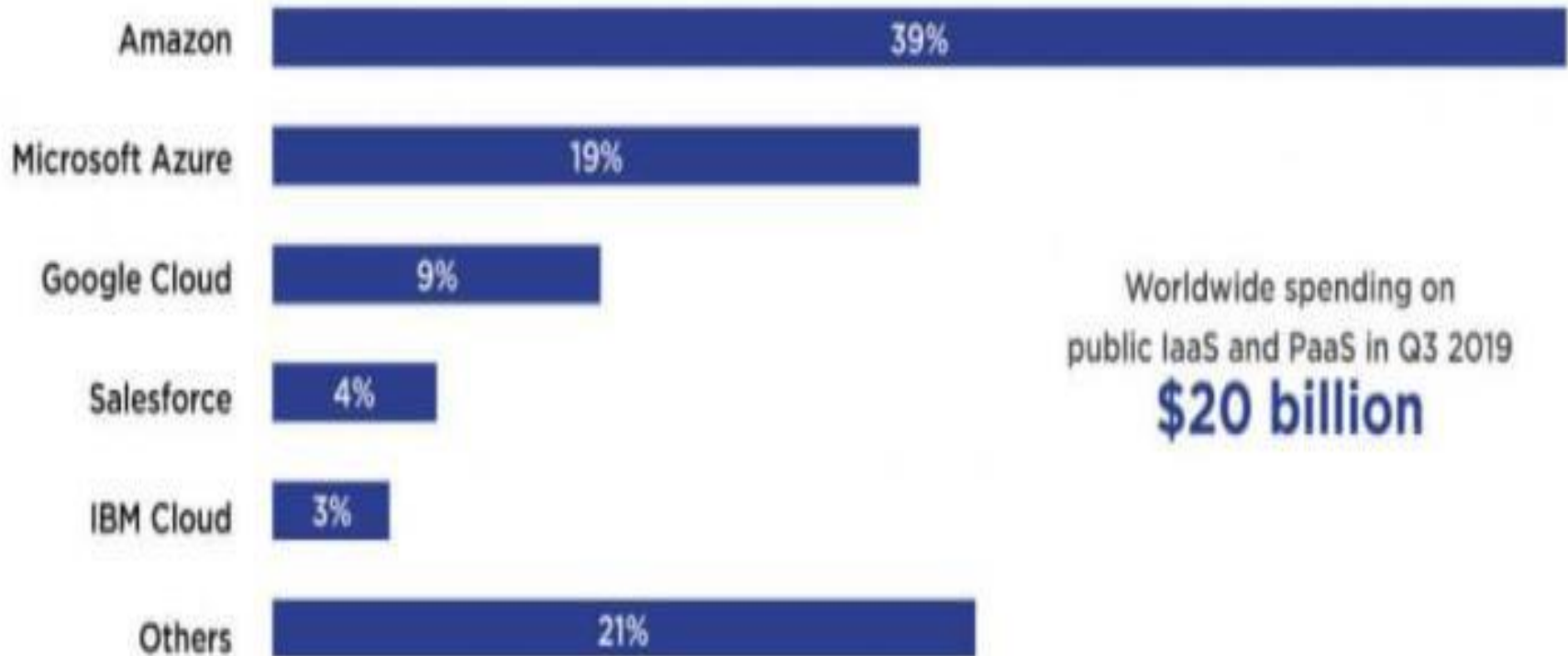
HP, Intel, and Yahoo!

IBM and Amazon

Criteria for Choosing the Best Cloud Service Provider

- First step in switching to cloud computing is determining what kind of cloud services you could be interested in.

- Choosing a cloud computing service is a long-term investment.

- Your application will heavily rely on third-party capacities, and you need to make sure that the provider is legitimate and fits your needs.

Criteria for Choosing the Best Cloud Service Provider

Amazon Dominates Public Cloud Market

Global market share of public cloud infrastructure service providers in Q3 2019

Provider	Market Share
Amazon	39%
Microsoft Azure	19%
Google Cloud	9%
Salesforce	4%
IBM Cloud	3%
Others	21%

Worldwide spending on public IaaS and PaaS in Q3 2019
$20 billion

Criteria for Choosing the Best Cloud Service Provider

Financial Stability.

Industries that Prefer the Solution.

Datacenter Locations.

Security Programs.

Encryption Standards.

Check Accreditation and Auditing.

Look for solutions that offer Free Cloud Backup.

That's all for now…