

AWS Academy Cloud Computing Content

CLOUD COMPUTING

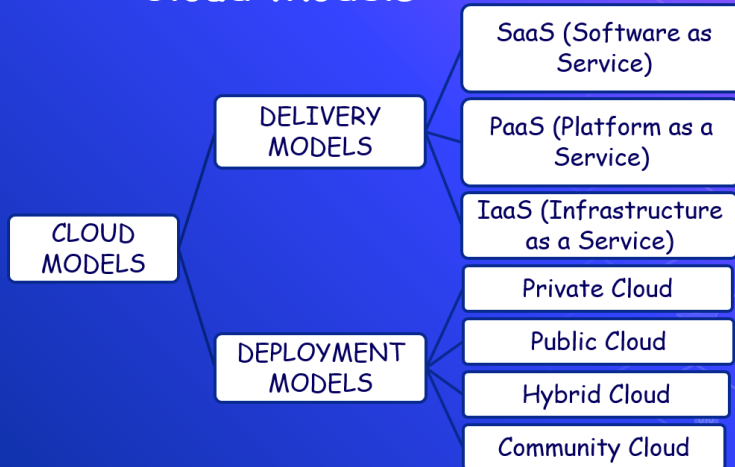
When it's smarter to rent than to buy....



What is cloud computing?

Cloud computing is the delivery of different services through the Internet. These resources include tools and applications like data storage, servers, databases, networking, and software.

Cloud Models



Service/Delivery Models

- **IaaS:**
Most common cloud service is that one offering data storage disks and virtual servers, i.e. infrastructure.
- **PaaS:**
If the cloud offers a development platform, and this includes operating system, programming language execution environment, database, and web server, the model is known as Platform-as-a-Service (PaaS)
- **SaaS:**
Software-as-a-Service (SaaS) means that users can access various software applications on a pay-per-use basis.



Deployment Models



Public:

- ⚙️ Whole computing infrastructure is located on the premises of Cloud service provider
- ⚙️ Customer has no physical control over infrastructure
- ⚙️ Public cloud uses shared resources

Private:

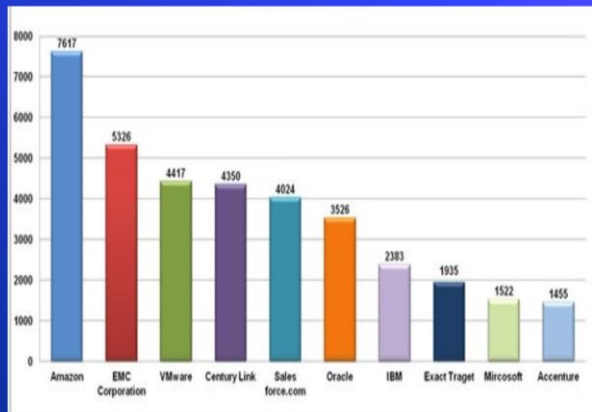
- ⚙️ It means using a cloud infrastructure (network) solely by one customer/organization
- ⚙️ The security and control level is highest while using a private network.
- ⚙️ The companies have higher security in this cloud

Benefits of cloud

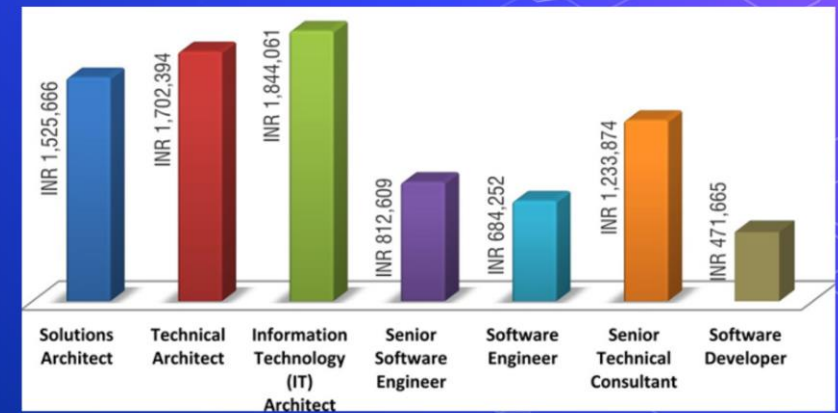
- Users can concentrate more on their core business processes
- No Capital investment or upfront cost
- Pay as you go model (Pay for what you consume)
- Greater benefits in enterprise IT world
- Increased mobility i.e., can access from anywhere with just internet
- Flexibility in capacity
- Automated Updates on Software



Cloud computing job advertised by companies



Job salary offered by companies



Course Objectives

Upon completion of this course, students will be able to:

- Define the AWS Cloud
- Explain the AWS pricing philosophy
- Identify the global infrastructure components of AWS
- Describe the security and compliance measures of the AWS Cloud, including AWS Identity and Access Management (IAM)
- Create a virtual private cloud (VPC) by using Amazon Virtual Private Cloud (Amazon VPC)
- Demonstrate when to use Amazon Elastic Compute Cloud (Amazon EC2), AWS Lambda, and AWS Elastic Beanstalk
- Differentiate between Amazon Simple Storage Service (Amazon S3), Amazon Elastic Block Store (Amazon EBS), Amazon Elastic File System (Amazon EFS), and Amazon Simple Storage Service Glacier (Amazon S3 Glacier)
- Demonstrate when to use AWS database services, including Amazon Relational Database Service (Amazon RDS), Amazon DynamoDB, Amazon Redshift, and Amazon Aurora
- Explain the architectural principles of the AWS Cloud
- Explore key concepts related to Elastic Load Balancing, Amazon CloudWatch, and Amazon EC2 Auto Scaling

Learning Resources

- Lecture materials
- Online multiple-choice knowledge checks
- Lab exercises
- Digital training (optional)
- Lecture or Video introductions
- Lecture or Video demos
- Example solutions