



One Day Workshop on “Exploring Cloud Computing : A Hands-on workshop using AWS Cloud” (06th February 2025)

S.No	Topic Covered	AWS Service
Session - 1		
Topic : Cloud Basics & IAM		
Duration : 11:00 am to 1:00 pm		
1	Introduction to AWS Cloud	
2	AWS Console Basic Walkthrough	
3	User Creation, User Policies, User Roles & Multi Factor Authentication (MFA), Alias account name	IAM - (Identity Access Management)
4	Creating a EC2 Linux instance on AWS Cloud	EC2 (Elastic Cloud)
Session – 2		
Topic : Website deployment on AWS		
Duration : 2:00 pm to 3.30 pm		
1	Preparing the environment & Deploying Website on the AWS Ubuntu Cloud Server	EC2 (Elastic Cloud)
2	Storing Files on AWS Storage	S3 Bucket - (Storage Bucket Version 3)
3	Creating & managing the private keys	EC2 (Elastic Cloud)
4	Usage of SSH Software (bitwise)	EC2 (Elastic Cloud)
5	Assigning Static IP address	EC2 (Elastic Cloud)
6	Assigning a Domain name to our website	Route 53 / Any DNS SP



Session – 3 Topic : Running Python & Java Programs on Cloud

Duration : 3.30 pm to 4.00 pm

1	Installing the python environment in the EC2 instance & Running a simple python program	EC2 (Elastic Cloud)
2	Installing JDK environment in EC2 instance & Running a simple Java Program	EC2 (Elastic Cloud)

Prerequisite for the workshop:

- Participants must have signed-up for free aws account <https://aws.amazon.com>
(**Note** : they will be asked for the banking details during signup)
- High Speed internet connection with **No-Firewall** restrictions.

1st step towards your AWS Journey

- You can get a **Free certificate** from AWS **“AWS Cloud Practitioner Essentials ”** by completing the course specified in the link below (Approx 7 Hours)
- **Link for the course**
<https://explore.skillbuilder.aws/learn/course/external/view/elearning/134/aws-cloud-practitioner-essentials?lcp=tile&tile=dt>

Resource Person

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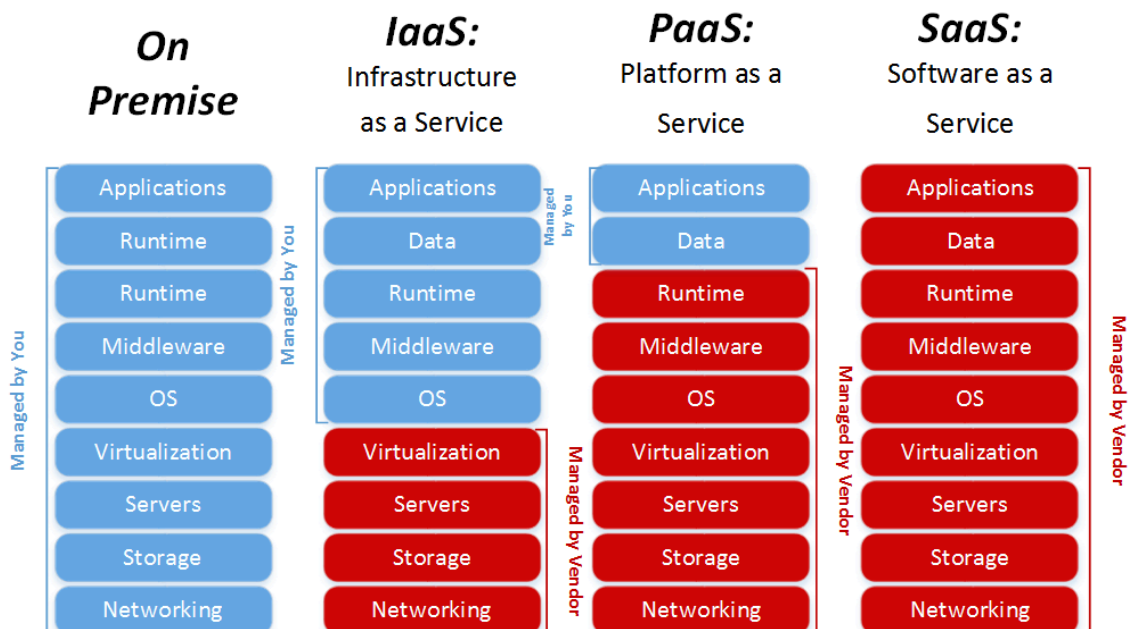
Assistant Professor,

MEASI Institute of Information Technology

Introduction to Cloud

- Cloud computing is the **on-demand availability of computer system resources**, especially data storage and computing power, without direct active management by the user.
- Large clouds often have functions distributed over multiple locations, each location being a data center. - [Wikipedia](#)

Cloud Service Models



Examples

1. On-Premise - Rack Servers on the premises

2. IaaS - AWS , Digital Ocean, Linode servers

3. PaaS - Google App Engine

4. SaaS - Netflix , Youtube

Advantages

- Back-up and restore data
- Improved collaboration
- Excellent accessibility
- Low maintenance cost
- Mobility
- Services in the pay-per-use model
- Unlimited storage capacity
- Data security

Disadvantages

- Internet Connectivity
- Vendor lock-in
- Limited Control

AWS Data Centers





Why AWS?

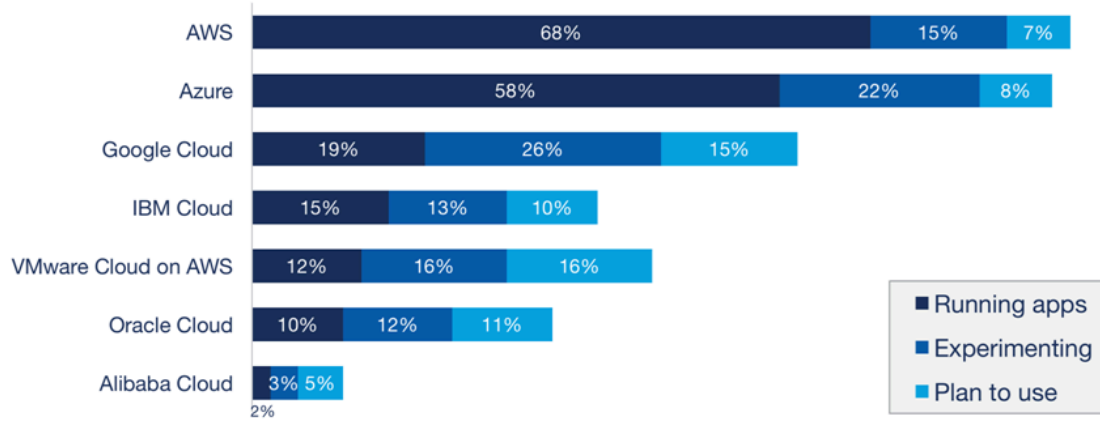
- It is the No.1 Cloud service provider in the world.
- It is available in more than 26 regions around the world.
- It has over 200+ Services.





Enterprise Public Cloud Adoption

% of Respondents Running Applications



Source: RightScale 2018 State of the Cloud Report

Let's Begin the Practical Session.....

AWS Ubuntu Cloud Server EC2-Instance Commands

Some of the important Ubuntu commands for preparing the environment & deploying the static website on the AWS Ubuntu EC2-Instance.

Default username : ubuntu

Order in which these commands have to be executed

S.no	Ubuntu Commands	Actions
1	sudo su	Elevate yourself to the root user
2	sudo apt update	Check for the Updates
3	sudo apt upgrade	Run server update
4	sudo apt install apache2	Install the apache http service on the server
5	cd /var/www/html	Changing Directory
6	ls	To list files
7	vim index.html	To open index file in edit mode
8	Click i	To open file in edit mode
9	Esc + wq	To write and quit
10	wget object link of s3 storage	To fetch files from s3 bucket into EC2 Instance.
11	rm index.html	Remove old index file
12	sudo apt install unzip	Extracting Files



	<code>unzip FileName.zip</code>	
13	<code>mv (unzippedfile)/* .</code> Example: <code>mv Website/* .</code> (If filename is Website)	Moving the files into root directory (space between * and . is must)

Running python program on AWS

Installing the python environment in the EC2 instance & Running a simple python program

```
python3 --version
```

```
vim file1.py — creating a file
```

#Python program to find odd or even numbers

```
# To find odd or even
def CheckNum(Num):

    if(Num % 2 == 0):
        print("Given Number is even");

    else:
        print ("Given Number is odd")

Num= int(input("Enter the number: "))
CheckNum(Num)
```

```
python file1.py — Execution of python program
```

Running Java Program on AWS Cloud

Installing JDK environment in EC2 instance & Running a simple Java Program

apt install default-jdk -----> To install jdk

Vim Simple.java -----> Creation of a java file

#Java Program

```
class Simple
{
    public static void main(String args[])
    {
        System.out.println("Hello Java");
    }
}
```

javac Simple.java -----> compiling the java program

java Simple.java -----> Execution of Java program

Some Important links:

1.Bootstrap Sites:

<https://bootstrapmade.com/website-templates/>



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[https://docs.google.com/forms/d/e/1FAIpQLScpqYHU7aq2xgFwzgtUMoiOytYCzmF6sdZZLgrTMFYuD6knMw/viewform?usp=sf link](https://docs.google.com/forms/d/e/1FAIpQLScpqYHU7aq2xgFwzgtUMoiOytYCzmF6sdZZLgrTMFYuD6knMw/viewform?usp=sf_link)