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Cloud Computing with AWS
Introduction

Overview of Cloud Computing

Cloud computing can simply be summarised as the **remote delivery of computing services over the internet to clients**.

Clients typically pay a monthly or annual service fee to providers, to gain access to systems that deliver:

- **software as a service,**
- **platforms as a service, and**
- **infrastructure as a service** to subscribers.

Typical Cloud Computing Services

Servers, Storage & Databases

Networking

Analytics

Intelligence

Traditional Computing Model vs Cloud Computing Model

Traditional Computing Model

The **traditional computing model consists of various pieces of hardware** connected to a network via a remote server(s). This server (or servers) is **usually installed on the premises** and gives all employees access to **business specific data and software**.

When the business running on this computing model wants to **scale its operations, additional hardware and software needs to be purchased**/ procured and installed.

Traditional IT infrastructures are considered to be one of the most secure data hosting solutions and allows you to maintain full control of your company's applications and data.

Cloud Computing Model

Cloud computing is the delivery of storage, computational resources, analytics and intelligent services **over the internet**.

This delivery model **enables for rapid innovation** by means of **compressing the time spent on the conceptual design, detail design and implementation phases of a project**. It does so by **reducing the bottleneck between ideation**, detail design, hardware and software procurement, set-up, integration and deployment.

In a sense the cloud allows for a **one click deployment as soon as the solution is properly architected in the cloud**.

The main difference between traditional and cloud computing models is in the decentralised flexibility and scalability of cloud computing

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IaaS, PaaS and SaaS Cont.

Managed By Your Company
Managed By Cloud Vendor

Comparison between vendor managed services and internally managed services for various computing models

Traditional IT	IaaS	PaaS	SaaS
Applications	Applications	Applications	Applications
Runtimes	Runtimes	Runtimes	Runtimes
Security & Integration	Security & Integration	Security & Integration	Security & Integration
Databases	Databases	Databases	Databases
Servers	Servers	Servers	Servers
Visualisations	Visualisations	Visualisations	Visualisations
Servers HW	Servers HW	Servers HW	Servers HW
Storage	Storage	Storage	Storage
Networking	Networking	Networking	Networking

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Types of Cloud Computing Delivery Model

Defining a cloud deployment model.

A **cloud delivery model** represents a specific type of cloud environment, primarily distinguished by ownership, storage size, infrastructure and accessibility. There are four main cloud deployment models.
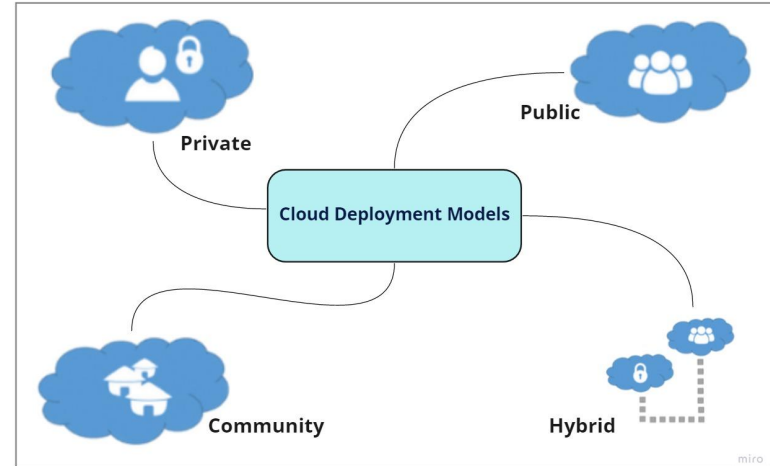
In the next few slides we will EXPLORE each of the four delivery models in cloud computing

Why use cloud services instead of traditional infrastructure?

The trade-off between using cloud computing and local IT infrastructure

Prior to the advent of cloud services, companies could only think of their computing infrastructure in terms of *fixed hardware installations* which, amongst other things, were:

- **Static** - Hardware stacks have fixed storage, compute, and networking capacity. They also have to be bought upfront as a capital expense, which can be a considerable cost!

- **Difficult to maintain** - Managing onsite infrastructure requires many specialised roles including facility management, system administration, network engineering, and system technicians.

- **Inefficient** - Unless coordinated perfectly, onsite hardware is either under or over utilised at any time during the day; wasting productivity during peak traffic periods or financial resources during activity lulls.

THE
CLOUD

AWS Accounts

This module includes **optional** practical walk-throughs that require a personal AWS account. They make use of AWS's free services, but you might get **charged if you use anything outside of these free services**.

AWS CCP Exam

Exam:　　　**AWS Certified Cloud Practitioner (CLF-C01)**

Exam Fee: $100

Duration:　90 minutes

Structure:　65 multiple choice questions

Pass Mark: 70%

Location:　Testing Center or Online (Recommended)

Please Note: Taking the exam is optional (and at your own expense).

*Certificate valid for 3 years

▸ Module 10 - Auto Scaling and Monitoring

▾ Sandbox

🔗　Sandbox Environment

Useful resources

▾ Certification Resources

📄　Certification Resources

💬　Certification Discussion

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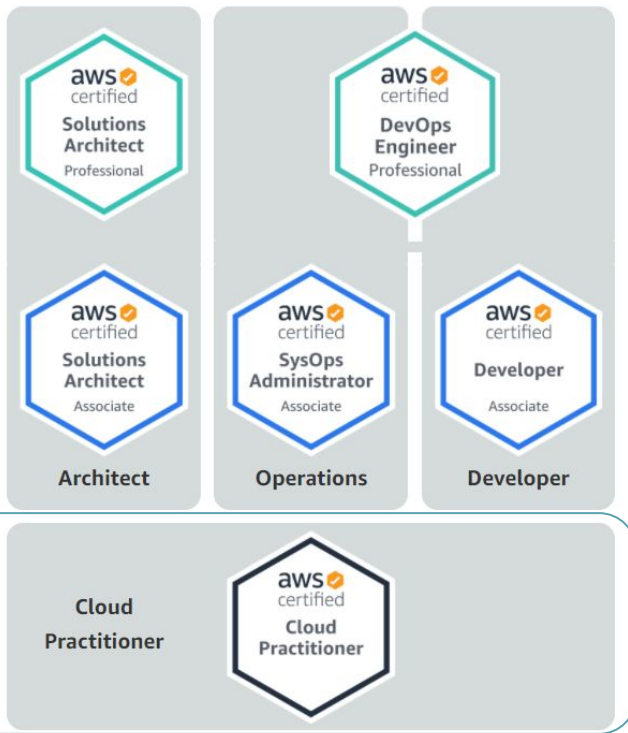
AWS Certifications

Professional

Two years of comprehensive experience designing, operating, and troubleshooting solutions using the AWS Cloud

Associate

One year of experience solving problems and implementing solutions using the AWS Cloud

Architect	Operations	Developer
aws certified **Solutions Architect** Professional	aws certified **DevOps Engineer** Professional	
aws certified **Solutions Architect** Associate	aws certified **SysOps Administrator** Associate	aws certified **Developer** Associate

Foundational

Six months of fundamental AWS Cloud and industry knowledge

Cloud Practitioner — aws certified **Cloud Practitioner**

Specialty

Technical AWS Cloud experience in the Specialty domain as specified in the **exam guide**

- aws certified **Advanced Networking** Specialty
- aws certified **Data Analytics** Specialty
- aws certified **Database** Specialty
- aws certified **Machine Learning** Specialty
- aws certified **Security** Specialty

Source: https://aws.amazon.com/certification/

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Helpful Resources (Optional)

FREE

Free Amazon AWS Certification Exams | ExamTopics

[Course]Study Material for AWS Cloud Practitioner Exam

Amazon AWS Certified Cloud Practitioner Exam Practice Questions

https://www.exam-answer.com/amazon/clf-c01

https://github.com/BobZAnnapolis/aws_cert_course_2020/tree/master/04_Exam_Cram

FREEMIUM (FREE + PAID)

AWS Certified Cloud Practitioner - Whizlabs

PAID

AWS Certified Cloud Practitioner: 6 Full Practice Exam Tests | Udemy

AWS Certified Cloud Practitioner 500 Practice Exam Questions | Udemy

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