Course Title: AWS Certified Cloud Practitioner (CLF-C01) Cert Prep: 1 Cloud Concepts

Description: Amazon Web Services (AWS)—and cloud computing in general—can be difficult for people without technical backgrounds to decipher. This introductory course is a bridge between non-engineers and the cloud. It is the first in a four-part series designed to help professionals in non-technical roles, including finance teams, project managers, and marketers, make the best use of AWS. Instructor Hiroko Nishimura—founder of Intro to AWS for Newbies—provides a brief history of cloud computing, an overview of cloud deployment models, and a summary of cloud design principles. She then shows how to create an account and start using the AWS Free Tier to gain hands-on experience with AWS products and services. Plus, get exam tips and learn about resources for professionals studying for the AWS Certified Cloud Practitioner exam.Note: This course also maps to the first domain of the AWS Certified Cloud Practitioner exam. Taking all four courses in the Introduction to AWS for Non-Engineers series will help you prepare for the exam.

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Chapter: 1. Introduction to Cloud Computing
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Video: Wrapping up: Cloud computing

Note Time: Note Text:

0:00:07   What's cloud ?

- On-demand delivery of compute, database storage, application, and other IT resources

Why cloud computing ?

- Traditional processes would go through procurement processes whereas here, it would be pay as you go model anywhere , anytime

- Scaling is hard in traditional because everytime you will have to go back to procurement process, so it should be cloud way which can scale easily on the fly.

How it started ?

- Mainframe started 1950's (a single computer control center with dumb terminals spread on different places sharing compute resources), Virtual machines 1970's (multiple OS running on single computer)
- Hypervisor : Software that links multiple hardwares to use as one giant resource (adding up of all the memory and storage of all the computers as one resource and pool those resources). So, eventually users in real-world use the pooled resources of the huge computers (again it's a sum of multiple machines) in large datacenters.

Daily life usage ?

- Gmail, google photos, youtube (google cloud), Outlook 365 (microsoft cloud), AWS, streaming services, file sharing services, social media etc.....

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Chapter: 2. Cloud Computing Concepts
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Video: Advantages of cloud computing

Note Time: Note Text:

0:02:37   Advantages of cloud computing :

- Trade capital expense for variable expense
- Benefit from massive economies of scale
- Stop guessing capacity
- Increase speed and agility
- Stop spending money in maintaining data centres
- Go global in minutes

Video: Cloud computing deployments

Note Time: Note Text:

0:00:00   Cloud computing models ?

- Iaas (infrastructure as a service)
  - Basic building blocks
  - Most closest to hosted datacenters/on-premises data center
  - Most flexiblity and management control
  - Requires highest technical knowledge
  - ex. AZURE, GCP, AWS ETC...

- Paas (platform as a service)
  - allows deploy and manage applications without worrying about underlying infra
  - Heroku, Google app engine,
  - Less flexibliity, packages precontructed
  - requires less knowledge about infra allowing focus on building and deploying applications

Saas (Software as a service)
  - don't need to worry about deploying and managing anything, Just use the software for your usecases
  - Outlook, Gmail etc...
  - Least flexiblity, Least technical knowledge, features out of the box for end users

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Video: Study break: Reviewing cloud computing

Note Time: Note Text:

0:00:26   Cloud deployment models:

- Cloud: 100% of IT infrastructure on cloud.

- on-premise: Private cloud. Use Virtualization to deploy resources in their data centers. Not connected to Internet. Security and data privacy. Healthcare usecases etc...

- Hybrid: Data partially on the cloud, partially on-premise data center. Can use as backup and DR solutions. Legacy company resources migrating towards cloud.

Design principles of cloud computing -

- Avoid unnecessary costs (use only what is required, monitor costs)
- Reliability (Test DR, backups)
- Efficiency (should allow to go global in minutes)
- Security (data should be protected on transit and at REST, enable traceability, manage access, audit)
- Operational excellence (document everything, update processes, anticipate failures, automate)
- Sustainibility (minimize carbon footprint, energy efficient resources on cloud)

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Chapter: 4. Diving into AWS
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Video: Popular services offered in AWS

Note Time: Note Text:

0:00:00   AWS Popular services :

- Compute services: Provide virtual server hosting, container management, serverless. Instead of hosting, orgs can rent

- Storage services: Provide storage for both in-use and archival files. Daily backups, store different kinds of files

- Database services: RDS, NoSql, petabyte-scale data warehouse, caching services etc....

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