**AWS Solutions Architect**

AWS Concepts (complete)

AWS Essentials

AWS Solutions Architect

Linux Essentials

**Certified Solutions Architect (CSA) Domains:**

1. Design highly available, cost-efficient, fault-tolerant, scalable systems
2. Implementation / Deployment
3. Data Security
4. Troubleshooting

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**AWS Concepts**

***INTRODUCTION***

**High Availability** – files in the cloud are available from anywhere

**Fault Tolerant** – having multiple backups for file in case of system fault

**Enterprise Use of Cloud:**

1. Put servers (storage) off-site in cloud
2. Scaling upwards is easier because you only use servers in cloud that you need
   1. Don’t have to estimate future server needs

**Scalability** – ability to quickly/easily add more servers

**Elasticity** – ability to shrink on-demand as needed

***UNDERSTANDING VPCs***

**Virtual Private Cloud:**

1. Your private section of AWS
2. Can allow/restrict access to your VPC
3. Can put EC2 and RDS on your VPC

***UNDERSTANDING EC2***

**Elastic Cloud Compute:**

1. Virtual server computer

**Instance** – many times an EC2 computer is referred to as an “EC2 Instance”

1. EC2 acts as a web server for Netflix
2. Common use – Web Hosting, encoding, transcoding
3. Good for any type of processing activity

***UNDERSTANDING RDS***

**Relational Database Service:**

1. Place to store customer account info, inventory catalog

**Scalability** – ability to quickly/easily add more servers

**Elasticity** – ability to shrink on-demand as needed

1. As user traffic increases, demands on DB increase therefore additional EC2 Instances are created

***UNDERSTANDING S3***

**Simple Storage Service:**

1. Unlimited storage bucket for files, photos, documents
2. Mass storage container, long-term storage

**Scalability** – ability to quickly/easily add more servers

**Elasticity** – ability to shrink on-demand as needed

1. As user traffic increases, demands on DB increase therefore additional EC2 Instances are created

***AWS Global Infrastructure (Physical Setup)***

**Multiple Regions**

1. Each region has “availability zones”, which are geographically separated, physical data centers

**Scalability** – ability to quickly/easily add more servers

**Elasticity** – ability to shrink on-demand as needed

1. As user traffic increases, demands on DB increase therefore additional EC2 Instances are created

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**AWS Essentials**