AMAZON WEB SERVICES COURSE CURRICULUM

Introduction to Cloud Computing

- What is Cloud Computing?
- Essential Characteristics of Cloud Computing
- Why Cloud Computing?
- Advantages of Cloud Computing

Cloud Computing Model

- Service Models (SAAS, PAAS, IAAS)
- Differences between the Service Models
- Deployment Models
- Overview of Public Cloud
- Overview of Private Cloud
- Overview of Hybrid Cloud
- Overview of Community Cloud

Cloud Computing Risks and Concerns

- Cloud Security and Privacy
- Pricing Model of Cloud
- Service Quality (SLA)
- Cloud Computing Portability and Interoperability
- Transition to the cloud
- Legal and compliance

Virtualization

- Introduction to virtualization
- Virtualization defined
- Types of virtualization
- Hypervisor Technology
- Virtualization terminologies
- Pros of Virtualization
- Virtualization Providers

Introduction to AWS

- Elastic computing
- AWS Global Infrastructure (Regions, Availability Zones and Edge Locations)
- Signing up for AWS
- AWS Free Tier

Amazon Elastic Compute Cloud (EC2)

- Creating Key Pairs
- Launching your first AWS instance
- Setting up security
- Security groups
- Provisioning Linux and Windows Instances with required security

Amazon EC2 Pricing

- On-demand Instance pricing
- Reserved Instance pricing
- Spot instance pricing

Amazon Machine Image(AMI)

- Introduction to AMI
- Choosing the AMI
- Copy and Share AMI across Regions
- Creating a new AMI from existing Instance.
- Deploying a new instance from the created AMI.

IP Addressing Scheme

- Introduction to TCP/IP Protocols
- IPv4 and IPv6 Addressing
- IP Address Classification
- Communication Types
- Public and Private IP Addresses
- Elastic IP's
- Network and Host Portions

- Introduction to NAT.

Amazon Virtual Private Cloud (VPC)

- Introduction to VPC
- VPC Components
- VPC security and Inbound and outbound ACL's
- Creating VPC Manually and using VPC wizard.

Elastic Load Balancer (ELB)

- Introduction to Load Balancing
- Creating an Elastic Load Balancer
- Create an ELB with web servers across Availability Zones

EBS (Elastic Block Storage)

- Introduction to Elastic Block Storage
- EBS Volume Types
- Introduction to Snapshots
- Provisioning and Terminating EBS volumes
- Creating and deleting snapshots
- Creating volumes from snapshots
- Attach and Detach EBS volume to Windows and Linux Instances
- Volume-Snapshot-Volume creation process

Simple Notification Service (SNS)

- Introduction to SNS
- SNS Protocols
- Creating a SNS topic

Relational Database Service (RDS)

- Introduction to RDS
- RDS Database types
- Creating databases
- Configuring backups
- Connecting to the database.

- Create a RDS instance and install Two Tier Application on it.

Route53

- Introduction to Route53
- Various Route53 Record Types
- Creating zones
- Creating Health Checks
- Create Simple, Weighted, Latency, Failover, and Geolocation Routing Policies

CloudWatch

- Introduction to CloudWatch
- Creating a Cloudwatch dashboard
- Creating a cloudwatch alarms
- Monitoring other AWS services
- Configuring Notifications
- Integrating cloudwatch with Auto scaling

Auto scaling

- Boot strapping Introduction.
- What is launch configuration?
- What is Auto Scaling group?
- set up an auto-scaled, load-balanced Amazon EC2 application
- Setting up Boot Strapping with an example of PHP.
- Test scaling UP and Down and Hosting Application using Autoscaling and Load Balancing

Identity access management (IAM)

- Creating Users, Groups and Roles
- Creating user and group Policies.
- Restricting access using policies.
- Password Policy
- Command line management.
- Activating MFA for a User

S3 (Simple Storage Service)

- Introduction to S3
- S3 durability and redundancy
- Buckets and Objects
- S3 static website hosting
- RRS (Reduced Redundancy storage)
- S3 Permissions and Bucket Policies.
- S3 Object Versioning and Lifecycle Policies
- Host a sample website on S3 Bucket.

CloudFront

- Introduction to CDN Network and CloudFront
- Creating a cloudfront distribution
- Hosting a website of cloudfront distribution
- Implementing restrictions
- Configuring origins and behaviors

Elastic Beanstalk

- Introduction to Elastic Beanstalk
- Elastic Beanstalk Application options
- Application versioning
- Deploying a sample app
- Deploy a PHP application using EC2 and RDS.

Dynamo DB

- Introduction to NoSQL Databases
- Creating Dynamo DB Tables
- Adding data manually
- Configuring alarms
- RCU and WCU

Cloud Formation

- What is cloud formation?
- Creating and Deleting Stack
- Provisioning application resources with CloudFormation
- Creating template from existing resources

Glacier storage

- Introduction to Glacier
- Creating a Vault
- Upload and Download to Vault
- Vault Lock Policies

Trusted Advisor

- Introduction to Trusted Advisor
- Cost Optimization
- Performance
- Security
- Fault Tolerance

Project and AWS Case study

- Architecting single tier application across regions using Route53.
- Architecting two tier and three tier applications on AWS.
- Best practices for AWS
- Cost control strategies

AWS certification

- Overview of AWS certifications
- How to book a slot for AWS certification.
- Certification Exam Question Patterns.
- Live Demo with sample questions and how to answer the questions

AWS troubleshooting

- Troubleshooting using CloudWatch
- Troubleshooting using ELB
- Using CloudTrail for Auditing

Check our website for more details on training.
http://www.govanin.com/