

AWS



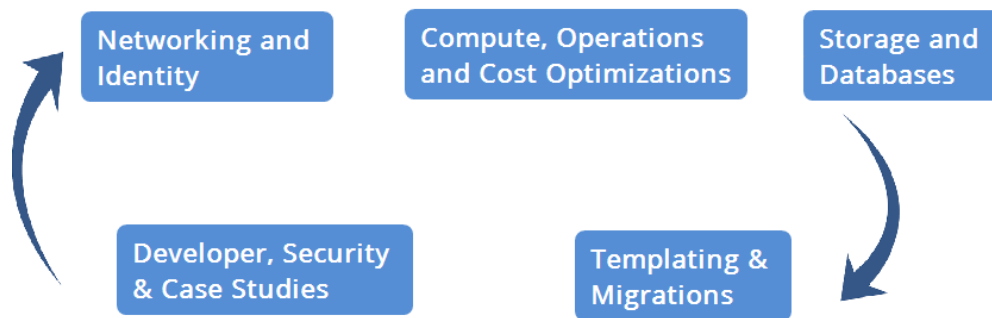
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The Leader in Software Training

Hyderabad

We are ready to serve Latest IT Trends, Are you ready to learn.??

START DATE :
TIMINGS :
DURATION :
TYPE OF BATCH :
FEE :
FACULTY NAME : Khaja

Amazon Web Services (AWS) DEVELOPER / ARCHITECTURE / ADMINISTRATION**Global Infrastructure**

- Backbone Network
- Regions
- Availability Zones
- Points of Presence
- Custom Hardware

Networking**Architecture Principles and Methodologies**

- Well-Architected Framework
- Shared Responsibility Model
- Terminologies
 - Elasticity
 - High Availability
 - Fault Tolerance
 - Disaster Recovery
 - Data Persistence
 - Encrypt at rest and Encrypt during transit

Virtual Private Cloud (VPC)

- VPC
- VPC Essentials
- Subnets
- Network ACLs and Security Groups
- Elastic Network Interfaces (ENI)
- Internet Gateways and Egress Only Internet Gateways
- NAT Gateway
- VPC Peering
- Elastic IPs
- DHCP Option Sets
- DNS in a VPC

- Endpoints
- Virtual Private Networks
- Transit Gateways
- Traffic Mirroring
- Network Monitoring using Flow logs
- IPv6 within AWS
- Operating Modes:
 - Console
 - CLI
 - CloudFormation

Load Balancing

- Basics
 - OSI Network Layer
 - Load Balancing
- Classic Load Balancer
- Application Load Balancer
- Network Load Balancer
- Auto Scaling Groups
- Target Groups
- Health Checks
- Using third party load balancers in AWS like F5
- Direct Connect Architecture
- Operating Modes:
 - Console
 - CLI
 - CloudFormation

Route 53

- DNS Basics
- Route 53 Architecture
- DNS Management
 - Public Hosted Zones
 - Private Hosted Zones
- Routing policies
 - Simple
 - Failover
 - Weighted
 - Latency
 - Geolocation
- Traffic flow
 - Traffic Policy
 - Policy Records
- Route 53 Routing Policies
- Route 53 Resolver

- VPCs
- Inbound vs Outbound endpoints
- Rules

Identity and Access Control

IAM

- Overview
- Users
- Groups
- Roles
- Policies
- Custom Policies
- Multi Factor Authentication
- API Keys
- Key Management Service
- Federation and Single Sign On
- AWS Inspector and Cognito
- AWS Organizations and Service Control Policies
- AWS Cross-Account Permissions
- Operation Modes
 - Console
 - CLI

AWS Directory Services

- Create managed directory
- Manage Access
- SSO with AD Credentials
- Domain Join EC2 instances

Compute

EC2

- Virtualization in AWS
- Virtualization Types
- EC2 Instance Types
- EC2 Instance Families
- EC2 Purchasing Options
 - OnDemand
 - Spot
 - Reserved
 - Dedicated
 - Capacity Reservations
- Creating AMI Images
- High Performance Compute and Placement Groups
- Horizontal and Vertical Scaling

- Auto Scaling Groups
- Key Value Pairs
- EC2 Status Checks
- Tags and Its Importance
- User Data
- EC2 Rescue
- Operating Modes
 - Console
 - CLI
 - CloudFormation
- Troubleshooting

Lightsail

- What is Amazon Lightsail
- DNS in Amazon Lightsail
- Creating Ec2 instances using Lightsail

AWS Batch

- Purpose of AWS Batch
- Jobs
- Job Definitions
- Job Queues
- Job Scheduling
- Compute Environments
- Elastic Fabric Adapter

Operations (OPS)

CloudWatch

- Monitoring and logging basics
- CloudWatch Metrics
 - Predefined
 - Custom Cloud Watch Metrics
- CloudWatch Alarms
- CloudWatch Billing Alarms
- CloudWatch Free tier Billing Alerts
- CloudWatch Logs
- CloudWatch Log Agent
- CloudWatch Log Insights
- CloudWatch Events
- CloudWatch and Simple Notification Services Integration

CloudTrail

- CloudTrail Workflow
- Concepts
- CloudTrail Log Files

- CloudTrail Events

Simple Notification Service (SNS)

- Introduction
- SNS Topics
- SNS Subscriptions and SNS Subscription Protocols
- SNS Push Notifications

Service Catalog

- Overview and Limits
- Product and Portfolio
- Authentication and Access Control
- Managing Catalogs
- Managing Provisioned Products
- Managing Tags
- Product and Service Integrations

Systems Manager

- Purpose
- Capabilities of Systems Manager
- Operations Management
 - CloudWatch Dashboards
 - OpsCenter
 - Resource Groups
 - Trusted Advisor & Personal Health Dashboard
- Actions & Change
 - Automation
 - Maintenance Windows
- Instance & Nodes
 - Configuration Compliance
 - Inventory Management
 - Managed Instances
 - Activations
 - Sessions Manager
 - Run Command
 - State Management
 - Patch Management
- Shared Resources
 - SSM Document
 - Parameter Store

AWS Cost Optimizations

- Right Size
- Increase Elasticity
- Leverage the right pricing model
- Optimize Storage

- Measure, monitor & improve
- AWS Account Structure Considerations
- AWS Tools for Reporting and Cost Optimization

Databases

Amazon Relational Database Services

- Overview of Relational Databases
- RDS Instances and RDS Instance Sizes
- Supported Databases
- Option Groups
- Subnet Groups
- Parameter Groups
- Why Aurora Database?
- Snapshots
- Automated Backups
- Reserved Instances
- Replications
- Encryption
- Limits
- Operating Modes
 - CLI
 - Console
 - CloudFormation

DynamoDB

- NoSQL Overview
- DynamoDB Concepts
- Tables
- Backups
- Reserved Capacity
- Indexes
- Transactions
- DAX
 - Dashboard
 - Clusters
 - Subnet groups
 - Parameter groups
 - Events

DocumentDB

- Overview
- Clusters
- Instances
- Snapshots



Elastic Cache

- Caching Overview
- Memcached
- Redis
- Clusters
- Backups

Storage**Simple Storage Service (S3)**

- Architectural Overview
- Buckets
- Objects and Folders
- Storage Tiers
- Lifecycle policies
- Versioning
- Locking
- Access to S3 Buckets
- Static Website Hosting
- S3 Cross Region Replications
- S3 Bucket Policies
- Troubleshooting
- Operating Modes
 - Console
 - CLI
 - CloudFormation

CloudFront

- Overview
- Understanding Points of Presence
- Content Delivery Network Basics
- Creating & Working with Distributions
- Custom Origins
- Security
- Optimizations

Glacier

- Archival Basics
- Data Model
- Working with Vaults
- Working with Archives
- Querying Archives with Glacier Select
- Data Retrieval Policies

Elastic Block Storage

- Hard disk Basics
- EBS Types

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- EBS vs Instance Storage
- Volume
- EBS Snapshots
- Backups & Replications
- Mounting EBS Volumes
- Troubleshooting
- Operating Modes
 - Console
 - CLI
 - CloudFormation

Elastic File Storage

- Network File System
- Creating Resources for Amazon EFS
- Managing EFS File Systems
- Mounting EFS File Systems
- Performance Limits
- Troubleshooting
- Operating Modes
 - Console
 - CLI
 - CloudFormation

AWS Storage Gateway

- What is Storage Gateway
- How Storage Gateway Works
- Creating & Managing Storage Gateway
- Troubleshooting

Cloud Formation

- Concepts
- How CloudFormation Works
- Templating Basics
- Json/YAML
- Template Anatomy
- Resources
- Intrinsic Functions
- Helper Scripts
- Template Macros
- Expressions
- Stacks
- StackSets

Server Migration Service

- Overview
- How Server Migrations Work

- Server Migrations
 - From Azure
 - From VMWare
 - From Hyper-V

Database Migration Service

- How AWS DMS Works
- Security Setup
- Replication Instance
- Endpoints
- Tasks
- Migrating
 - Mysql
 - Microsoft SQL Server

Developer**Elastic Beanstalk**

- Concepts
- Permissions
- Platforms
- Application Management
- Environment Management & Configuration
- Advanced Configuration
- Monitoring
- Working with Docker
- Working with Python
- Working with Java
- Working with .NET

Lambda

- What is Lambda
- Serverless concepts
- Permissions
- Functions and tools
- Managing, Configuring & Invoking Functions
- Lambda Runtimes & Applications
- Working with Python

API Gateway

- Concepts
- Use cases
- Deploying & Invoking a REST API
- Deploying & Invoking a WebSocket API
- Publishing & Monitoring API's

Step Functions

- What are Step Functions
- Creating a Lambda State Machine
- States
- Transitions
- State Machine Data
- Input and Output Processing
- Executions
- Service Integrations
- Monitoring & Logging

Simple Queue Service

- What is Amazon SQS
- Creating Queues
- Adding Permissions to Queue
- Sending, Receiving and Deleting a Message
- Subscribing a Queue
- Purging a Queue
- Configuring Queues

AWS Architecture Principles

- AWS Well-Architected Framework
- Cloud Design Patterns
- Case studies

Security

- Key Management Service
- Cognito
- WAF & Shield
- Certificate Manager



Foundation Course for DevOps, AWS & AZURE**Linux**

- Overview
- Understanding Linux Architecture
- Shell and Kernel Overview
- Linux Distributions
- Using Shell
- Exploring Filesystems
- Working with Text Files
- Process Management
- Package Management
 - RPM
 - DEB
 - YUM
 - APT
 - SNAP
- Managing User Accounts
- Disk & Filesystem management
 - Disk Storage
 - Partitions
 - LVM
 - Mounts
- Linux Networking
- Service Management in Linux
 - Init
 - systemd
- Server Configurations in Linux **Hyderabad**
 - Web Server
 - Application Server
 - Syslog
 - Database Servers
- Troubleshooting in Linux

Shell Scripting

- Why and What of Shell Scripting
- Shell Terminals
- Creation & Execution of Shell Scripts
- Variables & Variable Scopes
- Conditions in Shell Scripts
- Iterating with loops
- Functions in Shell Scripts
- Regular Expressions
- Command Piping with grep
- Stream Editor

- Understanding basics of sed
- Sed commands
- AWK Fundamentals

Python

- Introduction
 - Why Python?
 - Installing Python
 - Python 2 vs Python 3
- Types in Python
 - Integers & Floats
 - String
 - Booleans
 - None
 - Lists
 - Dictionary
 - Other Data Types
- Statements in Python
 - If
 - Loops
 - Break & Continue
 - While
- Exceptions in Python
- Functions
- File Management in Python
- Yield
- Lambda Functions
- Object Oriented Programming with Python
 - Classes
 - Methods
 - Constructors
 - Instance & Class Attributes
 - Inheritance & Polymorphism
- Python Tips & Tricks
- Strings & Collections
- Modularity
- Handling Exceptions

Networking

- Basic Networking Concepts
 - Computer Network
 - Terminology
 - Network Protocol
 - Ping & Traceroute
 - What is IP address

- Network Categories and Components
- Domain Naming System
- OSI Model
 - Layers
 - Application Layer
 - Presentation Layer
 - Session Layer
 - Transport & Other lower layers
 - TCP vs OSI Model
- Binary Compute Basics
- Hexadecimal Compute Basics
- IP Addressing
 - Overview & Demonstration
 - IPV4 Address Format
 - Network vs Host portion
 - Class A, B,C,D,E address
 - Classless Inter-Domain Routing (CIDR) Notation
- IP Subnetting
- Routing
- Switching
- NAT Server
- DNS
- DHCP Server

Windows Server

- Setup
- Understanding the Client Server Architecture
- Server Manager
- Managing Local User Accounts
- Task Manager
- Windows Administrative Tools
- Active Directory
- DHCP
- DNS and Name Resolution
- IIS Services and Configuration
- Active Directory Groups & OU
- Group Policy Management
- Windows Server Backups Overview

PowerShell

- Introduction to PowerShell
 - What is PowerShell
 - PowerShell Editors
 - Getting Help
 - Command Naming & Discovery

- Parameters & Parameter Sets
- Introduction to Providers
- Modules & Snap-ins
 - Introducing Modules
 - PowerShell Core & the Windows Compatibility Module
 - Snap-ins
- Objects in PowerShell
 - Pipelines
 - Members
 - Enumerating & Filtering
 - Selecting & Sorting
 - Grouping & Measuring
 - Comparing
- Operators
 - Arithmetic Operators
 - Assignment Operators
 - Comparison Operators
 - Regular Expression based Operators
 - Binary Operators
 - Logical Operators
 - Type Operators
 - Other Operators
- Variables, Arrays and Hashtables
- Branching & Looping
- Strings, Numbers & Dates
- Files, Folders & Registry
- Web Requests & Web Services
- Remoting & Remote Management
- Scripts, Functions & Filters
- Parameters, Validation & Dynamic Parameters
- Testing, Troubleshooting & Error Handling

PowerShell DSC

- Introduction & Overview of PowerShell DSC
- DSC Architecture
- DSC Configuration Files
- DSC Resources
- Pushing DSC Configurations
- DSC Cross Platform Support

Others

- Kafka Configuration
- Vagrant
- Virtualization
- Groovy Scripting