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'Your go-to partner for education upgrading and upskilling with current, industry-relevant courses that unleash your employment potential and make you production-ready to fit the tech market demand!'

A & T Edutech Learning Center is democratizing access to high-quality education at an affordable price. We are playing our part in helping the country meet the growing demand for talent across segments. We follow an outcome-oriented approach while not compromising on either quality or affordability. Our emphasis is to become a bridge and fill the employment gap in our country by increasing the employment quotient of students and enabling them to access premium jobs.

About the Program

A & T Edutech Learning Center Cloud Program prepares you to get job ready and enhance your skills to match the industry standards. This program will enable you for AWS services. This program starts with the basics of Linux, makes you proficient in developing and maintaining cloud solutions using AWS,

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Linux for Cloud and DevOps

1: Introduction to Linux and Shell

Topics

- Use Cases based on Linux
- History of Linux
- Linux vs Unix
- Features of Linux
- Components of Linux OS
- Architecture of Linux OS
- Linux Distribution
- Shell

2: Shell Scripting, Files, and Linux Commands

Topics

- Shell Scripting
- Miscellaneous Linux Concepts:
- Types of Files Linux
- Run Levels in Linux
- Pipe in Linux
- User Interface in Linux
- Linux Commands

3: Advanced Linux Commands and File System

Topics

- grep Command and its Uses
- sed Command and its Uses
- awk Command and its Uses
- alias Command and its Uses
- history Command and its Uses
- File Systems And Its Types
- File Attributes
- File Operations
- File Access Methods



4: Package Management and User Administration

Topics

- Software Package Management
- Update Packages
- Upgrade Packages
- apt command
- Users in Linux
- Sudo users
- Adding a User
- Deleting a User

5: Group Management and Permissions

Topics

- User Groups in Linux
- Group Add
- Group Modification
- Group Deletion
- Ownership and Permission
- chown command
- chmod command
- Process Management and Networking (Self-paced)
- Addressing and Network Protocol (Self-paced)

6: Traditional Computing and Cloud Computing

Topics

- Different processing systems
- Parallel Computing
- Client-server Computing
- Distributed Computing
- Cluster Computing
- Grid Computing
- Cloud and Cloud Computing
- Emergence of Cloud Computing
- Virtualization

Developing Cloud Solutions using AWS

7: *Introduction to AWS and Cloud Models*

Topics

- SaaS
- PaaS
- IaaS
- Public Cloud
- Private Cloud
- Hybrid Cloud
- Community Cloud
- Amazon Web Services (AWS)
- Benefits of AWS
- AWS Global Infrastructure
- AWS regions and replication of data between the regions
- Availability Zones in AWS
- High Availability

8: AWS Global Infrastructure and IAM

Topics

- AWS Direct Connect Locations and Local Zones
- Latency
- AWS PoP Locations
- AWS Services
- Ways to Access AWS resources
- AWS IAM
- Components of IAM
- IAM Users
- IAM Groups
-



9: IAM Roles, Policies, and Best Practices

Topics

- IAM Roles
- IAM Policies
- Identity and Credential Management
- Access and Permission Management
- Delegation and Audit
- AWS Access Keys

10: Overview of EC2

Topics

- Virtualization
- Amazon Elastic Compute Cloud (EC2) and Its Benefits
- Amazon Machine Image (AMI)
- Security Groups in AWS
- Authentication through Key-pair
- Hardware Tenancy – Shared vs. Dedicated
- Networking Layer in EC2: VPC
- Elastic Network Interface (ENI) and Its Attributes
- Different Categories of IP Address
- Public IP vs. Elastic IP



11: Storage Services in EC2 and Snapshots

Topics

- AWS Storage Service
- Instance Store
- Elastic Block Store (EBS), Its Features and Volume Types
- Amazon EBS Multi-Attach
- Solid State Drive: General Purpose SSD and Provisioned IOPS
- Hard Disk Drive: Throughput Optimized HDD and Cold HDD
- Snapshots
- Types of EC2 Instances

12: Elastic File System (EFS) and Storage Options

Topics

- Elastic File System (EFS) and Its Features
- EBS vs. EFS
- Traditional Storage
- Need to Move to Cloud Storage
- Traditional vs. Cloud Storage Cost
- Cloud Storage
- Different Storage Options Available on AWS

13: Overview of S3

Topics

- Simple Storage Service (S3) and Its Components
- Working of S3
- Difference Between S3, EBS and EFS
- Bucket Policy
- Access Control List (ACL)
- Versioning
- Cross-Region Replication (CRR) and Its Use Case
- Amazon S3 Transfer Acceleration



14: Storage Classes on S3 and Content Delivery Network (CDN)

Topics

- S3 Standard
- Intelligent Tiering
- S3 Infrequent Access
- Amazon Glacier
- Glacier Deep Archive
- Lifecycle Policy of S3 Bucket
- CloudFront
- Accessing a Static Website Using CloudFront
- Snowball

15: Types of Networks, Configure VPC and NAT Device

Topics

- Traditional network
- Virtual network and its working
- IP Address
- CIDR -IPv4 and IPv6
- Subnet
- Private and public subnet
- Internet Gateway
- Route Tables
- Security group and Network ACL
- NAT devices
- Types of NAT devices
- NAT Instance
- NAT Gateway

16: VPC Peering, VPN and Direct Connect

Topics

- VPC Peering
- Working of VPC Peering
- Limitations of VPC Peering
- VPC Endpoints
- Transit VPC Connection



- Virtual Private Network(VPN)
- AWS Direct Connect
- AWS Direct Connect and its Benefits
- Difference between VPN and Direct Connect
- PrivateLink
- Benefits of using PrivateLink

17: Network Load Balancer and Application Load Balancer

Topics

- Elastic Load Balancing
- Working of Elastic Load Balancing
- Types of Elastic Load Balancer
- Network Load Balancer
- Advanced Features of Network Load Balancer
- Application Load Balancer
- Advanced Features of Application Load Balancer
- Components of Application Load Balancer

18: AWS Auto Scaling and Lifecycle of Auto Scaling

Topics

- AWS Auto Scaling
- Use Cases that Auto Scaling solves
- Components of Auto Scaling
- Lifecycle of Auto Scaling
- Auto Scaling Policy
- Types of Scaling Policies

19: Route 53 and Routing Policies

Topics

- Why DNS is used?
- Route 53
- Working of Route 53
- Simple Routing Policy
- Weighted Routing Policy



- Latency-based Routing Policy
- Failover Routing Policy
- Geolocation Routing Policy
- Multivalue Answer Routing Policy

20: Database Services and Relational Database Services

Topics

- What is Database?
- Database Services Provided by AWS • Why Choose Managed Database Services?
- Amazon RDS
- Amazon RDS Benefits
- Amazon RDS Database Engines
- RDS Database Instances
- RDS Read Replica Billing of Amazon RDS
- DB Instance Regions and Availability Zones
- RDS Backup and Restore
- Identity and Access Management in Amazon RDS

21: Amazon DynamoDB, Amazon ElasticCache, and Amazon Redshift

Topics

- Difference Between SQL and NoSQL Databases
- Amazon DynamoDB – Benefits and Use cases
- DynamoDB API
- Read Consistency in DynamoDB
- Amazon ElasticCache
- Amazon ElasticCache -Memcached • Amazon ElasticCache -Redis
- Popular Use Cases of ElasticCache
- Amazon Redshift
- Features of AWS Redshift
- AWS Redshift Architecture
- Amazon Aurora
- AWS Database Services-Use Cases



22 Cloud Monitoring Services and Amazon CloudWatch

Topics

- Introduction to Cloud Monitoring Services
- Benefits of Cloud Monitoring
- Monitoring Services Offered by AWS
- Amazon CloudWatch
- Resources Managed by CloudWatch
- Amazon CloudWatch Terminologies
- Amazon CloudWatch Dashboard
- CloudWatch Events
- Monitoring EC2 Instances via CloudWatch
- Amazon Cloudwatch Logs
- Amazon CloudWatch Logs Insights

23: AWS CloudTrail and Amazon SES

Topics

- AWS CloudTrail
- AWS CloudTrail Concepts
- CloudTrail WorkFlow
- Where can you use CloudTrail
- AWS CloudTrail Best Practices
- Amazon Simple Email Service(SES)
- Why use SES
- Sending Email with Amazon SES
- Limitations in Amazon SES

24: AWS SNS and Amazon SQS

Topics

- Amazon Simple Notification Service(SNS)
- Working of SNS
- Benefits of SNS
- SNS Mobile Push
- What is SQS
- Short and Long Polling
- SQS Visibility Timeout
- SQS Features



25 Amazon SWF, Amazon EventBridge, and AWS Lambda

Topics

- AWS SWF and its Workflow • Used and Architecture of SWF
- What is Amazon MQ?
- What is Amazon EventBridge?
- Serverless Computing
- Amazon Lambda and Its Working
- Event Sources – Can be Integrated With Lambda
- How to Send an Email Through Lambda
- Notification via Lambda

26: Security - AWS Cognito and WAF

Topics

- Threats to Cloud Infrastructure
- AWS Shared Responsibility Model
- Identity and Access Management (IAM)
- IAM - AWS Cognito
- Web Application Firewall (WAF)
- Working of WAF

27: AWS Shield, AWS GuardDuty, and Data Protection

Topics

- What is AWS Shield
- Benefits of AWS Shield
- AWS GuardDuty
- Keys Concept of AWS GuardDuty
- Using GuardDuty to Block Suspicious Host
- Data Protection: KMS and CloudHSM
- Auditing Security via Trusted Advisor

28 IT Governance, IT Resources, Security and Billing

Topics

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- IT governance via AWS Config
- IT Resources: Assets Management and Cost Control
- IT Security: Physical And Logical Access Control, Securing IT Resources and Logging in IT Resources
- IT Performance: Monitoring IT Resources and IT Resiliency

29: Cloud Analytics - Amazon Athena and Amazon EMR

Topics

- What is Cloud Analytics?
- AWS Analytics Services
- Amazon Athena
- What is Amazon Elastic MapReduce (EMR)?
- Overview and use case of Amazon EMR

30: Amazon Kinesis and Amazon Elasticsearch

Topics

- Amazon Kinesis
- How to visualize Web Traffic Using Kinesis Data Stream
- Amazon Elasticsearch
- Working of Amazon Elasticsearch

31: Amazon QuickSight, AWS Lake Formation, AWS Cost Management and Budgets

Topics

- Amazon QuickSight
- AWS Lake Formation
- AWS Cost Management
- AWS Cost Management Services
- AWS Cost Explorer
- AWS Budgets
- AWS Cost Optimization



- Fault-tolerant system and High Availability (Self-paced)
- Disaster Recovery (Self-paced)

32: Interview Preparation and Assessment – Linux and AWS

Topics

- Interview Preparation on Linux and AWS
- Assessment on Linux and AWS

33: Project – Address Book Application

OrionCloud Innovations is a cloud services provider specialising in helping businesses migrate and manage their applications on Amazon Web Services (AWS). One of their clients, an emerging startup called BridgeSync Hub, approached them to deploy a scalable and reliable database solution for their address book application.