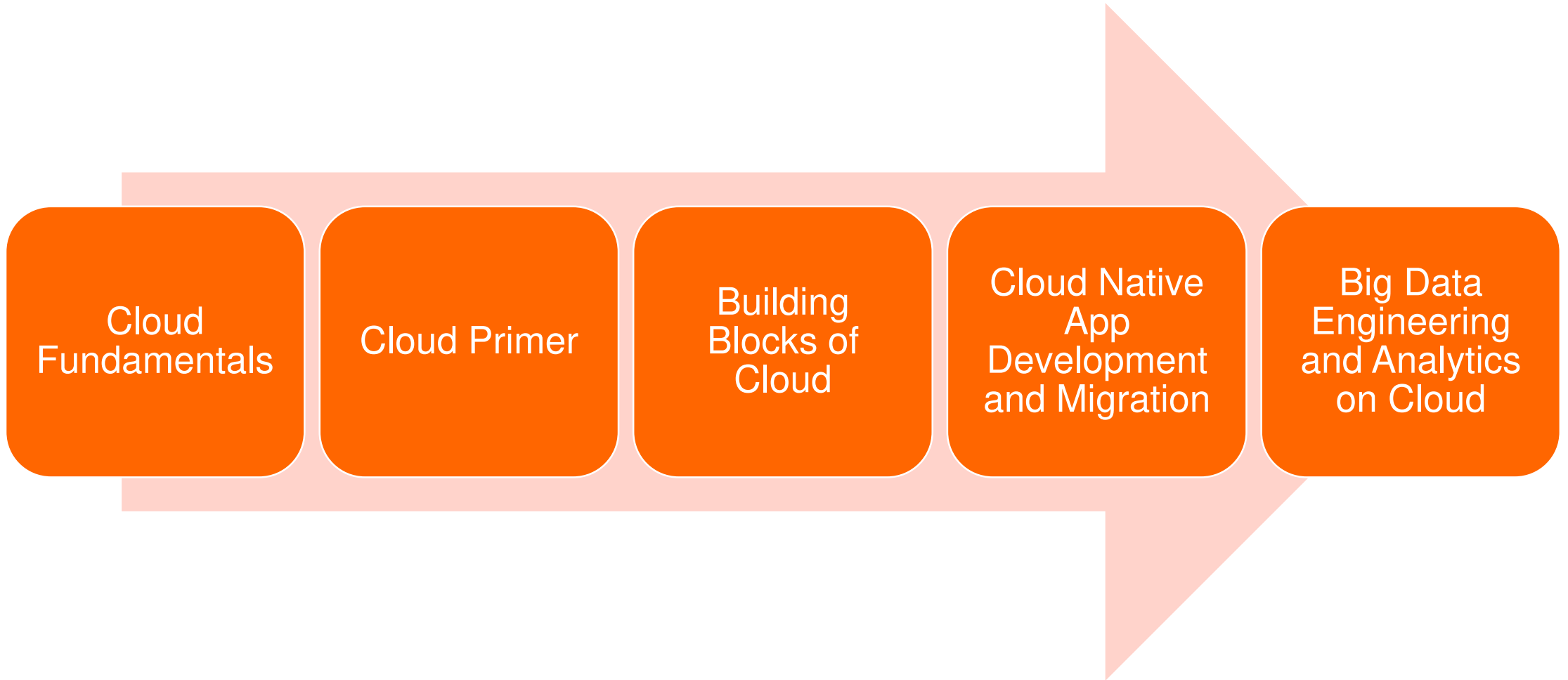




Cloud Computing

Learning Path



Program Design

Level	Topics	Self-Paced hours	Web-ILT Hrs	Assessment duration, Hrs	Total duration Hrs	Industry Certification	Pre-Requisite	Roles who can attend this training
	Cloud Basics	10	4	0.15	14.15		NA	Common for all
Level 1	Cloud Primer	10	12	0.45	22.45	AWS Cloud Practitioner	Completion of Level 0 and Assessment	Common for all
Level 2	Building blocks of Cloud	20	24	2	46	AWS Cloud Practitioner, AWS Sys-ops	Completion of Level 1 and Assessment	IT support and Enhancement, IT Enhancement and Maintenance Team members, Data Center Specialists,Infosecurity Specialists, Finance Control and Budget specialist, Developer, IT Developers,Delivery Manager, DevOps Manager,Application Owners(Enhancement and New Implementations), Application Security architects,Vertical Leads/ Managers, Cloud Migration Specialists (SaaS /IaaS), Project Managers,Production Support Engineers, Production Support Managers,
Level 3	Cloud Native App Development and Cloud Migration	20	28	2	50	AWS Cloud Practitioner, AWS Sys-ops, AWS Developer	Completion of Level 2 and Assessment	Developer,IT Developers, Delivery Manager,DevOps Manager, Application Owners(Enhancement and New Implementations), Application Security architects, Vertical Leads/ Managers, Cloud Migration Specialists (SaaS /IaaS), Project Managers,Production Support Engineers, Production Support Managers,
Level 4	Big Data Engineering and Analytics on Cloud	10	28	2	40	AWS Cloud Practitioner, AWS Sys-ops, AWS Developer, AWS Solution Architect - Associate/ Aws Devops Enginer, AWS Data Analytics / AWS Machine Learning	Completion of Level 3 and Assessment	Developer,IT Developers, Delivery Manager,DevOps Manager, Application Owners(Enhancement and New Implementations), Application Security architects, Vertical Leads/ Managers, Cloud Migration Specialists (SaaS /IaaS), Project Managers,Production Support Engineers, Production Support Managers,
		70	96		173			

Cloud Fundamentals

E-Learning Topics – total duration - 10 hours
Introduction to Cloud Computing
Components of Cloud Computing
Cloud Infrastructure Models
Technical Components of Cloud Computing
Cloud Current Trends
Cloud Current Trends - SAQ

Web-ILT	Duration in hours
Introduction Session - Cloud Computing - What is virtualization and evolution of virtualization.	1
Cloud computing basic concepts, IaaS, PaaS, SaaS, Deployment models(public, private, hybrid cloud)	1
Cloud Computing Technical components, cloud trends, and intro to cloud security	2

Cloud Primer

E-Learning Topoics – 10 hours	
AWS Global Infrastructure	Create s3 bucket and folders
AWS free tier sign up	S3 file operations
Enable MFA for root account	Static website hosting
Introduction to AWS IAM	Cross region replication setup
IAM User Management	Object versioning
IAM Group Management	Server access logging
IAM Roles	Object level logging
Set up a billing alarm	Transfer acceleration
Set up MFA for IAM user	Bucket policy
IAM Password policy	S3 lifecycle
Introduction to Elastic Compute Cloud	Introduction to Relational Database
VPC Theory Lab GUI	Launch MySQL RDS instance
Create Custom VPC	Introduction to DynamoDB
Create and attach internet gateway	Launch Dynamodb
Create public and private subnet	
Launch ec2 instance in public subnet	

Webinar Topics	Duration in hours
Webinar on & AWS Big Picture ,VPC, Subnets & Security Groups and to host website and Amazon AMI	2
AWS S3 introduction and S3 life cycle and Bucket policy, RDS instance and Launch and work with RDS instances	2
DynamoDB, understand NoSQL DB of AWS and work with DynamoDB	2
Intro to AWS IAM and Cost Management	2
AWS Cloud Practitioner certification focus discussion	4

Building Blocks of Cloud

E-Learning Topics – 10 hrs	
Launch ec2 instance in private subnet	Launch a windows 2016 ec2 instance
Create and route to IGW	Connect to a windows 2016 ec2 instance
Connect to Private subnet instance from public subnet vm and attach elastic ip to Public subnet vm	Launch a ubuntu Linux ec2 instance
Create secondary custom VPC with startup wizard	Connect to a Ubuntu Linux ec2 instance
VPC peering	Launch windows ec2 instance with userdata
Add and delete NACL rules	Launch Linux ec2 instance with userdata
Introduction to EBS	EC2 metadata
Introduction to AWS Load Balancer Service	Attach ENI to ec2 linux instance
Create and edit Internet facing Classic load balancer	NAT instance Source Destination Check
Introduction to Autoscaling and its Components	Troubleshooting
Create ec2 AMI for autoscaling	Create, Attach, Detach volume to Windows ec2 instance
Create ELB for autoscaling	EBS snapshot, Restore and Disaster recovery
Create autoscaling group	EBS encrypted volume and sharing snapshot
Scale out VMS in autoscaling group	Create, Attach, Detach volume to Linux ec2 instance
Scale in VMS in autoscaling group	
Clean up autoscaling group resources	

Web-ILT - Topics	Duration in Hrs
Virtual Networking, AWS DNS, DNS Settings, Security Rule, AWS Firewall, AWS Bastion Service and Application Security groups Ddos, Route53	4
Configure Application Gateway, configure an internal load balancer, load balancing rules, public load balancer AWS VPN gateway, Configure VPN, AWS Firewall , Traffic Manager and Application Security groups	4
Create and Configure Elastic Beanstalk and how to deploy APPS on VM, Cloud Trail and Cloud Monitoring , Cloud Front	4
Deploy and Manage VMS for high availability and scalability,, Virtual machine scale sets ARM Template Cloud Formation Template, EBS and EFS Move VMs from one resource group to another Configure networking and manage Vm Sizes	4
Introduction Containers and Kubernetes	2
AWS Configure and interpret metrics, Configure Log Analytics, Setup alerts and actions, AWS monitor, AWS Site Recovery benefits and usage and AWS Backup	2
AWS Security	4

Cloud Native App Development and Migration

E-Learning Topics – 10 hrs	
Introduction to AWS API Gateway	AWS Lambda
Introduction to AWS Lambda	AWS Redshift
AWS Redshift	AWS Simple Queue Service (SQS)
AWS Kinesis	Introduction to AWS ECS
Amazon SQS	AWS Directory Service
AWS ECS	Introduction to Code Build and Code Commit
Classic Load Balancer and ECS Containers	Introduction to AWS Cloud Formation
ALB - Introduction to the AWS ELB Application Load Balancer	Introduction to AWS Elastic BeanStalk
ALB Components explained	Introduction to Code Deploy and Code Pipeline
ALB Listener Rules	Introduction to AWS OpsWorks
ALB Content Routing (Host and Path based routing)	
ALB - Containers and Microservices Support	
ALB and ECS Dynamic Host Port Mapping	
Monitoring the ALB	
ALB - Benefits of Migrations From CLB to ALB	
Monitoring the ALB	

Web-ILT - Topics	Duration in Hrs
AWS Cloud Formation, evaluation of location of new resources, Virtual disks template, template library manage and deploy from template , create and execute an automation runbook API Gateway	4
Migrate workloads using AWS Migrate, implement AWS Backup for VMs, disaster recovery and AWS Update management	4
AWS Redshift and AWS Lambda, AWS DataLake Formation and AWS Datapipelines	8
AWS Code commit, AWS Code Deploy AWS Application loadbalancers CloudWatch and Cloud trail	4
Create a container image, Configure AWS Kubernetes service Automate image deployments in AWS Containers	4
Cloud Migration Casestudy	4

Big Data Engineering and Analytics on Cloud

E-Learning Topics – 10 hrs
Introduction to Hadoop
Introduction to EMR
Demao- Create EMR Cluster
Demo - Run Hive job on EMR
Demo - Delete EMR cluster
Demo - Create Step execution EMR Cluster
Demo - AWS IOT Services Overview
Introduction to ML, AI, DL and Data science
AWS Comprehend - Overview
AWS Deeplens - Overview
AWS Lex - Overview
AWS Machine Learning Solutions - Summary
AWS Polly - Overview
AWS Rekognition image - Overview
AWS Rekognition video - Overview
AWS SageMaker - Overview
AWS Transcribe - Overview
AWS Translate - Overview

Web-ILT	Duration in Hrs
AWS SDK, AWS Data Lake , Athena, Glue, Kinesis	4
AWS EMR and working with EMR notebooks	4
AWS snow Family, Amazon FSx, Glacier, AWS Cognito, Serverless Application Model(SAM) Overview	4
AWS Security, KMS overview, AWS Secret Manager, CloudHSM,Amazon GuardDuty, Amazon Inspector and Shared responsibility	4
Disaster Recovery in AWS, Database Migration service, Data Sync, Transferring Large Datasets into AWS	4
Machine Learning services on AWS AWS Sagemaker, Launch notebook instance and train a machine learning model on AWS Sagemaker	8