

DevOps Engineer Masters Program

Course Curriculum



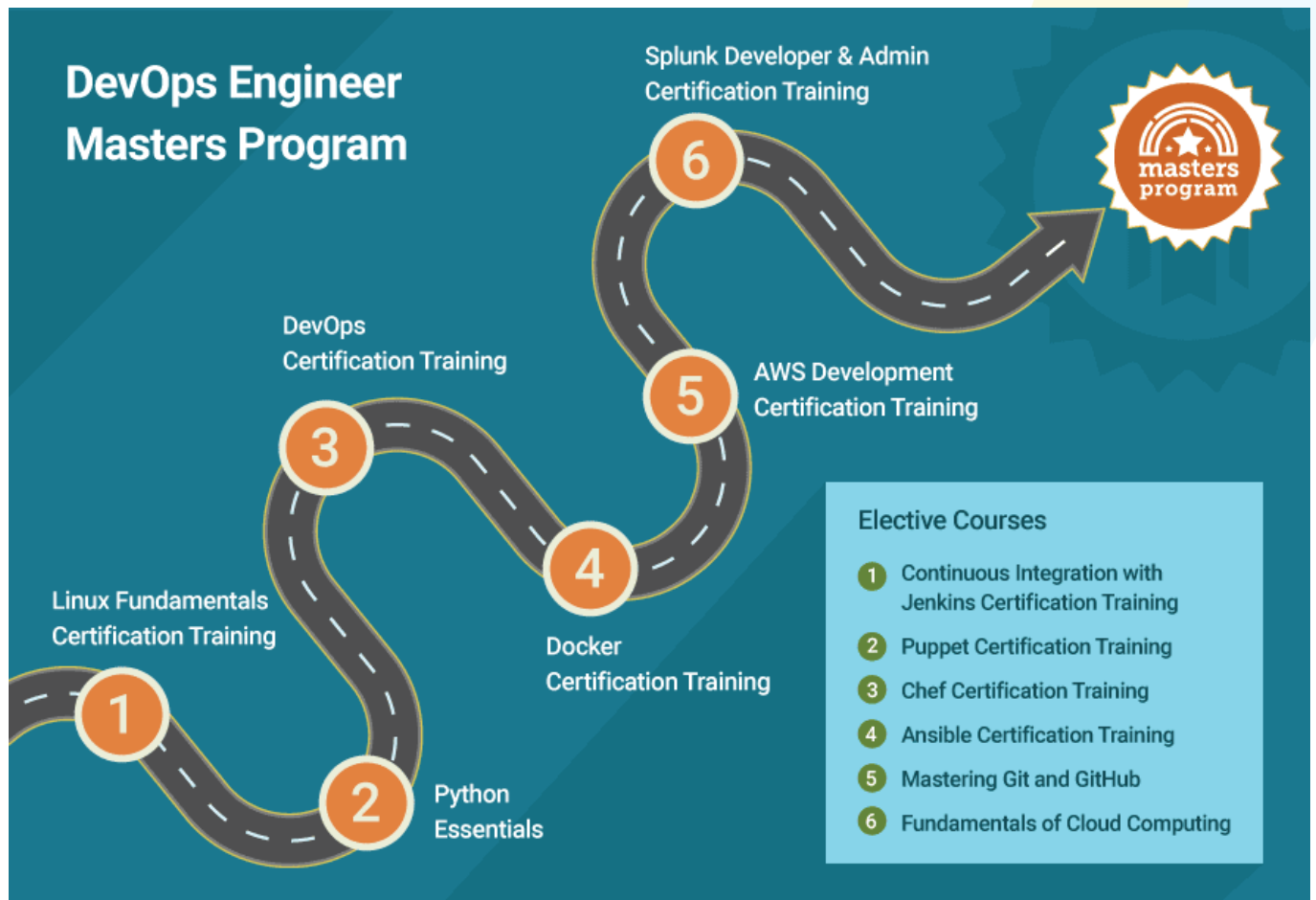
About Edureka

Edureka is a leading e-learning platform providing live instructor-led interactive online training. We cater to professionals and students across the globe in categories like Big Data & Hadoop, Business Analytics, NoSQL Databases, Java & Mobile Technologies, System Engineering, Project Management and Programming.

We have an easy and affordable learning solution that is accessible to millions of learners. With our students spread across countries like the US, India, UK, Canada, Singapore, Australia, Middle East, Brazil and many others, we have built a community of over 1 million learners across the globe.

About The Course

Edureka's Masters Program is designed to make you a DevOps Expert. It will help you master DevOps principles like Continuous Integration, Continuous Deployment, Continuous Monitoring, Continuous Delivery, using tools like Puppet, Nagios, Chef, Ansible, Docker, Git, Jenkins. The entire program is a structured learning path curated and led by leading industry experts and ensures that you transform into a DevOps Expert.



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Linux Fundamentals Certification Training

Course Curriculum

About The Course

Edureka's Linux Fundamental course covers all the necessary concepts required for Linux Administration. Starting from Linux installation to security administration, user-account management, networking concepts, file system management, system services, Kernel services, and virtualization.

Module 1 : Installation and Initialization

Learning Objectives

In this module, you will understand how to install Linux. You will learn partitions, package selections and post install configurations.

Topics

- ✓ Installation
- ✓ First Boot: Post-Install Configuration
- ✓ Command line
- ✓ Stream text editor (grep, sed and awk)
- ✓ Starting the Boot Process: GRUB
- ✓ Package Selection
- ✓ Anatomy of a Kickstart File
- ✓ Introduction to Bash Shell
- ✓ System Initialization
- ✓ Run Levels

Module 2 : User Administration

Learning Objectives

In this module, we will learn the concept of user administration in Linux. We also learn how to add new user account, modify and delete existing user account. We will also discuss network users and file permission techniques

Topics

- ✓ Adding a New User Account
- ✓ Modifying / Deleting User Accounts
- ✓ Password Aging Policies
- ✓ Sudo
- ✓ Authentication Configuration
- ✓ SGID Directories
- ✓ Default File Permissions
- ✓ Annie's Quizzes
- ✓ Q & A
- ✓ User Private Groups
- ✓ Group Administration
- ✓ Switching Accounts
- ✓ Network Users
- ✓ SUID and SGID Executable
- ✓ The Sticky Bit
- ✓ Access Control Lists (ACLs)
- ✓ LAB
- ✓ Quick Recap

Module 3 : Boot and Package Management

Learning Objectives

In this module, you will learn about boot management system, configuring services to run at boot. You will understand package management, which includes installing and removing software and updating a Kernel RPM.

Topics

- ✓ Setting Kernel Parameters
- ✓ Securing single-user mode (su login)
- ✓ RPM Package Manager
- ✓ Updating a Kernel RPM
- ✓ RPM Verification
- ✓ Using yum
- ✓ Configuring Additional Repositories
- ✓ Apt-cache package management
- ✓ Annie's Quizzes
- ✓ Q & A
- ✓ Configuring Services to run at boot
- ✓ Shutting down and rebooting the system
- ✓ Installing and Removing Software
- ✓ RPM Queries
- ✓ About yum
- ✓ Searching packages/files
- ✓ Apt-get command set
- ✓ Dpkg command set
- ✓ LAB
- ✓ Quick Recap

Module 4 : Security Administration, Shell Script and Virtualization

Learning Objectives

In this module, we will learn about Linux security administration, Shell Script, and Virtualization.

Topics

- ✓ SELinux Overview
- ✓ \SELinux Contexts
- ✓ Boot level security (GRUB)
- ✓ /etc/inetd.conf
- ✓ /etc/hosts.deny
- ✓ SELinux Tools
- ✓ SELinux Booleans
- ✓ Security need for TCP wrappers
- ✓ /etc/hosts.allow
- ✓ Xinetd

- ✓ Securing shell (change, default port, prevent root access)
- ✓ Securing Shell (managing IP allow and deny)
- ✓ Install and configuring antiviruses (ClamAV and LMD)
- ✓ Redirection
- ✓ Conditions
- ✓ Introduction to KVM Virtualization
- ✓ Configuring Virtual Machines
- ✓ LAB
- ✓ Q & A
- ✓ Securing Shell (Public/ Private)
- ✓ Different type of shell
- ✓ Shell script basics
- ✓ Executing shell scripts
- ✓ Header
- ✓ Comments on Script
- ✓ Environment Variables
- ✓ Loops
- ✓ Virtual Machine Installation
- ✓ Annie's Quizzes
- ✓ Quick Recap

Python Essentials

Course Curriculum

About The Course

Python has been one of the premier, flexible, and powerful open-source language that is easy to learn, easy to use, and has powerful libraries for data manipulation and analysis. For over a decade, Python has been used in scientific computing and highly quantitative domains such as finance, oil and gas, physics, and signal processing. As of today, it is the most preferred language for Artificial Intelligence, Robotics, Web Development and DevOps.

Module 1 : Introduction to Python

Learning Objectives

At the end of this Module, you should be able to understand Python – an Object oriented Programming Language, List the Users of Python for Data Analytics, Define Identifiers and Indentation, List Operations on Strings and Numbers, Run a Python Script.

Topics

- ✓ Get an overview of Python
- ✓ Learn about Interpreted Languages
- ✓ List the Advantages/Disadvantages of Python
- ✓ Explore Pydoc
- ✓ Explore Python Editors and IDEs
- ✓ Start Python
- ✓ Discuss Interpreter PATH
- ✓ Run a Python Script
- ✓ Discuss Python Scripts on UNIX/Windows

Module 2 : Sequences and File Operations

Learning Objectives

At the end of this module, you will be able to Define Reserved Keywords and Command Line Arguments, Describe how to Get User Input from Keyboard, Describe Flow Control and Sequences, Practice Working with Files, Define and Describe Dictionaries and Sets.

Topics

- ✓ Lists
- ✓ Iterating through a sequence
- ✓ Tuples
- ✓ Functions for all sequences
- ✓ Indexing and Slicing
- ✓ Using enumerate()
- ✓ Generator expressions
- ✓ Operators and keywords for sequences
- ✓ Dictionaries and sets
- ✓ The xrange()function
- ✓ Working with files
- ✓ List comprehensions
- ✓ Modes of opening a file
- ✓ File methods
- ✓ File attributes

Module 3 : Deep Dive – Functions, Sorting, Errors and Exception, Regular Expressions and Package

Learning Objectives

At the end of this Module, you should be able to explain Functions and various forms of Function Arguments, explain Standard Library, define modules, describe Zip Archives and Packaging.

Topics

- ✓ Functions
- ✓ Function Parameters
- ✓ Global variables
- ✓ Variable scope and Returning Values
- ✓ Errors and Exception Handling
- ✓ Sorting dictionaries
- ✓ Sorting lists in place
- ✓ Sorting
- ✓ Alternate Keys
- ✓ Lambda Functions
- ✓ Sorting collections of collections
- ✓ Handling multiple exceptions
- ✓ The standard exception hierarchy
- ✓ Using Modules

Module 4 : Object Oriented Programming in Python

Learning Objectives

At the end of this Module, you should be able to implement Regular Expression and its Basic Functions; Use Classes, Objects, and Attributes, Develop applications based on Object Oriented Programming and Methods

Topics

- ✓ The sys Module
- ✓ Interpreter information
- ✓ STDIO
- ✓ Launching external programs
- ✓ Paths
- ✓ Directories and filenames
- ✓ Walking directory trees
- ✓ Instance methods
- ✓ Class methods and data
- ✓ Private methods and Inheritance
- ✓ Math Function
- ✓ Random Numbers
- ✓ Dates and Times
- ✓ Zipped Archives
- ✓ Introduction to Python Classes
- ✓ Defining Classes
- ✓ Initializes
- ✓ Properties
- ✓ Static methods

Module 5 : Debugging, Databases, and Project Skeletons

Learning Objectives

At the end of this Module, you should be able to debug python scripts using pdb, debug python scripts using IDE, classify Errors, develop Unit Tests, create project Skeletons, implement Database using SQLite and perform CRUD operations on SQLite database.

Topics

- ✓ Debugging
- ✓ Dealing with errors
- ✓ Using unit tests
- ✓ Project Skeleton
- ✓ Required packages
- ✓ Creating the Skeleton
- ✓ Using the skeleton
- ✓ Creating a database with SQLite 3
- ✓ CRUD operations
- ✓ Creating a database object.
- ✓ Project Directory
- ✓ Final Directory Structure
- ✓ Testing your set up

DevOps Certification Training

Course Curriculum

About The Course

Learning Objectives

Edureka's DevOps certification training is designed to make you a certified practitioner by providing you hands on training on DevOps tools and sharing DevOps best practices about Continuous Development, Continuous Testing, Configuration Management, including Continuous Integration and Continuous Deployment and finally Continuous Monitoring of the software throughout its development life cycle.

Module 1 : DevOps Essentials

Learning Objectives

In this module, you will learn the reasons for the evolution of DevOps, what is DevOps, the various skills and market trends in DevOps, introduction to the delivery pipeline in DevOps and the DevOps ecosystem.

Topics

- ✓ Why DevOps?
- ✓ What is DevOps?
- ✓ DevOps Market Trends
- ✓ DevOps Market Trends
- ✓ DevOps Engineer Skills
- ✓ DevOps Delivery Pipeline
- ✓ DevOps Ecosystem

Module 2 : Build Tools – GIT and Jenkins

Learning Objectives

In this module, you can learn about automatic Source Code Management using GIT and Continuous Integration using Jenkins.

Topics

- ✓ Introduction to VCS and GIT
- ✓ GIT File workflow
- ✓ Introduction to Continuous Integration and Jenkins
- ✓ Important GIT Commands
- ✓ Plugin Management in Jenkins
- ✓ Various scenarios of Building Delivery Pipeline

Module 3 : Build and Test Automation

Learning Objectives

In this module, you can learn how to build an appropriate delivery pipeline and perform test automation on it. You can also understand the various security options and notification management in Jenkins.

Topics

- ✓ Build Setup in Jenkins
- ✓ Test Automation
- ✓ Security in Jenkins
- ✓ Notification System

Module 4 : Containerization using Docker

Learning Objectives

This module will help you identify the difference between containers and VMs. You can learn about virtualization using Docker. You can also deep dive into image and containers concept in Docker.

Topics

- ✓ What and Why of Containers
- ✓ Introduction to Docker
- ✓ Docker Containers
- ✓ Docker Fundamentals
- ✓ Image Distribution

Module 5 : Docker Commands and Use-cases

Learning Objectives

This module deals with the various networking concepts in Docker, the best way to use the Docker Volume, and creating a Docker file.

Topics

- ✓ Docker Networking
- ✓ Docker Files
- ✓ Docker Volumes

Module 6 : Puppet - 1

Learning Objectives

This module introduces you to an important topic called "Infrastructure -as-Code". You can learn about the master-agent architecture and catalog compilation in Puppet. You will also learn to write a Puppet program using Puppet DSL.

Topics

- ✓ Puppet Introduction
- ✓ Basic Puppet Terminologies
- ✓ Puppet Architecture
- ✓ Puppet Language Constructs

Module 7 : Puppet - 2

Learning Objectives

This module is a deep dive into the Puppet module and helps you learn how to install modules from a third-party tool. You can also learn about node classification using hiera and ENC, Puppet environment structure and configuration, various kinds of puppet classes and puppet template.

Topics

- ✓ Puppet Modules
- ✓ Node Classification
- ✓ Puppet Environment
- ✓ Puppet Classes
- ✓ Puppet Template

Module 8 : Continuous Monitoring using Nagios

Learning Objectives

This module helps you integrate Jenkins, Docker and Puppet, and create an application using them. You can also learn about system monitoring using Nagios and its components.

Topics

- ✓ Combining Jenkins
- ✓ Introduction to Nagios
- ✓ Nagios Commands
- ✓ Docker and Puppet
- ✓ Nagios Plugins, Nagios Objects
- ✓ Nagios Notification

Docker Certification Training

Course Curriculum

About The Course

Learning Objectives

Edureka's Docker Certification course will help you master the key concepts of Docker and how data can be containerized into a single or multiple containers, architecture of Docker, containerization and various operations performed on it. You will also learn about Docker Hub and ways to create a Docker Image. This course also introduces you to several tools that leverage Docker to ease application deployment, continuous integration, service discovery, and orchestration. Finally, learn to deploy various Container based Applications on the Cloud.

Module 1 : Overview of Docker

Learning Objectives

Upon completing this lesson, you should be able to: Introduce Docker and state its benefit over VM, get a brief idea about Architecture of Docker and various terminology associated with it, Run Hello World in Docker, describe what is Container in Docker, why to use it, and its various scopes, Create, start, stop and remove containers, Share, copy, and backup your data running in a container.

Topics

- ✓ Shipping Transportation Challenges
- ✓ Architecture of Docker
- ✓ Running Hello World in Docker
- ✓ Container Life Cycle
- ✓ Introducing Docker
- ✓ Understanding images and containers
- ✓ Introduction to Container
- ✓ Sharing and Copying

Module 2 : Image Creation and Sharing

Learning Objectives

At the end of this lesson, you should be able to: Create images by starting a container using a base image and interactively make changes to it, Create a Dockerfile that will let Docker build the image automatically, Share your image using Docker Hub deploy your own Docker images registry and set up your own automated build, At the end of this module, write Dockerfiles for your various application services and share them through a hosted service like the Docker Hub or through your own Docker registry.

Topics

- ✓ Base Image
- ✓ Working with containers
- ✓ Publishing Image on Docker Hub
- ✓ Docker File
- ✓ Optimization of Docker File
- ✓ Private Registry

Module 3 : Docker Ecosystem

Learning Objectives

Learn how to use Docker Compose to create a WordPress site, start containers on a Cluster with Docker Swarm and finally manage them locally using Kitematic UI and through Docker UI.

Topics

- ✓ Introduction to Docker Ecosystem
- ✓ Docker Swarm
- ✓ Running Containers
- ✓ Docker Compose
- ✓ Managing Containers

Module 4 : Docker Configuration, Developing and Networking

Learning Objectives

At the end of this lesson, you should be able to: Learn about the configuration of the Docker daemon, especially security settings and remote access to the Docker API, discuss few basic problems, like compiling Docker from source, running its test suite, and using a new Docker binary, learn how to change the underlying storage driver that provides a union filesystem to support Docker images, Learn the basics of Docker Networking.

Topics

- ✓ Introduction to nsenter
- ✓ Secure Remote Access
- ✓ Managing and Configuring Docker Daemon
- ✓ Introduction to runc
- ✓ Introduction to Docker Networking
- ✓ Network Types

Module 5 : Docker Networking Implementation and deploying to Cloud

Learning Objectives

At the end of this lesson, you should be able to: Learn about basic concepts that use the default Docker networking configuration, learn about some Docker commands that let you find the IP addresses of your containers, establish linking in the containers, Configuring Docker Daemon IP Tables and IP Forward settings, Set up custom bridge for Docker, Establish connection among the containers from different host without port mapping.

Topics

- ✓ Introduction to Docker Networking: Hands-on
- ✓ Custom Bridge
- ✓ Weave Network
- ✓ Docker Host on AWS EC₂
- ✓ EC2 Container Service
- ✓ Network Types: Hands-on
- ✓ Network Namespace
- ✓ Docker Container Networking
- ✓ Accessing Public Cloud to run Docker
- ✓ Docker Host on AWS using Docker Machine

Project Work

What are the system requirements for this course?

The system requirements include Windows / Mac / Linux PC, with a minimum of 4 GB RAM, 20 GB HDD Storage and i3 processor or above.

How will I execute the practical?

We will provide you with step-wise installation guide to set up the Virtual Box Ubuntu environment on your system which will be used for doing the hands-on exercises, assignments, etc. Our 24/7 expert support team will also be available to assist you.

Training Objectives

At the end of Edureka's Docker Course you will be able to:

1. Learn basics of Docker and run a basic hello world in Docker
2. Discuss containerization and various operations performed on it
3. Introduce yourself to the Docker File and Docker Hub and how to create Docker images
4. Discuss in detail about the configuration of the Docker daemon
5. Learn the various networking mechanisms available in Docker
6. Introduce several tools that leverage Docker to ease application deployment, continuous integration, service discovery, and orchestration
7. Learn to deploy various Container based Applications on the Cloud

AWS Development Certification Training

Course Curriculum

About The Course

Learning Objectives

Edureka's AWS Development Certification Training, will introduce to the participants to explore and master AWS concepts and services offered by AWS. Participants will be offered guidance and will share lot of demo's on each topic with real time examples on high availability, load balancing, data redundancy and day to day operations in managing cloud services. Participants will also get to implement one project towards the end of the course.

Module 1 : AWS Cloud essentials and overview

Learning Objectives

In this, you will understand overview of cloud, types of cloud services, cloud models, features of cloud, different cloud vendors.

Topics

- ✓ Basic overview of the cloud
- ✓ Different types of cloud services
- ✓ Different types of cloud models
- ✓ Different vendors of cloud implementation

- ✓ Why to choose AWS?
- ✓ Who is using AWS/customers
- ✓ Opportunities in Cloud / Market
- ✓ Features of AWS and key offerings
- ✓ Real time Use-cases

Module 2 : AWS Fundamentals

Learning Objectives

In this module, you will understand the list of AWS services, overview on each service and its usage along with examples/use cases.

Topics

- ✓ AWS service catalogue
- ✓ AWS console
- ✓ Storage Service
- ✓ Content Delivery Service
- ✓ Application Service
- ✓ AWS Paradigm
- ✓ Compute Service
- ✓ Database Service
- ✓ Network Service
- ✓ Deploy & Management Service

Module 3 : AWS Console and Usage

Learning Objectives

In this module, you will learn about how to use AWS console and different options available for each service.

Topics

- ✓ AWS console
- ✓ Compute Service
- ✓ Storage Service
- ✓ Content Delivery Service
- ✓ Application Service
- ✓ Explain each service visually over the console
- ✓ Database Service
- ✓ Network Service
- ✓ Deploy & Management Service

Module 4 : AWS software development kit and command line tool kit

Learning Objectives

In this module, you will learn about installing and configuring the Java SDK kit and command line tool kit (AWS CLI) and basic commands.

Topics

- ✓ AWS Java SDK Kit
- ✓ Configuration
- ✓ AWS CLI tool kit
- ✓ Configuration
- ✓ Step by step Java SDK installation
- ✓ Develop sample java program and access AWS resources

Module 5 : Monitoring and Metrics

Learning Objectives

In this module, you will learn how to enable monitoring and configuring the cloud watch metrics.

Topics

- ✓ Demonstrate ability to monitor availability and performance
- ✓ Installing and Configuring Monitoring Scripts for Amazon EC2 Instances
- ✓ Monitoring EBS For Performance and Availability
- ✓ Monitoring RDS For Performance and Availability
- ✓ Demonstrate ability to monitor and manage billing and cost optimization processes
- ✓ AWS Billing Dimensions and Metrics for Cloud Watch
- ✓ Creating Cloud Watch Alarms
- ✓ Develop sample java program and access AWS resources
- ✓ Elastic Compute Cloud (EC2) Instance and System Status Checks
- ✓ Elastic Compute Cloud (EC2) Instance and System Status Checks
- ✓ Monitoring the Elastic Load Balancer for Performance and Availability
- ✓ AWS Billing and Linking AWS Accounts

Module 6 : High Availability

Learning Objectives

In this module, you will learn how to enable high availability and related concepts.

Topics

- ✓ Implement scalability and elasticity based on scenario
- ✓ Scalability and Elasticity Essentials
- ✓ Determining Reserved Instance Purchases Based Off Business Needs
- ✓ How to configure autoscaling autoscaling groups
- ✓ Ensure level of fault tolerance based on business needs
- ✓ Understanding RDS Multi-AZ Failover
- ✓ Elastic Load Balancer
- ✓ Autoscaling
- ✓ What is autoscaling and where to use
- ✓ Elastic Compute Cloud (EC2) Instance and System Status Checks
- ✓ Demo on scale up and scale down scenarios
- ✓ High Availability by using Elastic IP Addresses

Module 7 : Analysis and Data Management

Learning Objectives

In this module, you will learn how to use storage services and enable fault tolerance to achieve 99.9 % data consistency and durability.

Topics

- ✓ Different storage services
- ✓ How to create and attach EBS volumes
- ✓ What is Ephemeral storage?
- ✓ EBS Root Devices on Terminated Instances - Ensuring Data Durability
- ✓ What is the usage?
- ✓ How create and attach s3 bucket

- ✓ Demonstrate ability to create backups for different services EC2 & RD
- ✓ How to take a backup of the RDS instance
- ✓ Managing Backup and Disaster Recovery Processes
- ✓ Read Replicas with MySQL RDS Across Regions
- ✓ How to create a customized AMI
- ✓ How to take a snapshot and reuse the AMI
- ✓ How to enable to auto snapshots for the RDS instance
- ✓ Quickly Recovering from Disasters
- ✓ Storing Log Files and Backups from glacier service

Module 8 : Security and Networking

Learning Objectives

In this module, you will learn how to enable security levels and different options available at network layer.

Topics

- ✓ Implement and manage security policies
- ✓ Building IAM Policies
- ✓ Using IAM Roles with EC2
- ✓ What is MFA On Amazon Web Services
- ✓ Demonstrate ability to prepare for security assessment use of AWS
- ✓ S3 Bucket Policies
- ✓ Network Access Control Lists (NACLs)
- ✓ Ensure data integrity and access controls when using the AWS platform
- ✓ What is Security Token Service?

- ✓ Different AWS provided certificates & standards followed at AWS data centers
- ✓ Route53 and DNS Failover
- ✓ Building A Non-Default VPC
- ✓ VPC Security
- ✓ Elastic IP Addresses and Elastic Network Interfaces
- ✓ Building A Virtual Private Cloud from Scratch – VPC
- ✓ Demonstrate ability to implement connectivity features of AWS
- ✓ How to handle IT Audits
- ✓ Demonstrate ability to implement networking features of AWS
- ✓ VPC Essentials
- ✓ VPC Networking
- ✓ DB Subnet Groups
- ✓ Configuring A Web Application In VPC
- ✓ Troubleshooting Connectivity in Issues
- ✓ What is the AWS Direct Connect & On-premise To VPC Redundancy?

Module 9 : Deployment and Provisioning

Learning Objectives

In this module, you will learn how to automate deployment and provisioning using beanstalk and cloud formation services.

Topics

- ✓ Demonstrate the ability to provision cloud resources and manage implementation automation
- ✓ Creating Our First Stack
- ✓ Creating an Amazon Virtual Private Cloud with Cloud Formation and Launching an EC2 Instance

Module 10 : Big Data and Analyticst

Learning Objectives

In this module, you will learn how to analyze the unstructured data using AWS EMR / Dynamo DB (No SQL).

Topics

- ✓ What is the usage the EMR and tbig data concepts?
- ✓ How to launch and configure the\ EMR service
- ✓ Run a sample MapReduce program to view the job details to analyze the Big data

Module 11 : Cloud best practices

Learning Objectives

In this module, you will learn what are cloud best practices at each layer.

Topics

- ✓ Cloud Security Best Practices at each layer
- ✓ Storage Service
- ✓ Database Service
- ✓ Compute Service
- ✓ Network Service
- ✓ Content Delivery Service
- ✓ Deploy & Management Service
- ✓ Application Service

Module 12 : Cost Optimization

Learning Objectives

In this module, you will learn how to use the AWS services effectively and reduce the cost at each layer.

Topics

- ✓ Cloud Security Best Practices at each layer
- ✓ Compute Service
- ✓ Content Delivery Service
- ✓ Application Service
- ✓ Storage Service
- ✓ Database Service
- ✓ Network Service
- ✓ Deploy & Management Service

Project Work

What are the system requirements for this course?

The system requirements include Minimum 4 GB RAM, i3 processor or above, 20 GB HDD.

How will I execute the practicals?

For executing the practicals you will be working on the cloud servers and various other services that Amazon provides. You will need to create an account on AWS which will give you access to all the AWS services. The step-wise guide for accessing these services will be available in the LMS and the team will help you with it.

Which case-studies will be a part of the course?

Project 1: Load Balancer

Description: In this Project, you will be performing the following tasks: Spin a ec2 instance (OS: Amazon Linux AMI 2015.09.1), Install binaries (Java 1.7 + Apache(HTTPD)), Install and configure Apache server, Create the image of the above setup and save the AMI for future reference. We will create a new instance using the above AMI, create a load balancer and attach the above instances, Access the load balancer URL to test the application.

Project 2: Elastic Beanstalk

Description: In this Project, you will need to complete the following tasks: Create a web server and deploy a web application using Elastic Beanstalk, Configure Elastic Beanstalk, Enable Auto scaling, Enable Elastic Load balancer.

Splunk Developer & Admin Certification Training

Course Curriculum

About The Course

The Splunk training course is specially designed to provide the requisite knowledge and skills to become a Splunk expert. The course encompasses fundamental concepts of Licensing, Indexing, Roles & Authentication, along with advanced topics like Clustering, Reports & Dashboards.

Module 1 : Splunk Basics, Licensing and Configuration Files

Learning Objectives

In this module, you will learn about creating and managing users, clustering and indexes. Also you will learn about the admin role in managing Splunk and coordinating with Splunk support.

Topics

- ✓ Introduction to the course
- ✓ Prerequisites
- ✓ Setting up Splunk forwarder and Splunk Licensing
- ✓ Setting up Splunk search head, indexer
- ✓ What is Splunk?
- ✓ Configuration files on Linux, Configuration files on Windows, Difference between Linux and Windows OS in Splunk configuration

- ✓ Types of files supported in Splunk:
 - Common Splunk configuration files
 - Configuring inputs.conf and outputs.conf
 - Configuring props.conf
 - Configuring index.conf
 - Configuring savedsearches.conf

Module 2 : Managing Users, Indexes, Splunk Admin Roles and Clustering

Learning Objectives

In this module, you will learn about creating and managing users, clustering and indexes. Also you will learn about the admin role in managing Splunk and coordinating with Splunk support.

Topics

- | | |
|---|--|
| ✓ User creation and management | ✓ Managing indexes |
| ✓ Importance of roles | ✓ Different permissions of each indexes |
| ✓ Splunk development concepts | ✓ Roles and responsibilities of Splunk Developer |
| ✓ How to configure LDAP authentication in Splunk? | ✓ Admin role in managing Splunk |
| ✓ What is alert? | ✓ Reports and dashboards |
| ✓ Coordinating with Splunk support | ✓ Implement Search Head Clustering |
| ✓ Implement Indexer Clustering | |

Module 3 : Splunk Search and Reporting Commands

Learning Objectives

In this module, you will learn basic and advanced Splunk queries and using different keywords to search and filter indexed data based on any individual team requirement.

Topics

- ✓ Different keywords
- ✓ Usage of following commands and their functions: Top, Rare, Stats, Addcoltotals
- ✓ Addtotals: Explore the available visualizations, creation of charts and timecharts, Omit null values and format results
- ✓ Splunk Basic search queries and using various commands to perform searches: fields, table, rename, rex&erex, multikv

Module 4 : Splunk Apps Deployment, Alerts, Tags and Event Types

Learning Objectives

In this module, you will learn how to deploy apps? Creating tags and using them in a search, Defining event types and their usefulness, creating and using event types in a search, creating and modifying alerts.

Topics

- ✓ Deploy Apps using Deployment server
- ✓ Defining event types and their usefulness
- ✓ Creating and modifying alerts
- ✓ Creating tags and using them in search
- ✓ Creating and using event types in search
- ✓ Use of Alerts

Module 5 : Enriching data with lookups, Visualizations, Analyzing, Calculating and Formatting Results

Learning Objectives

In this module, you will learn about overview of creating and defining lookups, different visualizations, Omit null values and format results, using eval command etc.

Topics

- ✓ Explore the available visualizations
- ✓ Using eval command
- ✓ Lookup file example, creating a lookup table, Defining a lookup, Configuring an automatic lookup and Using the lookup in searches and reports
- ✓ Omit null values and format results
- ✓ Perform calculations
- ✓ Understanding lookups
- ✓ Value conversion, Round values, Format values, Conditional statements, Filtering calculated results

Module 6 : Creating Reports and Dashboards and getting started with Field Extraction

Learning Objectives

In this module, you will learn to create reports and dashboards along with field extraction and raw data manipulation.

Topics

- ✓ Creating dashboards and adding reports
- ✓ Raw Data Manipulation
- ✓ Creating reports and charts
- ✓ Extraction of Fields

Project Work

As part of the course, you will get an opportunity to work on a live project where you can leverage Splunk concepts in real life.

Project 1 : Splunk Implementation

Industry: Employee Details Management

Data: Log Files

Problem Statement: Setup and configure Splunk with the different log file inputs. Once the inputs are setup, Alerts, Reports and Dashboards should be created