



Radical Technologies

Project Based IT Training & Certification Centre

MASTER'S PROGRAM **IN IT- IMS**

Linux | Cloud | Devops

INTEGRATED WITH INTERNATIONAL PG DIPLOMA FROM UK GOVERNMENT AUTHORISED AWARDDING BODY - UNITED KINGDOM (UK). THIS MASTER PROGRAM IS ENDORSED BY OTHM AND YOU WILL ACHIEVE THE INTERNATIONAL POST GRADUATE DIPLOMA CERTIFICATE IN IT - IMS CLOUD AND DEVOPS

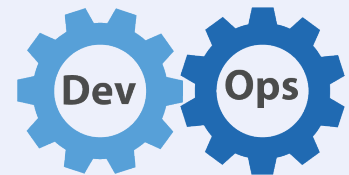
What We cover From Basic To Advanced

Red Hat Linux SA1 + SA2 + SA3
Which covers RHCSA and RHCE
Version 8



AWS Solution Architect
Complete Migration and
Implementation Practical

Devops Complete Devops Life Cycle
– Cover 15 + Tools involved in complete
Automation



Python – Basic to Advanced
Scripting

What we Cover From Basic to Intermediate



- SERVER
- VCS
- VXVM
- TICKETING

- TOOL
- NETBACKUP
- SAN
- NETWORKING

- DATA CENTRE
- MANAGEMENT
- MIGRATION
- TECHNIQUES

Job Oriented Scenarios



400 + Cloud , Linux Admin and Devops Engineer Responsibilities Practically Explained – Gain Knowledge of 5+ Year Experienced Cloud | System | Devops Engineer. 500+ Hours of content

Major Features of the course

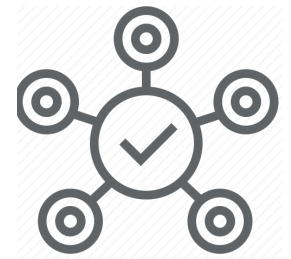
Major achievements of this program is that , This program is integrated with International PG Diploma Certificate Program IT – IMS Cloud and Devops – Awarded by OTHM – UK , Ofqual Approved UK Qualification provider

<https://www.gov.uk/government/organisations/ofqual>

Program include 400 core System Admin activities, 120 +Cloud activities, 50 + Devops automation using different Devops Tools.

5 DevOps Projects, 400 + Assignments and 50 hours of Mock interview session. You will acquire a knowledge of 5+ year experienced System|Cloud & DevOps Engineer

This program is good for freshers and up to 3 – 4 years of industry experienced professional & Those who have career gap



Certificates Achieved

You will receive 4 certificates after successful completion.

1. Radical Certified IT Professional (RCITP) after 6 months.
2. Internship Certificate explaining Projects undergone.
3. International PG Diploma certificate in IT-IMS Cloud & Devops -OTHM - UK.
4. Two Global Certification – Red Hat Certified System Administrator (RHCSA) From Red Hat and AWS Certified Solutions Architect Associate: SAA-C02 From Amazon
(Any Career Gap can be filled using the Real Time Projects from our consulting companies)

PROGRAM HIGHLIGHT

- 18000+ Students Empowered till now
- Online/Classroom/Self-Paced
- 6 months Intensive Training followed by 6 Month Assessments and Assignments
- Start Date –Every Month One Batch (Per Batch maximum 10 Students)
- 450+ Hiring Partners
- Certified from OTHM–UK Recognized by ofqual.gov.uk
- Interview Call until You get placed
- Gain Knowledge of At least 5+ Year Experienced
- Professional in IT IMS | Red Hat Linux | Cloud & Devops
- Designed for Freshers to Working Professionals
- 360 Degree Career Support
- Dedicated Student Mentors on candidates request.
- Project Driven industry mentorship in IT IMS Linux, Devops & Cloud
- 200 + Activities related to projects , Assignments, Job Oriented Scenarios ,up with 450+
- Learn 30 + IMS tools .
- 300 core System Admin activities
- 120 + Cloud activities
- complete automation using DevOps Tools .
- 400 + Assignments
- 50 hours of Mock interview session
- Dedicated Trainers with ample of Industry Experience
- All Programs are Project Based Training with guaranteed to pass certification programs
- You Gain Knowledge as 5+ Year Experienced
- professional in IT IMS – Linux | Cloud and Devops related
- tools , with our Industry standard project based training
- and International global certifications from Red Hat and
- Amazon web services
- Industry standard Projects & Assignments with Mentor Support
- Lab Access & Practical Guidance
- 0 % Interest on EMI – Completely interest free monthly
- instalments through banks with minimum

Job Opportunities

 System Administrator

 Linux Cloud Engineer

 Devops Engineer

 Cloud Administrator

Our students placed in various packages in MNC's Ranging from 5 Lakhs to 25 Lakhs .

Experience Level from freshers to 18+ Year experienced candidates

Target audience?

Those who hate programming

1. Engineers, Freshers, Domain Experts, Software & IT Professionals , Those who having career gap & not interested in Programming .
2. Engineering/Management Graduate or Post-graduate Fresher Students who want to make their career in IT Infrastructure Management Field. Those who hate programming .
3. Engineers who want to Become System Admin, Technical Architect , System Engineer ,Cloud Engineer , Devops Engineer
4. System Admins who are interested in Data Centre Setup and Migration and Troubleshooting
5. Cloud Admins who would like to become Cloud Infra Architect .
6. MBA Graduates or business professionals who are looking to move to a heavily quantitative role.
7. Engineering Graduate/Professionals who want to be in IT Infrastructure Management Administrator field.

7. Working Professional or Fresh Graduate who have mostly worked in Operating system, Virtualization, Cloud Technology etc
8. Professionals who've worked mostly with Linux, Cloud, Windows, Virtualization, Automation etc

Minimum Eligibility

Any Bachelor's degree. Completed or not completed . No coding experience required . If you have any Educational Gap or any other career gap, you can do this program to boost up your career . The qualifications provided by UK Regulatory board is equal to **Level 7 Masters Degree in UK.**



How You Benefit From This Program

- Post Graduate Diploma without quitting your job
- Cutting-edge curriculum designed by industry experts
- Career transition with 30 to 100% salary hike



1. Who Should do this course?

Audience :- Freshers, Any Graduate, 2 to 4 Years Experienced up skilling enthusiasts. 3rd Year Graduates who are going to attend campus Interviews These courses designed in a way to be suitable for all branches of Engineering and all type of graduates – Science and non-science Graduates. Option to customise the subject according to the interest of candidate is also available

2. How many Interview Calls You will provide?

Unlimited Interview Calls until you Get the Satisfied Job

3. Do I get Refund, if I am not interested to continued?

Yes. you should inform the Administrator and send email to masters@radicaltechnologies.co.in to cancel your admission within 7 days of the enrolment. Once we allocate the trainer and further proceedings, we will not

be able to refund.

4. How I will get Industry knowledge?

All our programs are developed by Industry person, who is having 10+ years real working knowledge. Under their mentorship, you will be able to gain at least 5+ year experience

5. Is this is 100% Job Guarantee program? And how is the Salary Structure?

Yes, it's a 100% JOB Guaranteed program. Minimum salary Package of 5 Lakhs per annum for the right candidate.

6. Is there any limitation on number of Interview calls providing

No, You will get calls until you get placed

7. How many people got placed as part of this program?

We have placement record of over 6000+

SYLLABUS

Redhat linux



Total duration

12 Weekends . 100 Hrs of training with 90% Practical and 10% Theory

Red Hat Enterprise Linux 8 includes three modules

RHCSA

- Red Hat System Administration I (RH124)
- Red Hat System Administration II (RH134)

RHCE

- Red Hat System Administration III: Linux Automation with Ansible (RH294)

Red Hat System Administration I (RH124)

Red Hat System Administration I provides a foundation for students wishing to become full-time Linux system administrators by introducing key command line concepts and other enterprise-level tools. These concepts are further developed in the follow-on course, Red Hat System Administration II (RH134).

Prerequisites:

There are no formal prerequisites for this course; however, previous operating system administration experience will be very beneficial.

- **Get started with Red Hat Enterprise Linux**

Describe and define open source, Linux distributions, and Red Hat Enterprise Linux.

- **Access the command line**

Log into a Linux system and run simple commands using the shell.

- **Manage files from the command line**

Copy, move, create, delete, and organize files while working from the bash shell.

- **Get help in Red Hat Enterprise Linux**

Resolve problems by using local help systems.

- **Create, view, and edit text files**

Manage text files from command output or in a text editor.

- **Manage local users and groups**

Create, manage, and delete local users and groups, as well as administer local password policies.

- **Control access to files**

Set Linux file system permissions on files and interpret the security effects of different permission settings.

- **Monitor and manage Linux processes**

Evaluate and control processes running on a Red Hat Enterprise Linux system.

- **Control services and daemons**

Control and monitor network services and system daemons using system.

- **Configure and secure SSH**

Configure secure command line service on remote systems, using OpenSSH.

- **Analyze and store logs**

Locate and accurately interpret logs of system events for troubleshooting purposes.

- **Manage networking**

Configure network interfaces and settings on Red Hat Enterprise Linux servers.

- **Archive and transfer files**

Archive and copy files from one system to another.

- **Install and update software**

Download, install, update, and manage software packages from Red Hat and yum package repositories.

- **Access Linux files systems**

Access, inspect, and use existing file systems on storage attached to a Linux server.

- **Analyze servers and get support**

Investigate and resolve issues in the web-based management interface, getting support from Red Hat to help solve problems.

- **Comprehensive review**

Review the content covered in this course by completing hands-on exercises.

You should be able to demonstrate these skills:

- Access the command line
- Manage files from command line
- Create, view, and edit text files
- Manage local users and groups
- Monitor and manage Linux processes
- Control services and daemons
- Control access to files with file system permissions
- Analyze and store log files
- Configure and secure the OpenSSH service
- Install and update software packages
- Access Linux file systems
- Manage Linux networking

Recommended next exam or course

- **Red Hat System Administration II (RH134) or**
- **Red Hat System Administration II with RHCSA exam (RH135)**

Course content summary

- Introduction to the command line
- Managing physical storage
- Install and configure software components and services
- Establish network connections and control firewall restrictions
- Monitor and manage running processes
- Manage and secure files and file systems
- Administer users and groups
- Review the system log files and journal for issues
- Troubleshoot problems and analyze systems with Red Hat Insights
- Remotely manage systems with SSH and the Web Console



Audience for this course

This course is geared toward Windows system administrators, network administrators, and other system administrators who are interested in supplementing current skills or backstopping other team members, in addition to Linux system administrators who are responsible for these tasks:



System Administration II (RH134)

This module goes deeper into enterprise Linux administration including file systems and partitioning, logical volumes, SELinux, firewalling, and troubleshooting. Attending both Red Hat System Administration I and Red Hat System Administration II can help you in your preparation for the Red Hat Certified System Administrator exam (EX200).

Course content summary

- Install Red Hat Enterprise Linux using scalable methods
- Access security files, file systems, and networks
- Execute shell scripting and automation techniques
- Manage storage devices, logical volumes, and file systems
- Manage security and system access
- Control the boot process and system services

Outline for this course

- **Improve command line productivity**

Run commands more efficiently by using advanced features of the bash shell, shell scripts, and various utilities provided by Red Hat Enterprise Linux.

- **Schedule future tasks**

Schedule commands to run in the future, either one time or on a repeating schedule.

- **Tune system performance**

Improve system performance by setting tuning parameters and adjusting scheduling priority of processes.

- **Control access to files with ACLs**

Interpret and set access control lists (ACLs) on files to handle situations requiring complex user and group access permissions.

- **Manage SELinux security**

Protect and manage the security of a server by using SELinux.

- **Maintain basic storage**

Create and manage storage devices, partitions, file systems, and swap spaces from the command line.

- **Manage logical volumes**

Create and manage logical volumes containing file systems and swap spaces from the command line.

- **Implement advanced storage features**

Manage storage using the Stratis local storage management system and use VDO volumes to optimize storage space in use.

- **Access network-attached storage**

Use the NFS protocol to administer network-attached storage.

- **Control the boot process**

Manage the boot process to control services offered and to troubleshoot and repair problems.

- **Manage network security**

Control network connections to services using the system firewall and SELinux rules.

- **Install Red Hat Enterprise Linux**

Install Red Hat Enterprise Linux on servers and virtual machines.

Course description

FOCUSES ON THE KEY TASKS NEEDED TO BECOME A FULL-TIME LINUX | CLOUD & DEVOPS ENGINEER.

Red Hat System Administration II (RH134) builds upon and lends context to the foundational knowledge established in Red Hat System Administration I (RH124). This follow-on course demonstrates more detailed use cases for Red Hat® Enterprise Linux®, preparing you for the Red Hat Certified System Administrator exam (EX200). This course is based on Red Hat Enterprise Linux

Course content summary

- Install Red Hat Enterprise Linux using scalable methods
- Access security files, file systems, and networks
- Execute shell scripting and automation techniques
- Manage storage devices, logical volumes, and file systems
- Manage security and system access
- Control the boot process and system services

Audience for this course

This course is geared toward Windows system administrators, network administrators, and other system administrators who are interested in supplementing current skills or backstopping other team members, in addition to Linux system administrators who are responsible for these tasks:

- Configuring, installing, upgrading, and maintaining Linux systems using established standards and procedures
- Providing operational support
- Managing systems for monitoring system performance and availability
- Writing and deploying scripts for task automation and system administration

Prerequisites for this course

Successful completion of Red Hat System Administration I (RH124) is recommended. Experienced Linux administrators seeking to accelerate their path toward becoming a Red Hat Certified System Administrator should start with the RHCSA Rapid Track course (RH199).

Red Hat System Administration III: Linux Automation With Ansible (RH294)

Course description

Learn how to automate Linux system administration tasks with Ansible

Red Hat System Administration III: Linux Automation with Ansible (RH294) teaches the skills needed to manage large numbers of systems and applications efficiently and consistently. You will learn the techniques needed to use Ansible® to automate provisioning, configuration, application deployment, and orchestration.

This course is based on Red Hat® Enterprise Linux® 8 and Red Hat Ansible Engine 2.8.

Course content summary

- Install Ansible / Red Hat Ansible Engine on control nodes.
- Create and update inventories of managed hosts and manage connections to them.
- Automate administration tasks with Ansible Playbooks and ad hoc commands.
- Write effective playbooks at scale.
- Protect sensitive data used by Ansible with Ansible Vault.
- Reuse code and simplify playbook development with Ansible roles.



Outline for this course

Introduce Ansible

Describe Ansible concepts and install Red Hat Ansible Engine.

Deploy Ansible

Configure Ansible to manage hosts and run ad hoc Ansible commands.

Implement playbooks

Write a simple Ansible Playbook and run it to automate tasks on multiple managed hosts.

Manage variables and facts

Write playbooks that use variables to simplify management of the playbook and facts to reference information about managed hosts.

Implement task control

Manage task control, handlers, and task errors in Ansible Playbooks.

Deploy files to managed hosts

Deploy, manage, and adjust files on hosts managed by Ansible.

Manage large projects

Write playbooks that are optimized for larger, more complex projects.

Simplify playbooks with roles

Use Ansible roles to develop playbooks more quickly and to reuse Ansible code.

Troubleshoot Ansible

Troubleshoot playbooks and managed hosts.

Automate Linux administration tasks

Automate common Linux system administration tasks with Ansible.



Impact on the organization

IT automation is key to managing large numbers of systems and applications efficiently and consistently at scale. This course develops the skills needed to efficiently operate and more easily scale the organization's dynamic IT infrastructure, accelerate application time to value, and rapidly adapt and implement needed innovation through DevOps practices.



Impact on the individual

As a result of attending this course, you should be able to use Ansible for the purpose of automation, configuration, and management. **You should be able to demonstrate these skills:**

- Install and configure Ansible or Red Hat Ansible Engine on a control node.
- Create and manage inventories of managed hosts
- as well as prepare them for Ansible automation.
- Run individual ad hoc automation tasks from the command line.

Recommended next exam or course

Red Hat Certified Engineer (RHCE) exam on Red Hat Enterprise Linux 8 (EX294)

Advanced Automation: Ansible Best Practices (DO447)

Our Speciality:

- 100% Passing Records of RHEL 7
- Training By 16+ Years experienced Real Time Trainer
- 300+ Practical Sessions in Red Hat Linux
- 100+ Scenarios & Assignments in Redhat Linux
- World class training methods
- Training until the candidate get placed
- Global Certification - RHCSA & RHCE Certification with Dual attempt
- 18000+ Satisfied candidates
- 6000+ Placement Records
- Complete End-to-End Project with Each Course
- Data Center with Cisco UCS Servers
- World Class Lab Facility which facilitates 13 /15 /17 Servers
- Resume And Interview preparation with 100% Hands-on Practical sessions
- Doubt clearing sessions any time after the course
- Happy to help you any time after the course



GETTING STARTED



Course Introduction



About the Training Architect



Working as a Solutions Architect



Creating an AWS Account, AWS Free Tier, Usage Tracking, and Billing Widget

Architecture

Access Management
Shared Responsibility/Security Model
Service Models
High Availability vs. Fault Tolerance
RPO vs. RTO
Scaling
Tiered Application Design
Encryption
Architecture Odds and Ends
Architecture 101

AWS Architecture

AWS Accounts
AWS Physical and Networking Layer
Elasticity
AWS Architecture 101

AWS Product Fundamentals

Console Tour and Navigation
Introduction to S3
Introduction to CloudFormation
Hands-on Labs
Getting Started with CloudFormation
AWS Product Fundamentals

IAM (Identity and Access Management)

IAM Essentials
IAM Policies
IAM Users
IAM Groups
IAM Access Keys
Securing Your Account — Creating an IAM User and Setting Up the CLI

Multi-Account Management and Organizations

AWS Organizations
Role Switching Between Accounts
Multi-Account Management and Organizations

Server-Based Compute (EC2) Fundamentals

EC2 Architecture: Part 1
EC2 Architecture: Part 2
Instance Types and Sizes
EC2 Storage Architecture: Part 1
EC2 Storage Architecture: Part 2
EBS Snapshots
Security Groups
Instance Metadata
Hands-on Labs
Creating and Working with an EC2 Instance
Server-Based Compute (EC2) Fundamentals

Server-Based Compute (EC2) Intermediate

AMI
Bootstrap
Instance ENI, IP, and DNS: Part 1
Instance ENI, IP, and DNS: Part 2
Instance Roles
Server-Based Compute (EC2) Intermediate

Using EC2 Roles and Instance Profiles
Using AWS Tags and Resource Groups

Server-Based Compute (EC2) Advanced

EBS Volume and Snapshot Encryption
EBS Optimization, Enhanced Networking, and Placement Groups
EC2 Billing Models: Part 1 – Spot and Spot Fleet
EC2 Billing Models: Part 2 – Reserved Instances
Dedicated Hosts
Server-Based Compute (EC2) Advanced

Serverless Compute (Lambda)

What Are APIs and Microservices?
Serverless and Event-Driven Architectures
Lambda Essentials: Part 1
Lambda Essentials: Part 2
API Gateway Essentials: Part 1
API Gateway Essentials: Part 2
Step Functions
Serverless Compute (Lambda)

Container-Based Compute and Microservices

Docker Essentials
ECS
Container-Based Compute and Microservices

Networking Fundamentals

Introduction
Seven-Layer OSI Model: Part 1
Seven-Layer OSI Model: Part 2
IP Addressing Basics
Subnetting
IP Routing
Firewalls
Proxy Servers
Networking Fundamentals



Virtual Private Cloud (VPC)

Virtual Private Cloud (VPC) and Subnets: Part 1
Virtual Private Cloud (VPC) and

Subnets: Part 2
Routing and Internet Gateway
Bastion Host/JumpBox
NAT, NAT Instance, and NAT Gateway: Part 1
NAT, NAT Instance, and NAT Gateway: Part 2
Network ACLs
Hands-on Labs
Designing and Building a Custom VPC from Scratch
Virtual Private Cloud (VPC)

Advanced VPC

VPC Peering: Part 1
VPC Peering: Part 2
VPC Endpoints: Part 1
VPC Endpoints: Part 2
IPv6 within AWS
Egress-Only Gateway
Hands-on Labs
Implementing VPC Peering on AWS
Advanced VPC

Global DNS (Route 53) Fundamentals

DNS 101
Domain Registration
Private vs. Public Hosted Zones
Record Set Types
Global DNS (Route 53) Fundamentals

Global DNS (Route 53) Advanced

Routing Policy: Simple
Routing Policy: Failover
Routing Policy: Weighted
Routing Policy: Latency
Routing Policy: Geolocation
Global DNS (Route 53) Advanced

S3 Architecture and Features

Permissions
Transferring Data to S3
Encryption
Static Websites and CORS
Object Versioning
Presigned URLs
Hands-on Labs
Creating a Static Website Using Amazon S3

S3 Performance and Resilience

Storage Tiers/Classes
Lifecycle Policies and Intelligent-Tiering
Cross-Region Replication (CRR)

CloudFront

CloudFront Architecture: Part 1
CloudFront Architecture: Part 2

OAI

Network File Systems

EFS Fundamentals: Part 1
EFS Fundamentals: Part 2
Storage and Content Delivery

Database Fundamentals

Database Models

SQL — RDS

RDS Essentials: Part 1
RDS Essentials: Part 2
RDS Backups and Restore
RDS Read Replicas
Database Fundamentals and SQL — RDS

SQL — Aurora

Aurora Essentials: Part 1
Aurora Essentials: Part 2
Parallel Queries and Aurora Global
Aurora Serverless Essentials: Part 1
Aurora Serverless Essentials: Part 2
SQL — Aurora

NoSQL

DynamoDB Essentials: Part 1 —

Tables and Items

DynamoDB Essentials: Part 2 —
Query and Scan

DynamoDB Essentials: Part 3

DynamoDB Performance and
Billing

DynamoDB Indexes: Part 1 — LSI

DynamoDB Indexes: Part 2 —
GSI

NoSQL

In-Memory Caching

DAX

ElastiCache

In-Memory Caching

Load Balancing and Auto Scaling

Load Balancing Fundamentals

Classic Load Balancers and
Health Checks: Part 1

Classic Load Balancers and
Health Checks: Part 2

Classic Load Balancers and
Health Checks: Part 3

Network Load Balancers

Launch Templates and Configura-
tions

Auto Scaling Groups: Part 1

Auto Scaling Groups: Part 2

Hands-on Labs

Implementing an Auto Scaling
Group and Application Load Bal-
ancer in AWS

VPN and Direct Connect

VPC VPN (IPsec)

Direct Connect Architecture

When to Pick Direct Connect vs.
VPN

Snow*

Snowball, Snowball Edge, and
Snowmobile

Data and DB Migration

Storage Gateway 101

Database Migration Service 101

Identity Federation and SSO

What Is Identity Federation?

When to Use Identity Federation
Hybrid and Scaling

Application Integration

Simple Notification Service (SNS)

Simple Queue Service (SQS): Part
1

Simple Queue Service (SQS): Part
2

Elastic Transcoder

Application Integration

Analytics

Athena
Elastic MapReduce (EMR)
Kinesis and Firehose
Redshift
Analytics

Logging and Monitoring

CloudWatch
CloudWatch Logs
CloudTrail
Custom Logging Using Cloud-
Watch and CloudWatch Logs
Hands-on Labs
Working with AWS VPC Flow
Logs for Network Monitoring
Logging and Monitoring

Operations

CloudWatch Events

KMS Essentials: Part 1
KMS Essentials: Part 2

Deployment

Elastic Beanstalk
OpsWorks
Operations and Deployment

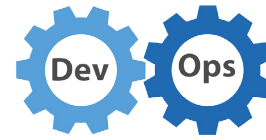
The Exam

How to Prepare for the Real Exam
AWS Solutions Architect Asso-
ciate (SAAC01) – Final Practice
Exam

Course Features

This course can help prepare you
for a certification exam.
Earn a Certificate of Completion





INTRODUCTION TO DEVOPS :

Introduction to the definition, value, history, building blocks.
Introduction to how Agile software development process applies to DevOps
The importance of integrating source control in DevOps
How automation is applied to DevOps

DevOps Concepts:

Application Servers (referring WAS) and Deployment
Web Servers
Cloud Computing
Virtualization
Containerization
Monitoring, Alerting and Trending
Configuration Management
Test and Build System

How to choose the right DevOps tools

Plan
Build
Continuous integration
Deploy
Operate
Continuous feedback

Devops Course Content

Linux Basics

- Working knowledge of Linux
- How to navigate through major Linux distributions?
- System configurations and graphical interface of Linux
- Basic command line operations
- Common applications of Linux

AWS Basics

- What is Cloud?
- What is AWS?
- Why Cloud is required for DevOps?
- How to provision Server- EC2?
- How to connect the Servers and install DevOps Tools?

Terraform

HashiCorp Terraform enables you to safely and predictably create, change, and improve infrastructure. It is an open source tool that codifies APIs into declarative configuration files that can be shared amongst team members, treated as code, edited, reviewed, and versioned.

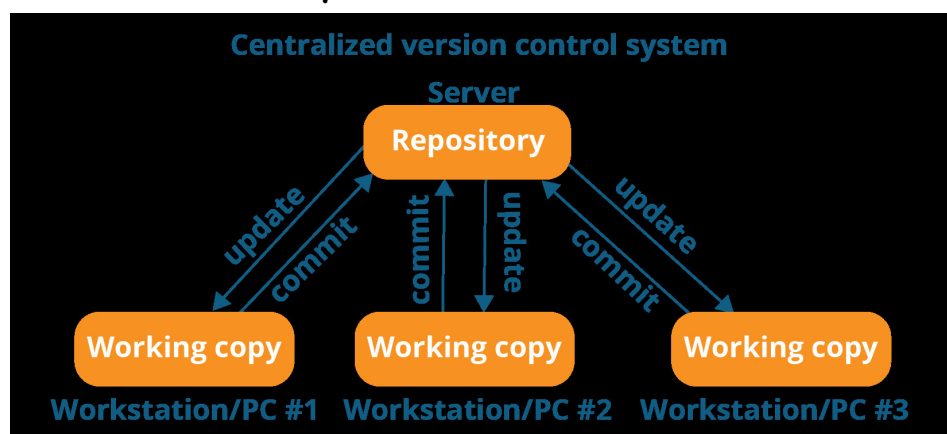
Introduction to Terraform , Scripting , Configuration Management , Integration with Azure

Hands-on Exercise – Script f+or server provisioning, Cluster management



Git(Source Control)

Git is a free, open source distributed version control system tool designed to handle everything from small to very large projects with speed and efficiency. It was created by Linus Torvalds in 2005 to develop Linux



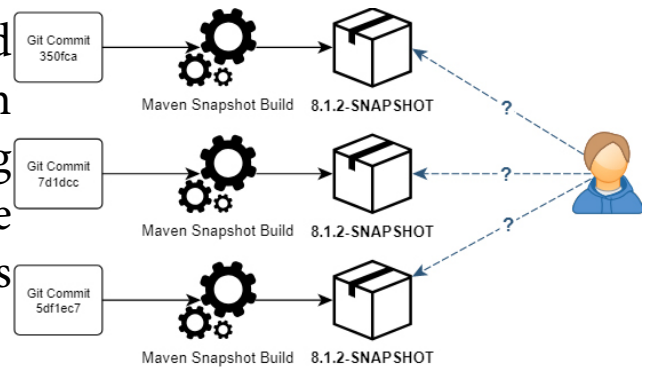
Kernel. Git has the functionality, performance, security and flexibility that most teams and individual developers need.

Concepts of Version Control Systems, Git as SCM, Git Command Line, Git setup with CI tool Jenkins, Trunk based approach for

Hands-on Exercise – Create a git project, Edit file, Commit the code, Set up Jenkins and integrate with Git

Maven

Maven is a build automation tool used primarily for Java projects. Maven addresses two aspects of building software: first, it describes how software is built, and second, it describes its dependencies.



Ansible

Ansible is the simplest way to automate apps and IT infrastructure. Application Deployment Configuration Management + Continuous Delivery.

I.Inventory. The “inventory” is a configuration file where you define the host information.

II.Playbooks. In most cases – especially in enterprise environments – you should use Ansible playbooks.

III.Plays. Playbooks contain plays. ...

IV.Tasks. ...

V.Roles. ...

VI.Handlers. ...

VII.Templates. ...

VIII.Variables.



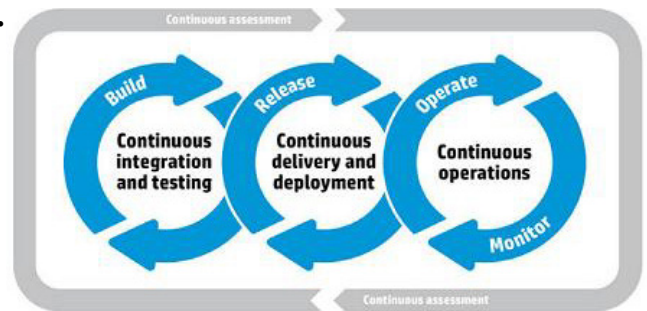
Introduction to Ansible, Configuration, Writing Ansible Playbooks, Ansible based Configuration Management, Different Roles and Command Line usage.

Hands-on Exercise – Write Ansible playbook, Assign different roles in configuration tool

Puppet

Puppet is an open source systems management tool for centralizing and automating configuration management. Configuration management is the detailed recording and updating of information that describes an enterprise's hardware and software. A look under the hood. Puppet Enterprise is built on the world's most proven and widely adopted configuration management platform.

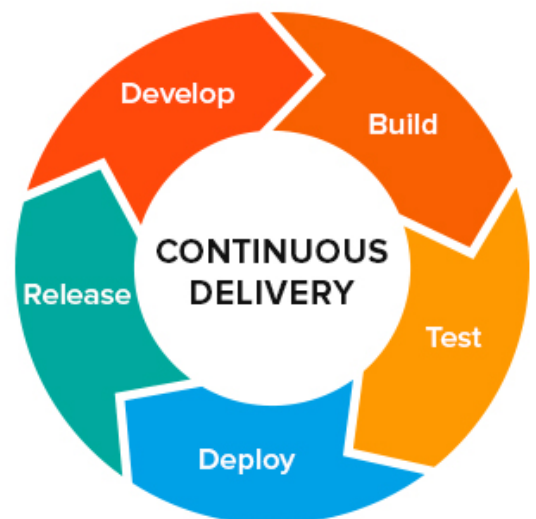
- ...
- a.Puppet Language. ...
- b.Puppet Server. ...
- c.PuppetDB. ...
- d.Facter. ...
- e.Hiera



Jenkins (Automating Build and Test)

Continuous Integration and Continuous Delivery. As an extensible automation server, Jenkins can be used as a simple CI server or turned into the continuous delivery hub for any project.

- a.Pipeline
- b.Easy Installation
- c.Easy Upgrades
- d.Scriptability
- e.View Filters
- f.Amazon EC2
- g.HTML Publisher
- h.Throttle Builds
- i.Join
- j.Green Balls

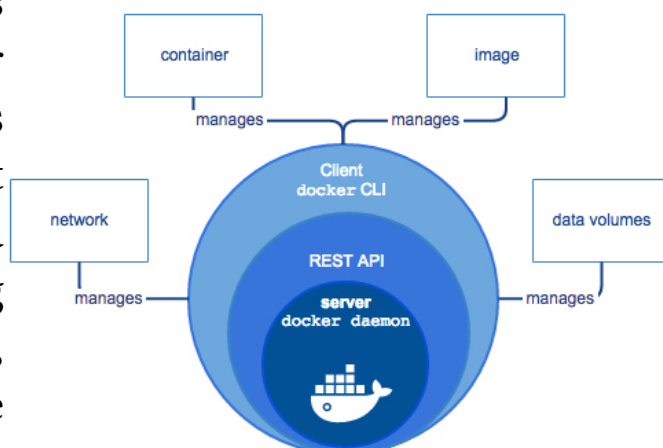


Automating Builds with Maven and Ant, Building Delivery Pipeline in Jenkins (CI/CD), Test Automation, Security, Notification System in Jenkins
Hands-on Exercise – Create a Maven Project, Edit pom.xml file to install

a version of junit, Set up build delivery pipeline, Set up notification alerts in Jenkins, Configure test plan in Jenkin

Docker

Docker is a tool designed to make it easier to create, deploy, and run applications by using containers. Containers allow a developer to package up an application with all of the parts it needs, such as libraries and other dependencies, and ship it all out as one package. In a way, Docker is a bit like a virtual machine. But unlike a virtual machine, rather than creating a whole virtual operating system, Docker allows applications to use the same Linux kernel as the system that they're running on and only requires applications be shipped with things not already running on the host computer. This gives a significant performance boost and reduces the size of the application.



Docker Container Management

What are Containers, Difference between VM and Container, Docker Fundamentals, Creating & Running Docker Images, Image Distribution, Creating Docker Registry, Compose Scripts, Remote Docker Image

Hands-on Exercise – Configure a Docker, Create an image in Docker and run it

Docker Commands and Best Practices.

Networking concepts in Docker, Using Docker Volume and Creation of a Dockerfile, a text file to contain the commands to create an image

Hands-on Exercise – Create a dockerfile with the commands to create an image, Create the image

Kubernetes

Containerization with Kubernetes

Kubernetes is an open-source system for automating deployment, scaling, and management of containerized applications.

Kubernetes (aka k8s) is an open source orchestrator, donated to the community by Google, who has been using it internally for many years. It has become the de facto standard for container scheduling, and can scale up to the biggest deployments or down to a cluster of Raspberry Pi boards.

Introduction to Kubernetes, the cluster architecture of Kubernetes, creating a Kubernetes cluster, what is YAML, creating YAML with Kubernetes deployment, Kubernetes service, dashboard installation, Kubernetes rolling updates, using an app with the dashboard.

Jira

Plan, track, and manage your agile and software development projects in Jira. Customize your workflow, collaborate, and release great software.

a.Process

b.Versions

c.Labels

Nagios – Performance and Automated Monitoring

Nagios provides enterprise-class Open Source IT monitoring, network monitoring, server and applications monitoring

a.Monitoring

b.Response

c.Maintenance

Introduction of Nagios, Nagios Setup, Commands, Objects, notifications, Configure Nagios to monitor webserver, Load Balancer (HAProxy, NginX), + Project 1 & project 2

Hands-on Exercise – Perform Nagios and Netdata monitoring, Monitor the performance with Grafana, Setup Syslog and verify the logs are getting generated, Configure HAProxy server

Continuous Integration (CI)

Frequent merge of code to a shared repository after which automated builds and tests are run using Jenkins

Hands-on Exercise – Commit code and check if Jenkins runs the build scripts and tests the code using automation script

Agile Process & Other Tools

Devops insync with Agile

PagerDuty Alerting tool

Jira Project Management Tool

Slack – Continuous communication tool



ADVANCED PYTHON SCRIPTING



1: Introduction

- What is Python..?
- A Brief history of Python
- Why Should I learn Python..?
- Installing Python
- How to execute Python program
- Write your first program

2: Variables & Data Types

- Variables
- Numbers
- String
- Lists ,Tuples & Dictionary

3: Conditional Statements & Loops

- if...statement
- if...else statement
- elif...statement
- The while...Loop
- The for....Loop

4: Control Statements

- continue statement
- break statement
- pass statement

5: Functions

- Define function
- Calling a function
- Function arguments
- Built-in functions

6: Modules & Packages

- Modules
- How to import a module...?
- Packages
- How to create packages

7: Classes & Objects

- Introduction about classes & objects
- Creating a class & object
- Inheritance

- Methods Overriding
- Data hiding

8: Files & Exception Handling

- Writing data to a file
- Reading data from a file
- Read and Write data from csv file
- try...except
- try...except...else
- finally
- os module

Module 2: Getting started with Python Libraries

- what is data analysis ?
- why python for data analysis ?
- Essential Python Libraries
- Installation and setup
- Ipython
- Jupyter Notebook
- 2.7 VS 3.5

Module 3 :OS

- Command Line
- sys.argv
- argparse module

Module 4:NumPy Arrays

- Creating multidimensional array
- NumPy-Data types
- Array attributes
- Indexing and Slicing
- Creating array views and copies
- Manipulating array shapes
- I/O with NumPy

Module 5:Working with Pandas

- Installing pandas
- Pandas dataframes
- Pandas Series
- Data aggregation with Pandas DataFrames
- Concatenating and appending DataFrames
- Joining DataFrames
- Handling missing data

Module 6: Data Loading, Storage and file format

- Writing CSV files with numpy and pandas
- HDF5 format
- Reading and Writing to Excel with pandas

- JSON data
- Parsing HTML with BeautifulSoup
- PyTables

Module 7: Python Regular Expressions

- What are regular expressions?
- The match Function
- The search Function
- Matching vs searching
- Search and Replace
- Extended Regular Expressions
- Wildcard

Module 8: Python Oracle Database Access

- Install the cx_Oracle and other Packages
- Create Database Connection
- CREATE, INSERT, READ, UPDATE and DELETE Operation
- DML and DDL Operation with Databases
- Performing Transactions
- Handling Database Errors
- Disconnecting Database

Module 9: Python Multithreaded Programming

- What is multithreading?
- Starting a New Thread
- The Threading Module
- Synchronizing Threads
- Multithreaded Priority Queue
- we will be covering 30-40 Assignment after each weekend

(Assignment and Live Examples)

- Real time examples with live project for Google finance data extractions
- Sample resumes helping you to create your resume

Additional Benefits:

- We provide real time scenarios examples, how to work in real time projects
- We guide for resume preparation by giving sample resume
- Will give you 2 POC (proof Of Concept) with Data set so that you can practice before going for interview
- In 2 months training we provide study material's soft copy in classroom itself
- We provide hands -on in class room itself so that you can understand concepts 100%
- We give assignments for weekdays practice



Approved Centre

RADICAL TECHNOLOGIES

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Country : India

Centre number : DC2010456

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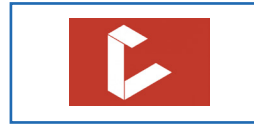
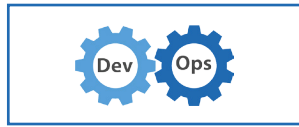
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