



FULLSTACK DEVOPS & CLOUD ENGINEER

ACCELERATE YOUR CAREER GEAR TO
EXPERIENCE, EXPLORE AND EXCEL THE
CUTTING EDGE TECHNOLOGIES OF
DEV-OPS, CLOUD AND BIG-DATA
IMPLEMENTATION.....

inceptez
INTELLIGENCE DIGITALIZED

ABOUT INCEPTEZ

Inceppez Technologies was founded by a team of Big data Evangelists in 2014 and is one of the leading IT training, Development and staffing company specializing in Big Data, Data Science, Dev-Ops, Cloud Computing and Internet of things (IOT). Inceppez is a non money oriented training center, where we first prioritize Comprehensiveness, Engagement based, Focus based, Competitive model with high Quantity and Quality in all the training as a paramount.

Inceppez Technologies is mastered and administrated by highly skilled industry experts. We are the technology enablers committed to provide comprehensive training to the aspiring professionals in the game changing, high demanding applications such as Hadoop, Spark , Data Analytics, Data Science, DEV-OPS and AWS/Google Cloud Platforms, that are the fastest growing trend setting technologies that provide competitive advantage in the ever changing IT world.

**ENQUIRE, ANALYSE, COMPARE AND
FINALLY INVEST IN YOUR CAREER
ACCEPTING INCEPTEZ AS YOUR CAREER
PARTNER**

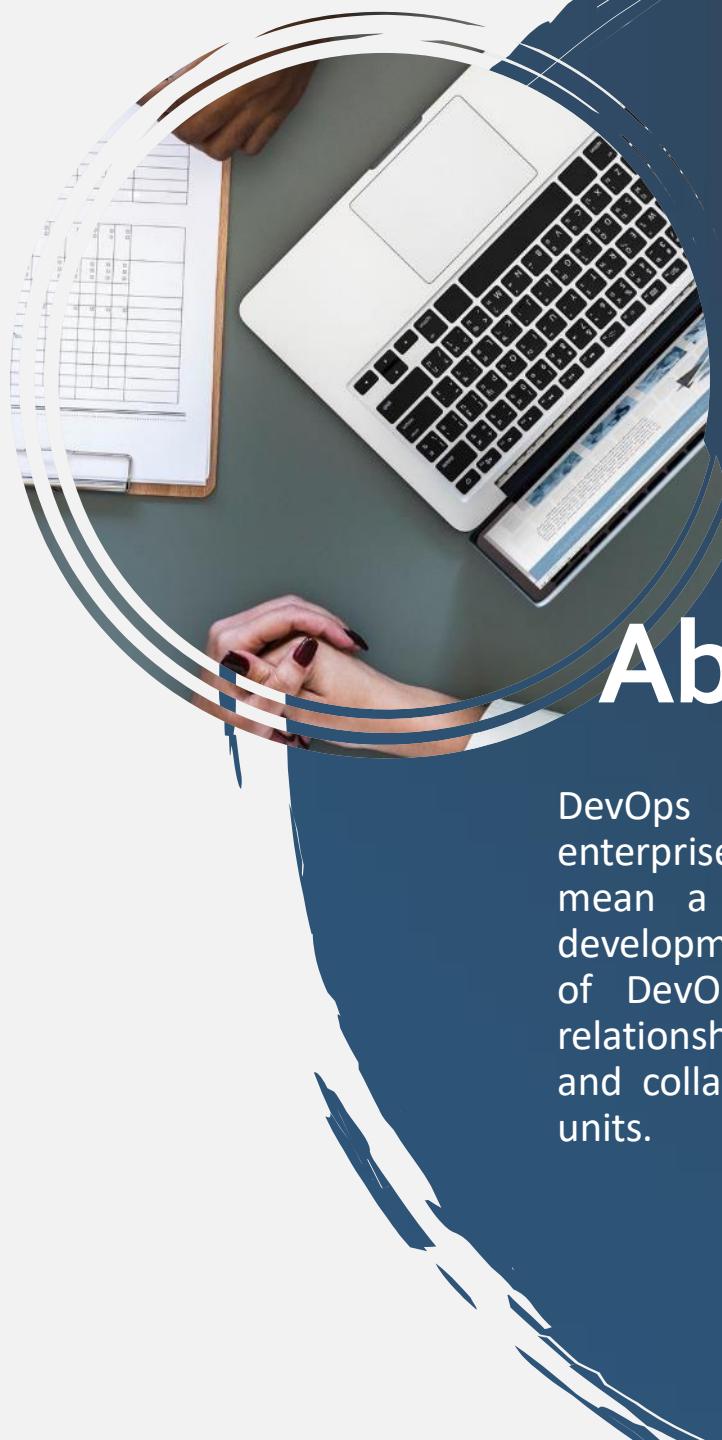
**WE CHISEL YOU TO MAKE YOU FEEL
TECHNICALLY VIBRATED, MOTIVATED &
OVERWHELMED**

 TRAINING	 DEVELOPMENT	 SOLUTION	 STAFFING
We are the technology leaders committed to provide comprehensive training to the aspiring professionals in the game	Our software engineering process collects and translates business requirements into imaginative technology solutions that become reality with custom software development.	We are the technical leaders expertise in providing end to end solutions for the cutting edge technologies which industries demands for their business growth and analytics requirements.	Inceppez Technologies provides flexible, innovative recruitment strategies and technologies to maximize recruiting efficiency and reduce cost.

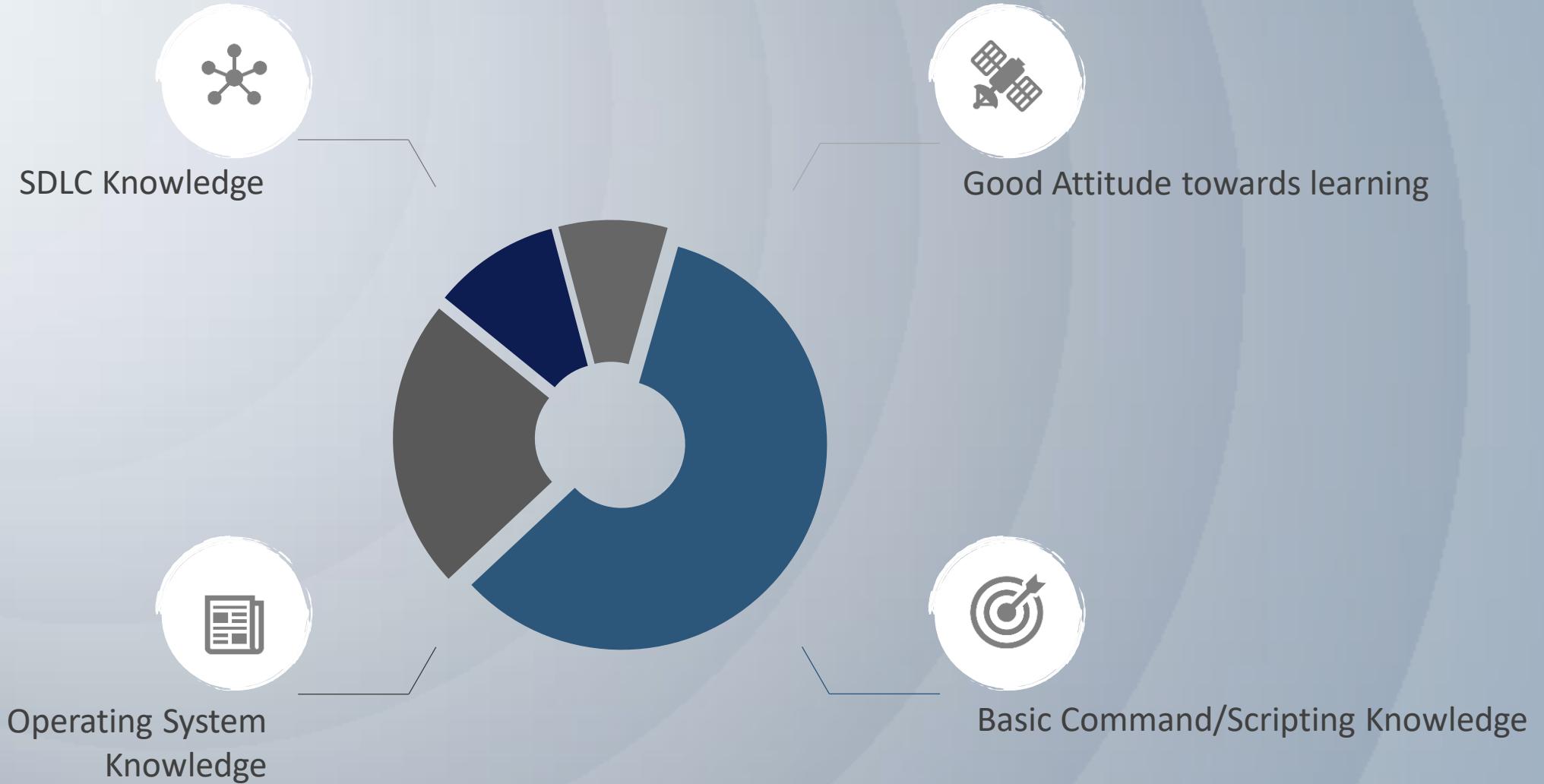
Dev-Ops “**Continuous Software Delivery**”, it’s “**Automation Strategies**” and with its ability to maintain well-balanced collaboration and communication between the “**Development and Operational**” units of its implying organization, Dev-Ops aims at achieving enhanced profits and boosted production outcomes. It is a well-proven fact that effective implementation of Dev-Ops strategies will place the implying organization way ahead of their respective competitors. So the demand for a qualified Dev-Ops engineer is more in the present corporate sector. But in contrast to this demand, there is a shortage of skilled Dev-Ops engineers. And so, many top notching organizations are willing to pay extremely high pay packages for the best-skilled Dev-Ops experts.

About DEV-OPS

DevOps (development and operations) is an enterprise software development phrase used to mean a type of agile relationship between development and IT operations. The goal of DevOps is to change and improve the relationship by advocating better communication and collaboration between these two business units.



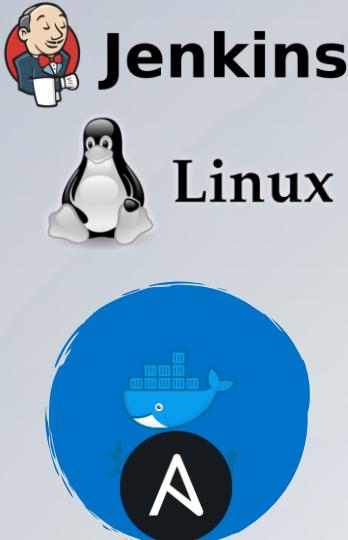
Prerequisite



What You will learn in this Course



DevOPS



Docker & Ansible



Cloud Services



Linux Scripting,
Hadoop & Spark



Monitoring and
Visualization

Dev-Ops “Continuous Software Delivery”, it’s “Automation Strategies” and with its ability to maintain well-balanced collaboration and communication between the “Development and Operational” units of its implying organization, Dev-Ops aims at achieving enhanced profits and boosted production outcomes.

Docker is a platform and tool for building, distributing, and running Docker containers.

Ansible is an open source automation platform. ... Ansible can help you with configuration management, application deployment, task automation. It can also do IT orchestration, where you have to run tasks in sequence and create a chain of events which must happen on several different servers or devices.

Amazon Web Services is a cloud computing platform that provides customers with a wide array of cloud services. Similarly, AWS is one of the cloud computing providers that provide us computing, storage, networking and lot more services that we can pay as we use.

Linux Shell Scripting with Hadoop, Spark and DataScience End to end implementation using DevOps tools. Hadoop & Spark are the open source Apache softwares for BigData management

The **ELK Stack** is a collection of three open-source products Elasticsearch, Logstash, and Kibana all developed, managed and maintained by Elastic. Elasticsearch is a NoSQL database that is based on the Lucene search engine. Logstash collects and parses logs, and then Elasticsearch indexes and stores the information.

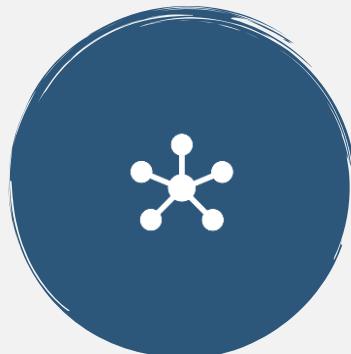
What's Unique



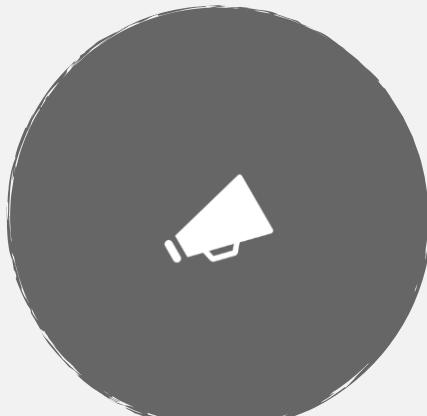
Unique



Best in class



Engagement based



Market Standard

All under one course DevOps, Cloud, ELK & Cloud Docker, Kubernetes, Ansible, Chef, Git etc with Cloud

Job Oriented Training, Professional Environment

All Trainings by Industry Experts

Extended Training Duration

More Focus on Hands-on

Use cases & Projects Oriented

Interview and Job Support

End to end learning materials

360 degree Training Model

Competitive learning model

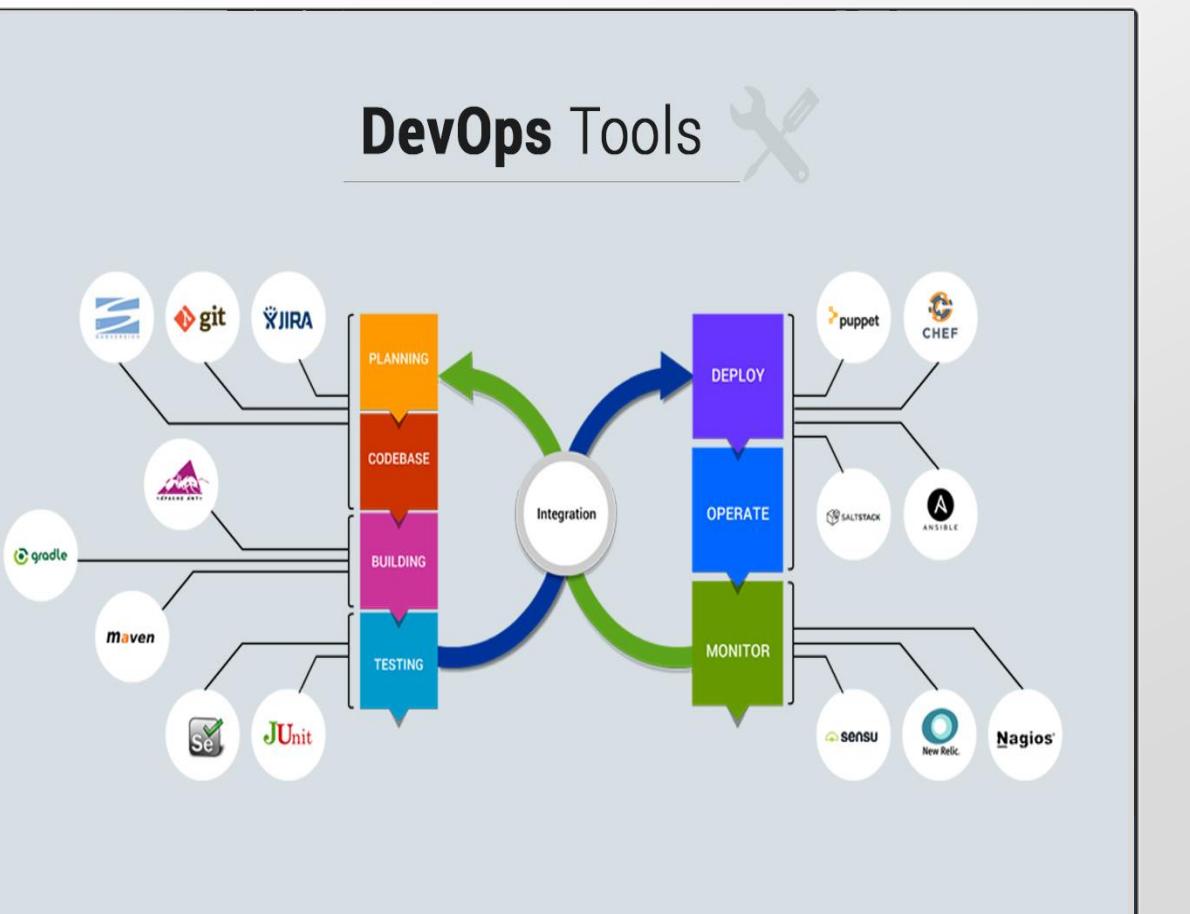
3 Realtime Projects, Hackathons & Tests

Packaging & Deployment

Cloud based Hadoop/Spark Clustering using Devops Tools

Cloud based DataScience Model Deployment using Devops Tools

High Level Course Curriculum



- Overview of DevOps
- Linux Commands & Shell Scripting
- Introduction to VM on Cloud
- Version Control with Git
- Git, Jenkins & Maven Integration
- Continuous Integration using Jenkins
- AWS Components understanding
- Ansible & Chef managed automated Infrastructure with AWS
- Elastic Search, LogStash & Kibana Stack
- Configuration Management with Ansible
- Continuous Deployment & Orchestration: Containerization with Docker
- Jenkins Automation pipeline with Blue Ocean
- Kubernetes networking

Key Content Highlights

- Realtime Projects & Use Cases
- Best Practices & Daily Roles
- Containerization & Orchestration
- Cloud Environment with End to End deployment and management strategies
- Continuous Development & Testing
- Configuration Management
- Continuous Integration
- Continuous Deployment
- Continuous Monitoring
- Playbooks & Cookbooks
- Virtualization & Cloud
- CI-CD of Cloud, Hadoop & Spark frameworks
- Clustering Automation

Course Overview

Upskill to Upscale your career gear becoming
Full Stack Cloud based DEVOPS Engineer

join.. **incepez**
Technologies

Why Incepez ??

All under one course DevOps, Cloud, ELK & Cloud
Kubernetes & Docker with Cloud

Job Oriented Training

Professional Environment

All Trainings by Industry Experts

Extended Training Duration

More Focus on Hands-on

Use cases & Projects Oriented

Interview and Job Support

End to end learning materials

360 degree Training Model

Competitive learning model

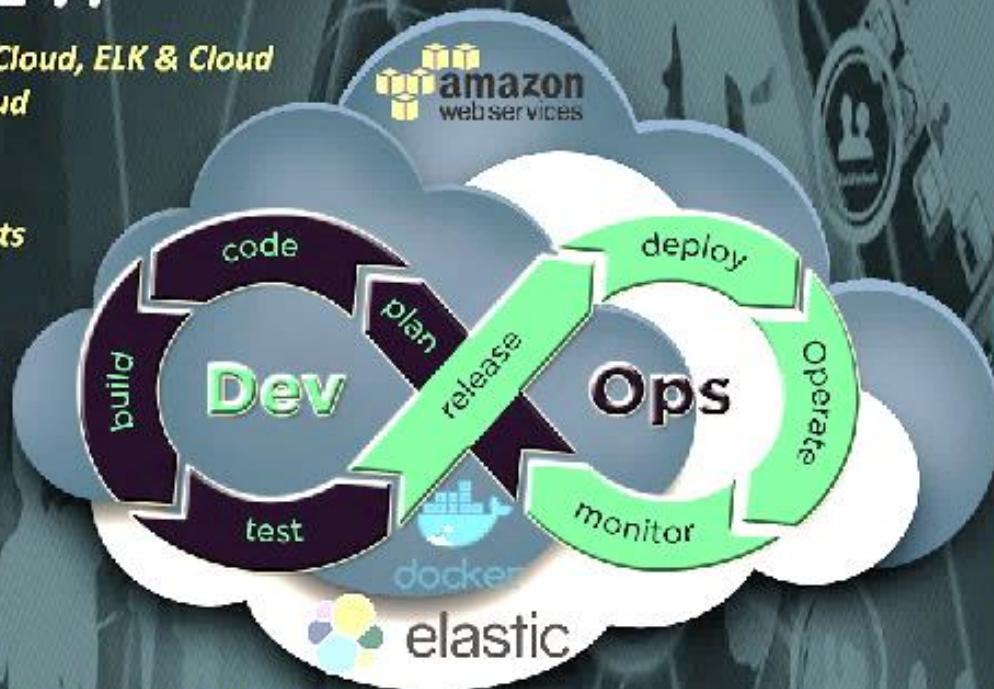
3 Realtime Projects

Hackathons & Tests

Packaging & Deployment

Cloud based Hadoop/Spark Clustering using Devops Tools

Cloud based Datasience Model Deployment using Devops Tools



Quick Facts

3.5 Years of Excellence

3500+ Growing Students Base

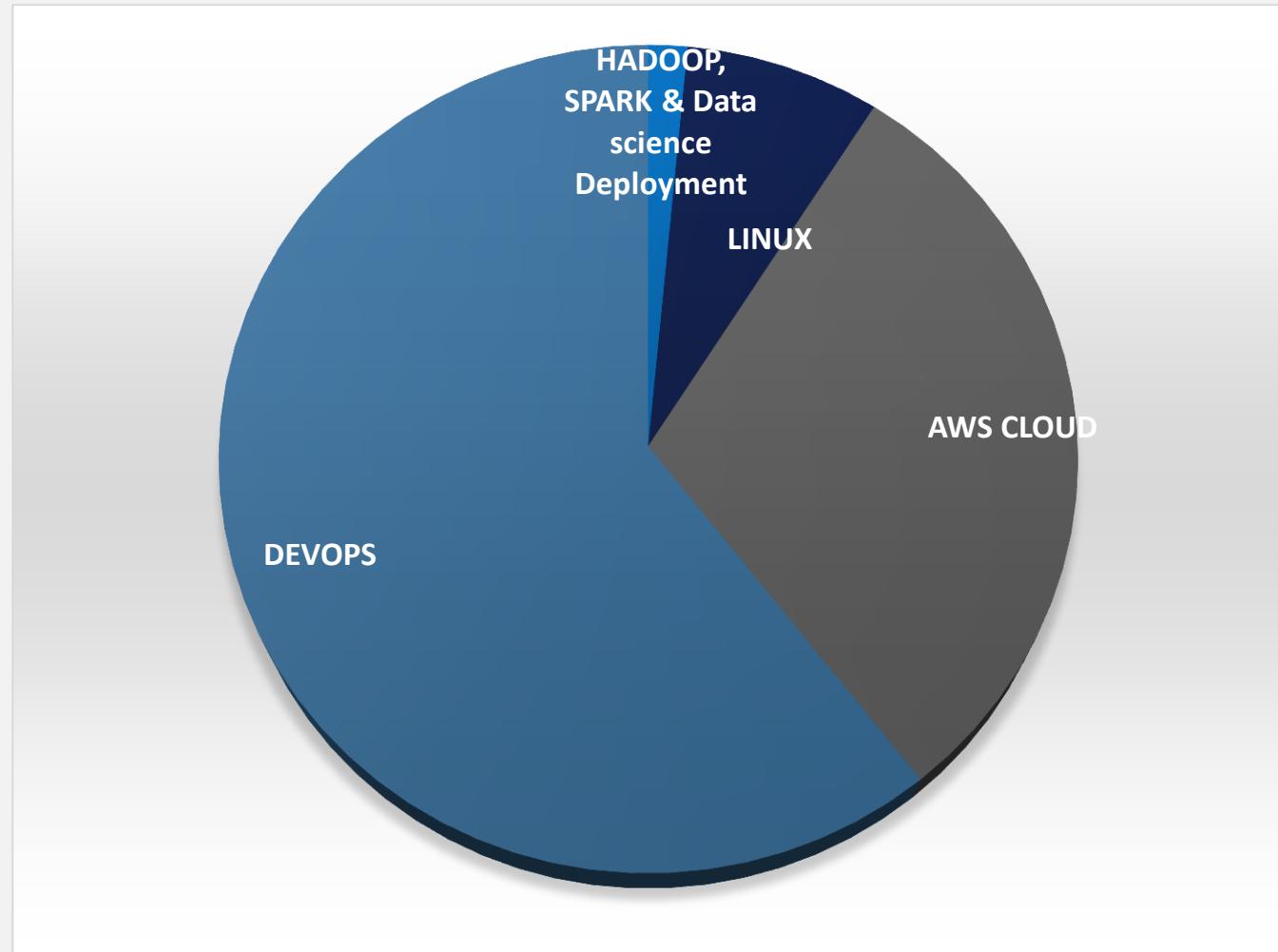
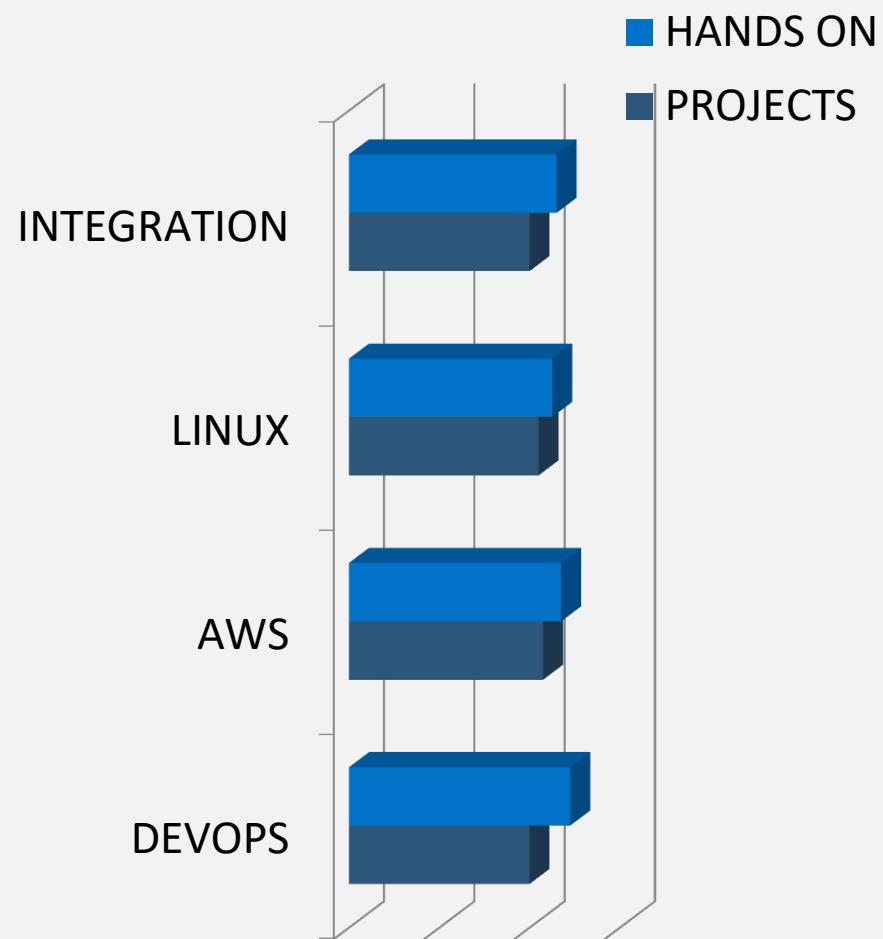
Technical Services, Placement &
Candidate Evaluation For IT MNCs

No 1 In Training to Job conversion rate %

No 1 In Social media +ve ratings

Proportion of Contents

Forecasting for success



Overview of DevOps

In this module you will be introduced to Dev-Ops environment.

- DevOps Introduction
- What is DevOps?
- Why DevOps?
- Where DevOps is useful
- History of DevOps
- DevOps and Software Development Life Cycle
- DevOps main objectives
- DevOps on the Cloud
- Prerequisites for DevOps
- Frameworks for Devops



Linux Foundation

In this module you will be learning Introduction & Key Components of Linux

- What is OS?
- What is Unix/Linux?
- Major Linux Distros
- History of Linux
- Key Components in Linux
- Kernel, Shell
- Terminal
- Runlevel
- User, Group
- Partition, Disk, Filesystem
- Process, Package, Service
- SSH, GUI
- Architecture of Linux



Linux Intro

In this module you will be linux shell, kernel and OS environment

- Key Differences between Linux & Windows
- FAQ on Linux
- Kernel
 - What is the Purpose of Kernel?
 - How Kernel Works?
 - Find Kernel
 - Get Kernel Info
- Shell
 - What is the Purpose of Shell?
 - Major Shells
 - What is Environment Variable?
 - Manage Environment Variables
 - Types of Shell
 - Environment Variables in Shell

Linux Terminal & RunLevels

In this module you will be learning the terminal, run level and user managements

- Terminal
 - What is the Purpose of Terminal?
 - Major Terminal Emulators
 - What is TTY Terminal?
 - Types of Terminal Switching between Terminals
- Runlevel
 - What is the Purpose of Runlevel?
 - Understanding Runlevel
 - Add Service to Runlevel
 - Manage Runlevels
- User
 - Why users
 - Sudo Users
 - Understanding User Configurations
 - Create User
 - Manage Users



Linux Permissions

In this module you will be learning Groups, Disk and Filesystem in Linux

- Group
 - What is the Purpose of Group?
 - Create Group
 - Manage Groups
- Disk
 - What is the Purpose of Disk?
 - Understanding Disk Partition
 - Types of Disk Partition
 - Data Partition
 - Swap Partition
- Filesystem
 - What is INode?
 - What is the Purpose of Filesystem?
 - Filesystems supported by Linux
 - Structure of Filesystem
 - Format Filesystem , Manage FS
 - Manage Ownerships & Permissions



Linux FS & Processes

In this module you will be learning FS and Processes

- Mount Filesystem
 - Unmount Filesystem
 - Persist Filesystem Configurations on Reboot
 - Check Current Path in FS
 - Manage File & Directories in Filesystem
 - Manage Ownership & Permission in Filesystem
 - Deep Dive into Filesystem
-
- Process
 - What is the Purpose of Process?
 - Structure of Process Tree
 - Understanding Process Tree
 - Process Signaling
 - Piping Process Output
 - Monitor Processes
 - Autorun Process using Cron
 - Manage Processes

Linux Packaging & Services

In this module you will be learning the Packaging methods, services etc

- Package
 - Purpose of Package?
 - What is Package Manager?
 - Package Managers in Linux
 - Add Package Repository
 - Install Package
 - Manage Packages
- Service
 - Purpose of Service?
 - What is Service Manager?
 - Service Managers in Linux
 - Install Service
 - Manage Services
- Partition
 - What is the Purpose of Partition?
 - Types of Disk Partition
 - Manage Partitions



Linux Network & Secure data transfers

In this module you will be learning Networking and Secure shells

- Network
 - What is the Purpose of Network?
 - Types of Network
 - What is IP?
 - What is Port?
 - What is Socket?
 - Understanding Network
 - Manage Network Interfaces
 - Listing Sockets, Listeners & Connections
- SSH
 - History of SSH
 - Key Differences between Telnet & SSH
 - What is the Purpose of SSH?
 - How SSH Works?
 - Install SSH Server
 - Install SSH Client
 - Configure SSH Server



Linux commands & GUI

In this module you will be learning other commands, GUI and Text editors

- Configure SSH Key-based Authentication
- SSH to Server
- Do's and Dont's with SSH
- Useful Commands
- WGET , CURL
- GREP, CAT, MORE, LESS, TAIL , MAN etc.,
- GUI
 - What is the Purpose of GUI?
 - Major GUI's
- Text Editor
 - What is the Purpose of Text Editor?
 - Major Text Editors
 - Using VIM Text Editor
 - Using Nano Text Editor



Linux Scripting

In this module you will be learning Shell Scripting & Automation Services.

- **Shell Script**
 - What is the Purpose of Shell Script?
 - Key Components in Shell Script
 - Structure of Shell Script
 - Variables, Functions
 - Control structures
 - Looping Constructs
 - Execution steps
 - Shell categories
 - Writing Shell Script
 - Do's and Dont's with Shell Script



Dev Ops Criterias

Viewing Applications As Products, not Projects

- IAAS for DevOps
- PAAS for DevOps
- Containerization Tools
- System Configuration
- Automation and Management
- Continuous Integration (CI) Systems
- Build and Dependency
- Management Systems
- Select DevOps Tools



AWS Components

In this module you will be learning about AWS Components

- Introduction to AWS
- Characteristics and Benefits of Cloud
- IaaS, PaaS and SaaS
- Cloud Storage SOA
- Risk in Cloud and DevOps security concerns
- What is VM, Why VM?
- Virtualization
- Things to Look For and Avoid
- IT Assets Ownership
- EC2, S3, VPC, IAM, EBS, SG
- Cloud Formation, Dev Ops in the Enterprise
- DevOps Adoption Steps

Version Control with Git

In this module you will be introduced to the Version control using Git Repository.

- **Introduction to Git**
 - What is Version Control System (VCS)/Source Code Management (SCM)? Need for VCS/SCM
 - What is Git?
 - History of Git
 - Alternatives for Git
- **Key Components in Git**
 - Git Repository
 - Git Branch
 - Git Tag
 - Git Service Provider - GitHub/Bitbucket/GitLab
- **FAQ on Git**



Git Setup & Config

In this module, you will learn about the setup and configuration of Git

- **Overview of Git**
 - Architecture of Git-managed Software Development
 - Workflow of Git-managed Software Development
- **Setup Git**
 - Install Git
 - Significance of Git Programs
 - Understanding Git System Paths
- **Configure Git**
 - Understanding Git Configurations
 - Apply Global Level Configurations in Git
 - Apply Repo Level Configurations in Git



Git Handson

In this module, you will do the Hands on and Exploration of the Integration of components

- **Git Repository**
 - What is the Purpose of Git Repository?
 - Initialize Git Repository
 - Structure of Git Repository
 - Add Source Tree to Git Repository
 - Ignore Files and Paths in Git Repository
 - Commit Changes into Git Repository
 - Check Status of Git Repository
 - Deep Dive into Git Repository
 - Inspecting Git Repository
 - Do's and Dont's with Git Repository

GitHub Workflow & Advanced



Git Service

In this module you will be learning Git as a Service

- **Git Service Provider**

- What is the Purpose of Git Service Provider?
- Who are Major Git Service Providers?
- How to Choose a Git Service Provider?
- Manage SSH Keys with Git Service Provider
- Create Remote Git Repository
- Manage Remote Git Repository
- Push Changes in Local Git Repository to Remote Git Repository
- Integrate Remote Git Repository with Jenkins CI Server using Webhooks
- Do's and Dont's with Git Service Provider



Git Workflow & Case Study

In this module, you will learn about the Git Workflow and case study

- Create Branches on Git Repository
- Let Developer Clone the Git Repository
- Cherry Pick Git Commits from One Branch and Apply it to Other Branch
- Merging Git Branches
- Release Source Code using Git Tag
- Manage Git Branches
- Do's and Dont's with Git Workflow
- **Case Study**
 - Managing Git Workflow on SloopEngine Git repository



Git Major concepts

In this module, you will do the Hands on and Exploration of the merge, stash, reset and rebase

- **Merge Conflict in Git**
 - Why Merge Conflict Occurs in Git Repository?
 - Fixing Merge Conflict in Git Repository
- **Git Stash**
 - What is the Purpose of Git Stash?
 - Stashing Changes before Switching to Other Git Branch
- **Git Reset**
 - What is the Purpose of Git Reset?
 - Delete Git Commits on a Branch using Git Reset
- **Git Rebase**
 - What is the Purpose of Git Rebase?
 - Rebasing a Git Branch using Git Rebase

Jenkins – Continuous Integration

Continuous Integration using Jenkins

In this module, you will know how to perform Continuous Integration using Jenkins by building server cases.

- Jenkins Management
- Adding a slave node to Jenkins
- Building Delivery Pipeline
- Pipeline as a Code
- Implementation of Jenkins in the Project
- Continuous Integration with Jenkins Overview
- Installation & Configure Jenkins as stand-alone application
- Configure Jenkins on an Application Server
- Jenkins management

Jenkins Git plugin, securing, maven build

In this module, you will learn about the integration of git, Jenkins and maven.

- Support for the Git version control systems
- Different types of Jenkins Jobs
- Setting up a Jenkins job
- Scheduling build Jobs
- Maven Build Scripts
- Securing Jenkins
- Authentication, Authorization
- Confidentiality, Creating users
- Jenkins Plugin
- Distributed builds with Jenkins
- Best Practices for Jenkins



Jenkins

Jenkins build jobs, pipelining, testing

In this module, you will do the Hands on and Exploration of the Installation, build, test and CD pipelining using Jenkins

- Acquiring & Installing Jenkins Plugins
- Jenkins Build jobs
- Testing Cycle
- Manage Plugins
- Continuous Deployment
- Build the pipeline of jobs using Jenkins
- Create a pipeline script to deploy an application over the tomcat server

Docker - Containerization

Config Management with Ansible & Handson

Learn about the Ansible installation, configuration, creation/management of playbooks & execution of Adhoc commands.

- Introduction to Ansible
- Ansible Installation
- Configuring Ansible Roles
- Ansible Facts
- Write Playbooks
- Executing adhoc command
- Variables and command line
- Playbook loop, notify, conditional, prompts etc.,
- Templates and shell
- Handlers, packages and CRON.

Containerization using Docker

This module introduces Docker to readers, the core concepts and technology behind Docker, container and various operations performed.

- **Introduction to Docker**
 - What is Containerization?
 - Evolution of Container Technology
 - What is Docker?
 - History of Docker
- **Key Components in Docker**
 - Docker Image
 - Docker Registry
 - Docker Network
 - Docker Container
 - Docker Volume
 - Docker Compose
 - Docker Machine
 - Docker Swarm
 - Docker Node



Docker Setup & Overview

In this module, you will continue doing handson exercises

- **Overview of Docker**
 - A Scenario Analysis in VM & Container
 - Key Differences between VM & Container
 - Architecture of Dockerized Services
 - FAQ on Docker
- **Setup Docker**
 - Install Docker
 - Significance of Docker Programs
 - Understanding Docker System Paths
 - Manage Docker
 - Deep Dive into Docker

Docker Advanced

Docker Image, build automation

Handson of the Docker configuration methodologies, imaging and automation

- Configure Docker
 - Understanding Docker
 - Configurations Change Storage & Log Drivers of Docker
 - Apply Configuration Changes to Docker
- Docker Image
 - What is Filesystem Layer?
 - What is the Purpose of Docker Image?
 - Deriving Docker Images
 - Build Docker Image Manually
 - Understanding Dockerfile
 - Automated Build of Docker Images using Dockerfile
 - Create Docker ID at docker.com
 - Tag Docker Images



Docker Network

Handson on the Docker registry, networks, inspection of networks etc

- Push Docker Images to Docker Registry (Docker Hub)
- Manage Docker Images
- Deep Dive into Docker Image
- Inspecting Docker Image
- Do's and Dont's with Docker Image
- Docker Network
 - What is the Purpose of Docker Network?
 - Types of Docker Network
 - Significance of Docker Networks
 - How to Choose a Docker Network?
 - Create Docker Network
 - Manage Docker Networks
 - Inspecting Docker Network



Containerization using Docker Deep dive

In this module, you will continue doing handson exercises

- Docker Container
 - What is the Purpose of Docker Container?
 - Understanding Docker Container Configurations
 - Managing Processes within Docker Container using Supervisor
 - Design Highly Configured Docker Container
 - Provision Docker Containers Manually
 - Manage Docker Containers
 - Deep Dive into Docker Container
 - Inspecting Docker Container Do's and Dont's with Docker Container

Kubernetes Orchestration

Docker Compose, Case study, Swarm

Handson on Docker compose with YML, Automation, Project with real tool SloopEngine, Docker Swarm

- **Docker Compose**
 - What is the Purpose of Docker Compose?
 - Install Docker Compose
 - Understanding Docker Compose YML
 - Automated/Orchestrated Provisioning of Docker Containers using Docker Compose
 - Manage Docker Containers using Docker Compose
- **Case Studies**
 - Simulating SloopEngine Multi-Pod Architecture on Docker
 - How We Scaled Sloop Stash Multi-Environment on Docker in AWS
- **Docker Swarm**
 - What is the Purpose of Docker Swarm?
 - Key Components in Docker Swarm
 - Architecture of Docker Swarm
 - Quorum-based Cluster Stability in Docker Swarm



Docker with AWS

This module details Docker to create nodes, swarm clustering, scaling, demolishing with AWS implementation of Docker Containers

- Boot Docker Nodes
- Form Docker Swarm Cluster
- Prepare Docker Nodes
- Provision Docker Containers using Docker Compose
- Deep Dive into Docker Swarm
- Testing the Fault-tolerance, High Availability and Self-healing Behaviour's of Docker Swarm Cluster
- Deprovision Docker Containers using Docker Compose
- Scale Docker Swarm Cluster
- Manage Docker Swarm Cluster
- Demolish Docker Swarm Cluster
- **Docker on AWS Cloud**
 - Implementation of Docker containers on AWS Cloud platform



kubernetes

Kubernities & Jenkins

Handson on the Kubernetes orchestration nd networking, Introduction to Jenkins & components

- **Kubernetes**
 - What is Kubernetes?
 - What is the Purpose of Kubernetes?
 - Key Components in Kubernetes
 - Architecture of Kubernetes
 - Automated/Orchestrated Provisioning of Docker Containers using Kubernetes
- **Jenkins**
 - Introduction
 - What is Testing?
 - Need for Automated Testing
 - CI/CD Pipeline
 - What is Jenkins?
 - History of Jenkins
- **Key Components in Jenkins**
 - Jenkins Server

Jenkins pipelining



Jenkins

Jenkins Server

End to end handson on Jenkins with server management.

- Jenkins Cluster
- Jenkins Plugin
- Jenkins Project/Job
- Blue Ocean
- Overview of Jenkins
 - Architecture of Jenkins-managed Software Testing
 - Workflow of Jenkins-managed Software Testing
- FAQ on Jenkins
- Jenkins Server
 - What is the Purpose of Jenkins Server?
 - Install Jenkins Server
 - Configure Jenkins Server
 - Significance of Jenkins Server Programs
 - Understanding Jenkins Server System Paths
 - Manage Jenkins Server

Jenkins Project & Pipeline

Jenkins project free style, pipelining with handson exercises

- Jenkins Project – Freestyle
 - What is Freestyle Project in Jenkins?
 - What is the Purpose of Jenkins Freestyle Project?
 - Setup CI/CD using Freestyle Project in Jenkins
 - Trigger Build/Test for Freestyle Project in Jenkins
 - Manage Jenkins Freestyle Projects
 - Do's and Dont's with Jenkins Freestyle Project
- Jenkins Project - Pipeline
 - What is Pipeline Project in Jenkins?
 - What is the Purpose of Jenkins Pipeline Project?
 - What is Groovy Declarative Pipeline?
 - Understanding Groovy Declarative Pipeline
 - What is Jenkinsfile?

Jenkins Cluster with Blue Ocean

Handson on Jenkins file, CICD pipelining, Understanding Blue ocean and Jenkins Cluster

- Understanding Jenkinsfile
- Setup CI/CD using Pipeline Project in Jenkins
- Trigger Build/Test for Pipeline Project in Jenkins
- Manage Jenkins Pipeline Projects
- Do's and Dont's with Jenkins Pipeline Project
- Blue Ocean
 - What is the Purpose of Blue Ocean?
 - Install Blue Ocean
 - Understanding Blue Ocean
 - Manage Projects using Blue Ocean
- Jenkins Cluster
 - What is the Purpose of Jenkins Cluster?
 - Form Jenkins Cluster
 - Manage Jenkins Cluster

Ansible Playbook

Config Management with Ansible & Handson (Continued)

Learn about the Ansible automated deployments, key components, overview

- **Introduction to Ansible**

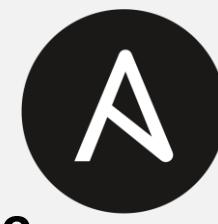
- What is Deployment?
- Need for Automated Deployments
- Deployment Matrix
- What is Ansible?
- History of Ansible
- What is Deployment?

- **Key Components in Ansible**

- Ansible Control Machine
- Ansible Node
- Ansible Playbook
- Ansible Role
- Ansible Galaxy
- Ansible Tower

- **Overview of Ansible**

- Architecture of Ansible-managed Infrastructure



ANSIBLE

Ansible Control Machine

This module gives the handson on the Ansible Control Machine with FAQs

- Workflow of Ansible-managed Infrastructure
- Key Differences Between Ansible & Chef
- FAQ on Ansible
- Ansible Control Machine
 - What is the Purpose of Ansible Control Machine?
 - Install Python
 - Install Ansible
 - Significance of Ansible Control Machine Programs
 - Understanding Ansible Control Machine System Paths
 - Understanding Ansible Control Machine Configurations
 - Configure Ansible Control Machine
 - Manage Ansible Control Machine

Ansible Playbook, Role & Nodes

Handson on the Ansible playbook creation with role definition, management and nodes

- **Ansible Playbook**

- What is the Purpose of Ansible Playbook?
- Key Components in Ansible Playbook
- Structure of Ansible Playbook
- Writing Ansible Playbooks
- Manage Ansible Playbooks
- Do's and Dont's with Ansible Playbook

- **Ansible Role**

- What is the Purpose of Ansible Role?
- Key Components in Ansible Role
- Structure of Ansible Role
- Writing Ansible Roles
- Manage Ansible Roles
- Do's and Dont's with Ansible Role

- **Ansible Node**

- How Ansible Works?
- Using Docker Containers as Ansible Nodes

Chef Infra management

Ansible Nodes with AWS Cloud

Handson on the Ansible boot nodes, triggering of deployments with the integration of Ansible in AWS Cloud platform

- Boot Ansible Nodes
- Trigger Deployments on Ansible Nodes
- Understanding Deployments on Ansible Nodes
- Ansible on AWS Cloud
- **Introduction to Chef**
 - What is Deployment?
 - Need for Automated Deployments
 - Deployment Matrix
 - What is Chef?
 - History of Chef
- **Key Components in Chef**
 - Chef Infra Server
 - Chef Infra Client
 - Chef Manage
 - Chef Automate
 - Chef Workstation



Chef End to End

Learn End to end practices of the Chef Infra server, client, workstation, CDK, roles, cookbooks etc.

- Chef Development Kit
- Chef Solo
- Chef Node
- Push Jobs Server
- Push Jobs Client
- Chef Cookbook
- Chef Role
- Supermarket
- Knife
- Kitchen
- **Overview of Chef**
 - Architecture of Chef-managed Infrastructure
 - Workflow of Chef-managed Infrastructure
 - Key Differences Between Ansible & Chef
- **FAQ on Chef**

Chef Infra Server, Manage and Push Job Servers

Chef infrastructure server, chef manage, system paths, push job servers etc.

- What is Chef Infra Server
- he Purpose of Chef Infra Server?
- Install Chef Infra Server
- Reconfigure Chef Infra Server
- Significance of Chef Infra Server Programs
- Understanding Chef Infra Server System Paths
- Manage Chef Infra Server
- **Chef Manage**
 - What is the Purpose of Chef Manage?
 - Install Chef Manage
 - Reconfigure Chef Manage
 - Significance of Chef Manage Programs
 - Understanding Chef Manage System Paths
 - Manage Chef Manage
- **Push Jobs Server**
 - What is the Purpose of Push Jobs Server?

Chef Workstation

Chef Workstation

Learn and handson on the chef push jobs server with the workstation using Ruby scripting.

- Install Push Jobs Server
- Reconfigure Push Jobs Server
- Significance of Push Jobs Server Programs
- Understanding Push Jobs Server System Paths
- Manage Push Jobs Server
- **Chef Workstation**
 - What is the Purpose of Chef Workstation?
 - Install Ruby
 - Install Chef Workstation
 - Configure Chef Workstation
 - Test Connectivity from Chef Workstation to Chef Server
 - Significance of Chef Workstation Programs
 - Understanding Chef Workstation System Paths
 - Manage Chef Workstation
 - Do's and Dont's with Chef Workstation

Chef Cookbook, Role & Node creation with Docker

Handon on creating cookbooks for chef, run on solo, creation of chef roles, chef node using docker containers

- **Chef Cookbook**
 - What is the Purpose of Chef Cookbook?
 - Key Components in Chef Cookbook
 - Structure of Chef Cookbook
 - Writing Chef Cookbooks
 - Run Chef Cookbooks using Chef Solo
 - Manage Chef Cookbooks
 - Do's and Dont's with Chef Cookbook
- **Chef Role**
 - What is the Purpose of Chef Role?
 - Create Chef Roles
 - Manage Chef Roles
- **Chef Node**
 - How Chef Infra Client Works?
 - Using Docker Containers as Chef Nodes
 - Boot Chef Nodes
 - Trigger SSH-based Deployments on Chef Nodes



CHEF

Chef on AWS

In this module, you will continue doing handson exercises on Chef on top of AWS Cluster

- Understanding SSH-based Deployments on Chef Nodes
- Trigger Agent-based Deployment on Chef Nodes
- Understanding Agent-based Deployment on Chef Nodes
- **Chef on AWS Cloud**
 - Implementation of the practices of Chef in the AWS cloud platform

Terraform Infrastructure Automation



Terraform

Define and provision the end to end datacenter infrastructure

- Introduction to Terraform
 - Key Components in Terraform
 - Overview of Terraform
 - FAQ on Terraform
 - Prerequisites for Terraform
 - Setup Terraform
 - Configure Terraform
 - Terraform Provider
 - Terraform Provisioner
 - Terraform Configuration
 - Terraform HCL



Terraform on AWS

Learn about the integration of Terraform with AWS platform automation

- AWS Automation using Terraform
 - Spinning up instance using Terraform
 - Software provisioning
 - Terraform Variable Types
 - Remote state
 - Data sources
 - Interpolation
 - Conditional
 - Loops



Terraform for realtime

In this module, you will learn applications of Terraform

- Provisioning Infra in AWS using the Terraform services
- Learn about the Cloud enablement of services
- Terraform realtime applications

AWS End to End (IAM & VPC)

AWS Key Components

In this module you will be learning the introduction of AWS Cloud services

- **Introduction to AWS**
 - What is Cloud Computing
 - Types of Cloud Computing
 - Benefits of Cloud Computing
 - What is AWS
 - History of AWS
 - Value Proposition of AWS
 - Ways to Interact with AWS

Key Services in AWS

- AWS IAM
- Amazon VPC
- Amazon S3
- Amazon CloudFront
- Amazon EC2
- Amazon Route53
- Amazon SNS
- AWS CodeCommit

Overview

Services overview

- AWS CodeDeploy
- AWS CodePipeline
- Amazon SES
- AWS CloudFormation
- Amazon RDS
- Amazon DynamoDB
- AWS Lambda
- Amazon API Gateway
- Amazon CloudWatch
- **Overview of AWS**
 - Architecture of AWS-managed Infrastructure
- **FAQ on AWS**
- **Prerequisites for AWS**



AWS Components IAM & VPC Handson

In this module you will be experiencing with the AWS core components with handson

- **AWS IAM**
 - What is the Purpose of IAM?
 - Key Components in IAM
 - IAM User
 - IAM Policy
 - IAM Group
 - IAM Role
 - Do's and Dont's with IAM

Amazon VPC

- What is the Purpose of VPC?
- Key Components in VPC
- Architecture of VPC-managed Network
- VPC Network
- VPC Internet Gateway
- VPC Route Table
- VPC Subnet

AWS End to End (*s₃, cloudfront, EC2, SNS, Route53, Codecommit, deploy, SES*)

AWS S3 & Cloudfront

In this module you will be learning the S3 & Cloudfront

- VPC Network ACL
- VPC Security Group
- VPC Endpoint
- Do's and Dont's with VPC
- Amazon S3
 - What is the Purpose of S3?
 - Key Components in S3
 - S3 Bucket
 - Do's and Dont's with S3
- Amazon CloudFront
 - What is the Purpose of CloudFront?
 - Key Components in CloudFront
 - CloudFront Origin Access Identity
 - CloudFront Distribution
 - Do's and Dont's with CloudFront



AWS EC2, SNS & Route53

Learn the network and compute components

- Amazon EC2
 - What is the Purpose of EC2?
 - Key Components in EC2
 - EC2 Key Pair
 - EC2 AMI
 - EC2 EBS
 - EC2 Instance
 - EC2 ELB
 - Do's and Dont's with EC2
- Amazon Route53
 - What is the Purpose of Route53?
 - Key Components in Route53
 - Route53 Hosted Zone
- Amazon SNS
 - What is the Purpose of SNS?
 - Key Components in SNS
 - SNS Topic
 - SNS Subscription
 - Do's and Dont's with SNS



AWS Codecommit, deploy & SES

In this module you will be learning about AWS Components

- AWS CodeCommit
 - What is the Purpose of CodeCommit?
 - Key Components in CodeCommit
 - CodeCommit Repository
 - Do's and Dont's with CodeCommit
- Amazon CodeDeploy
 - What is the Purpose of CodeDeploy?
 - Key Components in CodeDeploy
 - CodeDeploy Application
 - Do's and Dont's with CodeDeploy
- Amazon SES
 - What is the Purpose of SES?
 - Key Components in SES
 - SES Identity
 - Do's and Dont's with SES



AWS End to End (Cloudformation, DynamoDB, RDS, CloudWatch, Lambda, APIGateway)



AWS Key Components

In this module you will be learning the core components of AWS

- **AWS CloudFormation**
 - What is the Purpose of CloudFormation?
 - Key Components in CloudFormation
 - CloudFormation Stack
 - Do's and Don'ts with CloudFormation
- **Case Studies**
- **Amazon RDS**
- **Amazon DynamoDB**
- **Amazon CloudWatch**
- **AWS Lambda**
- **Amazon API Gateway**

Devops Integration

Viewing Applications As Products, not Projects

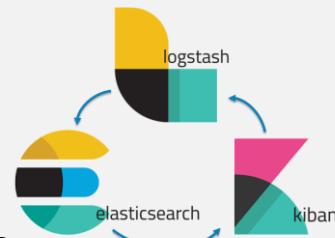
- **AWS OpsWorks**
- **AWS Devops component integration**
- **Working on AWS CLI**
- **Working on AWS Console for DynamoDB**
- **Working on AWS Console for RDS**
- **Working on AWS Console for CloudWatch**
- **Lambda functions**
- **Lambda 3rd party API**

AWS Components

In this module you will be learning about AWS Components

- **AWS CodeCommit**
 - What is the Purpose of CodeCommit?
 - Key Components in CodeCommit
 - CodeCommit Repository
 - Do's and Dont's with CodeCommit
- **Amazon CodeDeploy**
 - What is the Purpose of CodeDeploy?
 - Key Components in CodeDeploy
 - CodeDeploy Application
 - Do's and Dont's with CodeDeploy
- **Amazon SES**
 - What is the Purpose of SES?
 - Key Components in SES
 - SES Identity
 - Do's and Dont's with SES

ELK Stack – Data pipeline



ELK Stack

Learn about the Elastic Search,
LogStash & Kibana

- **Introduction to ELK**
 - What is Analytics?
 - Need for Data Analytics
 - What is ELK?
 - History of ELK
- **Key Components in ELK**
 - Elasticsearch
 - Logstash
 - Kibana
 - Filebeat
 - Metricbeat
 - Packetbeat
 - Auditbeat
 - Heartbeat
 - Functionbeat

ELK Overview & Elastic Search Deep dive

This module details about the ELK stack and deep dive of Elastic Search.

- **Overview of ELK**
 - Architecture of ELK-driven Data Analytics
 - Workflow of ELK-driven Data Analytics
 - Replacing NewRelic, Splunk, Nagios & Grafana
- **FAQ on ELK**
- **Elasticsearch**
 - What is the Purpose of Elasticsearch?
 - Key Components in Elasticsearch
 - What is Elasticsearch Cluster?
 - Using Docker Containers as Elasticsearch Nodes
 - Install & Configure Elasticsearch
 - Significance of Elasticsearch Programs
 - Understanding Elasticsearch System Paths
 - Manage Elasticsearch

LogStash & FileBeat

In this module, you will learn Logstash and Filebeat

- **Logstash**
 - What is the Purpose of Logstash?
 - Key Components in Logstash
 - Using Docker Containers as Logstash Servers
 - Install Logstash
 - Configure Logstash
 - Significance of Logstash Programs
 - Understanding Logstash System Paths
 - Manage Logstash
- **Filebeat**
 - What is the Purpose of Filebeat?
 - Key Components in Filebeat
 - Install & Configure Filebeat
 - Significance of Filebeat Programs
 - Understanding Filebeat System Paths
 - Manage Filebeat
 - What is Filebeat Module?

ELK Visualization & Dashboard

FileBeat & MetricBeat

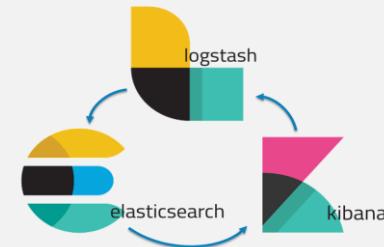
This module introduces about the Metricbeat and its handson with importance

- Key Components in Filebeat Module
- Structure of Filebeat Module
- Writing Filebeat Module
- Install Filebeat Module
- Manage Filebeat Modules
- Do's and Dont's with Filebeat Module
- **Metricbeat**
 - What is the Purpose of Metricbeat?
 - Key Components in Metricbeat
 - Install & Configure Metricbeat
 - Significance of Metricbeat Programs
 - Understanding Metricbeat System Paths
 - Manage Metricbeat
 - What is Metricbeat Module?
 - Manage Metricbeat Modules
 - Do's and Dont's with Metricbeat Module

Kibana Visualization & Dashboard

End to end handson session on Kibana dashboard and visualization creation for analysis of log events.

- **Kibana**
 - What is the Purpose of Kibana?
 - Key Components in Kibana
 - Using Docker Containers as Kibana Servers
 - Install Kibana
 - Configure Kibana
 - Significance of Kibana Programs
 - Understanding Kibana System Paths
 - Manage Index Patterns
 - Query Data using Discover
 - Build Visualizations & Dashboards
 - Using Timelion
 - Monitor App Performance using APM
 - Using Dev Tools
 - Anomaly Detection using ML
 - Generate Alerts using WatcherData



ELK Analytics

Analytics of realtime log using ELK stack and ELK on top of AWS

- **Analytics in ELK**
 - Simulating Traffic to App
 - Perform Real-Time Analytics
- **ELK on AWS Cloud**

Kubernetes clustering

Continuous Orchestration using Kubernetes & Kubernetes networking.

Learn about Orchestration of Docker containers using Kubernetes

- Revisiting Kubernetes Cluster Architecture
- Spinning up a Kubernetes Cluster on Centos VMs
- Kubernetes networking
- Exploring your Cluster
- Understanding YAML
- Creating a Deployment in Kubernetes using YAML
- Creating a Service in Kubernetes
- Using Rolling Updates in Kubernetes
- Ingress in Kubernetes



Continuous Orchestration using Kubernetes Handson

Learn about Orchestration of Docker containers using Kubernetes

- Kubernetes Architecture
- Setting up the Kubernetes Cluster
- Accessing your application through service
- Rolling updates in Kubernetes
- Deploying Kubernetes using Kubeadms
- Alternate ways of deploying Kubernetes & Creating Services
- Creating an Ingress
- Demonstrating the use of Ingress, services and deployments together



kubernetes DevOps Best Practices

Learn about the realtime best practices and use cases.

- Realtime challenges and best practices followed in industries.
- Project Example for Packaging
- Project Example Docker image creation manually
- Project Example Docker image creation using Dockerfile
- Project Example deployment using CICD(Jenkins) Docker and Kubernetes

<https://sloopengine.io/>



- ✓ *Managing Git Workflow on SloopEngine Git repository*
- ✓ *Simulating SloopEngine Multi-Pod Architecture on Docker*
- ✓ *Scaling Story of Leading Product Startup in Docker and AWS*
- ✓ *End to End project execution in line with SLOOP STASH project*
- ✓ *Project Example for Packaging*
- ✓ *Project Example Docker image creation manually*
- ✓ *Project Example Docker image creation using Dockerfile*
- ✓ *Project Example deployment using CICD(Jenkins) Docker and Kubernetes*
- ✓ *Containerizing various frameworks and Docker on AWS*
- ✓ *Using Git for version control and tracking of software*
- ✓ *Automating the IT infrastructure of a company*
- ✓ *Automating applications using different pipelines*
- ✓ *DevOps Continuous Integration*
- ✓ *Provision EC2 Virtual Machine with Ansible*
- ✓ *How to speed up the setting up and configure a software tool of an organization*
- ✓ *How to integrate the software projects deployed in diverse environments using Docker*
- ✓ *End to End integration of DEVOPS components in AWS Cloud*
- ✓ *Cloud based Hadoop/Spark Clustering using Devops Tools*

Projects

Key Stuffs behind the success that provides real experience...



THANK YOU

Instructor - *Mr. John Sundarraj*
Founder/CTO - *SloopStash*

<https://sloopstash.com>
<https://sloopengine.io>

{OC} sloopstash 

Inceptez Technologies Pvt. Ltd. 
+91 70107 90330 
info@inceptez.com 
www.inceptez.com 
www.inceptez.in

