



DevOps Training

About Cognixia

Cognixia- A Digital Workforce Solutions Company is dedicated to delivering exceptional trainings and certifications in digital technologies. Founded in 2014, we provide interactive, customized training courses to individuals and organizations alike, and have served more than 100,000 professionals across 37 countries worldwide.

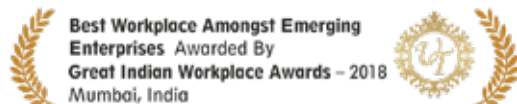
Our team of more than 4,500 industry experts facilitate more than 400 comprehensive digital technologies courses, along with state-of-the-art infrastructure, to deliver the best learning experience for everyone. Our comprehensive series of instructor-led online trainings, classroom trainings and on-demand self-paced online trainings cover a wide array of specialty areas, including all of the following:

- IoT
- Big Data
- Cloud Computing
- Cyber Security
- Machine Learning
- AI & Deep Learning
- Blockchain Technologies
- DevOps

Cognixia is ranked amongst the top five emerging technologies training companies by various prestigious bodies. We're also an MAPR Advantage Partner, Hortonworks Community Partner, RedHat Enterprise Partner, Microsoft Silver Learning Partner and an authorized training partner for Dell EMC, Pivotal, VMware and RSA technologies.



OUR AWARDS & AFFILIATIONS



SOME FORMIDABLE NAMES AS OUR TRAINING PARTNERS



Red Hat



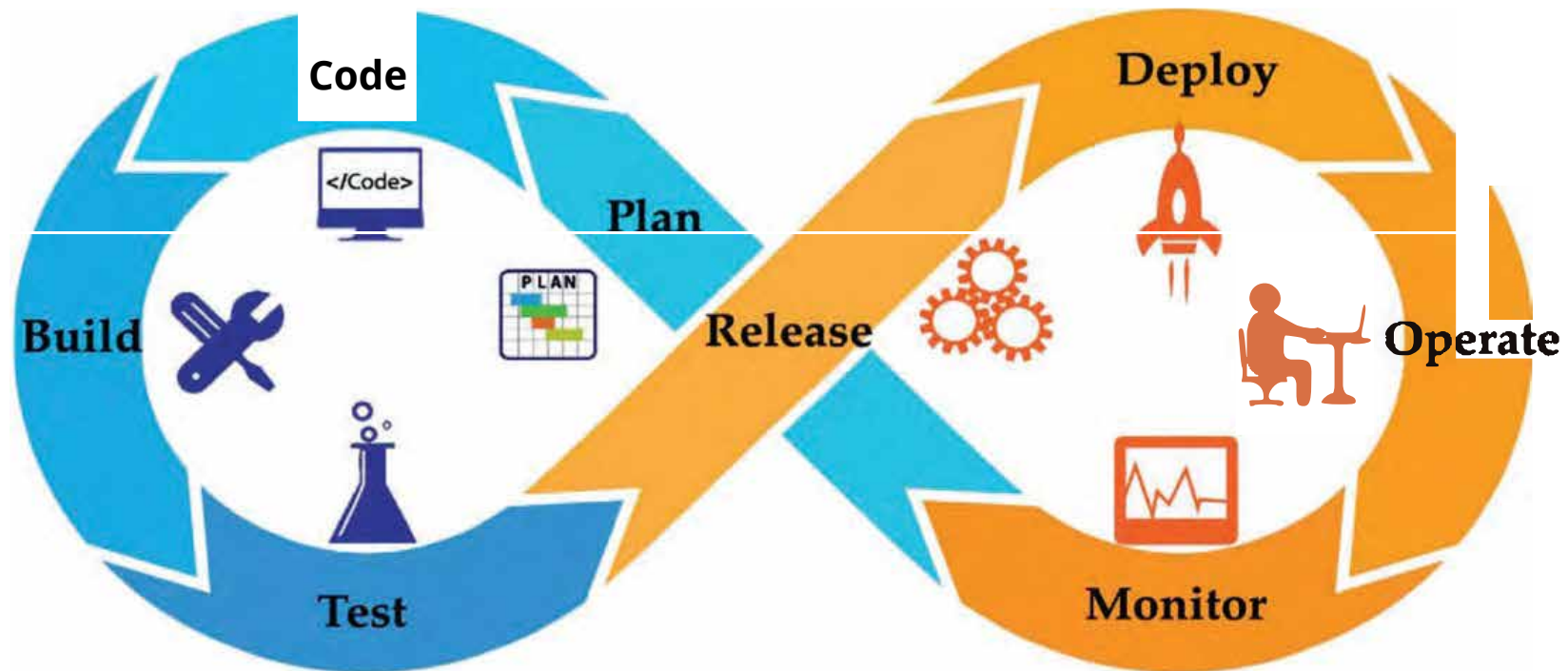
Silver
**Microsoft
Partner**



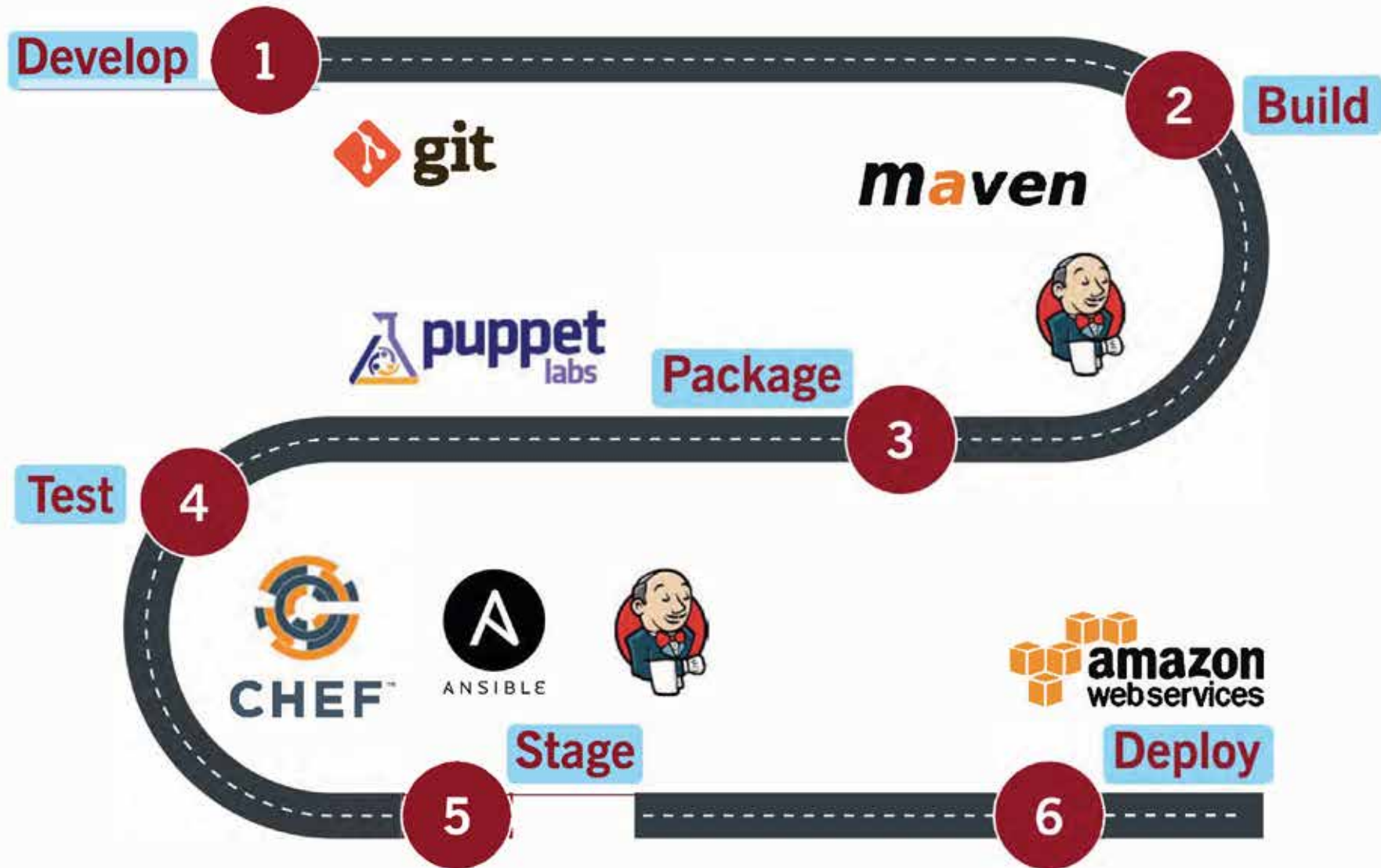
THE WORLD OF DEVOPS

DevOps is a practice combining the Development Operations and the System Operations. "DevOps" as a term was first coined in 2009 by Patrick Debois, who became one of the chief proponents for DevOps. Simply put, DevOps is a combination of software development and operations, an amalgamation of two disciplines in order to emphasize communication, collaboration and cohesion between the traditionally separate developers and IT operations teams.

The DevOps methodology recognizes the interdependence of the development group and operations group and integrates it into one department/team, thereby helping an organization deploy software more frequently while also maintaining service stability as well as gaining the pace required to breed innovation.



THE DEVOPS ROADMAP



WHO SHOULD STUDY DEVOPS?

DevOps is for anybody who wants to grasp how the concepts of DevOps can help an organization focus on value and streamline the delivery process. It is also for individuals who are keen to learn more about common infrastructure servers, scalability and availability.

Learning DevOps would be ideal for software developers, technical project managers, architects, Operations support team members, deployment engineers, IT managers, development managers, etc.

By getting trained in DevOps one would be much better placed to build a career as a DevOps engineer or a service engineer in the enterprise infrastructure arena.

ELIGIBILITY/ PRE-REQUISITES

- Knowledge of software development, preferably in Java, and the UNIX/Linux command line tools is essential for this

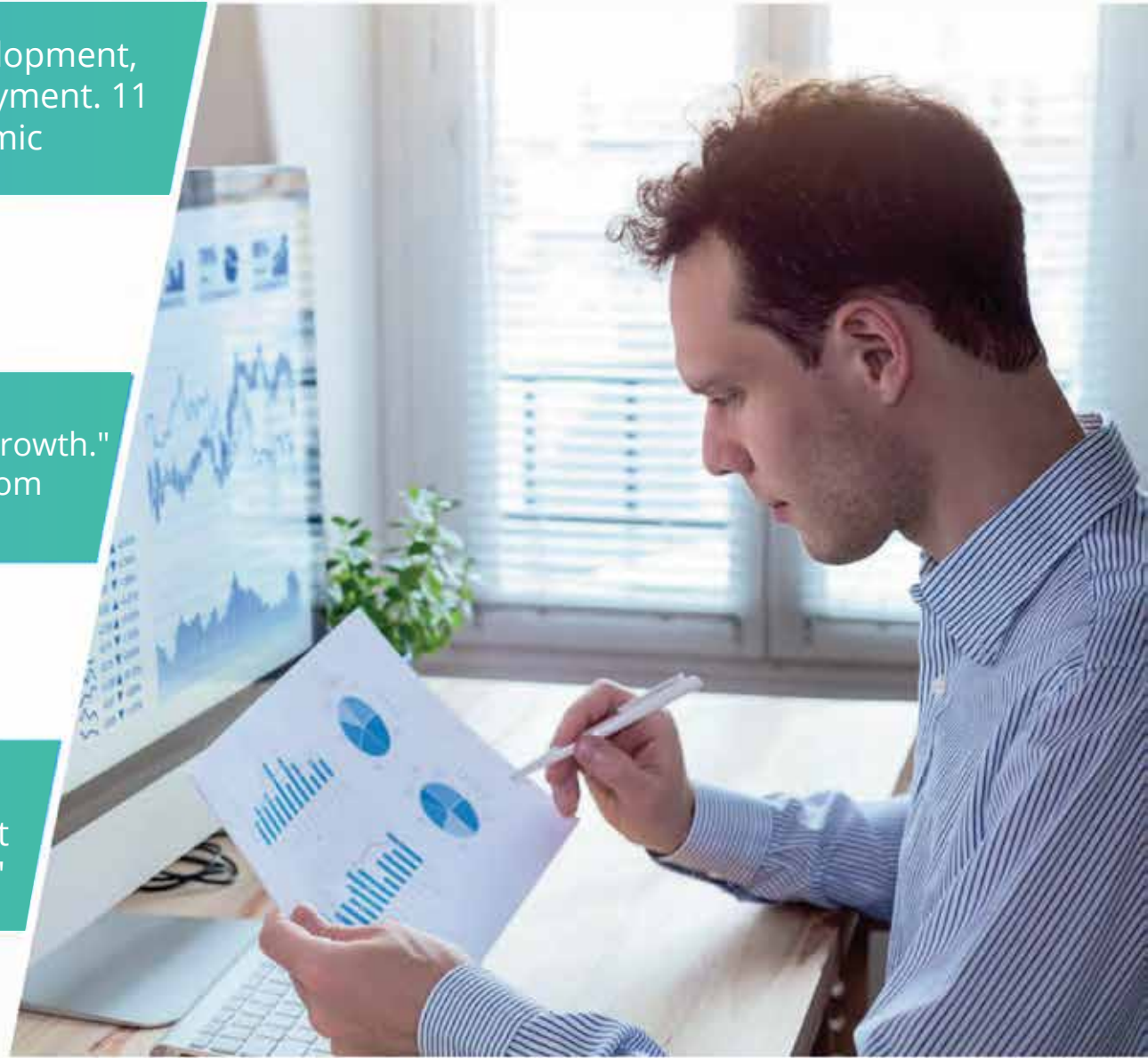


TRENDS IN THE DEVOPS + INDUSTRY VIEWS

"DevOps is becoming everything - development, operations security, testing, and deployment. 11
Michael Schmidt, Senior Director, Automic

"Without DevOps there is no Continuous Growth."
Muchael Hutterman, CEO of Hutterman.com

"There's only two percent adoption of DevOps practices around the world, just imagine the potential that DevOps has."



PROGRAM STRUCTURE & PLATFORMS



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POC support and multiple assignments to gain thorough understanding



ANSIBLE

maven



CHEF



git



puppet
labs



amazon
web services



DETAILED CURRICULUM : MODULES

Introduction to Devops

- Define Devops
- What is Devops?
- SDLC models,Lean,IT IL,Agile
- Why Devops?
- History of Devops
- Devops Stakeholders
- Devops Goals
- Important terminology
- Devops perspective
- Devops and Agile
- Devops Tools
- Configuration management
- Continuous Integration and Deployment

Introduction to Cloud computing

- What is Cloud Computing?
- How Cloud Computing are helpful?
- Cloud's role in DevOps orchestration
- What is AWS?
- Use cases in AWS
- Companies using AWS and Market trends
- Different Services offered in AWS
- Use case: - Highly available fault tolerant systems
- Understanding availability zone
- region
- Creating your own account in AWS

- Creating a VPC
- subnet
- network gets way
- Running your own EC2 instance
- Connecting in EC2 and installing https in Ec2
- S3
- Overview S3
- SNS. Cloud watch

Introduction to Virtualization

- What is Virtualization?
- History of Virtualization
- What is Hypervisor?
- Types of Server Virtualization
- Benefits of Virtualization
- Important Virtualization products

VAGRANT Introduction

- Why and what is Vagrant?
 - Uses of Vagrant in an environment
 - Alternatives of Vagrant
 - Vagrant versions
- Installation and Configuration
- Installing Virtual box
 - How to install Vagrant on Windows?
 - Configuring Vagrant

DETAILED CURRICULUM : MODULES

Provisioning with Vagrant

- Creating first VM with Vagrant
- Operations on the VM
- Connecting to the VM
- Add required Images to Vagrant
- Using Vagrant

GIT: Version Control

- Introduction
- Version control systems
- Local, Centralized and distributed

Installing Git

- Installing on Linux
- Installing on Windows
- Initial setup

Git Essentials

- Creating repository
- Cloning, check-in and committing
- Fetch pull and remote
- Branching

Chef for configuration management Overview of Chef

- Common Chef Terminology (Server, Workstation, Client, Repository etc.)
- Servers and Nodes
- Chef Configuration Concepts

Workstation Setup

- How to configure knife?
- Execute some commands to test connection between knife and workstation

Organization Setup

- Create organization
- Add yourself and node to organization

Test Node Setup

- Create a server and add to organization
- Check node details using knife

Node Objects and Search

- How to Add Run list to Node?
- Check node Details

Environments

- How to create Environments?
- Add servers to environments

Roles

- Create roles
 - Add Roles to organization
- Data bags in chef
Search criterion in Chef
Real time cookbooks

Puppet for configuration management

- What is Puppet?
- How puppet works?
- Puppet Architecture
- Master and Agents

DETAILED CURRICULUM : MODULES

- Configuration Language
- Resource Abstraction Layer
- Transactional Layer

Installation and Configuration

- Installing Puppet
- Configuring Puppet Master and Agent
- Connecting Agents

Puppet Master

- Puppet configuration tree
- Puppet configuration files

Puppet Language Basics

- The declarative language
- Resources
- Resource Collectors
- Virtual Resources
- Exported Resources
- Manifests
- Relationships and Ordering
- Modules and Classes
- Class Parameters
- Defined Types

Puppet Language Advanced

- Facter
- Variables
- Conditional statement
- If Else
- Case and Selectors
- More Conditionals and Logic

- Resource relationship

Templates

- Static Contents Explosion
- Using Dynamic Content with Templates
- Templates Overview
- ERB

Example Code Manifests/Modules

- NTP Module
- Users Module
- SSH
- Sudo

Ansible:

- Introduction to Ansible
- Ansible Architecture
- Ansible terminology
- Ansible commands
- How to add nodes to server
- Ansible installation and configuration
- Installing ssh on nodes
- Generating the keys
- Components of Ansible
- Inventory
- Configuration
- Modules
- Playbooks
- Global Configuration
- Roles
- Tags

DETAILED CURRICULUM : MODULES

- How to write playbooks
- PYYAML overview
- How to write playbooks
- Ansible modules
- Ansible Roles
- Ansible Galaxy
- How to download playbooks from Galaxy
- Realtime playbooks

Nagios: Monitoring

- Introduction and Installation
- Obtaining Nagios
- Compiling and installing Nagios

Basic configuration

- Creating a new host and service
- Creating a new e-mail contact
- Verifying configuration
- Creating a host group and service group
- Creating a new contact group
- Creating a new time period

Plugins and commands

- Finding and installation of a Plugin
- Removing a plugin
- Creating a new command
- Customizing commands

Using Nagios GUI

- Scheduling downtimes
- Generating reports
- Configuring notification

- Configuring checks
- Managing Flapping

NRPE Monitoring

- Enabling Remote Execution
- Monitoring local services on a remote machine with NRPE
- Setting the listening address for NRPE
- Creating new NRPE command definitions securely
- Creating a custom NRPE script.

Jenkins - Continuous Integration

- Introduction.
- Understanding continuous integration
- Introduction about Jenkins
- Build Cycle
- Jenkins Architecture
- Installation
- Obtaining and installing Jenkins
- Installing and configuring GIT
- Java installation and configuration
- Maven Installation
- Exploring Jenkins Dashboard.
- Creating Jobs
- Running the Jobs
- Adding and updating Plugins
- Disabling and deleting jobs
- Build Deployments
- Understanding Deployment.

DETAILED CURRICULUM : MODULES

- Tomcat installation and configuration
- Deployment Plugins
- Deploying a war file from Jenkins to Tomcat
- Securing Jenkins
- How to integrate Jenkins with Ant?
- How to integrate Jenkins with Maven?
- Authentication
- Jenkins Plugin
- Authorization
- Confidentiality
- Creating users
- Best Practices for Jenkins
- Jenkins Parameterized build
- Environment inject plugin
- Use of Jenkins environment variables
- Deploying a specific revision
- Customizing the Jenkins UI
- Project based Matrix plugin
- Parallel Execution
- Configuring Jenkins Hub and Node in the cloud (AWS)
- Configuring a Selenium Desktop node with a Linux Server (AWS)
- Case Study
- Real time implementation of Automated role back
- Multi branch Deployment.
- Docker- Containers.
- Introduction
- What is a Docker
- Use case of Docker
- Platforms for Docker
- Dockers vs Virtualization
- Architecture
- Docker Architecture
- Important Docker components
- Understanding the Docker components
- Installation
- Installing Docker on Linux
- Understanding Installation of Docker on Windows
- Some Docker commands
- Provisioning
- Docker Hub
- Downloading Docker images
- Running Docker images
- Running commands in container
- Running multiple containers
- Custom images
- Creating a custom image
- Running a container from the custom image
- Publishing the custom image
- Docker Networking
- Accessing containers
- Linking containers
- Exposing container ports
- Container Routing

DETAILED CURRICULUM : MODULES



Build web applications in docker container



Automate implementation of code using chef and puppet



Deploy Jenkins app using different containers like web logic and tomcat

COGNIXIA USP_s



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INDUSTRY EXPERTS AS TRAINERS



INDUSTRY STANDARD CERTIFICATE



EXIT PROFILE

DevOps ENGINEER

DevOps ARCHITECT



TESTIMONIALS



MANI RANGAN, CHENNAI, INDIA

The DevOps training program helped me understand how DevOps helps transform the whole process of development and operations. Moreover, the support received from the trainer and the technical team was appreciable.



VISHAL BHATIA, BANGALORE, INDIA

Excellent training. Highly engaging. Appreciate the trainer's idea of "all lab" training.



MANI RANGAN, HYDERABAD, INDIA

Double check the name. The name is same as the first testimonial, only the city is different, looks a bit fake. I was always keen on learning about the emerging technologies and I am happy that I chose the DevOps course offered by cognixia. The training program was very informative and was best for beginners.



ADAM MITCHELL, United States

The course curriculum is very informative and the support received from the technical team is commendable.



SAMSON COSTA, United Kingdom

The DevOps training offered by cognixia is very interesting, and the approach of the trainer in resolving the query was quite impressive.



CARL JOHNSON, Australia

The training program on DevOps offered by Cognixia has been a great experience. The course content covered the application of Bash/Python basics and understanding the performance and security for the infrastructure, which was awesome.

DevOps Training



To learn more visit
<https://www.cognixia.com/>