

# DEVOPS CERTIFICATION TRAINING COURSE

## About IntelliPaat

IntelliPaat is a global online professional training provider. We are offering some of the most updated, industry-designed certification training programs in the domains of Big Data, Data Science & AI, Business Intelligence, Cloud, Blockchain, Database, Programming, Testing, SAP and 150 more technologies.

We help professionals make the right career decisions, choose the trainers with over a decade of industry experience, provide extensive hands-on projects, rigorously evaluate learner progress and offer industry-recognized certifications. We also assist corporate clients to upskill their workforce and keep them in sync with the changing technology and digital landscape.

## About The Course

This IntelliPaat DevOps popular training course will help you become fully proficient and deploy the DevOps principles and tools in a software enterprise. You will be learning the techniques of successfully integrating the IT development and IT operation departments. This DevOps instructor-led training will help you understand how to communicate, collaborate and automate key processes and systems in order to create synergies for creating faster and better software solutions.

 <b>Instructor Led Training</b> 32 Hrs of highly interactive instructor led training	 <b>Self-Paced Training</b> 16 Hrs of Self-Paced sessions with Lifetime access	 <b>Exercise and project work</b> 60 Hrs of real-time projects after every module	 <b>Lifetime Access</b> Lifetime access and free upgrade to latest version
 <b>24x7 Support</b> Lifetime 24*7 technical support and query resolution	 <b>Get Certified</b> Get global industry recognized certifications	 <b>Job Assistance</b> Job assistance through 80+ corporate tie-ups	 <b>Flexi Scheduling</b> Attend multiple batches for lifetime & stay updated.

## Why take this Course?

For very long times the development and the operations teams of any software enterprise have stayed at arm's length. But this organizational cultural shift thanks to DevOps a lot of

changes are happening in forward-thinking enterprises. Learning DevOps will help you master all the skills needed in order to successfully build, operate, monitor, measure and improve the various processes in IT enterprises by better integrating development and operations. You will grab the best jobs in top MNCs after finishing this IntelliPaat DevOps online training. The entire IntelliPaat DevOps course is in Line with the industry needs.

## Course Content

1. Infrastructure Setup
2. Introduction to Devops
3. Software Version Control
4. Containerization using Docker - Part I
5. Containerization using Docker - Part II
6. Configuration Management using Puppet
7. Configuration Management using Ansible
8. Continuous Testing using Selenium
9. Continuous Integration using Jenkins
10. Continuous Orchestration using Kubernetes
11. Continuous Monitoring using Nagios

# Infrastructure Setup & DevOps Fondation

- ❖ Installation of – Git, Jenkins, Ansible, Puppet, Docker, Chef, CVS, ClearCase, Nagios, Maven, Database
- ❖ Market Trend and Career Scope for DevOps professionals
- ❖ The desired Skillset of a DevOps Engineer
- ❖ Cultural practices and Supporting Tools for smooth and continuous collaboration among Operations
- ❖ Product Development, Testing, Build N Release, Deployment

# Software Version Control (aka Source Code Management) System

- ❖ Concepts of different types of Version Control Systems
- ❖ Git as SCM
- ❖ Git Command Line
- ❖ Git setup with CI tool Jenkins
- ❖ SVN, CVS, ClearCase

## Automating Build and Test

- ❖ Automating Builds with Maven and Ant
- ❖ Building Delivery Pipeline in Jenkins (CI/CD)
- ❖ Test Automation, Security, Notification System in Jenkins

## Continuous Integration (CI)

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

## Continuous Delivery (CD)

- ❖ Core principles of Continuous Delivery
- ❖ Collaboration between development and software release
- ❖ The building, testing, and releasing software in shorter more frequent cycles

## 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

## Docker Commands and Best Practices

- ❖ Networking concepts in Docker
- ❖ Using Docker Volume and Creation of a Docker file
- ❖ A text file to contain the commands to create an image

## Puppet – Configuration Management Tool (Infra As Code)

- ❖ Introduction to Puppet
- ❖ Architecture of Puppet
- ❖ Constructs of Puppet and the various terminologies in Puppet
- ❖ Configuring Puppet
- ❖ Using Puppet Manifests
- ❖ Puppet commands

## Advanced Puppet

- ❖ Puppet Modules
- ❖ Node Classification
- ❖ Puppet Classes
- ❖ Puppet Template
- ❖ Puppet Manifests
- ❖ Puppet master and client folder structure

## Chef

- ❖ Chef Fundamentals
- ❖ Chef environment
- ❖ Chef Cookbooks & Knife Commands
- ❖ Node Object & Search, Data-bags, Roles
- ❖ Deploying Nodes in Production and using the Open Source Chef Server
- ❖ Vagrant file

## Ansible

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

## Nagios – Performance and Automated Monitoring

- ❖ Introduction of Nagios
- ❖ Nagios Setup, Commands
- ❖ Objects, notifications
- ❖ Configure Nagios to monitor web server
- ❖ Load Balancer (HAProxy, Nginx), + Project 1 & project 2

## Project Works

### **Project 1 : Containerizing various frameworks and NGINX Application using Docker.**

#### **Industry : General**

**Problem Statement :** How to integrate the software projects deployed in diverse environments using Docker.

**Topics :** In this Docker project you will containerize the software running in different environment like Node.js, MongoDB, NGINX, and ASP.NET. You will first setup these frameworks and the NGINX application on Docker container and then run them on the individual containers.

#### **Highlights**

- Setup Node.js on Docker container
- Pull NGINX image from Docker hub
- Deploy PowerShell & Hyper-V.

### **Project 2: Using Git for version control and tracking of software.**

#### **Industry : Internet related**

**Problem Statement :** How to ensure the changes on the website made by various developers is implemented.

**Topics :** In this project you will be working on coordinating the work of multiple developers making changes to the website of an online pet's store. You will focus on source code management, creating a repository on Git for all the codes created by various developers, Next, we check the status of the code, bring it to staging, then commit it, and view its status in log all within the Git repository.

#### **Highlights**

- Create a repository on GitHub
- The various Git commands
- Push local repository into Git repository.



## Project Works

### **Project 3 : Automating the IT infrastructure of a company**

#### **Industry : Information Technology**

**Problem statement :** How to speed up the setting up and configuration of a software tool of an organization using Puppet

**Topics :** In this project you will be working on installing WordPress along with its dependencies like Apache, PHP, MySQL and others. You will deploy the Puppet configuration management tool, handle the infrastructure like it was code, and automate the entire workflow using Puppet to get the job done faster and better.

#### **Highlights**

- Configuration management
- Infrastructure as Code
- Deployment automation.

### **Project 4 : Automating WordPress application using Kubernetes**

#### **Industry : General**

**Problem Statement :** How to automate the deployment of WordPress with MySQL with increasing workloads

**Topics :** In this project you will handle the deployment of WordPress with MySQL which is quite challenging with increasing workloads. So, in order to automate the whole process, you will setup the Kubeadm and Kubectl in your system and deploy the WordPress application along with MySQL using Kubernetes.

#### **Highlights**

- Installation of Docker containers
- Setting up Kubernetes environment
- Container orchestration with Kubernetes.

## Project Works

### **Project 5 : Implementing a HAProxy server with Docker**

**Industry : Information Technology**

**Problem Statement :** How to ensure the HAProxy server is run using a Docker container

**Topics :** In this DevOps project you will create containers using Docker. The Docker compose script will have a code for each container separately, various containers are connected to one another, scaling up and scaling down of the web containers is done. You will write codes for Redis, Load Balancer, and the web and join them later.

**Highlights:**

- Working with Docker-compose script
- Connecting multiple Docker containers
- Creating high performance TCP load balancer.

### **Project 6 : DevOps Continuous Integration**

**Industry: General**

**Problem Statement:** Maintaining a state of application using Playbook/Cookbook and using CI tool to run periodic jobs

**Topics:** In this DevOps project you will first write a Playbook/Cookbook/Module for maintaining an application and then using a Continuous Integration or orchestration tool to run jobs on them periodically. You will deploy continuous integration with Software Configuration Management. You can then have the advantage of any deployment tool/orchestration agent on server.

**Highlights**

- Pushing configuration code to CM
- Continuous Integration with SCM
- Playbook/Cookbook for DevOps

## Project Works

### **Project 7: Deployment of LAMP and WordPress using Ansible**

**Industry: Open Source Website**

**Problem Statement:** How to get a WordPress website running by installing LAMP stack using Ansible

**Description:** You will automate the deployment of a LAMP stack and install WordPress. LAMP stands for Linux, Apache (a Web server), MySQL (a database) and PHP (server-side scripting). It is a technology stack on which you can deploy different Web applications. Also, configure the installation of WordPress, which is free and open source software for creating websites and blogs. Perform all these operations using Ansible.

**Highlights:**

- Linux & Ansible Installation
- Issuing commands from Ansible
- Deploying LAMP Server.

### **Project 8 : Provision EC2 Virtual Machine with Ansible**

**Industry: Cloud Computing**

**Problem Statement:** How to launch a Virtual Machine with AWS EC2

**Topics:** In this Project you will provision your EC2 Virtual Machine using Ansible, install Ansible and run playbooks manually on your local machine to provision a Virtual Machine for more consistency and to put some logic into EC2 parameters.

**Highlights:**

- Preparing the AWS EC2 VM
- Preparing Ansible Playbook
- Running the Playbook.

# Job Assistance Program

Intellipaate is offering job assistance to all the learners who have completed the training. You should get a minimum of 60% marks in the qualifying exam to avail job assistance.

Intellipaate has exclusive tie-ups with over 80 MNCs for placements.



Successfully finish the training



Get your resume updated



Start receiving interview calls

## Intellipaate Alumni Working in Top Companies



Varun Tayagi 

**Devops Engineer at Accenture**

Thanks a lot Intellipaate team. Your help was very useful to me. Without your support I would not have been able to master the subject but you made the entire learning experience abbsolutely effortless. Great work



Dawn Berry 

**IT Professional/Software Developer**

Oh, thank you for your wonderful and helpful response. I am so glad that I joined your training!



BHANU PRASAD SGV 

**Senior Level professional**

The trainers came with immense experience in the cloud domain thus helping to master hot cloud technologies. Thanks to Intellipaate.

**More Customer Reviews**

## Our Clients

ERICSSON



SONY



+80 Corporates

## Frequently Asked Questions

### Q 1. What is the criterion for availing the IntelliPaat job assistance program?

Ans. All IntelliPaat learners who have successfully completed the training post April 2017 are directly eligible for the IntelliPaat job assistance program.

### Q 2. Which are the companies that I can get placed in?

Ans. We have exclusive tie-ups with MNCs like Ericsson, Cisco, Cognizant, Sony, Mu Sigma, Saint-Gobain, Standard Chartered, TCS, Genpact, Hexaware, and more. So you have the opportunity to get placed in these top global companies.

### Q 3. Do I need to have prior industry experience for getting an interview call?

Ans. There is no need to have any prior industry experience for getting an interview call. In fact, the successful completion of the IntelliPaat certification training is equivalent to six months of industry experience. This is definitely an added advantage when you are attending an interview.

### Q 4. If I don't get a job in the first attempt, can I get another chance?

Ans. Definitely, yes. Your resume will be in our database and we will circulate it to our MNC partners until you get a job. So there is no upper limit to the number of job interviews you can attend.

### Q 5. Does IntelliPaat guarantee a job through its job assistance program?

Ans. IntelliPaat does not guarantee any job through the job assistance program. However, we will definitely offer you full assistance by circulating your resume among our affiliate partners.