The Idea behind this Training is to demonstrate **DevOps Tools** with hands-on lab to all sort of students like non-technical, technical and different technical track backgrounds, and to highly IT experienced Techies.

The Course will start from basic and then will go into deep-dive of real time scenarios. Each session is a combination of theoretical, practical and production use cases.

Lab setup Requirements

- 'Amazon Web Services' Account (We will be creating if not already created)
- Google Cloud Platform Account (We will be creating if not already created)
- For MS Windows local Machines: PuTTY, PuTTY KeyGen (https://putty.org/) or MobaXterm
- For Linux and mac Operating Systems: Terminal (default)
- Internet connection

Course Outline

- Fundamentals of Cloud Computing
- DevOps overview
- Introduction to DevOps Tools
- Introduction to Amazon Web Services (AWS)
- Introduction to Google Cloud Platform (GCP)
- Introduction to Microsoft Azure
- Introduction to Vagrant
- Basic Linux OS Administration
- Continuous Development
- Continuous Integration
- Continuous Testing
- Continuous Provisioning
- Configuration Management
- Continuous Delivery or Continuous Deployment
- Continuous Monitoring
- Containerization
- Assistance for Resume preparation
- Enablement for Technical Interviews (Mock Interviews)
- Guidelines for Certification preparation

DevOps Course Content

1. What is **DevOps** Methodology?
2. Why do we need DevOps in our present work culture?
3. What is DevOps life cycle and its Workflow?
    a. Plan
    b. Code
    c. Build
    d. Test
    e. Release
    f. Deploy
    g. Operate
    h. Monitor
4. What are DevOps Goals?
5. What is the difference between Agile and DevOps?
6. What is Software Development Life Cycle (**SDLC**)?
7. What are the DevOps Practices?
    a. Code Build
    b. Continuous Integration (CI)
    c. Continuous Deployment (CD)
    d. Continuous Delivery (CD)
    e. CI/CD Pipelines
    f. Configuration Management
    g. Infrastructure as a Code (IaC)
    h. Orchestration
    i. Infrastructure Monitoring
8. DevOps Tools
    a. **Git**
    b. **GitHub**
    c. **GitLab**
    d. **Ansible**
    e. **Chef**
    f. **Puppet**
    g. **Jenkins**
    h. **SonarQube**
    i. **Terraform**
    j. **CloudFormation**
    k. **ARM**
    l. **Docker**
    m. **Kubernetes**
    n. **ECS**
    o. **EKS**
    p. **AKS**
    q. **Vagrant**

    r. **Python**
    s. **JSON**
    t. **YAML**
    u. **Nagios**
    v. **Prometheus**
9. What is Cloud Computing?
    a. Physical Vs Virtual Vs Cloud Architectures
    b. Private, Public and Hybrid Cloud
    c. AWS Vs GCP Vs Azure
10. Why do we need Cloud Computing?
11. Cloud Providers
    a. Introduction to **Amazon Web Services**
    b. Introduction to **Microsoft Azure**
    c. Introduction to **Google Cloud Platform**
12. DevOps On Amazon Web Services
13. DevOps On Microsoft Azure
14. **Automating Build** Process using Maven
15. **Containerization** with Google Cloud Platform (GCP)
16. Real Time Scenarios with Test cases and Use cases
17. Illustration of Cloud Architecture
18. OS Administration
    a. Basic **Linux OS Administration**
    b. Basic **Windows OS Administration**
19. Coding and Programming (**JSON, YAML & Python**)
20. Summery
    a. Scenario based Question and Answers
    b. Evaluation of Resume Preparation
    c. Certification Guidelines and required notes.

Happy Learning!
Mahesh Babu Bitra
Multi-Cloud & DevOps Sr. Architect