

# Ansible Automation

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Duration: 5 days

## ###Objective

Objective of this course is to introduce students to what Ansible is, make them familiar with the core concepts, and help them get started writing Infrastructure as a code.

## ###Targeted Audience

This introductory course is targeted for the budding devops professionals, experienced sysadmins and enthusiasts alike who are already using ansible, or intend to use it to automate configuration management, system integration and manage scalable infrastructures with ease.

## ###Prerequisites

- Basic understanding of linux/unix system concepts
- Familiarity with Command Line Interface (CLI)
- Familiarity with a Text Editor

## ###System Requirements

### Hardware

Laptop/Desktop with internet connection  
8GB RAM  
2 CPU Cores  
50 GB Disk Space available

### Software

Base Operating System  
VirtualBox  
vagrant

## ###Course Outline

- Introduction to Ansible
- Inventorizing your Infrastructure
- Building Patterns
- Ad Hoc Server Management
- Playbooks – the real magic
- Roles for Modularizing Code
- Variables and Templates
- Advanced Playbook Topics
- Modules
- Jinja Templates
- Ansible Vault
- Extending Ansible
- Vagrant and Ansible
- Ansible Cloud Integration
- Continuous Delivery and Rolling Updates
- Troubleshooting and Best Practices

### ###Daywise Outline

- Introduction to Ansible and Devops
- What is Devops
- What is Ansible
- Comparison with other automation tools
- Setting up Learning Environment
- Vagrant overview /quick demo
- Additional Setup Tasks
- Inventorying your Infrastructure
- What is Hosts Inventory?
- Hosts and Groups
- Host/Group Variables
- Dynamic Inventory
- Building Patterns
- Grouping Hosts with Patterns
- Ansible Host Patterns & Roles
- Building Patterns
- Ad Hoc Server Management
- Running one time tasks/commands
- Running commands in parallel
- File Transfer
- Managing Packages
- Managing Users
- Deploying from Source Control
- Managing Services
- Playbooks – the real magic
- Introduction to Ansible Playbooks
- Plays
- Tasks
- Actions
- Modules
- Roles for Modularizing Code
- Playbook Roles and Include Statements
- Directory Layout for Modules
- Notifications and Handlers
- Writing a simple module to install web server
- Variables and Templates
- Variables and Facts
- Variable Precedence
- Registered Variables
- Metadata
- Static Contents Explosion

- Using Dynamic Content with Templates
- Templates Overview
- Jinja
- Modules Deep Dive
- What are Ansible Modules
- Types of Modules
- Writing Modules
- Advanced Playbook Topics
- Accelerated Mode
- Asynchronous Actions and Polling
- Dry Run
- Setting the Environment
- Error Handling
- Lookups
- Prompts
- Tags
- Ansible Vault : Encrypting Data
- Ansible Cloud Integrations
- Troubleshooting and Best Practices
- Troubleshooting
- Best Practices
- Continuous Delivery and Rolling Updates