PHIL-COSTANZO.COM
EDUCATION & MENTORING
SOCIAL MEDIA INTELLIGENCE
INTERNET INTELLIGENCE

Ansible Configuration Management
Mentored Learning Workshop

Overview

The focus of Veritas' Mentored workshops is to Mentor/Train IT Professionals by transferring real-world knowledge and aiding in the Development Strategies in the advanced instruction of applicable technologies that are utilized within your environment by your in-house technology teams. Heavy concentration is placed on how Ansible can be used to build and scale a highly reliable infrastructure for your own environments and projects. In addition, we cover the Best Practices within Installation, Configuration, Design, Customization and Troubleshooting as it relates to your environment and industry standards.

Our sessions are facilitated by IT professionals with extensive real-world knowledge (15 year minimum consulting experience) and team driven personalities (5 year minimum training experience) that enable them to successfully transfer their knowledge and experience so that your internal organization can effectively manage and perform day to day tasks and mission critical projects.

The curriculum and mentored framework will include live exercises and demonstrations focusing on heavy participation with your internal staff. The exercises and demonstrations will allow the Mentor and the students to explore, test, and reinforce various theories/topics presented during the engagement.

A list of set-up requirements will be sent to a contracted client at least 3 weeks prior to commencement.

Topics of Expertise for Training Framework

INTRODUCTION

- Ansible strengths & weaknesses
- CM tool differences (Chef and Puppet)
- Ansible and YML for describing your environment

INSTALLATION & SETUP

- Mac, Linux and Windows Setup
- Testing with Vagrant
- Using SSH keys to connect to your target nodes
- Installation & test Connectivity to your test nodes

INVENTORY

- Inventory Examples – basic & complex
- Hosts & Groups
- Create Inventory files that define hosts, web servers and database servers.
  - Assign hosts to groups that describe their function

ANSIBLE PLAYBOOK

- Directory Structures to Organize Ansible Code
- Managing Ansible Code with Git
- Install and Configure NTP Time Synchronization
- Playbook creation to install and configure Openssh-Server on nodes

PROVISIONERS

- Connecting Ansible to Cloud Providers
- New Server Instance Creation
- Dynamic Inventory
- Dynamic Inventory on AWS and Azure
- Mixing Static & Dynamic Inventory
- Refactoring Inventory
  - Staging Environment is Local using Vagrant and Production environment is built on Cloud Provider

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HIGHLY AVAILABLE INFRASTRUCTURE

- Spec up Inventory and Host groups
- Using Roles
- Database backend Configuration
- Web Server Front-End Configuration
- Replicated Filesystem Configuration
- Centralized Logging Configuration
- Infrastructure Build on Local Vagrant Environment

APPLICATION DEPLOYMENTS

- Deploying Ansible App from SCM to Local Vagrant Environment
- How to Deploy once test QA Code to Production
- Updating Ansible Application
- Ansible comparison to Capistrano

DOCKER CONTAINERS WITH ANSIBLE

- Containerization and Automation Synergy
- Building Docker Containers using Ansible
- MySQL Containers
- Web Application Containers
- Data Storage Containers
- Adapting an Infrastructure to deploy a sample App using Docker

TESTING & CONTINUOUS INTEGRATION

- Unit, Integration and Functional Testing
- Testing Automation with GitHub and Travis CI
- SSH Playbook Test Creation
  - Ensure there are no Syntax Errors
  - Ensure Ansible is configuring Nodes as expected

ANSIBLE PREPARATION AT THE WORKPLACE

- Use Case: Using Ansible to Automat CM and Application Pipelines through continuous Integration, Release, Deployment and Operations
- Client Environment & Processes Review
- Evaluation: Best Practices to Integrate Ansible's Configuration Management for your own needs
- Launching a static site
- Updating the static site from git or bitbucket

USER SCENARIO 2

- Container for a NodeJS application
- Base Image for Redis Containers
- Creating a Redis Back-End-Cluster
- Capturing Logs
- Managing Containers