



# Configuration Management with Ansible

by  
Issac Lee  
Thomas Theakanath

# Learning Objectives



1. Getting Started
2. Writing a Playbook
3. SSH Basic and Privilege Escalation
4. Roles
5. Configuration and Deployment Management

# Lab Environment



1. Control Machine - console[1:20]
2. Managed Node - runner[1-20]
3. Labs - <https://github.com/mpt-bootcamp/ansible/tree/master/docs>

# Getting Started



1. Connecting to the Lab Environment
2. Using Ansible CLI
3. Setting the Default Inventory File
4. Clone the Ansible Project from GitHub

# Terminology



- Control Node: the machine where Ansible is installed, responsible for running the provisioning on the servers you are managing.
- Inventory: an INI file that contains information about the servers you are managing.
- Playbook: a YAML file containing a series of procedures that should be automated.
- Task: a block that defines a single procedure to be executed, e.g.: install a package.
- Module: a module typically abstracts a system task, like dealing with packages or creating and changing files. Ansible has a multitude of built-in modules, but you can also create custom ones.
- Role: a set of related playbooks, templates and other files, organized in a pre-defined way to facilitate reuse and share.
- Play: a provisioning executed from start to finish is called a play.
- Facts: global variables containing information about the system, like network interfaces or operating system.
- Handlers: used to trigger service status changes, like restarting or reloading a service.

# Writing a Playbook



1. Creating and Executing a Simple Playbook
2. Working with Variables
3. Using Loops
4. Using Conditionals and Debugging
5. Defining and Triggering Handler
6. Using Modules

# SSH Basic and Privilege Escalation



1. Generating a SSH Key Pair
2. Setting the SSH Key Pair for Managed Nodes
3. Connecting to the Managed Nodes using SSH Key
4. Running a Playbook Passwordless

# Playbook Roles



1. Creating an Apache Role
2. Calling the Role in a Playbook



# Configuration and Deployment Management



1. Setting up Environment Specific Inventory File
2. Configuring Apache, MySQL and PHP
3. Deploying a Java Web Application
4. Configuring Elasticsearch and Kibana

# What's Next



The Ansible Project - Share, Learn and Collaborate

<https://github.com/mpt-bootcamp/ansible>