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DOE500 - Ansible: Software Provisioning, Configuration Management and Applicationdeployment

Presentation

Objectives: Master software provisioning, configuration management and application-deployment with Ansible.

Who can benefit: Linux Technicians and Administrators.

Prerequisites: One of the following certifications or the equivalent skills: CompTIA Linux+ Powered by LPI or LPIC-1 or SUSE CLA or ITT Debian Linux - Technician or ITT CentOS Linux - Technician. **Learning technique**: Clear, theoretical course content divided into lessons and extensive LABS. **Student Progression**: Student progression is monitored both in terms of effective attendance and in terms of comprehension using self-assessment tests.

Duration: 2 days (14 hours).

Prerequisites

Hardware

- A computer running MacOS, Linux, Windows[™] or Solaris[™],
- AZERTY FR or QWERTY US keyboard,
- Minimum 4 GB of RAM,
- · Minimum dual-core processor,
- Headphones/Earphones,
- A microphone (optional).

Software

- If Windows[™] Putty and WinSCP,
- Chrome or Firefox web browser.

Internet

- A fast Internet connection (4G minimum) and no proxy,
- Unhindered access to the following domains: https://my-short.link, https://itraining.center, https://ittraining.io, https://ittraining.institute, https://ittraining.support.

Curriculum

Day #1

- DOE500 Ansible: Software Provisioning, Configuration Management and **Application-deployment** 1 hour.
 - Prerequisites
 - Hardware
 - Software
 - Internet
 - Using the Infrastructure
 - Connecting to the Cloud Server
 - Linux, MacOS and Windows 10 with a built-in ssh client
 - Windows 7 and Windows 10 without a built-in ssh client
 - Starting the Virtual Machine
 - Connecting to the Virtual Machine
 - Course Curriculum
- DOE501 Installing Ansible 1 hour.
 - What is Ansible?
 - ∘ LAB #1 Installing Ansible
 - ∘ LAB #2 Configuring ssh and sudo
 - 2.1 ssh
 - 2.2 sudo
- DOE502 The ansible, ansible-playbook and ansible-galaxy Commands 3 hours.
 - ∘ LAB #1 Working with Ansible
 - 1.1 The ansible command
 - LAB #2 The ansible-playbook command
 - 2.1 Playbook Files
 - 2.2 Tasks
 - 2.3 Handlers
 - 2.4 Modules
 - 2.4.1 Package modules
 - 2.4.2 File modules
 - 2.4.3 System modules
 - 2.5 Inventory Files
 - 2.6 Rights
 - 2.6.1 Creating groups
 - ∘ LAB #3 The ansible-galaxy command
 - 3.1 Using roles with a Play Book
 - 3.2 Ansible Galaxy
- DOE503 Roles, Templates and Variable Hierarchy 2 hours.
 - ∘ LAB #1 Role dependancy
 - ∘ LAB #2 Using templates
 - 2.1 Variables
 - 2.2 Conditional templates
 - **2.3 Loops**
 - 2.4 Macros

2.5 - Filters

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- 2.5.1 Default
- 2.5.2 Join
- 2.5.3 Map
- 2.6 Parent-child templates
 - 2.6.1 The parent template
 - 2.6.2 The child template
- LAB #3 Managing variable hierarchy

Day #2

- DOE504 Facts, Secret Facts and Docker 2 hours.
 - LAB #1 Using Ansible facts
 - ∘ LAB #2 The ansible-vault command
 - 2.1 Encrypting a file
 - 2.2 Editing the file
 - 2.3 Decrypting the file
 - 2.4 Using random passwords
 - LAB #3 Ansible and Docker
 - 3.1 What is Docker?
 - 3.2 Installing Docker
 - 3.3 Connecting Ansible to Docker
- DOE505 Using Ansible with Windows 2 hours.
 - Prerequisites
 - LAB #1 Preparing Windows 10
 - 1.1 Updating PowerShell and .NET
 - 1.2 Configuring WinRM
 - 1.3 Getting information from WinRM
 - 1.4 Creating a local user for Ansible
 - LAB #2 Preparing the Ansible controller
 - 2.1 Installing pywinrm
 - 2.2 Testing the configuration
 - LAB #3 Working with Ansible and Windows
 - 3.1 Getting information about Windows 10
 - 3.2 Executing a command
 - 3.3 Executing a PowerShell script
 - 3.4 Installing software with Chocolatey
 - 3.5 Creating a local user with Ansible
- DOE506 Ansible in Practice 2 hours.
 - ∘ LAB #1 Case study
 - 1.1 Instructions
 - 1.2 Corrections
 - Error #1
 - Error #2
 - Error #3
 - Errors 4, 5 and 6
- DOE507 Course completion 1 hour.
 - What's next?

- 4/4
 - Training materials
 - What you need
 - Hardware
 - Software
 - Virtual Machine
- What we covered
 - Day #1
 - Day #2
- Resetting the course infrastructure
- Evaluate the training session
- Thanks

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