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DOE500 - Ansible: Software Provisioning, Configuration Management and Application-deployment

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://ittraining.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 dependency
- LAB #2 - Using templates
 - 2.1 - Variables
 - 2.2 - Conditional templates
 - 2.3 - Loops
 - 2.4 - Macros

- 2.5 - Filters
 - 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?

- 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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