Windows Server Automation (Ansible 203)

COURSE OVERVIEW

Continue your studies of Ansible, with a focus on automating servers and applications. In addition to Ansible, students will study enough Python to understand Ansible's plugin architecture. Lessons and labs focus on using both Python and Ansible to interact with and configure your Windows servers, as well as common applications. At the conclusion of this course, you will return to work empowered with the skills necessary to create or improve Ansible solutions. This class is a combination of live demonstrations and hands-on labs with virtual network devices and endpoints as targets for your configuration.

For many of the lessons, we will focus on tasks targeting Windows.

Students looking for Ansible for network applications should see: Ansible 201 (Networking)

Students looking for Ansible for Linux server applications should see: Ansible 202 (Linux Server)

WHO WILL BENEFIT FROM THIS COURSE?
- Network Administrators
- Ansible Developers
- Python Developers
- Administrators interested in Automation
- Individuals interested in DevOps, specifically for networking

PREREQUISITES
- Ansible 101 (Ansible Essentials)
- Coding experience in another language serves as an adequate prerequisite

COURSE OBJECTIVES
- Version controlling code with Git
- winrm sessions and pass commands to remote servers
- Basic Python for automation applications
- Ansible collections for server automation
- Understanding plugin architecture of Ansible modules written with Python
- Best practices for automation

COURSE OUTLINE

Day 01
Ansible and Python Review
- Overview of Python and Ansible
- Python whitespace rules & best practices
- Conditional expressions
- Relational and Boolean operators
- Lists, Tuples, Dictionaries
- Indexing and slicing
- Built-in functions
- Writing custom functions
- Getting at methods
- Iterating with Loops (for and while)
- Working with files
- Software Control Management (SCM) (Git, Github, GitLab, Bitbucket, Cloudshare, etc.)
- Getting at RESTful interfaces
- Working with JSON
- Ansible with WinRM vs OpenSSH

Day 2
Windows Automation
- RESTful API review
- Understanding API documentation
- Windows operations
- Getting running services on Windows platforms
- Install and uninstall MSIs
- Enable and disable Windows features
- Start, stop, and manage Windows services
- Create and manage local users and groups in Windows

Day 3
Building Ansible Skillsets for Windows
- Common Windows operations
- Building roles
- Manage Windows packages via the Chocolatey package manager
- Manage and install Windows updates
- Fetch files from remote sites
- Push and execute PowerShell scripts
- Community modules for Windows
- Writing Ansible playbooks that respond to failures

Day 4

Blending Python and Ansible Skillsets

- Review how to use Python within Ansible
- Calling Python scripts with Ansible
- Jinja2 Templating Engine for Python (and Ansible)
- Using Templates in Ansible Playbooks
- Jinja2 filters, looping, and other useful tricks for automating with Ansible
- Playbook tagging for selective runs
- When to use Python and when to use Ansible
- Writing a custom collection
- Writing custom roles
- Extending Ansible to support Windows

Day 5

Customizing Ansible with Python

- Review – Running Scripts with Ansible
- Prompting for Ansible user input
- Writing a custom Ansible Module with Python
- Ansible "Engine" vs Ansible "Tower" – marketing hype, capabilities, costs, etc.
- Molecule – Testing your roles

Hands-On Labs:

- Welcome to Alta3 Research Labs
- Using vim
- Introduction to VScode
- Tmux Basics
- SCM Option #1 - GitLab
- SCM Option #2 - GitHub
- Download Files to Windows machines
- Install and uninstall MSIs
- Enable and disable Windows features
- Get a list of Windows services
- Start, stop, and manage Windows services
- Create and manage local users and groups
- Manage Windows packages via the Chocolatey package manager
- Manage and install Windows updates
- Fetch files from remote sites
- Push and execute PowerShell scripts
- Lecture - REST APIs and JSON
- Open APIs with Python and Ansible
- Building Ansible Collections
- Role and ansible-galaxy
- Loops and Mapping YAML Vars Files in Playbooks
- Lecture - Ansible Workflow

- ansible-runner
- Securing Playbooks with Vault
- Ansible and Jinja Templates
- Running a script with Ansible
- Dynamic Inventories and Inventory Plugins
- Writing an Ansible Module with Python
- Molecule
- Windows Automation with Python and Ansible - Certification Project
- Glossary

WHY TRAIN WITH SUNSET LEARNING INSTITUTE?

Sunset Learning Institute (SLI) has been an innovative leader in developing and delivering authorized technical training since 1996. Our goal is to help our customers optimize their technology Investments by providing convenient, high quality technical training that our customers can rely on. We empower students to master their desired technologies for their unique environments.

What sets SLI apart is not only our immense selection of trainings options, but our convenient and consistent delivery system. No matter how complex your environment is or where you are located, SLI is sure to have a training solution that you can count on!

Premiere World Class Instruction Team
- All SLI instructors have a four-year technical degree, instructor level certifications and field consulting work experience
- Sunset Learning has won numerous Instructor Excellence and Instructor Quality Distinction awards since 2012

Enhanced Learning Experience
- The goal of our instructors during class is ensure students understand the material, guide them through our labs and encourage questions and interactive discussions.

Convenient and Reliable Training Experience
- You have the option to attend classes live with the instructor, at any of our established training facilities, or from the convenience of your home or office
- All Sunset Learning Institute classes are guaranteed to run – you can count on us to deliver the training you need when you need it!

Outstanding Customer Service
- You will work with a dedicated account manager to suggest the optimal learning path for you and/or your team
- An enthusiastic student services team is available to answer any questions and ensure a quality training experience

Interested in Private Group Training?

Contact Us