

**SaltStack and Salt Open Source Administration**

**Course Number:** DVOP-148
**Duration:** 3 days

**Overview**

Salt Open (also known as SaltStack) is an open-source, Python-based platform for configuration management and systems automation. This SaltStack Administration and Salt Open Source Administration training course teaches attendees how to use Salt Open to manage IT infrastructure at scale.  Attendees learn how to build Salt execution, grain, and state modules, as well as Salt architecture, data storage, caching, and security features.

**Prerequisites**

All students must:

* Be active systems developers and/or system administrators
* Have some scripting knowledge (bash, ksh, Perl, or Python)
* Understand the various system tasks relating to setting up and supporting Linux (and other) systems, or experience with any other interactive system(s), such as Windows

**Materials**

All Salt Open training students receive comprehensive courseware.

**Software Needed on Each Student PC**

Attendees will not need to install any software on their computer for this class. The class will be conducted in a remote environment that Accelebrate will provide; students will only need a local computer with a web browser and a stable Internet connection. Any recent version of Microsoft Edge, Mozilla Firefox, or Google Chrome will be fine.

**Objectives**

* Install and configure SaltStack master servers and agents
* Use SaltStack from the command line
* Create and modify states (files)
* Use standard SaltStack state formulas
* Design a 'best practice' strategy for using SaltStack capabilities

**Outline**

* Introduction
* Configuration Management Overview
	+ Configuration management issues
	+ Configuration management tools
	+ SaltStack distributions
	+ SaltStack master
	+ SaltStack master installation
	+ SaltStack master minion installation - keys
	+ Using the root account
	+ SaltStack basic operations
	+ SLS files - introduction and layout
* SaltStack Master and Minion Nodes
	+ SaltStack architecture review
	+ SaltStack master node key directories and files
	+ SaltStack master node supplied documentation
	+ SaltStack node keys
	+ SaltStack (Linux) minion node overview
	+ SaltStack (Linux) minion node requirements
	+ SaltStack (Linux) minion node setup
	+ SaltStack master and minion nodes configuration file
	+ SaltStack (Windows) minion node requirements
	+ SaltStack (Windows) minion node setup
	+ SaltStack (Windows) minion modules
	+ SaltStack (Unix) minion node setup
	+ using SaltStack with SSH
* Grains and Variables
	+ Grains (definitions)
	+ Grains and variables in SLS files
	+ Using grains to specify minion nodes
* SaltStack (States) Executions
	+ SaltStack execution modules (methods0
	+ SaltStack state modules (methods)
	+ SLS files - introduction and layout
	+ SLS files - syntax checking and dry run
	+ SaltStack execution logging
	+ SLS files - in line file substitutions
	+ Linux package repositories - server side
	+ Linux package repositories - client side
	+ SLS file capabilities - Jinja templating
	+ Conditionals
	+ Loops
	+ Requisites
* SaltStack Environments
	+ SaltStack environments
	+ SaltStack top file (and highstates)
	+ SaltStack fileserver backends
* Data Storage and Caching
	+ Salt mine
	+ Accessing SaltStack mine data
	+ SaltStack pillars
	+ Accessing pillars data from minions
	+ Storing data securely
* SaltStack Security Features
	+ SaltStack node keys
	+ Using the root account
	+ SaltStack publisher ACLs
* Conclusion