

# Puppet Configuration & Administration

## Course Overview

This course presents the system management and configuration tool Puppet Enterprise, from methods, techniques, capabilities to implementation.

This is a 3-day class

## Who Should Attend

This course is for RHEL 7 systems administrators looking to automate the provisioning of key areas of the RHEL 7 system, such as packages, services, and configuration files. It is assumed that participants are working systems administrators with some scripting knowledge (bash, ksh, Perl or Python) and an understanding of the various system tasks related to setting up and supporting RHEL 7 systems.

## Course Objectives

At the completion of the course, participants should be able to: install and configure Puppet servers and agents; create and modify manifests that contain resource definitions; create and modify classes; create and modify modules; create and modify node definitions; create and modify environments; apply manifests, classes, nodes, and environments; extend Puppet with functions; use (and extend) Facter facts; generate basic reports; use tools MCollective and Hiera; and design a 'best practice' strategy for using Puppet capabilities.

## Course Outline

### 1 CONFIGURATION MANAGEMENT OVERVIEW

- Configuration management
- Puppet configuration management
- Facter (concepts)
- Facter installation
- Facter core facts
- Using Facter information
- Extending Facter (external and internal facts)

### 2 PUPPET ENTERPRISE (MASTER SERVER) INSTALLATION

- Puppet Enterprise overview
- Yum (package) repositories
- Puppet Enterprise Master installation
- Puppet Enterprise components
- Puppet Enterprise key directories
- Puppet Enterprise documentation
- Puppet Enterprise certificates and licensing

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## 3 PUPPET ENTERPRISE CERTIFICATES AND LICENSING

- Overview of resource management
- Defining configuration resources
- Checking syntax of configuration resources
- Puppet style guide
- Applying configuration resources (locally)
- Metaparameters
- Conditionals
- Arrays of resources
- Classes
- Parameterized classes
- Classes with inheritance (and parameters)
- Defined resources (definitions)
- Run stages
- Modules
- Virtual resource definitions
- Puppet standard library functions

## 4 PUPPET ENTERPRISE (AGENT) INSTALLATION

- Puppet Enterprise agent overview
- Puppet Enterprise agent installation
- Puppet Enterprise agent initial setup

## 5 CREATING NODES AND ENVIRONMENTS

- Node definitions
- Environment definitions

## 6 EXTENDING PUPPET WITH REPORTING, MCOLLECTIVE AND HIERA

- Reporting
- Transaction reporting
- Syslog (rsyslogd) reporting
- MCollective
- Hiera