



Puppet Enterprise 401: Extend Capability

Private Training Service Description

Learn how to build well-architected modules and streamline your code base to structure large projects efficiently and scale with confidence.

Overview

In *Puppet Enterprise 401: Extend Capability*, you'll learn coding best practices and advanced Puppet code constructs for designing, building, and extending Puppet modules to automate software management while maximizing code reuse and minimizing maintenance. This one-day, instructor-led course — with hands-on labs for both Linux and Windows users — gives you the tools for scaling faster without compromising security.

Course Topics

In this course, you'll learn how to:

- Develop and test a new module using Puppet Development Kit, the puppet apply command, and the Puppet language.
- Extend the module — in this case, to support additional operating systems in your enterprise.
- Implement multiple configuration instances using defined types.
- Deploy more powerful code using conditional statements.
- Use templates to generate and manage configuration files, saving time and maintaining consistency across platforms.
- Run Bolt to deploy your extended module to test nodes for unit and acceptance testing.
- Practice data separation as part of the design — specifically, deciding what to include in Puppet code vs. using Hiera to configure class parameters that manage settings and exceptions.

Concepts covered include:

- Resource abstraction layer (RAL)
- Resource declaration and ordering, resource metaparameters, and automatic relationships
- Class containment, variable scope, and built-in variables
- The Puppet run and how resources are refreshed when other resources change
- Testing with Puppet Development Kit and puppet-lint

Course Agenda

Class duration is about 8 hours including 10-minute breaks throughout the day and a one-hour break for lunch. Topics covered include:

Welcome and objectives

Develop and test a new module

 Lab 1.0 Use Puppet Development Kit to create and test a new module

 Lab 1.1 Acceptance test new modules

Develop a module to support additional operating systems

 Lab 2.0 Extend a module to support different OS platforms

Lab 2.1 Use Hiera to extend module capabilities
Lab 2.2 Configure additional agent package platforms
Develop a module to support multiple configuration instances
Lab 3.0 Develop a module to manage configuration files
Lab 3.1 Add defined types to a module to support virtual hosts
Course conclusion

Delivery Options

This instructor-led course is taught in a cloud-hosted classroom environment and can be delivered virtually or at your facility.

Prerequisites

This course is for you if you're a site reliability engineer (SRE), sysadmin, or DevOps engineer who manages Windows or Linux. You should already know how to complete these tasks in Puppet Enterprise:

- Set external and trusted facts on nodes.
- Use basic Git workflow, with commands such as pull and push.
- Use class parameters and data types to design roles and profiles that are easy to reuse and maintain.
- Implement environment-based testing using node groups so that you can test and deploy with confidence.

We also strongly recommend that you take the first three courses in this series: [Puppet Enterprise 101: Deploy & Discover](#), [Puppet Enterprise 201: Design & Manage](#), and [Puppet Enterprise 301: Develop & Maintain](#).

Class Maximum

The attendee limit for this course is 15 students.

Technical Requirements

Puppet courses have specific technical requirements. You will need access to Zoom to access this course. For the best classroom experience, we recommend that you use two monitors and we also recommend using [Google Chrome](#) as your browser. Mozilla Firefox, Apple Safari, and Microsoft Edge are not suitable for this class.

To access the labs used in class, you must [create a free account](#) with our Practice Lab partner, Instruqt. We recommend having your Instruqt login credentials ready when you come to class.

Fees

Product Description	Length	Amount
PE401: Extend Capability	1 day	\$6,000.00

This class will be delivered virtually unless the Customer and Puppet mutually agree that the class will be delivered onsite at the Customer's facility. Onsite delivery requires a minimum of 2 days of private training scheduled consecutively, and the Customer will be responsible for travel and expenses in addition to the fees above. A travel and expense estimate will be provided on the quote and billed at actuals not to exceed the estimate unless otherwise specified in the quote that travel and expenses will be invoiced in full at the time of purchase. Any quote that does not include a travel and expense estimate will be performed remotely.