

# Designing and Implementing Cisco Network Programmability (NPDESI) v1.0

Duration 5 Days

## COURSE DESCRIPTION

This course addresses the evolving role of network engineers towards more programmability, automation and orchestration, enabling them to leverage the powerful level of abstraction provided by controller based architectures to create real added value.

Candidates will learn how to minimize the amount of manual interactions with the network, and increase the use of scripts and automation tools to drive down operational inefficiencies. The course will review network programmability fundamentals including Linux and Python, common automation protocols such as NETCONF and REST and how they relate to YANG data models.

The course will enable candidates to understand SDN controllers including APIC, APIC-EM and OSC, as well as how to use device-level APIs such as Cisco NX-OS, IOS-XE, IOS-XR and ASA OS. They will be introduced to DevOps and Agile software development methodologies, and get started on using automation tools such as Ansible, Chef and Puppet.

## COURSE OBJECTIVES

Upon completion of this course, you will be able to:

- Understand the basics of Network Programmability
- Use basic Linux commands and configure networking
- Write and troubleshoot Python scripts
- Understand and use REST and NETCONF programmability interfaces of various Cisco controllers and devices
- Consume and comprehend YANG data models
- Know DevOps and Agile software development methodologies
- Practical application of Ansible automation tool

## COURSE OUTLINE

- Module 1: Network Programmability Fundamentals
- Module 2: APIs and Automation Protocols
- Module 3: Data Models
- Module 4: Operations
- Module 5: Controllers

## PREREQUISITES

It is recommended that a learning have the following knowledge and skills before attending this course:

- CCNP or Equivalent Experience
- Complete the Programming for Network Engineers (PRNE) ELT or equivalent Python programming experience

## WHO SHOULD ATTEND

- Resellers
- Customers
- Employees