Programming for Network Engineers

The Programming for Network Engineers (PRNE) v2.0 course is designed to equip you with fundamental skills in Python programming. Through a combination of lectures and lab experience in simulated network environments, you will learn to use Python basics to create useful and practical scripts with Netmiko to retrieve data and configure network devices. Upon completion of this course, you should have a basic understanding of Python, including the knowledge to create, apply, and troubleshoot simple network automation scripts.

Pay with CLC points.:

Cisco Learning Credits accepted : 36 Credits

Details and registration on the provider's website:

https://learninglocator.cloudapps.cisco.com/#/home

The Cisco Continuing Education program is a flexible offering dedicated to all active individuals holding certifications at the Associate, Specialist, Professional, and Expert levels.

Learn more about how you can recertify through CE to maintain your certification status.

Cisco Continuing Education Program - CE

Participation in authorized training allows you to earn additional points needed to maintain your certification.

PRNE: 24 points CE

Odbiorcy szkolenia

This course is intended for:

- Network administrators
- Network engineers with little or no programming or Python experience
- Network managers
- Systems engineers

Korzyści

This course will help you:

- Explain the need for network engineers to learn how to program
- Explain how programming relates to the journey into network automation and programmability
- Create useful and practical scripts to retrieve data and configure network devices
- Create, apply, and troubleshoot simple network automation scripts
- Gain hands-on experience with Python programming

Program szkolenia

Course outline

- Introducing Programmability and Python for Network Engineers
- Scripting with Python
- Examining Python Data Types
- Manipulating Strings
- Describing Conditionals, Loops, and Operators
- Exploring Classes, Methods, Functions, Namespaces, and Scopes
- Exploring Data Storage Options
- Exploring Python Modules and Packages
- Gathering and Validating User Input
- Analyzing Exceptions and Error Management
- Examining Debugging Methods
- Course Summary

Lab outline

- Execute Your First Python Program
- Use the Python Interactive Shell
- Explore Foundation Python Data Types

- Explore Complex Python Data Types
- Use Standard String Operations
- Use Basic Pattern Matching
- Reformat MAC Addresses
- Use the if-else Construct
- Use for Loops
- Use while Loops
- Create and Use Functions
- Create and Use Classes
- Use the Python main() Construct
- Traverse the File Structure
- Read Data in Comma-Separated Values (CSV) Format
- Read, Store, and Retrieve Data in XML Format
- Read, Store, and Retrieve Date in JavaScript Object Notation (JSON) Format
- Read, Store, and Retrieve Data in a Raw or Unstructured Format
- Import Modules from the Python Standard Library
- Import External Libraries
- Create a Python Module
- Prompt the User for Input
- Use Command-Line Arguments
- Manage Exceptions with the try-except Structure
- Manage Exceptions with the try-except-finally Structure
- Use Assertions
- Use Simple Debugging Methods
- Use the Python Debugger
- Code a Practical Debugging Script

Oczekiwane przygotowanie uczestnika

Before taking this course, you should have:

- Familiarity with Cisco IOS®-XE software or other Cisco network device configuration and operation skills
- Basic network management knowledge
- Cisco CCNA® certification or equivalent knowledge

The following Cisco courses can help you gain the knowledge you need to prepare for this course:

- Implementing and Administering Cisco Solutions (CCNA®)

Szkolenie obejmuje

- 4 dni pracy z trenerem
- Nadzór trenera
- Kontakt ze społecznością
- Autoryzowany podręcznik w wersji elektronicznej
- Środowisko laboratoryjne

Metoda szkolenia

- wykład
- warsztaty

Czas trwania

4 dni / 28 godzin

Język

- Szkolenie: polski
- Materiały: angielski