

PRNE

Programming for Network Engineers

This course will provide you with basic Python programming skills. Through a combination of lecture and lab experience in simulated network environments, you will learn to use Python fundamentals to create useful and practical scripts using Netmiko to retrieve data and configure network devices. Upon completion of this course, you should have a basic understanding of Python, including the ability to create, apply, and troubleshoot simple network automation scripts.

Course Contents

- 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

Target Group

This course is aimed at:

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

Prerequisites

Before participating in this course, you should fulfill the following requirements:

- Familiarity with Cisco IOS®-XE software or other skills for configuring and operating Cisco network devices
- Basic knowledge of network management
- Cisco CCNA® certification or equivalent knowledge

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

- Implementing and Administering Cisco Solutions (CCNA)

Course Target

Upon completing this course, students will be able to:

- Describe use cases and examples of the value of network programmability
- Acquire a full complement of Python programming skills — basics, data structures, control structures, comparison operators, input and output, structured programming, object-oriented programming, etc.
- Use Python to communicate to individual network devices, using examples of real networking communication and operations
- Use Python to communicate to multiple devices
- Use Object-Oriented Programming within Python to abstract network devices
- Use databases within a network-based application to store information about the network
- Use test methodologies to create quality applications
- Leverage software available via open source and existing libraries e.g. Cisco GitHub, Cisco DevNet, Python general-purpose and Cisco-specific libraries, NX-API

Processing time

approx. 30 hours

This Course in the Web



You can find the up-to-date information and options for ordering under the following link:

www.experteach-training.com/go/PRNE

Reservation

On our Website, you can reserve a course seat for 7 days free of charge and in a non-committal manner. This can also be done by phone under +49 6074/4868-0.

Guaranteed Course Dates

To ensure reliable planning, we are continuously offering a wide range of guaranteed course dates.

Your Tailor-Made Course!

We can precisely customize this course to your project and the corresponding requirements.

Cisco Digital Learning

This course is available in the Cisco Digital Learning Library. These recently developed, multi-modal training events include HD videos moderated by lecturers with stored searchable text and subtitles, as well as exercises, labs, and explanatory text and graphics. We provide this offer to you via our myExpertTeach learning portal. Effective of the activation of the account, access to the courses will be granted for a duration of 6 months. In the case of packet solutions (Cisco Digital Learning Subscriptions), this time period will amount to 12 months.

Cisco Digital Learning	Prices, excl. of V.A.T.
Activation for 6 months	€ 500

Training	Prices, excl. of V.A.T.
Classes in Germany	4 Days € 2,995
Online Training	4 Days € 2,995
Date/course venue	Course language German 
23/09-26/09/25  Frankfurt	24/11-27/11/25  Frankfurt
23/09-26/09/25  Online	24/11-27/11/25  Online

Status 06/08/2025



Our Training Offer for You:



Classroom Training

The live training experience in our training centers or on your premises on-site.



Online Training

Attend your course in online mode – without travel and accommodation expenses and effort.



Hybrid Training

Classroom & online in one course – choose how you wish to participate in your training event.



In-house Training

We create your customized training concepts for your project.



Guaranteed Course Dates

ExperTeach guaranteed course dates allow for secure and reliable planning.

Awards Won by ExperTeach



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