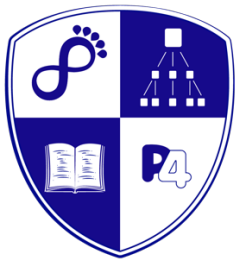

BAREFOOT ACADEMY

BA-1111 (Online) Introduction to P4$_{16}$ and P4 Studio™ SDE Development Workflow

Course Prospectus

BA-1111 is an introductory online, instructor-led course module that provides a quick, hands-on introduction to the basics of P4$_{16}$ language and a simple P4 Studio™ SDE development workflow. This course is recommended to anyone who wants to start learning P4 and P4 Studio and is a required pre-requisite for other online courses.

BA-1111 is a part of Barefoot Academy Online course series.

Course Goals

Upon the completion of the course, the students will:

1. Understand the abstract data plane model (PISA) and its main components
2. Understand the concept of P4$_{16}$ architecture
3. Understand the main components of Tofino Native Architecture (TNA) for P4$_{16}$
4. Understand the process and methodology of developing a simple data plane program in P4$_{16}$/TNA, based on a self-explanatory example
5. Understand the steps, required to compile a P4 program and exercise it on a target
6. Learn how to use P4 Studio SDE in a cloud-based lab environment
7. Learn the basic CLI commands required to manage match-action tables
8. Learn how to read and understand model logs and use them to perform simple debugging

Target Audience

This course is most suitable for designers and architects, tasked with design and development of data plane and control plane programs for modern networking equipment.

What is included?

The course fee includes the following:

- A 3-hour lecture (with short breaks) conducted online via Zoom (Zoom account associated with your work email address is required)
- Lecture and lab materials in PDF format (we highly recommend printing them before the start of the class)
- Two or fix consecutive days of access to a personal, preconfigured lab VM (depending on the ticket)
- Online support by the instructor via a dedicated Slack channel

Pre-requisites

- General understanding of network and telecommunications architecture and protocols
- Knowledge of C and C++ languages, especially as it relates to embedded and NOS development
- Knowledge of Python language
- Experience in data or control plane design is extremely helpful
- Good and reliable Internet access for both online lectures and VM access is a must

Logistics

An event-specific link to ticket purchase site will be provided on both Barefoot Academy page as well as on Customer Portal and FASTER Forum. If you do not have an account on the Customer Portal or FASTER Forum, please contact Barefoot Sales representative first to get the password and establish an account.

To attend an online presentation, you will need to create a **free Zoom account, associated with your work email address**. Upon the registration, you will receive a link to the online event. You will also receive an invitation to establish a Slack account for lab support, also **associated with your work email address**.

A high-speed internet connection is required to attend the online presentation. Call-in numbers for higher voice quality might be provided, depending on the region. Please, connect to the online meeting 15 minutes before the start to work out all potential connection problems.

All necessary materials, including the presentation PDFs and lab exercises will be available through the Customer Portal or FASTER Forum a day before the start of the class. We highly recommend that you print the presentation PDFs and use them to take notes. Alternatively, these presentations can be loaded on a tablet, where the notes can be taken with an electronic pen.

The information about the lab Virtual Machines will be provided at the end of the lecture. VMs will be kept running for the next two or five days, depending on the ticket type. This time can be extended through a separate arrangement.

Contact

For more information, please contact academy@barefootnetworks.com.