



BAREFOOT ACADEMY

BA-1131 (Online) Introduction to P4 Studio™ SDE

Course Prospectus

BA-1131 is an introductory online, instructor-led course module that provides a quick, hands-on introduction to the basics of the architecture or P4 Studio™ SDE, its components and architecture, build process and the basic usage models, including running on the reference platforms. 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-1131 is a part of [Barefoot Academy Online](#) course series.

Course Goals

Upon the completion of the course, the students will:

1. Understand the architecture of P4Studio, its components and their relationship
2. Understand the typical deployment scenarios, including the local and remote procedure call arrangements
3. Understand the role of the Board Support Package
4. Understand the P4 Studio build process
5. Understand the process of P4 program compilation and the generated artifacts
6. Understand how to run P4 Studio on a reference platform
7. Learn how to use the Engineering CLI (uCLI), bfrt-python and run_pd_rpc.py tool to bring up and manage ports
8. Learn how to run diagnostic tests

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 five 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 the basic Barefoot Workflow (BA-1111)
- 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.