

Switch WorkShop P4 Service

SwitchWorkShop P4 Service is designed to work directly, online or offline, as a workshop team facilitator and domain expert to fast-track the initial design process for a P4 development.

Domain experience

STORDIS were early adopters of P4 and Tofino-based platforms. Currently we have four applications in the field and two more are in development. These are based on two Tofino platforms:

- APS Networks BF2556X-1T and BF6064X-T-A2F 64x100G
- Edgecore Wedge 32X

The applications are not usually single focused but can be classed as:

- Filtering
- Netflow Generation
- Balancing and load-sharing
- · Hash distribution and VLAN tagging
- Embedded Time-stamping for downstream processing
- Mass Packet Generation

The Goal

The goal of the workshop session is to fast-track the design strategy and together examine the critical aspects of the proposed customer development.



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The Audience

Ideally suited to the Systems or Applications Engineer (individual or teams not greater than six participants) who are about to embark on a the development of a P4-based system or application. While participants should ideally have some P4 exposure, it is not strictly necessary as the focus of the workshop will be on design; remember that P4 is just a language for implementing a design. One of our several value-adds is to bridge the real-world gap between what is theoretically possible in P4 and what is actually possible on Tofino-based platforms.

Session Plan

We will work with the customer to organize the structure of the workshop. In the absence of specific requests the **3-day** workshop will be divided into several focused sessions as outline in the table below.

1-morning	1 hour	Introduction and planning for the workshop.
	3 hours	Deep dive into system/application concept and high-level requirements.
1-afternoon	2 hours	Presentation and analysis of first-glance strategies and mechanisms of the P4 platform that may address high-level requirements.
	1 hour	Arbitrated discussion focusing on the suitability of the platform for design and on any circumvention or alternate strategies where relevant.
	1 hour	Planning for the next two days including design aspects that require special focus and the deliverables that should come out of the workshop.
2	8 hours	Develop design of primary strategies and mechanisms carefully allotting time segments to a high-priority set and avoid getting sucked into imple- mentation.
3-morning	4 hours	Develop design of primary strategies and mechanisms carefully allotting time segments to a high-priority set and avoid getting sucked into implementation.
3-afternoon	2 hours	Drill down on unfinished top priority requirements.
	2 hours	Consolidate the work done and the design decisions - plan next steps.

Prerequisites

Ideally the workshop participants taking this session will include the System Architect and Developers, but it may be useful to include other stakeholders such as a Product Manager, Marketing person or a System Tester for the first day's session - this is entirely up to the customer but we need to limit the size of the core design team in order to achieve as much as possible during days 2 and 3.

