VNF offloading on multi-vendor P4 fabric controlled by ONOS via P4Runtime

In collaboration with Barefoot, Netcope

- **ONOS: P4Runtime-enabled SDN control plane**
- **Fabric.p4: open source multi-purpose leaf-spine fabric**
  - Support programmable and fixed-function switches from many vendors
- **Spgw.p4: implementation of 5G user plane VNF**

fabric.p4

ONOS

P4Runtime
P4 program deployment, table management, etc.

Spine   Spine

GTP tunnels
(user traffic)

ToR   ToR

Base station

fabric+spgw.p4
GTP termination, filtering, billing, etc.

Upstream router

M-CORD (with P4 fast path)
NFV/SDN platform for 5G edge services