

# HyPer4: Virtualizing the Programmable Data Plane (PDP)

## PDP Virtualization Benefits

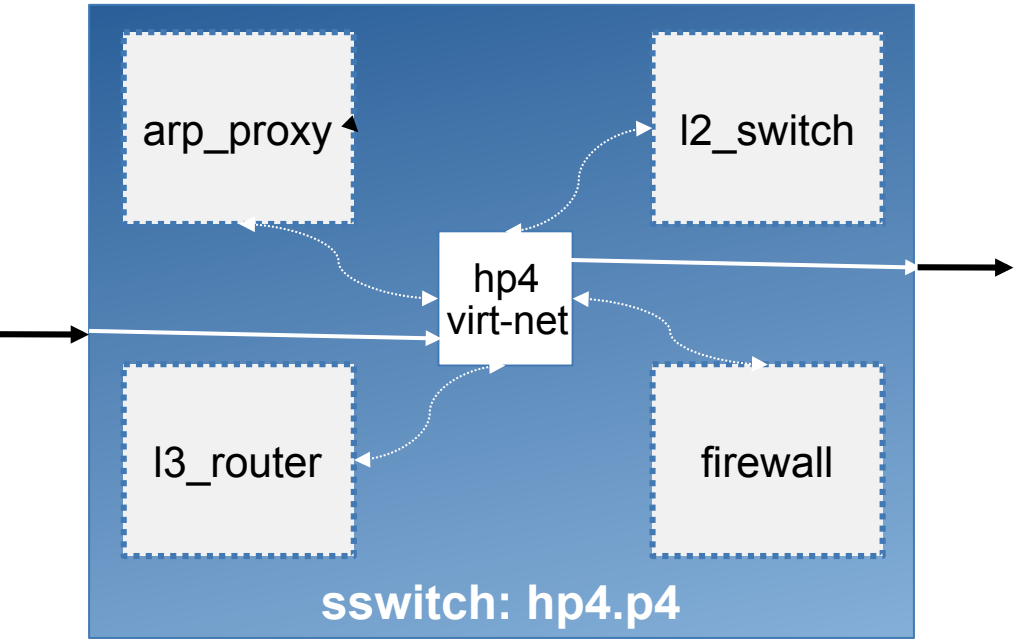
- Present illusion of multiple PDPs
- Portably extend switch feature set
- Virtual networking between PDPs

## HyPer4 written in P4: Why?

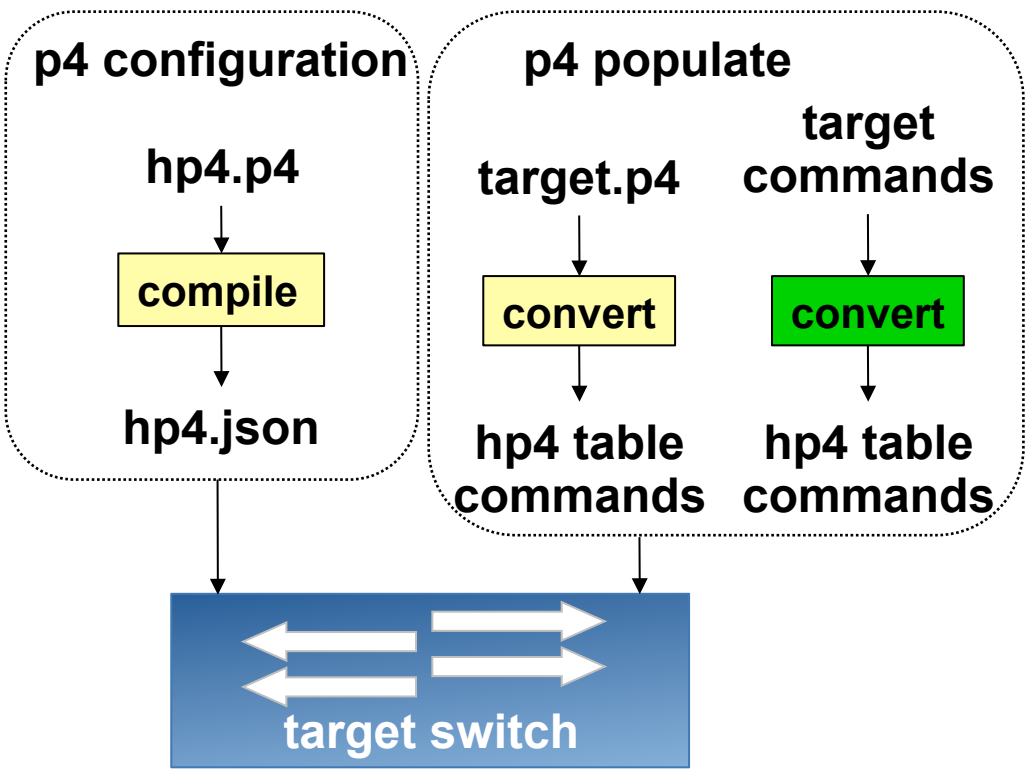
- Explore P4 language reflexivity
- Hope for broad switch compatibility

## But...

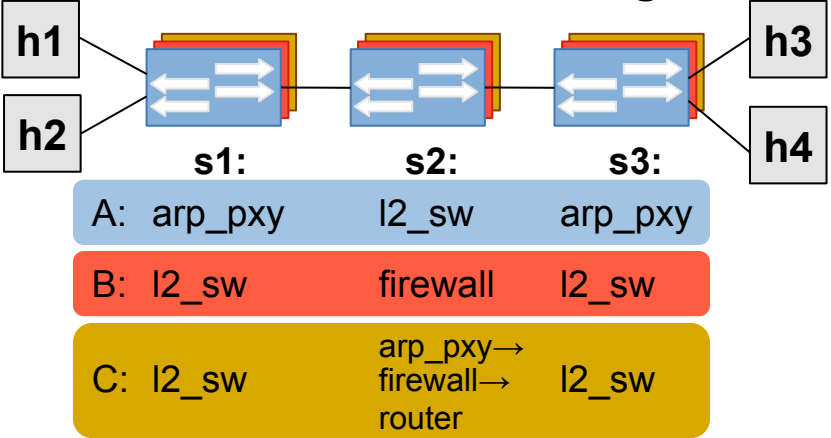
- Resource requirements multiplied
- P4 model not well suited for the task



hp4.p4 emulating target.p4:



## DEMO 1: live network reconfiguration



## DEMO 2: split personality

