P4-NetFPGA

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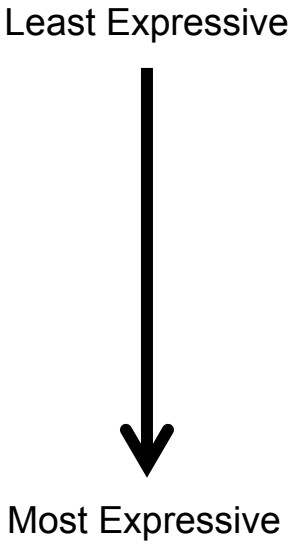
- Stateful P4 program support using externs inspired by Domino atoms
- $P4_{16}$ compiled to NetFPGA SUME platform using Xilinx P4-SDNet tool flow
- Demonstration: switch computes flow size distribution for TCP/IP flows
  - Fine grained analysis with per-flow counters
  - Inspired by FlowRadar

Atom	Description
R/W	Read or write state
RAW	Read, add to, or overwrite state
PRAW	Predicated version of RAW
IfElseRAW	2 RAWs, one each when a predicate is true of false
Sub	IfElseRAW with stateful subtraction capability
Nested	4-way predication (2 nested IfElseRAWs)
Pairs	Update a pair of state variables



DEMO:
Flow Size Distribution