MACsAD: An Exemplar Realization of Multi-Architecture P4 Pipelines
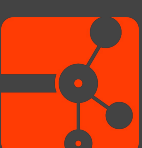
High-level MACSAD Architecture

MACSAD COMPILER SYSTEM

- Auxiliary Frontend
- TRANSPILER
- CORE COMPILER
- DATAPATH LOGIC
- COMPILER
- Auxiliary Backend (DPDK, OpenDataPlane)

Select Use-Case

Select Dataplane Target

bng.p4 / vxlan.p4 / l2fwd.p4 / l2fwd.p4

1001101
1000001
1000011

SoC(ARM) — Server(x86) — Rpi(ARM) — VM(x86)
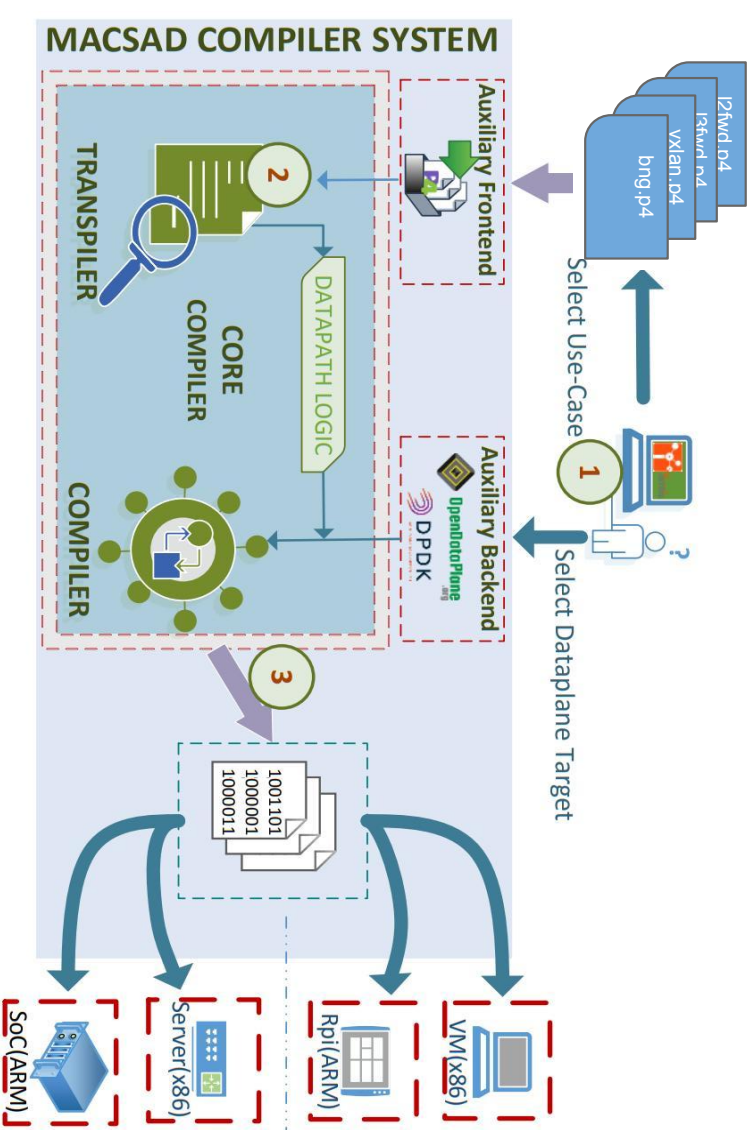
Performance comparison on different platforms

(AARCH64)

(x86_64)

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