

Introductory and Advanced Topics on P4 Programmable Data Plane Switches

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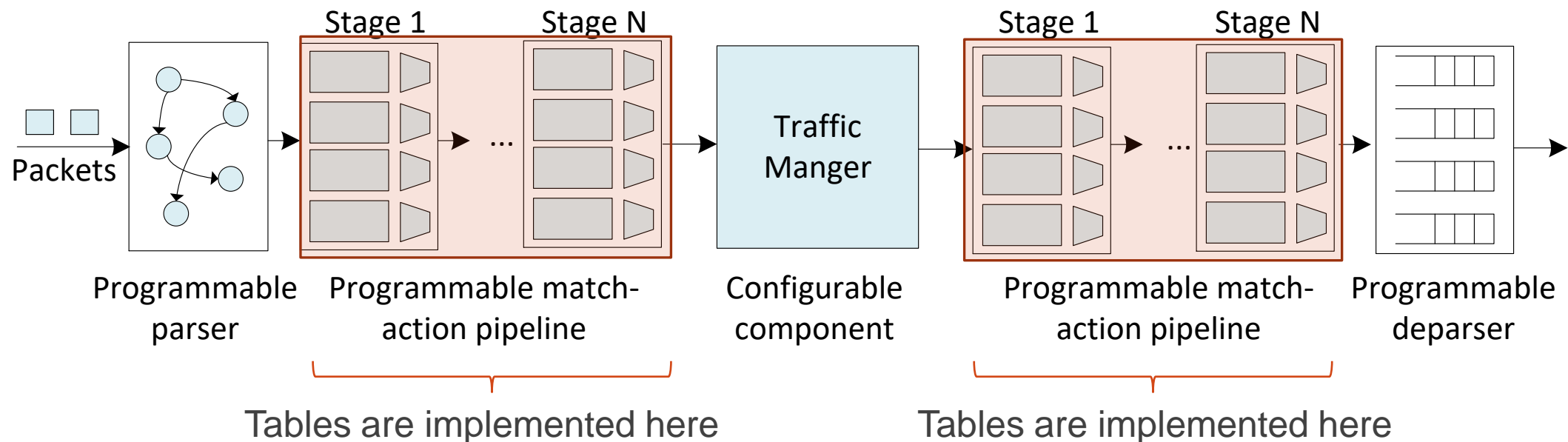
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Match-action Tables (Part 2)

Lab activities are described in Lab 6, P4 Programmable Data Plane Switches (BMv2) lab series

Match-action Pipeline

- Tables define the processing logic inside the match-action pipeline
- They can be used to implement traditional switch tables (e.g., routing, flow lookup, access-control lists)
- They can implement custom user-defined complex logic



Lab Topology and Objectives

- The topology consists of three hosts: h1, h2, and h3; one P4 switch: s1
- Implement a table that matches on the destination IP address in the packet headers using the Longest Prefix Match (LPM)
- Implement another table that matches on the destination IP address in the packet headers using the exact match
- Assign the output port based on the matched IP address
- Update the MAC addresses in the headers
- Decrement the Time-to-Live (TTL)

