

# Lab 8: Checksum Recalculation and Packet Deparsing

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A Hands-on Tutorial on P4 Programmable Data Planes

Tuesday March 7, 2023

# Checksum Recalculation and Packet Deparsing

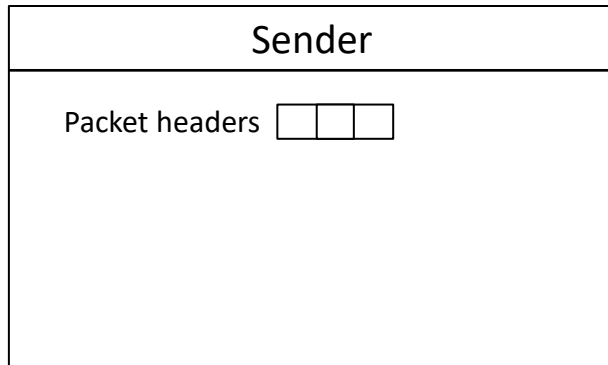
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Lab activities are described in Lab 8, P4 Programmable Data Plane Switches (BMv2) lab series

# Checksums

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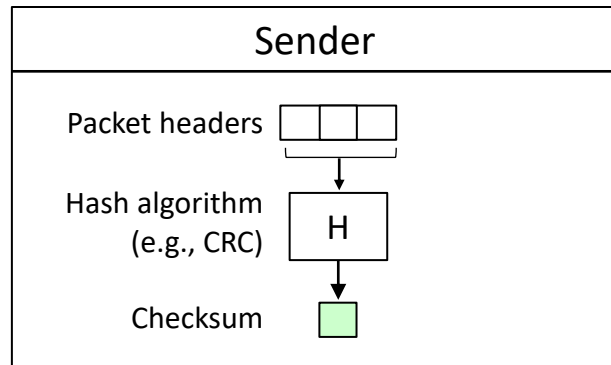
- Several protocols use checksums to validate the integrity of the packet headers
- A checksum is a small value derived using a checksum algorithm such as the Cyclic Redundancy Check (CRC)



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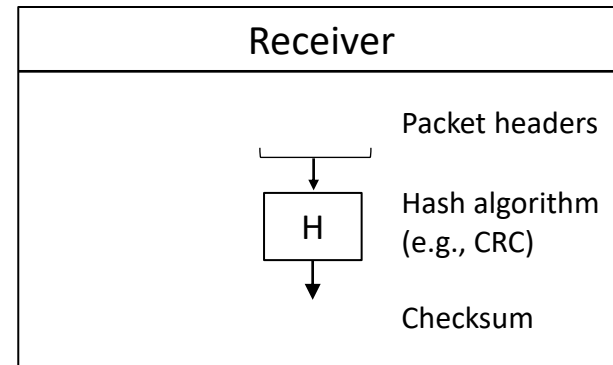
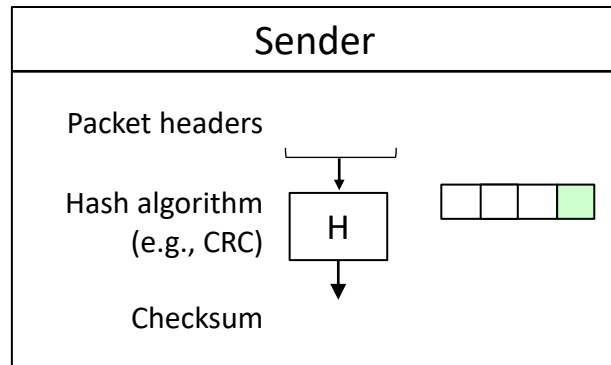
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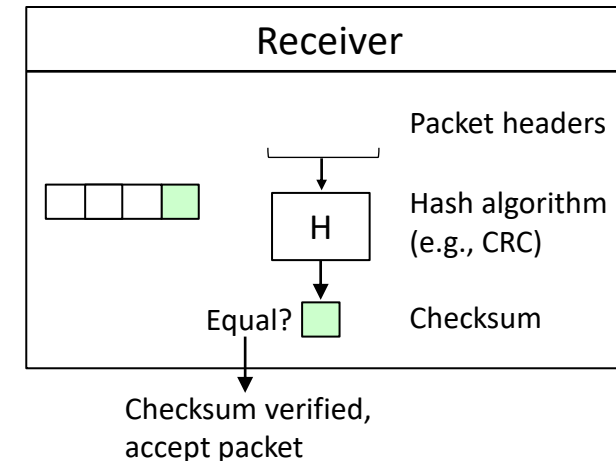
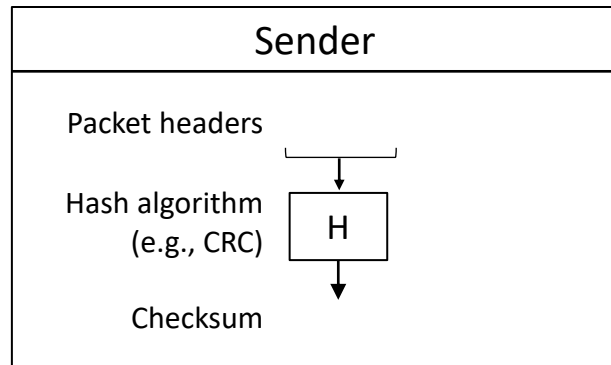
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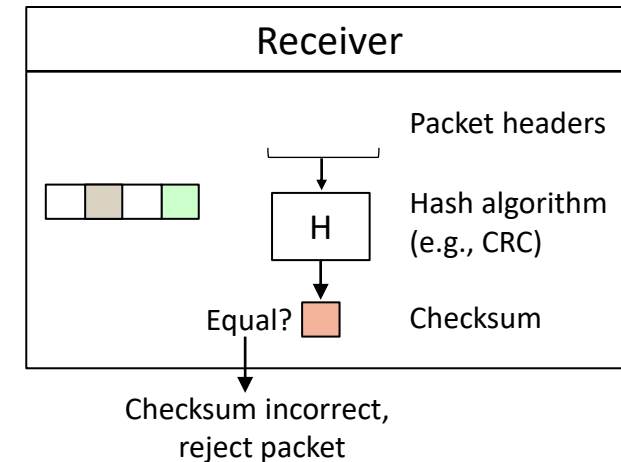
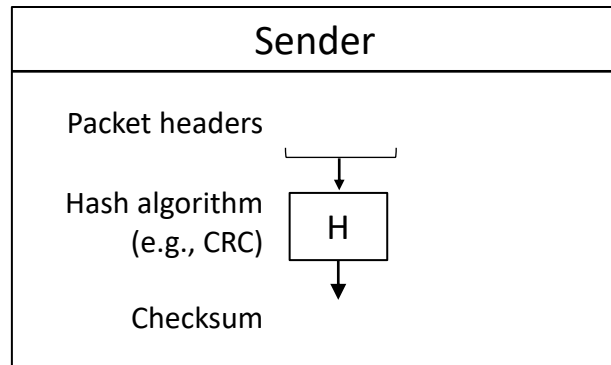
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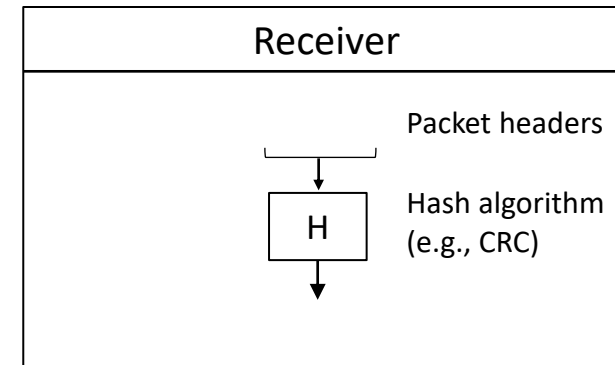
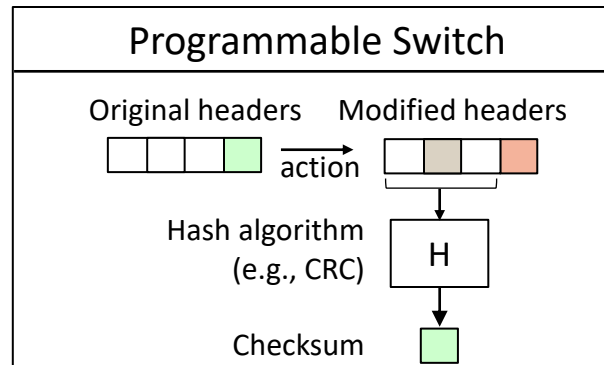
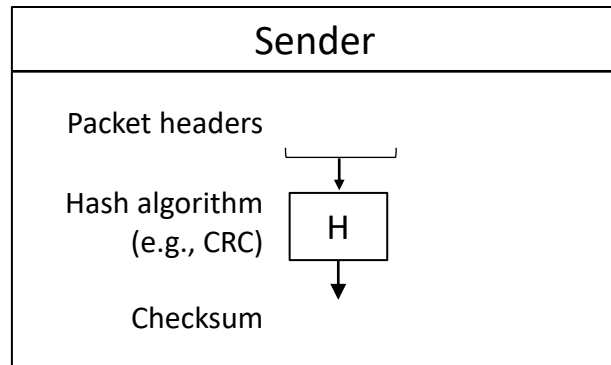
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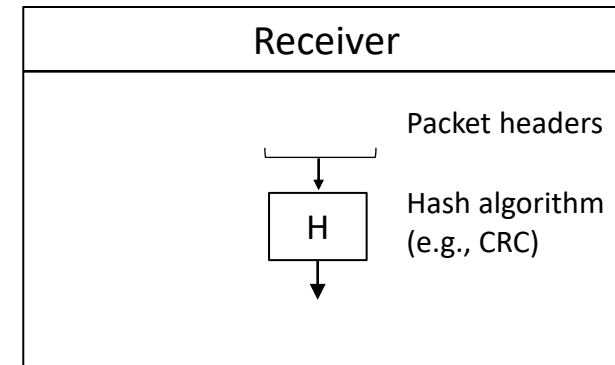
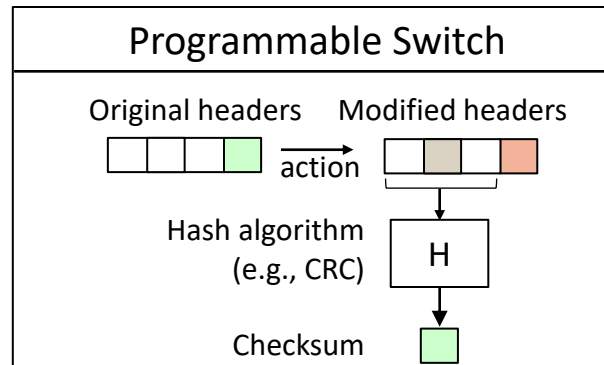
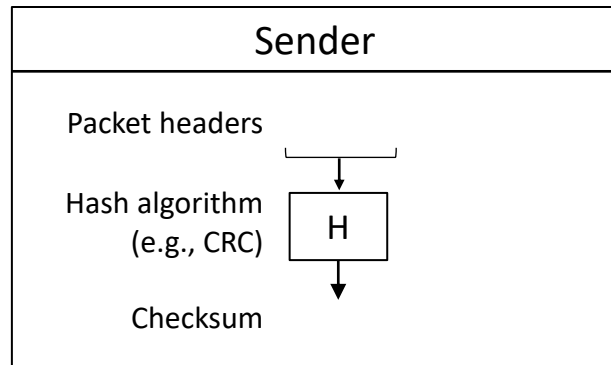
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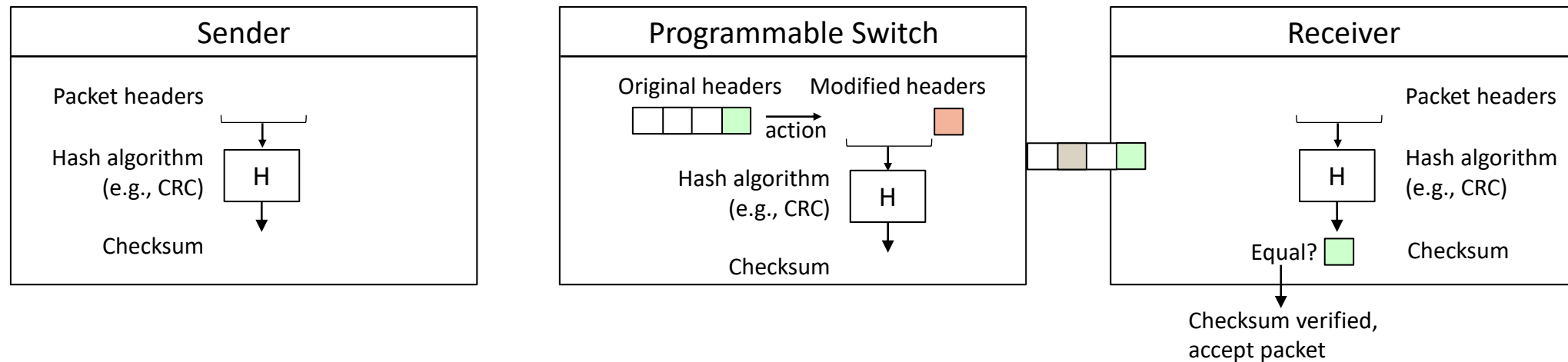
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# Lab Topology and Objectives

- The topology consists of three hosts: h1, h2, and h3; one P4 switch: s1
- The P4 program modifies the headers of the packet
- The P4 program recomputes the checksum of the updated headers

