Hands-on Open vSwitch and Software-defined Networking

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Lab 7: Implementing Routing in Open vSwitch

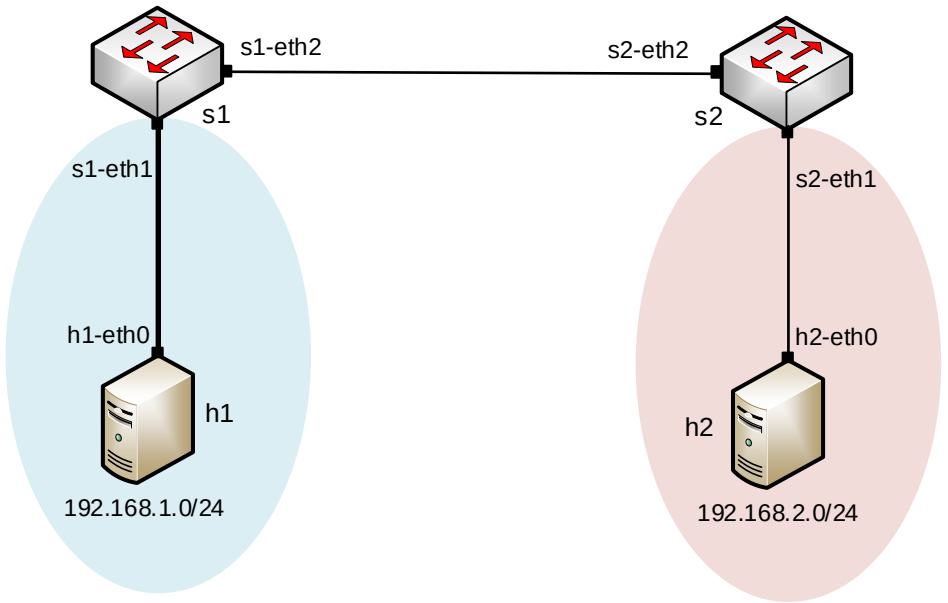
Flow Table

- A flow table consists of flow entries
- A flow entry consists of header fields, counters, and actions associated with that entry

Flow Entry 0		Flow Entry 1		...	Flow Entry F		...	Flow Entry M	
Header Fields	Inport 12 192.32.10.1, Port 1012	Header Fields	Inport * 209.*.*.*, Port *		Header Fields	Inport 2 192.32.20.1, Port 995		Header Fields	Inport 2 192.32.30.1, Port 995
Counters	val	Counters	val		Counters	val		Counters	val
Actions	val	Actions	val		Actions	val		Actions	val

Lab Topology

- Switch s1 connected to hosts h1 and h2
- Host h1 belongs to 192.168.1.0/24
- Host h2 belongs to 192.168.2.0/24
- The lab aims to demonstrate how to manage flows manually in the switch s1 so that hosts in different networks can communication (i.e., enable routing)



Lab Topology

- Add a flow on s1 to forward traffic to 192.168.2.0
- Add a flow on s2 to forward traffic to 192.168.1.0
- Add a flow on s1 to forward traffic to host h1
- Add a flow on s1 to forward traffic to host h1
- Update the src/dst MAC between the switches
- Decrement the time-to-live