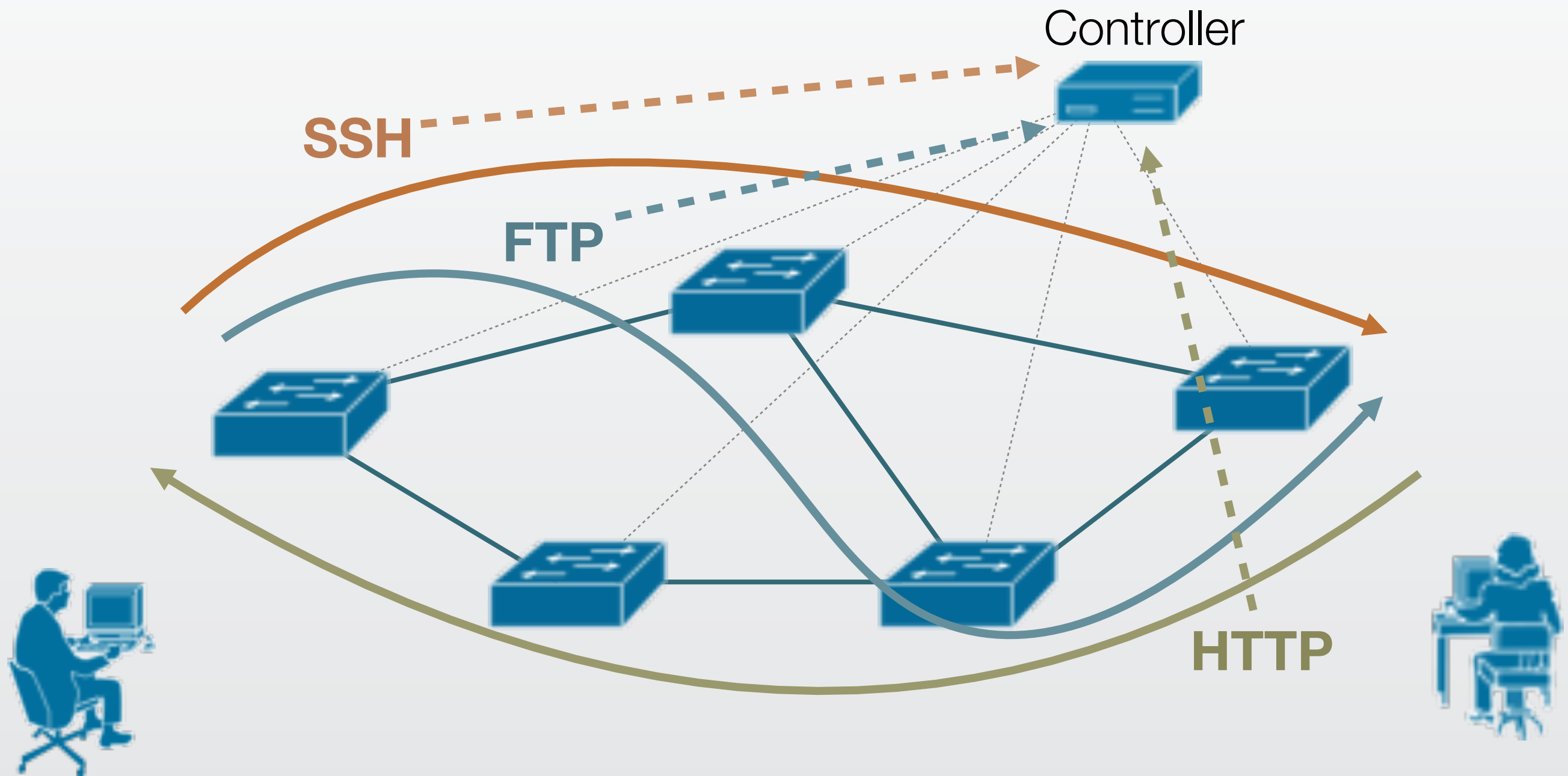


Bandwidth and Latency Aware Routing using OpenFlow

Pongsakorn U-chupala, Kohei Ichikawa, Putchong
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Application-aware Routing



Architecture

App

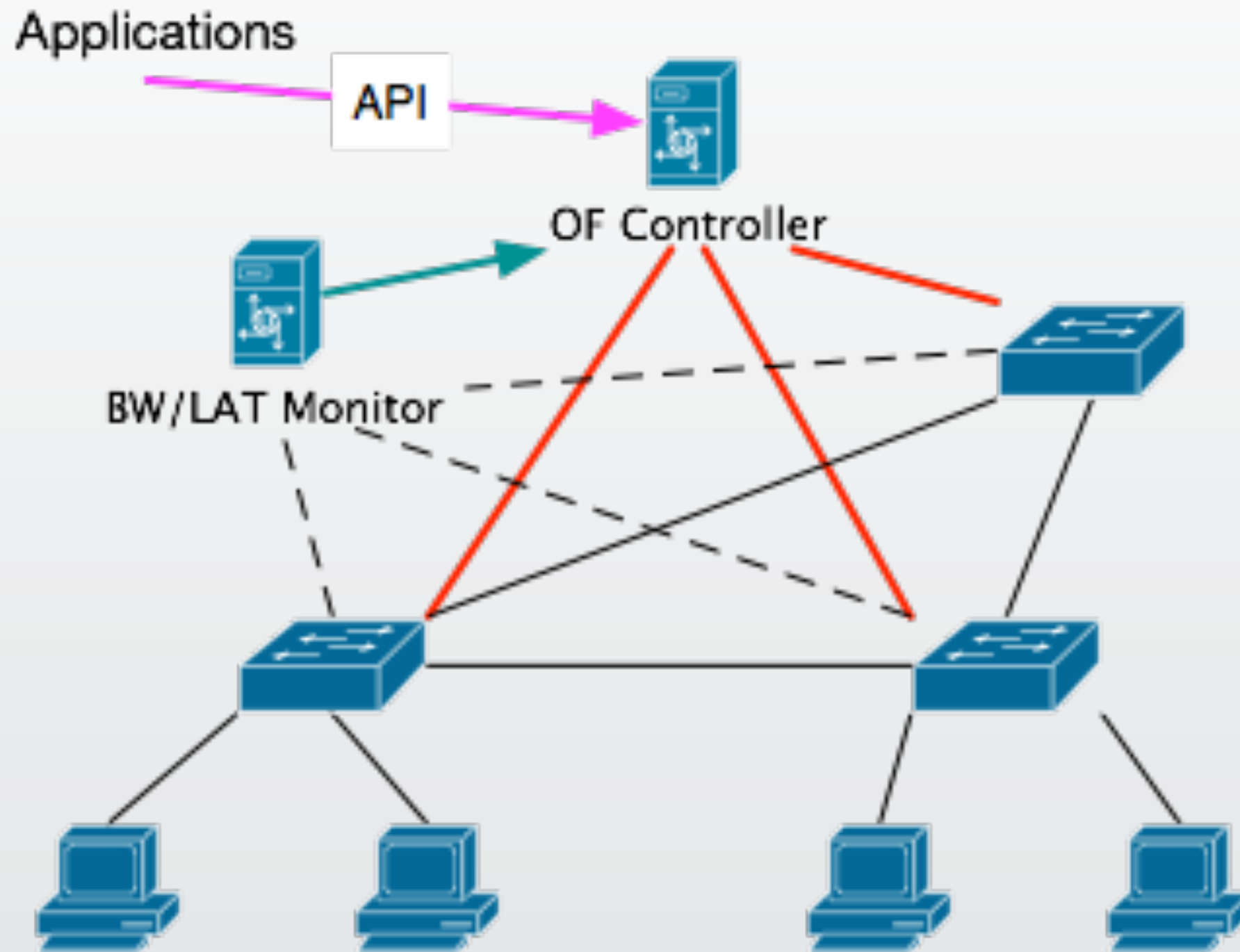
App

App

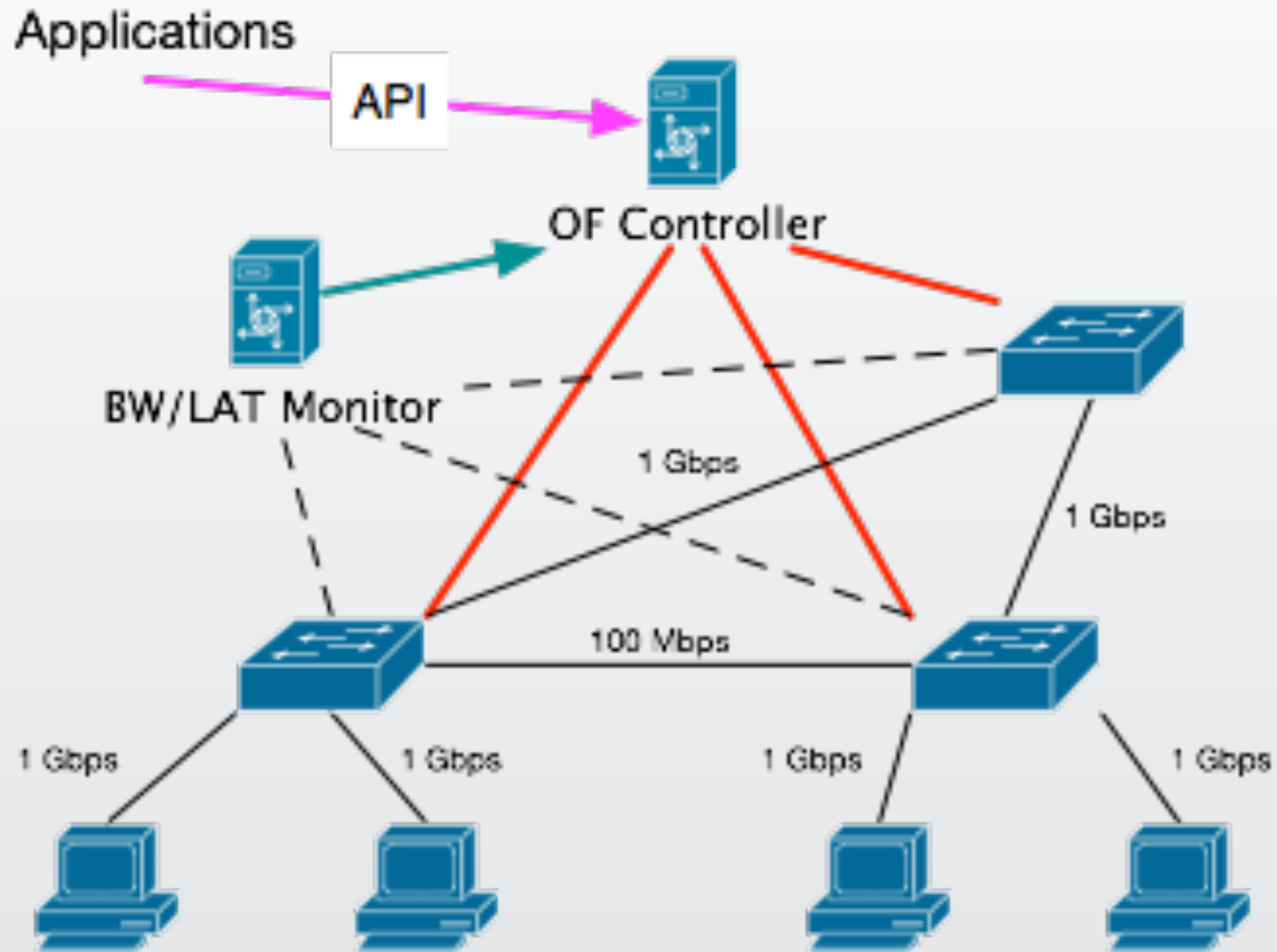
Controller

OpenFlow Network

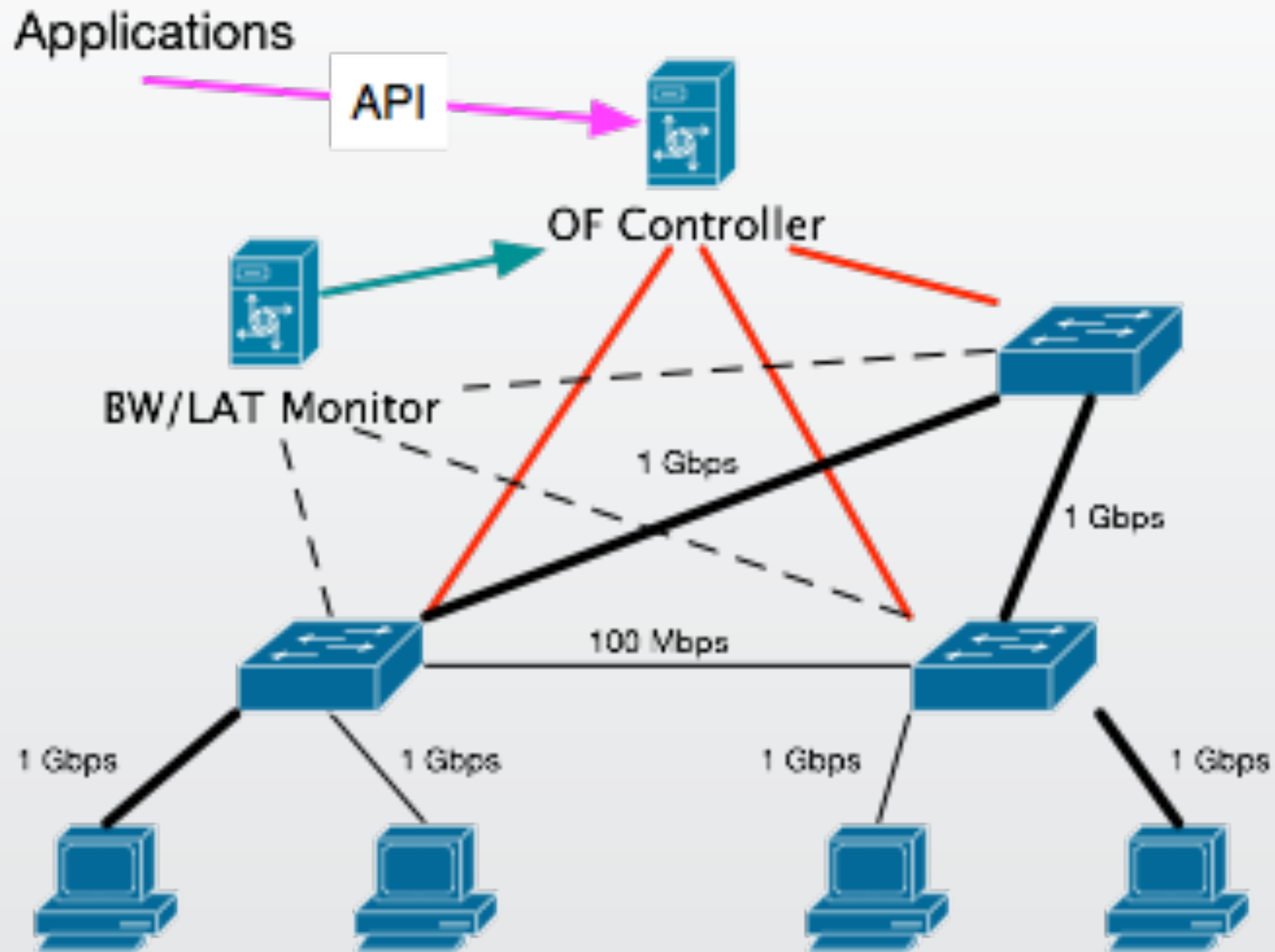
Mechanism



Mechanism



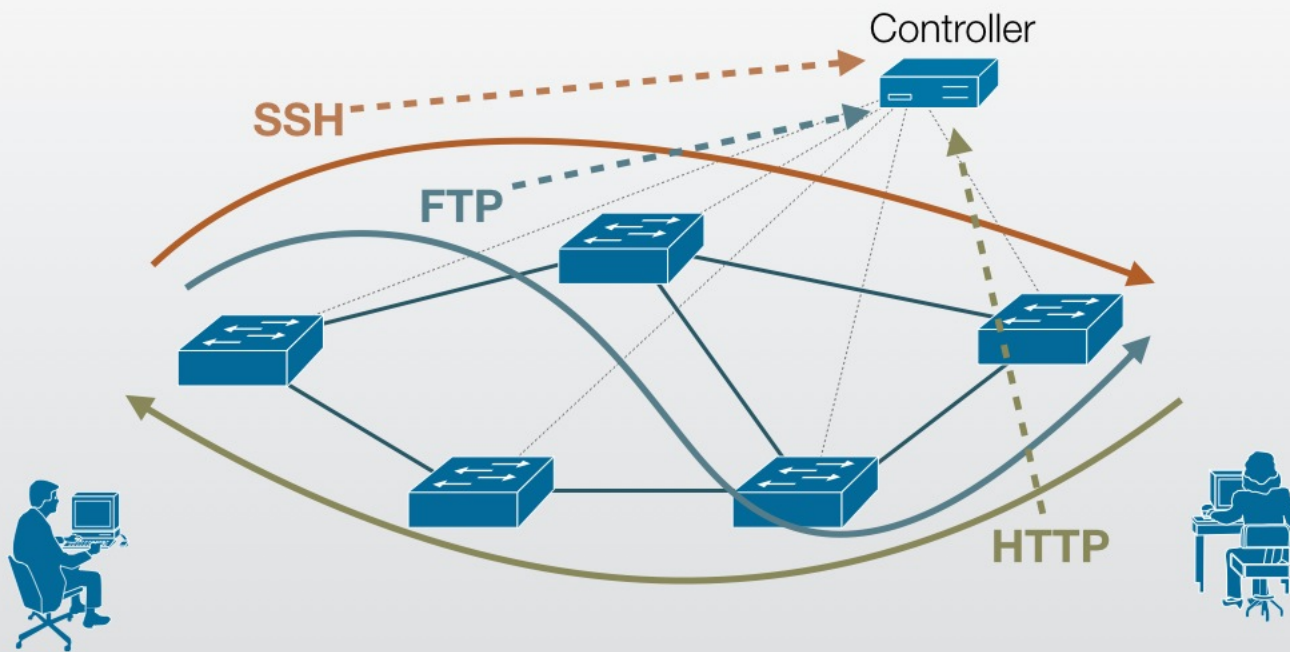
Mechanism



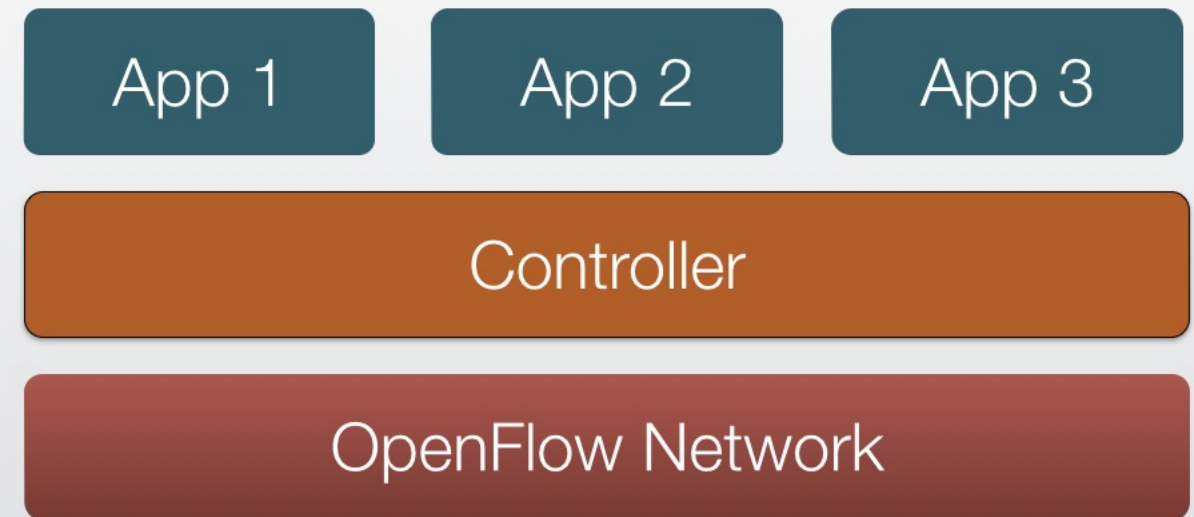
Path Preference Table

Path Identifier (src_ip, src_port, dst_ip, dst_port)	Preference (DEFAULT / MAX_BW / MIN_LAT)
(10.0.0.1, 1234, 10.0.0.2, 80)	DEFAULT
(10.0.0.1, *, 10.0.0.2, 80)	MAX_BW
(10.0.0.2, 80, 10.0.0.1, *)	MAX_BW
(10.0.0.1, *, 10.0.0.2, *)	MIN_LAT
(*, *, *, *)	DEFAULT

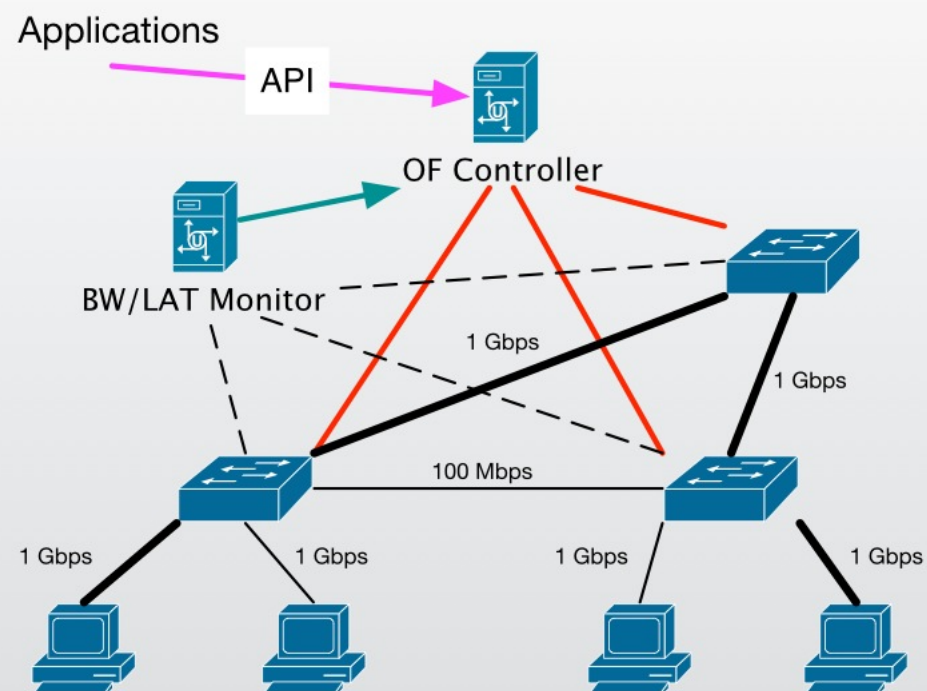
Bandwidth and Latency Aware Routing



Architecture



Mechanism



Path Preference Table

Path Identifier (from_ip, from_port, to_ip, to_port)	Preference (DEFAULT / MAX_BW / MIN_LAT)
(10.0.0.1, 1234, 10.0.0.2, 80)	DEFAULT
(10.0.0.1, *, 10.0.0.2, 80)	MAX_BW
(10.0.0.2, 80, 10.0.0.1, *)	MAX_BW
(10.0.0.1, *, 10.0.0.2, *)	MIN_LAT
(*, *, *, *)	DEFAULT