支持协议无感知转发的Floodlight控制器实现

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摘 要：无协议感知转发(POF)交换机在转发数据时去除了对于特定协议的依赖，使得SDN控制器具有更高的灵活性和可编程性.现有SDN控制器不支持POF协议，通过扩展Floodlight开源控制器的功能，添加了链路发现、拓扑管理、设备管理、数据转发等模块，实现了支持POF协议的控制器.实验结果表明，该控制器可以有效管理POF交换机并支持自定义转发协议的制定和执行.

关键词：软件定义网络；OpenFlow；支持协议无感知转发；控制器
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Implementation of the Floodlight Controller with Protocol Oblivious Forwarding

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Abstract: Switch with Protocol-Oblivious Forwarding doesn't rely on the support of special protocol, which makes the controller more flexible and more programmable. Current SDN controller doesn't support Protocol-Oblivious Forwarding. In order to let the SDN controller support Protocol-Oblivious Forwarding, Modules are added to expand Floodlight controller's function. The modules are LinkDiscovery, TopologyManager, DeviceManager and Forwarding. Experiment shows that the controller can manage POF switch and can support the development and execution of custom-defined protocol with POF.

Key words: softurare defined networks; OpenFlow; POF; controller

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