

HP Hybrid Switches



HP OpenFlow Enabled Switches

- OF Firmware for Existing Procurve Switches
 - 5406zl, 5412zl, 3500yl and 6600
 - Supports OpenFlow 1.0 Specification
 - Based on Open vSwitch
 - Now available in General Release
 - <https://h10145.www1.hp.com/downloads/SoftwareReleases.aspx?ProductNumber=J8697A>
 - K.15.05.5001
 - Older Versions don't show OF config in Show Run

VLAN Virtualization Mode

- Can operate as a normal switch and OF switch
- OF enabled per VLAN
 - Each VLAN is a Virtual OpenFlow Switch Instance
 - Each VLAN has it's own DPID
 - derived from the VLAN ID and the switch MAC Address
 - Can be configured independently to connect to different controllers
 - Ports assigned to VLANs
 - Tagged ports must have matching VLAN ID
 - Untagged ports must have no VLAN ID (or matching?)
- Non-OF VLANs
 - At least one non-OF VLAN required for mgmt

Features...

- Supports Listener Port
- Rate Limiting
- No VLAN translation
- SSL Controller Connection Not Supported
- OpenFlow 1.0 fully implemented in Software
- Hardware Support
 - Must be IP (L2 type == 0x800)
 - Main Action is Output to single port or drop
 - Optional Actions: set pcp, set ToS & rate limit
- OF Instance will not connect to Controller till at least 1 member port is up

OpenFlow Configuration

- vlan 10 name openflow
- vlan 10 untagged 1,2,3
- vlan 10 tagged 23
- vlan 10 openflow [enable | disable]
- vlan 10 openflow controller tcp:
10.11.12.1:6633 fail-secure on
- openflow listener ptcp:6633

OpenFlow Show Commands

- show openflow
- show openflow vlan <vlan id>
- show openflow vlan <vlan id> [rules | flows]

VLAN Aggregation Mode

- Experimental
- Enables switch to have single OpenFlow instance managing all the VLANs in the switch
- Can't be mixed with Virtualization Mode
- Requires OpenFlow Management VLAN
 - Not necessarily the same as the switch mgmt VLAN

Non-OF Commands

- show run
- conf t
- write mem
- show interfaces [brief|config|display]
- show vlan [<vlan id>|port]