OpenFlow

An exciting new technology for separating hardware and software
Quick OpenFlow 101

classical switch
Quick OpenFlow 101

OpenFlow switch
OpenFlow entry

(Figure from the Openflow Intro Presentation, N. McKeown)
Why OpenFlow?

Classical Switch: Cisco 3548XL
Why OpenFlow?

Classical Switch: Cisco 3548XL

A closed box
Operator says:

But I need extended VTP / a 3rd spanport etc.!

Cisco's answer:

Buy one of these!
Operator says: I need something better than STP for my Datacenter...

Cisco's answer: We don't have that!
On a more serious note:
- Closed HW/SW stuck hurts innovation
- Researchers can't try their ideas on scale (no, NetFPGA is not 'at scale')
- Data center ops can't differentiate by building customized network