

# Software Defined Networks (SDNs)

SDNs rest on pillars:

1. Separation of data and control planes
  - MPLS (Data forwarding Push/Pop/Swap) LDP  
ASVP  
SW  
LSP OSPF  
Find LSP  
paths
2. Forwarding decisions can be made on more info than dest. addresses (Layer 4, Layer 7 switches)
3. Control logic/software can be moved to an external entity
4. Network functionality can be programmed w/ software

1. Ethernet { Pervasive  
Low cost  
Features rich

- Merchant Silicon for Ethernet switching
2. Open source movement
  3. OpenFlow -- Interface for switch control

## Single Point of Failure

1. logical controller "centralized"