Crossing the next bridge

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Netconf 2011
Current Bridge

- loctl, sysfs, netlink
- RSTP userspace
- Iptables and ebtables
- Ethernet only
The competition

- Converged networking
  - Vmware Vswitch
  - Cisco Nexus
Virtual Edge Bridge
Virtual Ethernet Port Aggregator
VN tag
New architectures

• Userspace control plane – Openflow

• Hardware dataplane – Bridge offloading
Features

- API
  - RSTP in kernel
  - Per port control of STP – portfast, bpdufilter
  - Sysctl & netlink
- Security
  - Port mirroring
  - Transmit filtering
  - Keep iptables, ebtables for special case
Wishlist

- Netlink ↔ Openflow controller
- VNTag
- PVST
- TRILL