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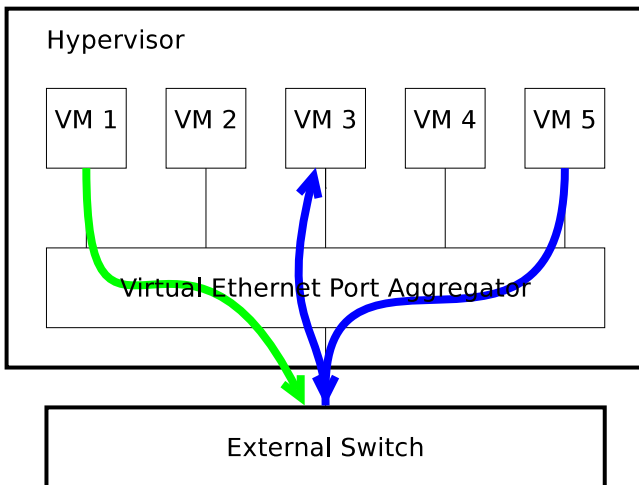
Virtual Networking in KVM

Arnd Bergmann
KVM Forum 2010

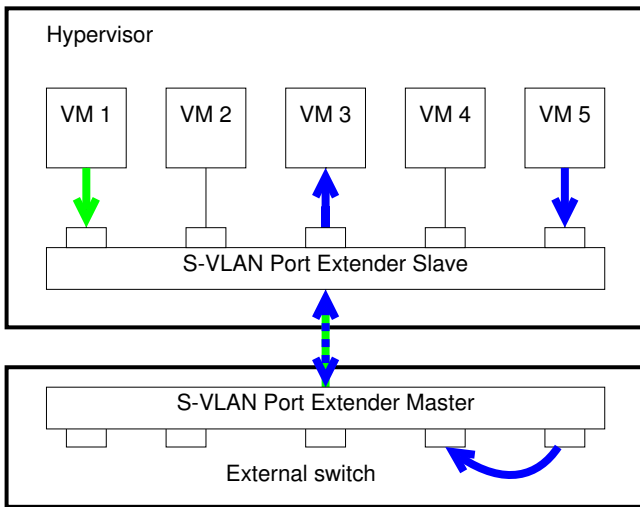
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- 802.1Qbg and 802.1Qbh
- Performance
- Open vSwitch

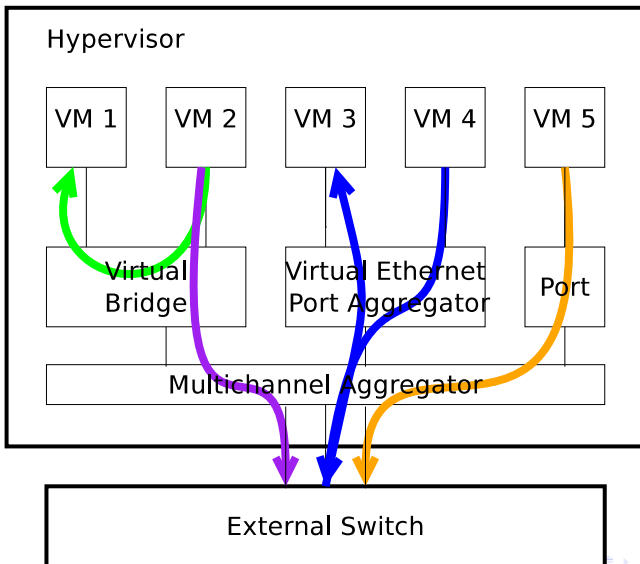
802.1Qbg VEPA



802.1Qbh Port Extender



802.1Qbg Multichannel VEPA



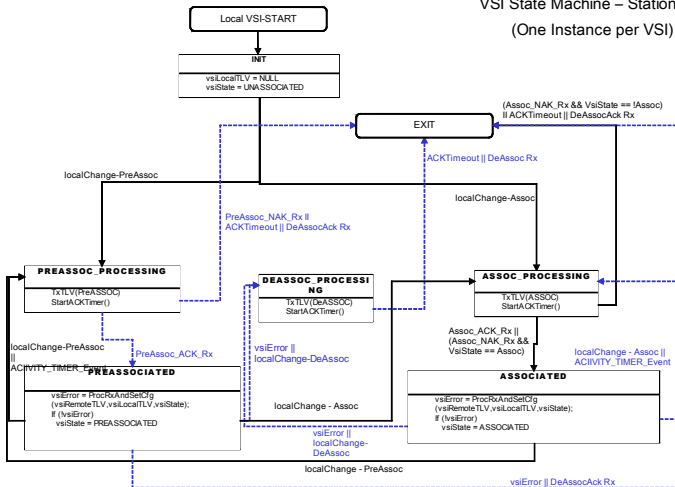
802.1Qbg protocols

- LLDP: Link-layer discovery protocol, new TLVs
 - EVB: Edge Virtual Bridging
 - CDCP: Channel Discovery and Configuration Protocol
- VDP: VSI discovery protocol

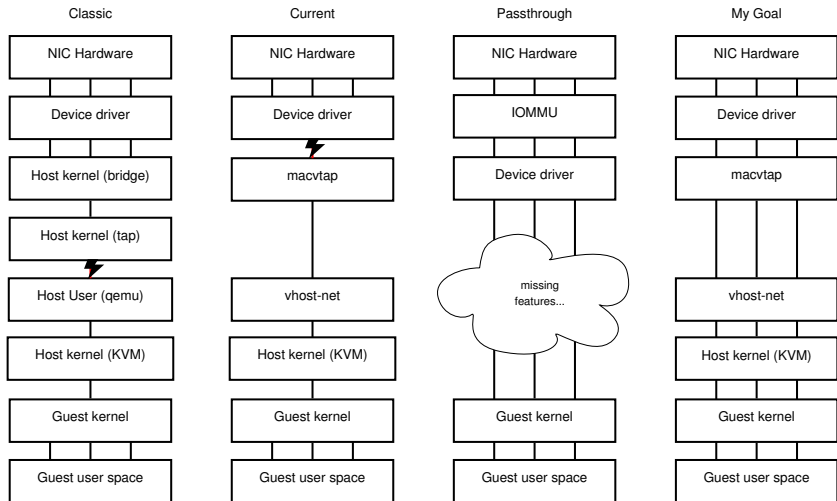
Draft: <http://www.ieee802.org/1/files/public/docs2010/bg-joint-evb-0410v1.pdf>

Virtual Station Interface Discovery Protocol

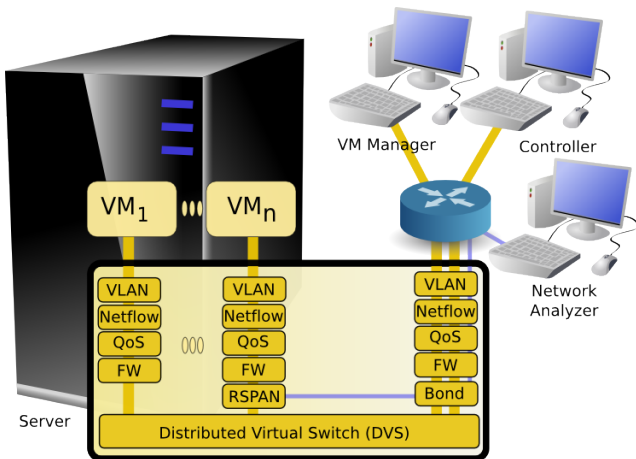
VSI State Machine – Station
(One Instance per VSI)



Network stack alternatives



Open vSwitch



<http://www.openvswitch.org/>

Open vSwitch

- OpenFlow standard based
- Alternative to bridge, macvlan/macvtap
- Use cases:
 - Distributed Layer 3 switch
 - Security Appliance
- → drivers/staging

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