

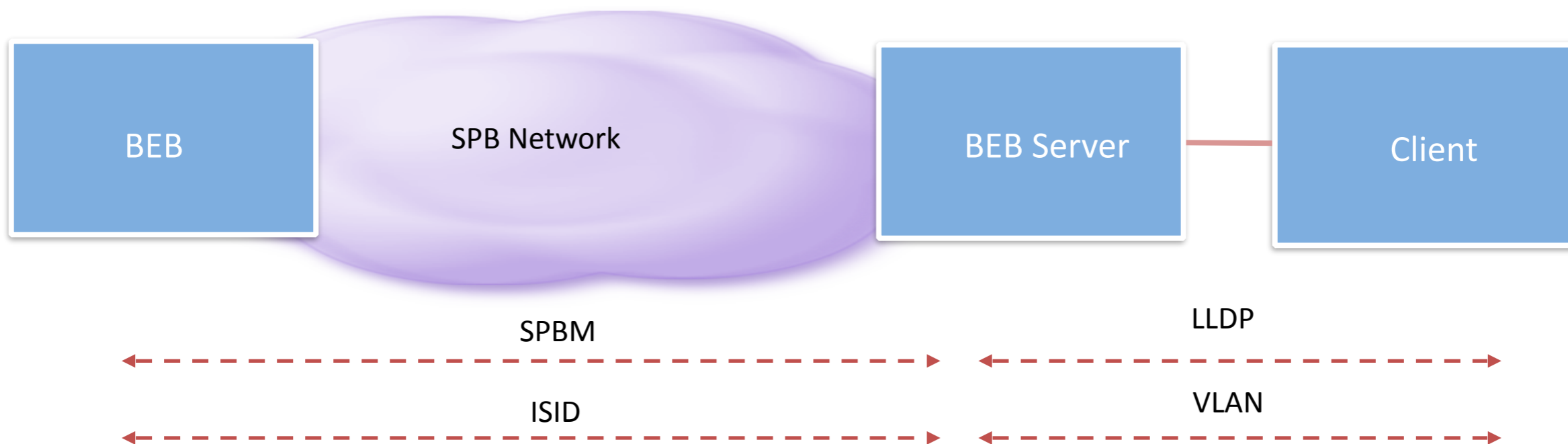


Integrating Open vSwitch with 802.1aq SPB

Paul Unbehagen

unbehagen@avaya.com

What does Auto Attach (AA) solve ?

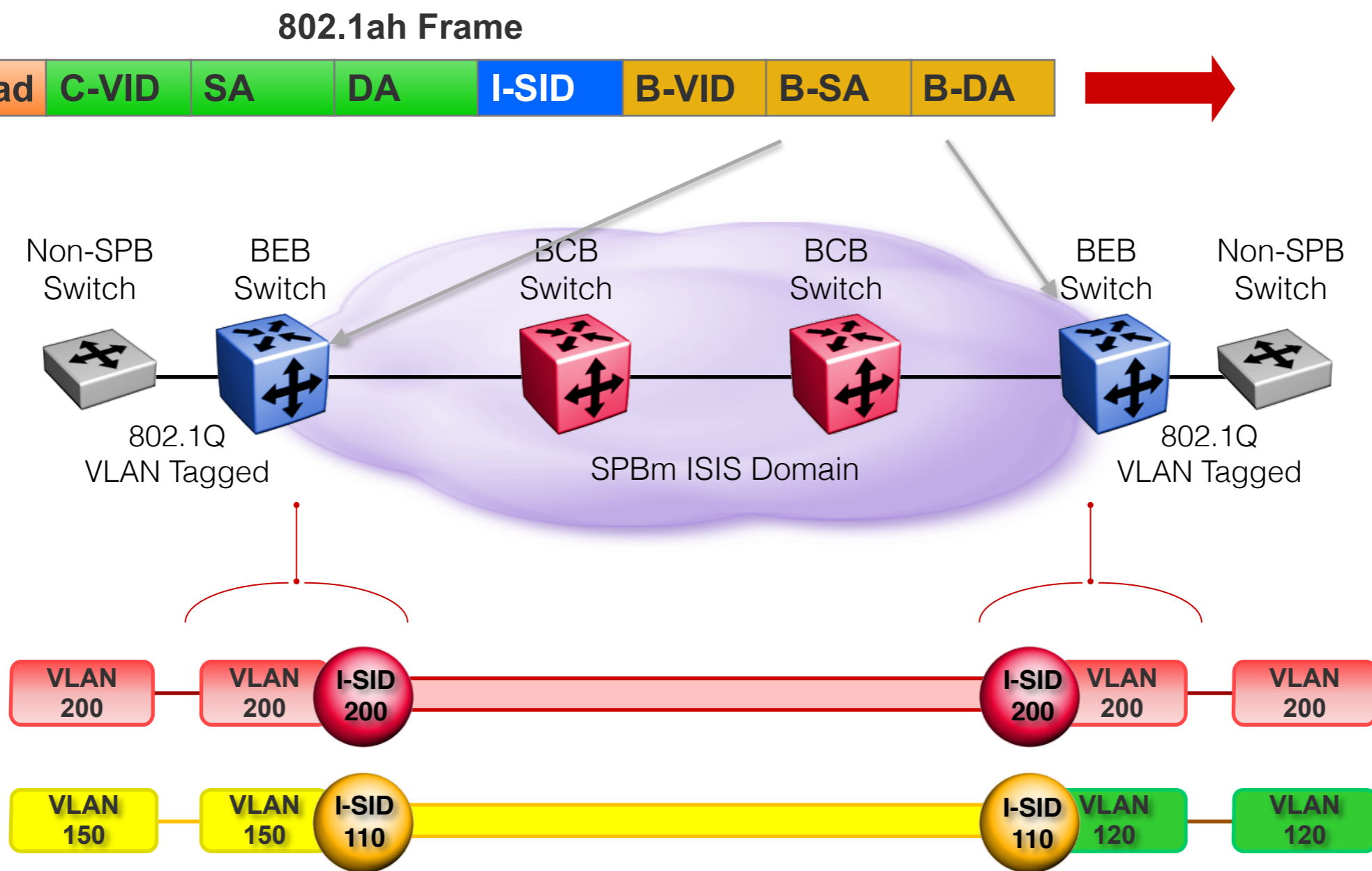


- ▶ SPB provides for a more scalable and simpler Ethernet network, AA provides an automated means for attachment for devices not supporting IEEE 802.1ah to individual services
- ▶ AA uses IEEE 802.1AB Link Layer Discovery Protocol (LLDP) to simplify and automate attachment of endpoints to ISID based services
- ▶ Defines a method of using IEEE 802.1AB Link Layer Discovery Protocol (LLDP) with IEEE 802.1aq Shortest Path Bridging (SPB) network to automatically attach network devices not supporting IEEE 802.1ah to individual services in a SPB network
 - ▶ These network devices typically do not support SPBM, MAC-in-MAC (802.1ah), nor I-SID usage and therefore cannot easily take advantage of the SPB infrastructure without manual configuration of attachment of VLANs to I-SIDs in multiple locations

What does SPBm solve ?

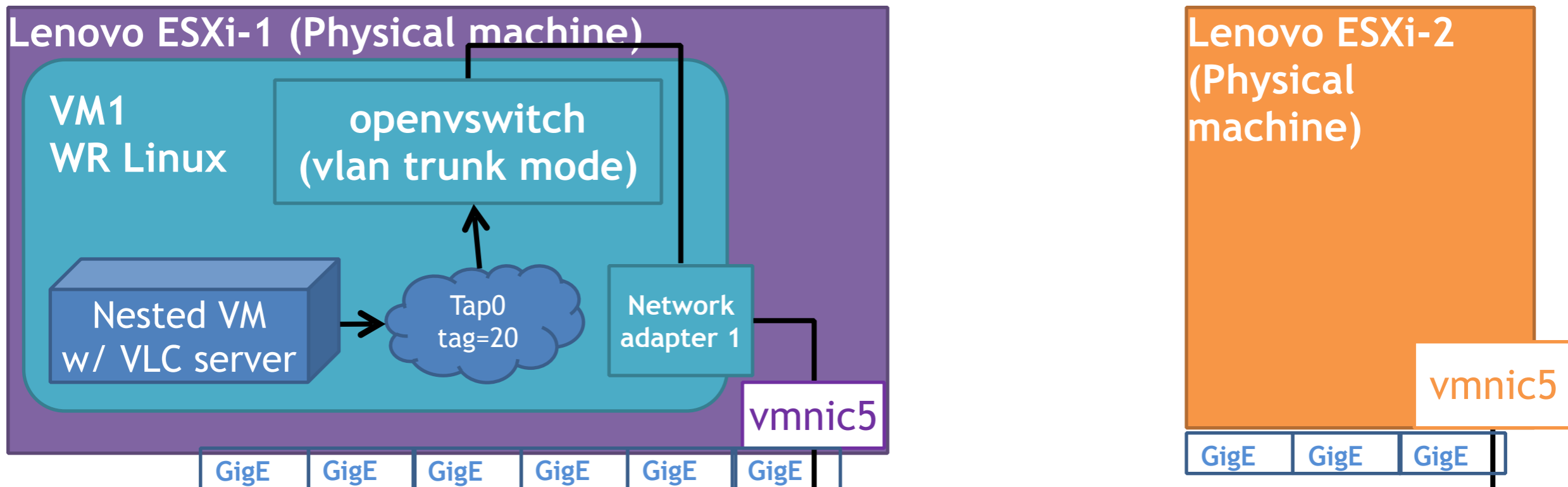
- ▶ Scalability : Mac address explosion
- ▶ Loop prevention & suppression
- ▶ Use all links. Does not block and waste link resources
- ▶ Use shortest path for unicast and multicast traffic
- ▶ Ease of provisioning
- ▶ Service virtualization
- ▶ Simple encapsulation

SPB services



- Transparent Layer 2 VLAN extension of services across SPB domain
- Simply associate I-SID to VLAN in BEB Switches

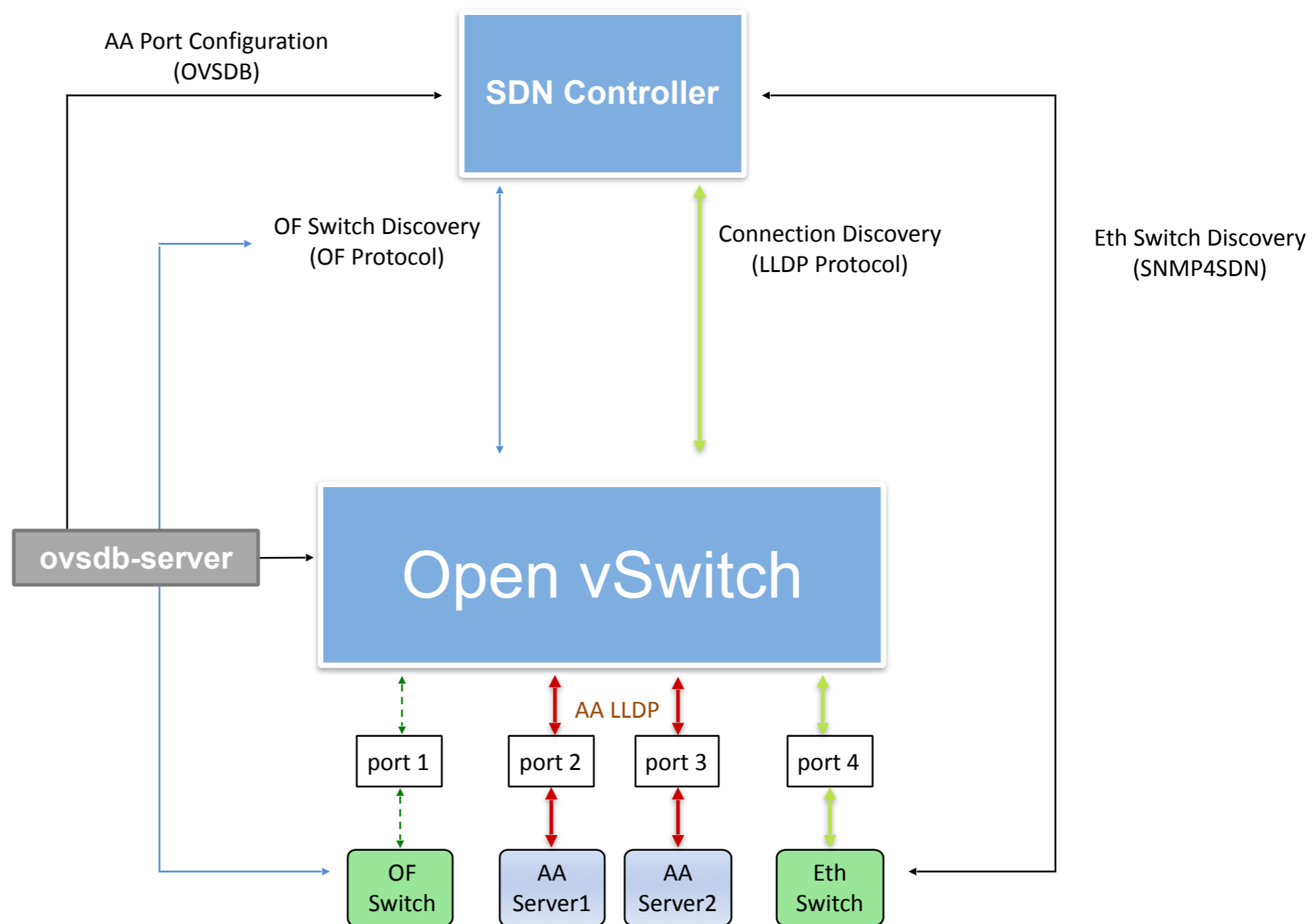
Functional demonstration of AA with OVS at VMWorld



STEP 1 of demo
 show auto attach with dynamic config of ISID/ VLAN map on the FA-OVS via ctl command

STEP 2 of demo
 Invoke a vmotion migration of VM1 from ESXi1 to ESXi2 and show re-attach with Fabric attach changes on ERS4850 to port 3 and traffic re-establishes automatically

Conceptual Auto Attach Model with OVS



Summary

- ▶ Submitted to IETF and IEEE
 - ▶ <http://tools.ietf.org/html/draft-unbehagen-ldp-spb-00>
 - ▶ Currently moving active work to IEEE

<https://github.com/auto-attach>

It has 2 git repos:

```
aa-ldpd % git clone https://github.com/auto-attach/aa-ldpd  
aa-sdk  % git clone https://github.com/auto-attach/aa-sdk
```



AVAYA

The Power of We™
