

Three Technologies Worth Watching or Learning

Some technologies that might position you well for future developments and trends

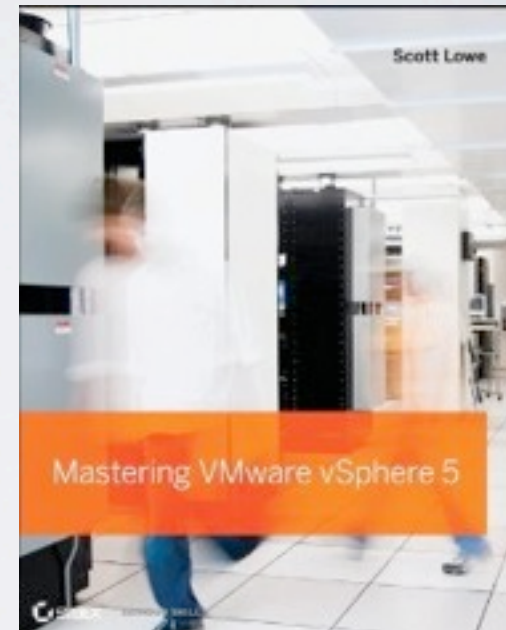
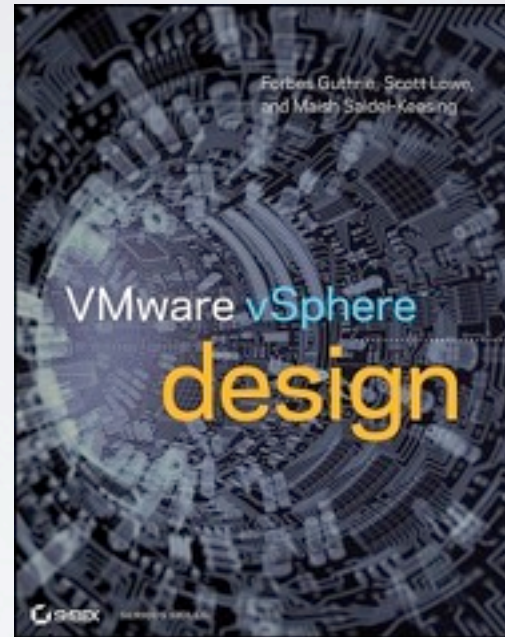
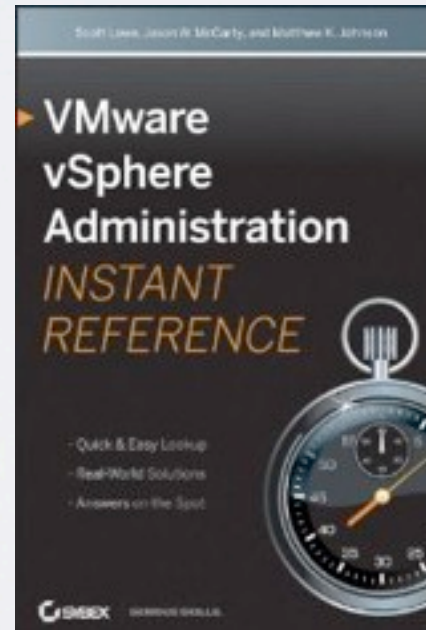
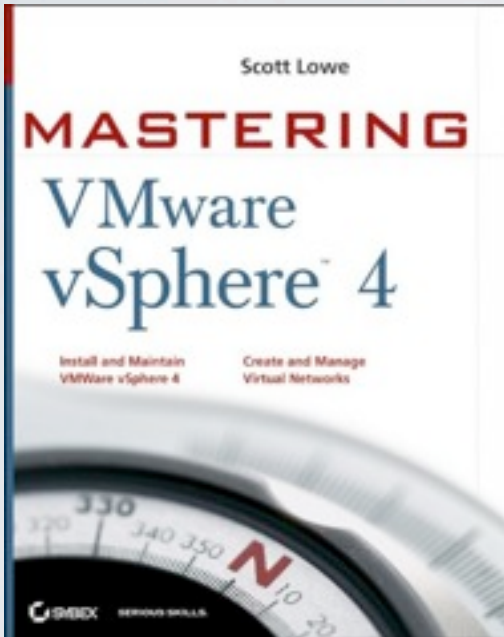
Scott Lowe, VCDX 39
vExpert, Author, Blogger, Geek
<http://blog.scottlowe.org> / Twitter: @scott_lowe



Before we start

- Get involved! Audience participation is encouraged and requested.
- If you use Twitter, feel free to tweet about this session (use hashtag #VMUG or @MyVMUG)
- I encourage you to take photos or videos of today's session and share them online
- This presentation will be made available online after the event

Your name is familiar...



Some new technologies to watch/learn:

- Network virtualization overlay
- Open vSwitch (OVS)
- Declarative configuration management

Network virtualization overlay

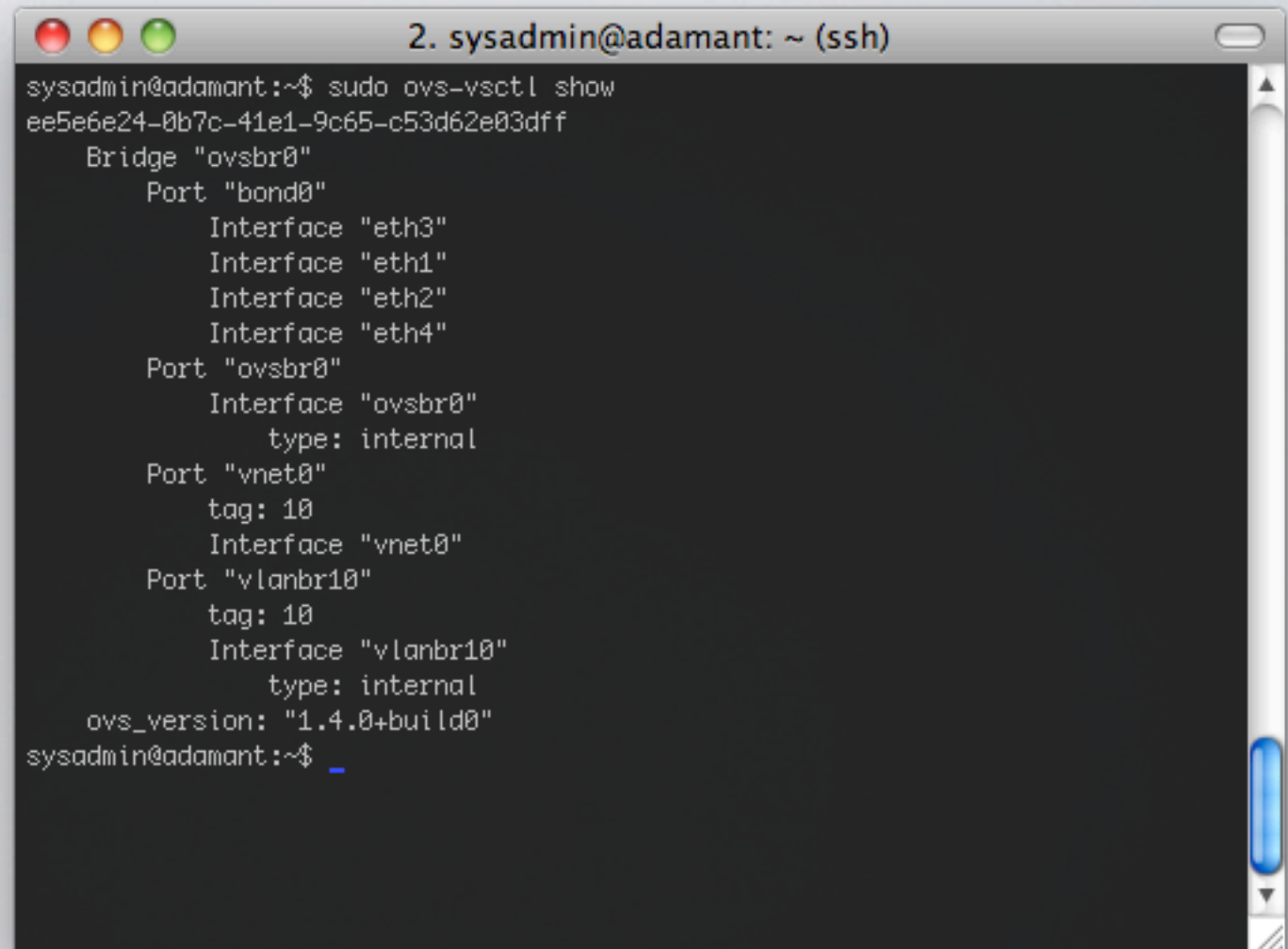
- Provides encapsulation and isolation
- Enables the creation of multiple logical network topologies on top of a single physical topology
- Provides multi-tenancy functionality
- Think technologies like VXLAN, NVGRE, STT, and others
- Work is underway in the IETF to standardize this functionality

Open vSwitch (OVS)

- A full-featured, manageable multi-layer virtual switch
- Runs on multiple platforms and with multiple hypervisors
- A key component in Nicira's (now VMware's) network virtualization solution
- Supports OpenFlow

Open vSwitch (OVS)

- Here's a quick screenshot:

A terminal window titled "2. sysadmin@adamant: ~ (ssh)" showing the output of the command "sudo ovs-vsctl show". The output lists the configuration for Bridge "ovsbr0", including ports "bond0", "ovsbr0", "vnet0", and "vlanbr10" with their respective interfaces and types. The terminal also shows the OVS version as "1.4.0+build0".

```
sysadmin@adamant:~$ sudo ovs-vsctl show
ee5e6e24-0b7c-41e1-9c65-c53d62e03dff
    Bridge "ovsbr0"
        Port "bond0"
            Interface "eth3"
            Interface "eth1"
            Interface "eth2"
            Interface "eth4"
        Port "ovsbr0"
            Interface "ovsbr0"
                type: internal
        Port "vnet0"
            tag: 10
            Interface "vnet0"
        Port "vlanbr10"
            tag: 10
            Interface "vlanbr10"
                type: internal
    ovs_version: "1.4.0+build0"
sysadmin@adamant:~$
```

Declarative configuration management

- Declarative configuration management describes what system should look like, not how you go about making it look like that
- Think Puppet or Chef
- Allow you to describe your “infrastructure as code”
- Can be a tool to help with change management (think code and version control repositories), testing/development of infrastructure changes, increased automation

Declarative configuration management

```
class apache::ssl {  
    include apache  
  
    package { "mod_ssl":  
        require => Apache::Module["ssl"],  
    }  
  
    apache::module{"ssl":  
        source => "puppet:///modules/apache/ssl.conf",  
    }  
}
```

Where do these fit in a VMware environment?

- Network virtualization overlay:
 - VXLAN already in vSphere 5.1 and vCloud Director 5.1
 - Not a stretch to think other technologies might be supported
- Open vSwitch:
 - Nicira was primary developer; now owned by VMware
 - Not unreasonable to think OVS could be ported to vSphere

Where do these fit in a VMware environment?

- Declarative configuration management:
 - Increases automation and therefore increases efficiency
 - Enables you to move away from “snowflake servers” toward “phoenix servers” (see <http://martinfowler.com/bliki/SnowflakeServer.html> and <http://martinfowler.com/bliki/PhoenixServer.html>)

Questions & Answers

Thank you!

Don't forget to provide feedback and rate this session on the last page of your Program Guide.