

# ARISTA

**Making SDN a Reality**

Douglas Gourlay  
Vice President – Arista  
Networks

1 @douglasgourlay

# What is SDN?

## Purist View

a strict separation of control plane and data plane

*SDN = Openflow*

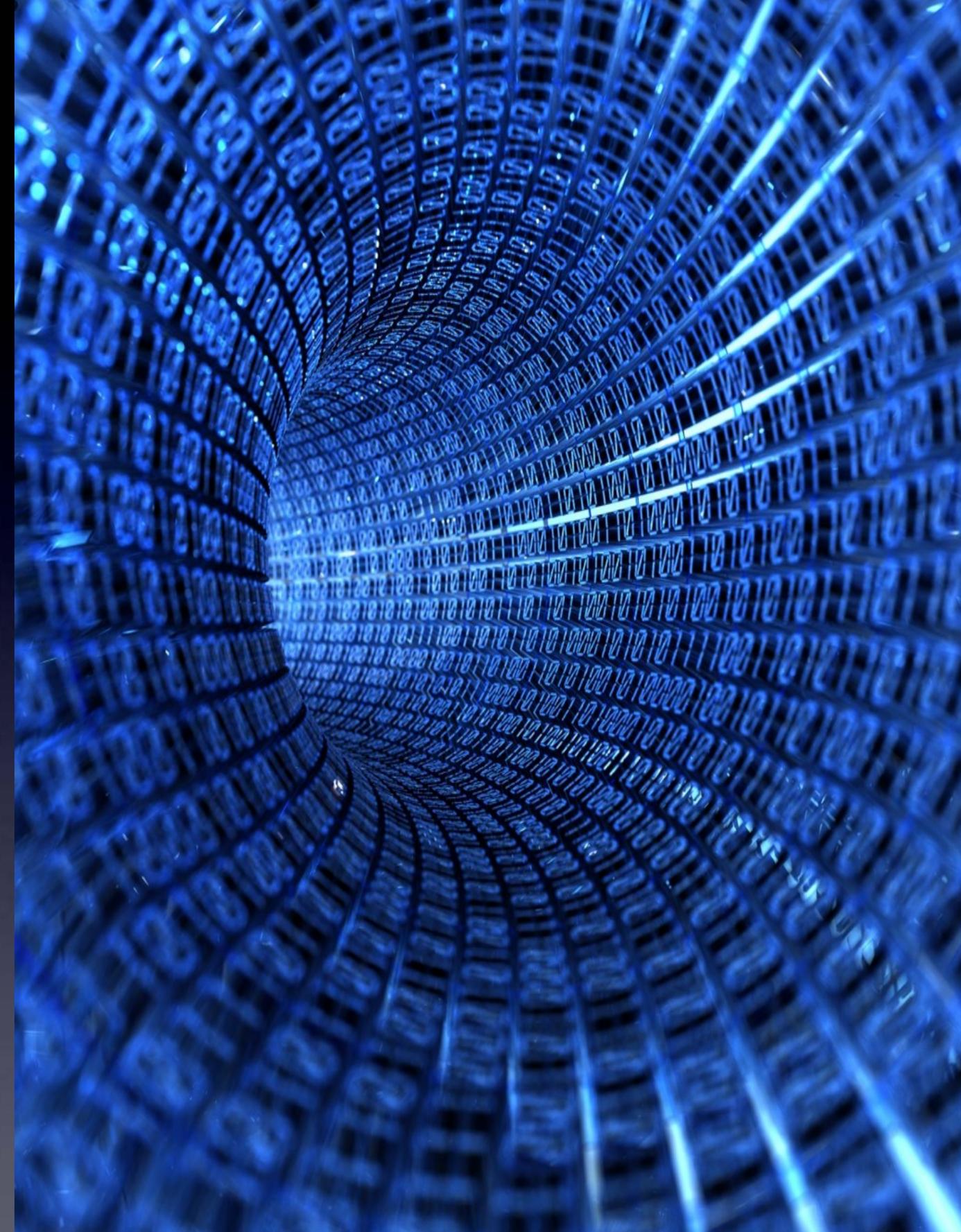
## Pragmatic View

a network architecture designed to be programmed by high-level languages and APIs

*SDN = Programmability*

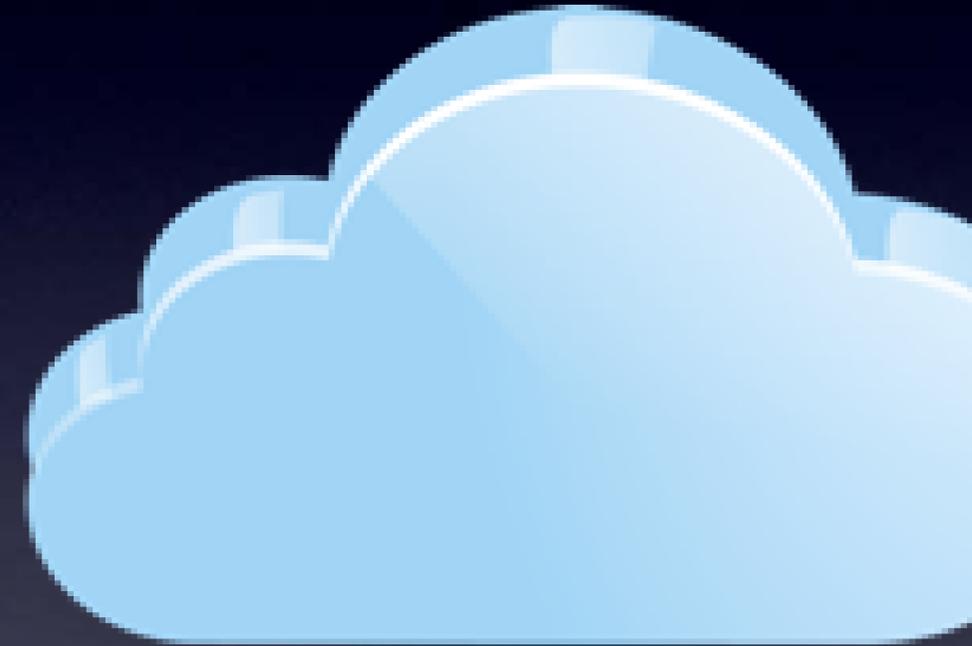
## A Common View

*SDN = Network Virtualization*



# Why SDN?

Networks are an order of magnitude larger; automation has lagged



SDN solves inflexibilities and inefficiencies that inhibit scale & automation

# SDN is More than Just OpenFlow





# Arista's SDN View

SDN is a software-to-infrastructure interface that allows applications to drive infrastructure actions, delivering capabilities like Network Virtualization and Orchestration.

# Arista SDN Phases: Making SDN a Reality



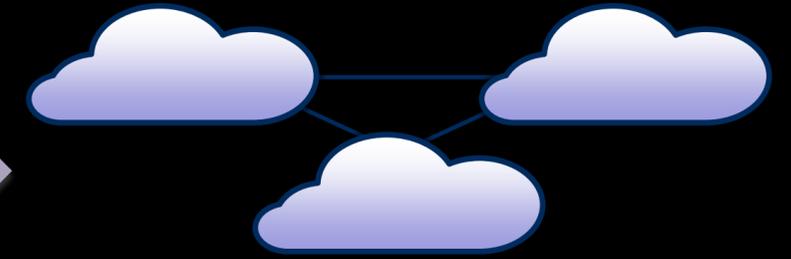
Ubiquitous Network-wide Virtualization



All devices virtual and SW provisioned



Open APIs – Control & Data Orchestration Integration



Rapid Service Delivery



Arista EOS



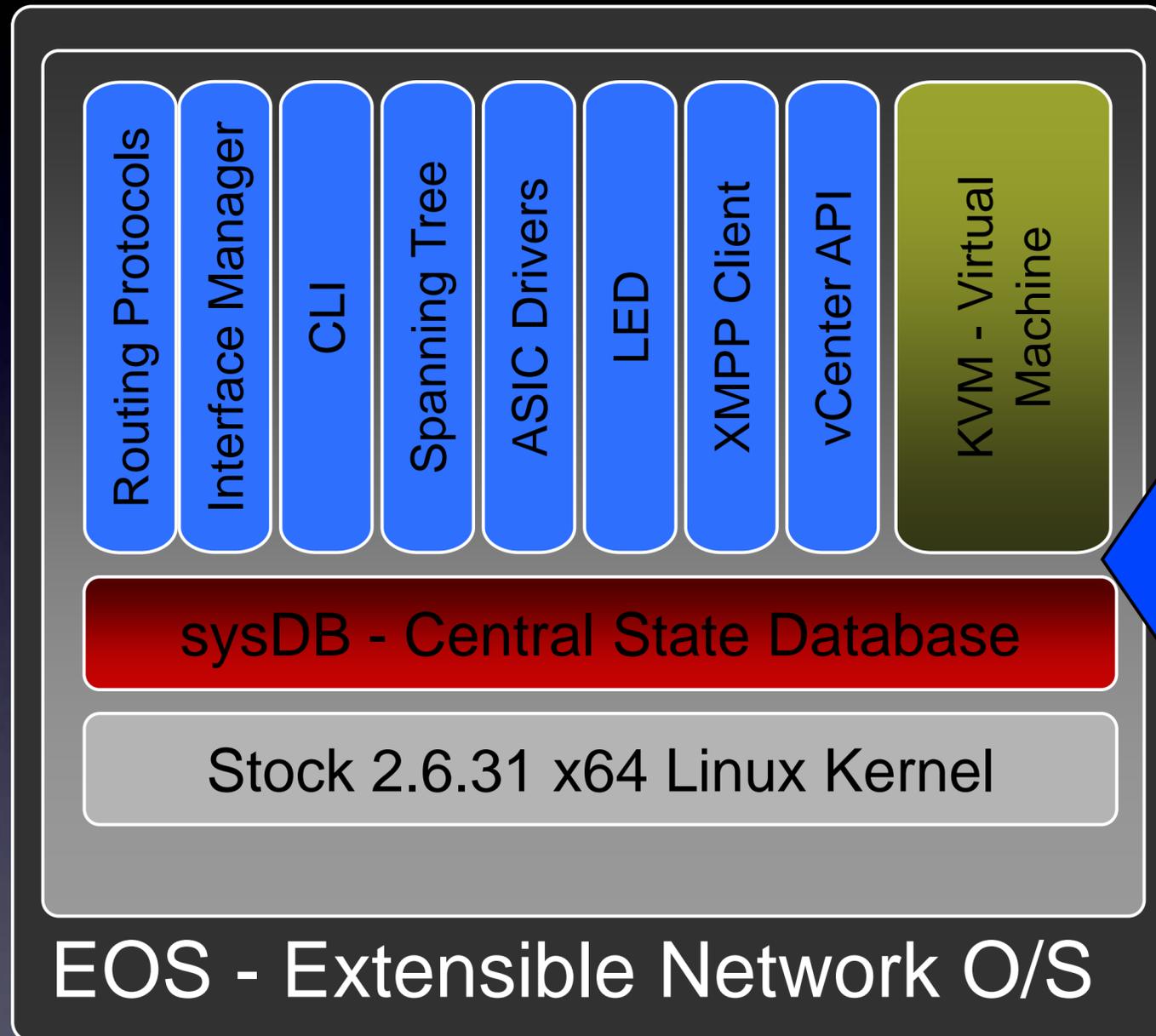
Programmable Foundation

# Recent and and near-term SDN innovations

- Integration of Arista EOS with Openstack - enables fully automated provisioning
- Contribution to Openstack that enables unified physical and virtual network provisioning
- Openflow support with new Direct Flow mode for controller-less operation
- Hybrid support of Openflow to enable flow provisioning on top of existing production networks
- Arista eAPI Integration with several cloud and application partners



# Arista EOS - programmable network O/S



Partner Integration  
- F5, Palo Alto, Splunk, etc

Packaged Extensions  
- CloudVision, etc

Openflow 1.0/1.3  
- multi-vendor services

Direct Flow Programming  
- customized flow pathing

EOS eAPI  
- JSON Web Services API

Local Scripts  
- Python, TCL, Shell

Local Daemons/Extensions  
- C++, Python, etc

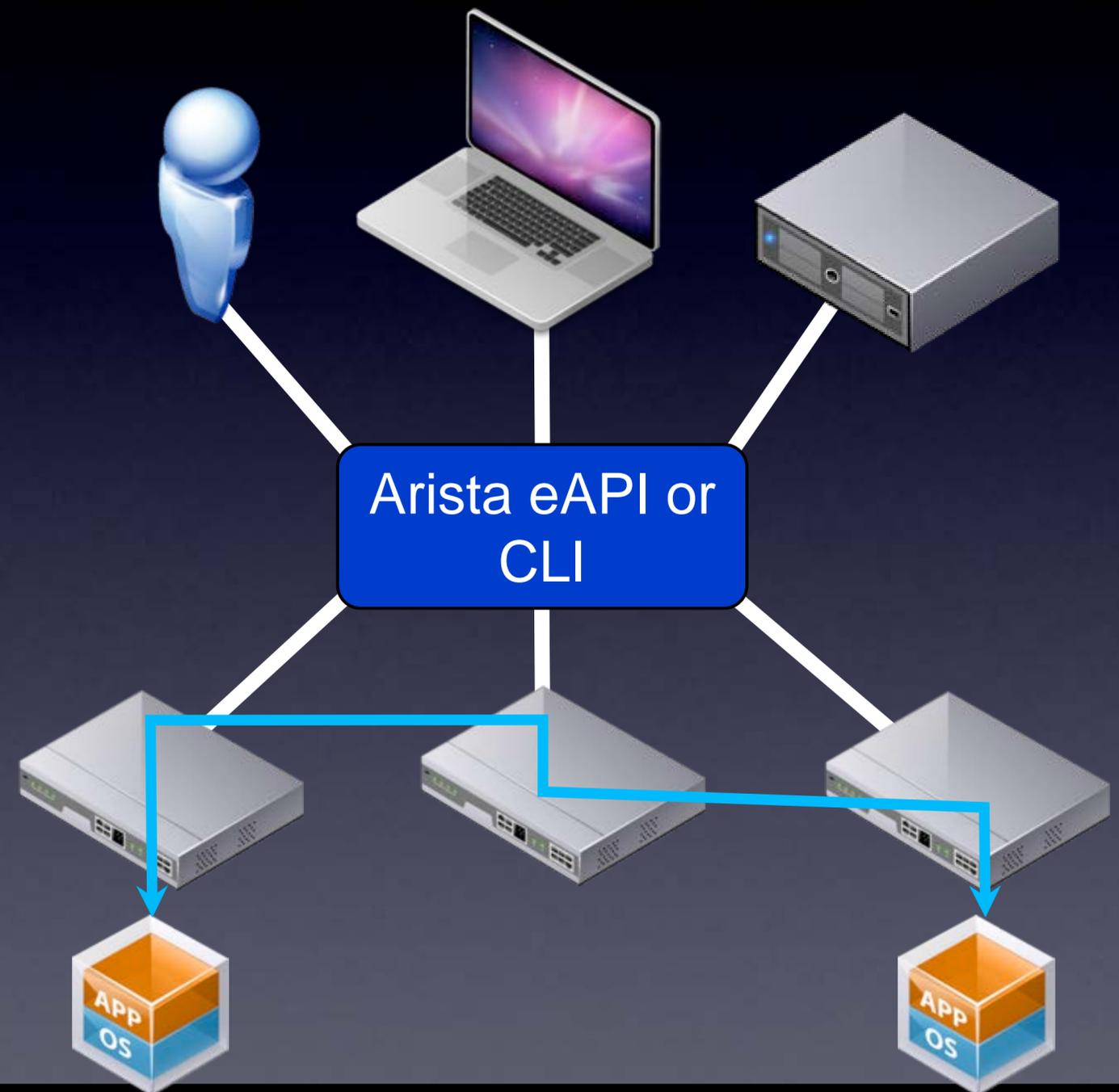
# Arista DirectFlow Control

Enables direct CLI and eAPI control over specific flow switching operations

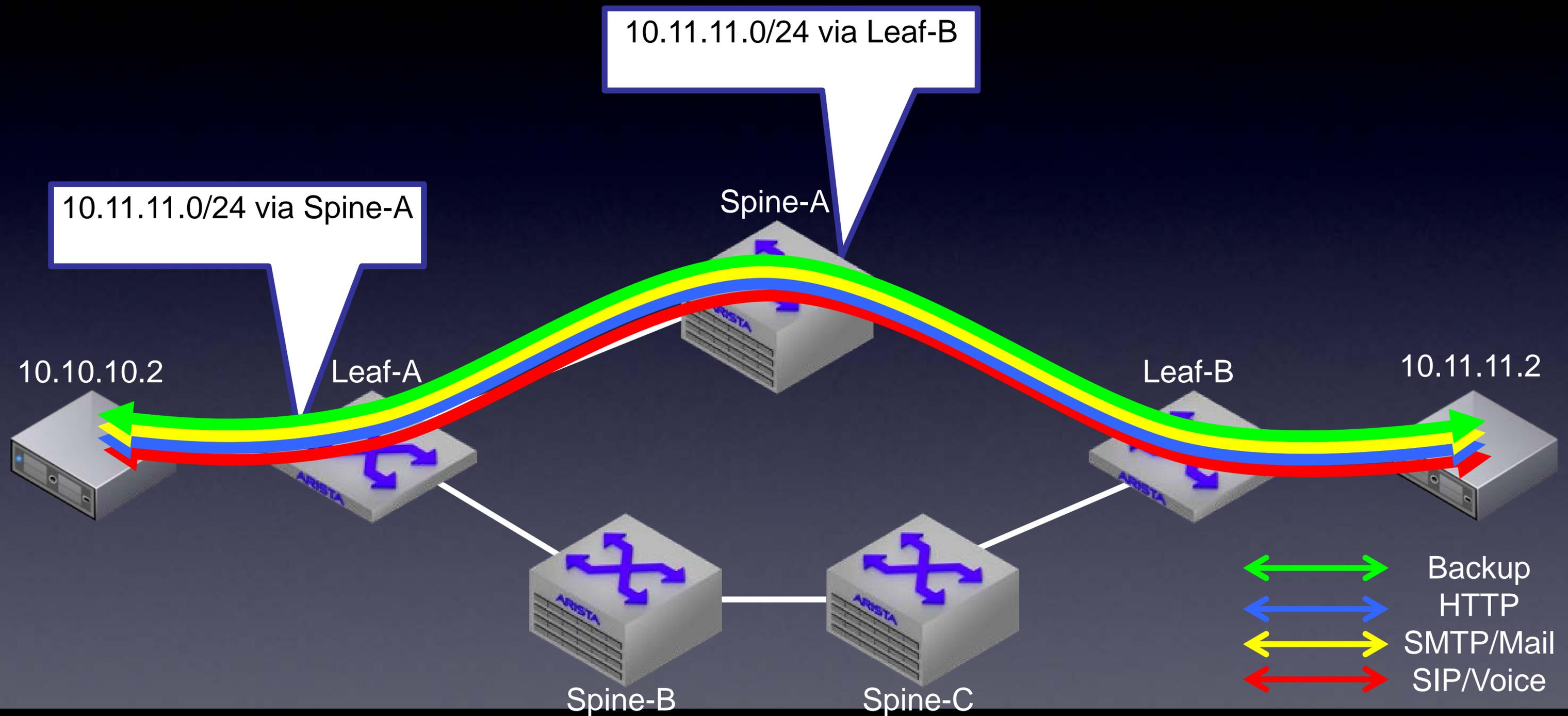
Extends the capabilities of OpenFlow with controller-less operation and enables per-flow pattern-matching with full control

Enables firewall load balancing, purpose-built backup network consolidation, etc.

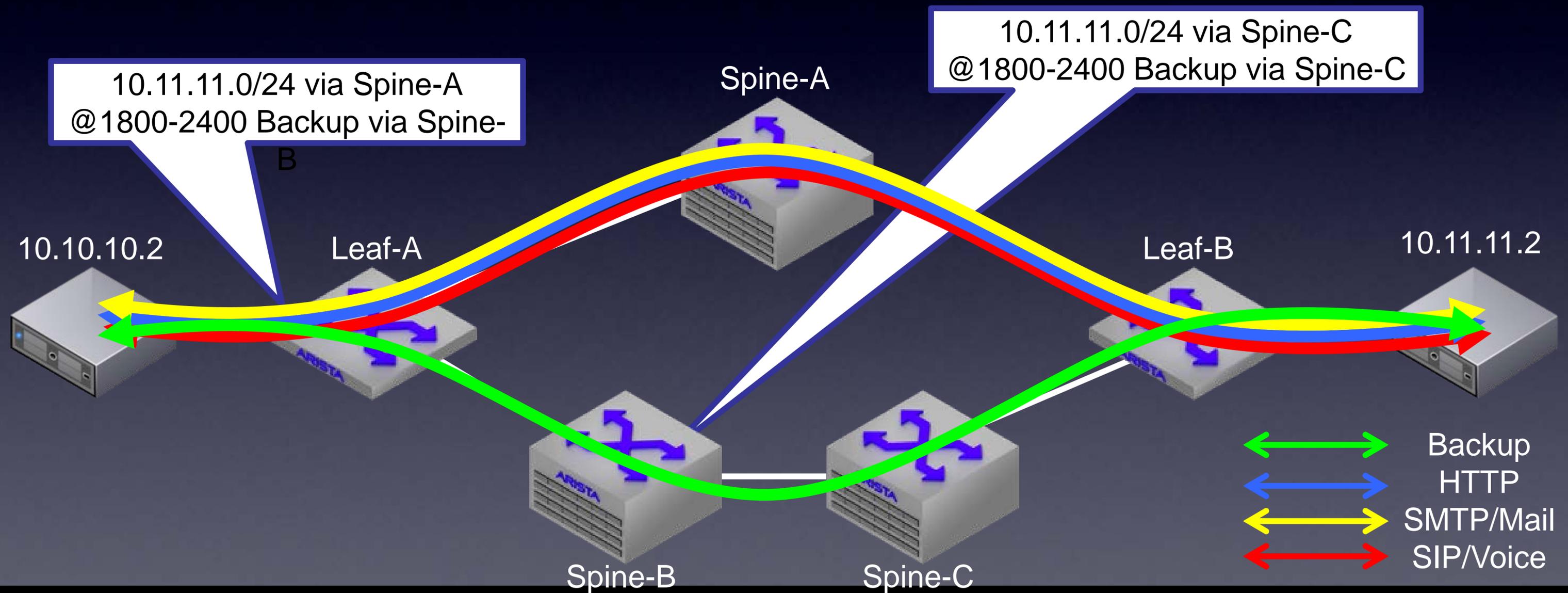
Available Summer 2013



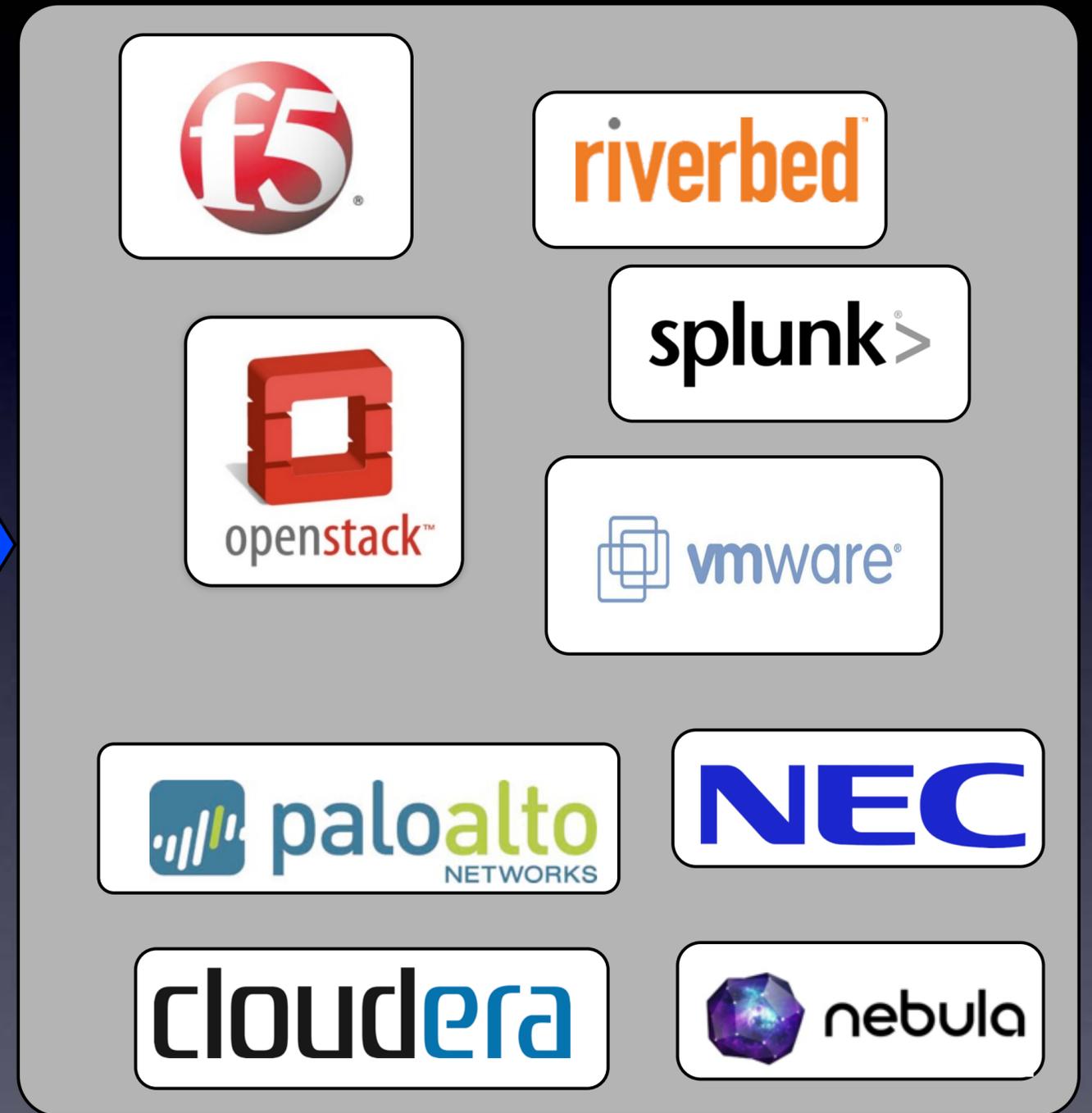
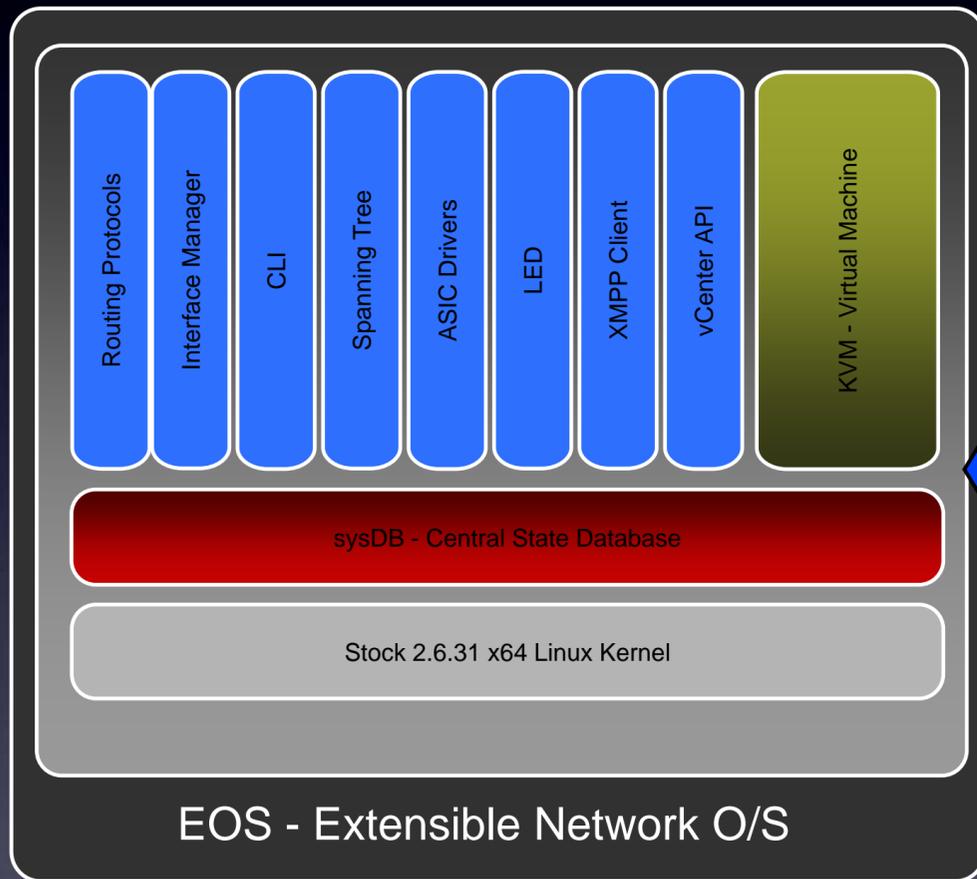
# Traditional Routing/Switching Mode



# Arista DirectFlow Programming

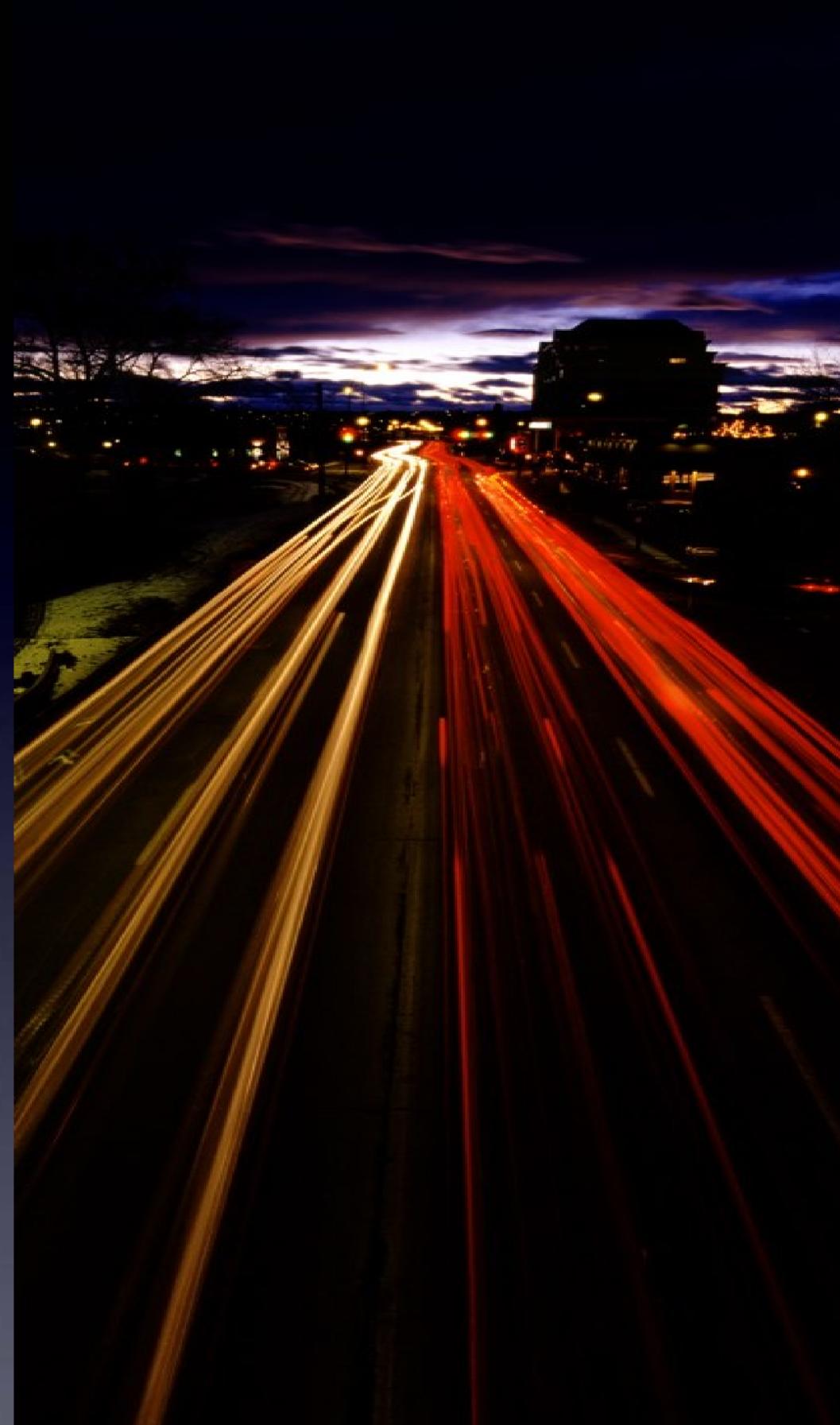


# eAPI links Arista to other industry leaders - bringing the best together for our customers



# Summary

- Arista EOS offers customers the best option for trying and deploying SDN capabilities.
- Customers can freely choose controllers, direct flow capabilities, protocol driven topologies, or hybrid approaches. No barrier to entry, no barrier to exit.
- Arista EOS enables orchestration of the network with VMware and Openstack - full VM Tracer capabilities and auto-provisioning for 90%+ of the public and private cloud market!
- Competing solutions are largely proprietary, and are designed to force single-vendor or architectural lock-in.
- Simply the best networking for the cloud



ARISTA

The word "ARISTA" is rendered in a bold, metallic, sans-serif font with a silver-to-white gradient. It is positioned in the upper left quadrant of the image. The background is a dark blue gradient with several glowing, wavy lines of light blue and white that sweep across the lower half of the frame, creating a sense of motion and depth.