FlexSwitch Overview

SnapRoute™

Who is SnapRoute?

- Experienced
  - Founded by former Apple engineers who led both DevOps and NetOps
  - Grown to include developers from Broadcom, Cisco, Ciena, and others
  - Funded by tech industry heavyweights
- Open as Core Value
  - Open Source to accelerate innovation and adoption
- Ecosystem Focused
  - Full support across silicon, hardware, and software solutions.
  - Focus on control for both scale and enterprise

Version 1.0

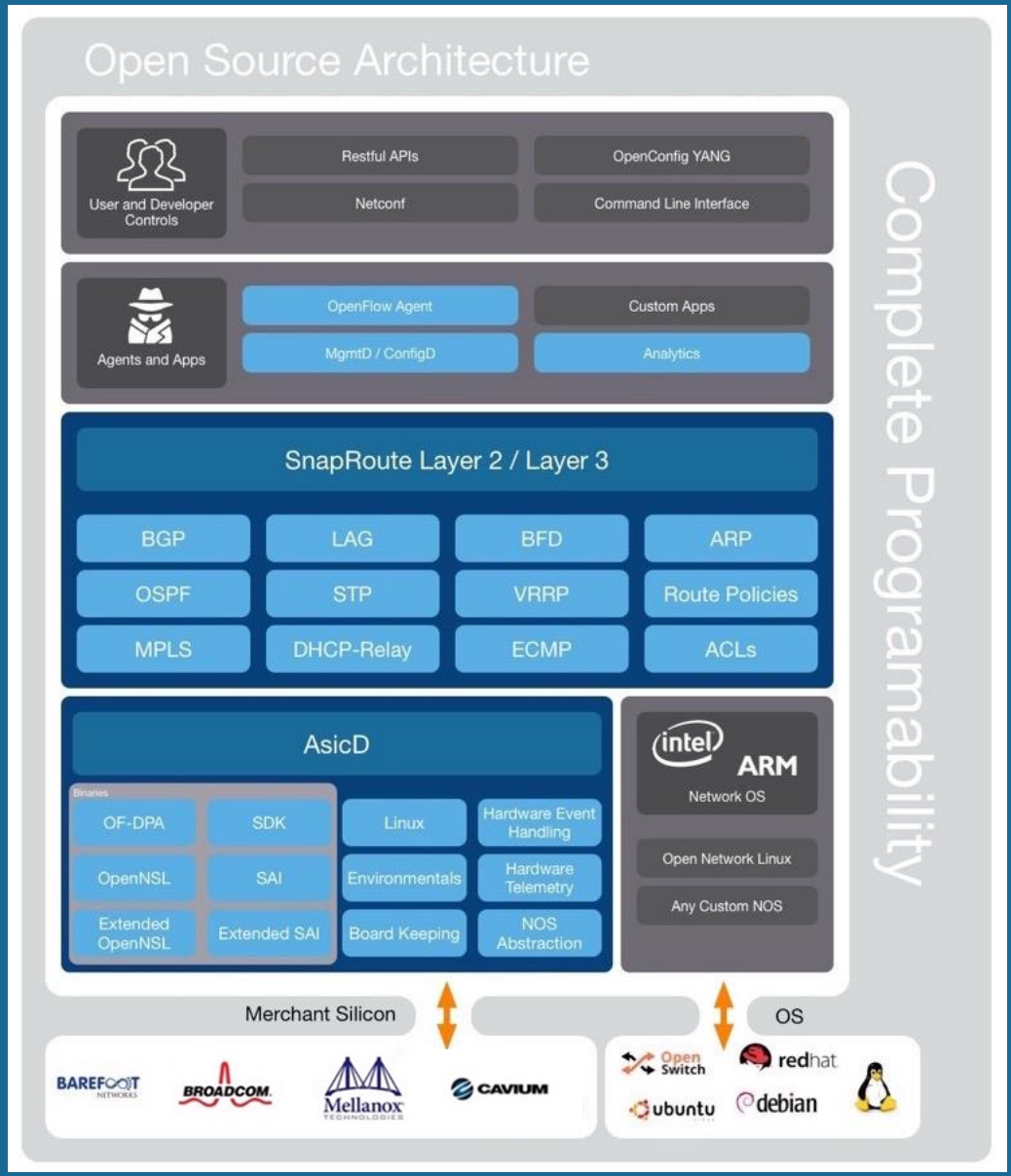
Manage, deploy and program everything with a common API

Run any agent

Load only the protocols you need

HAL supports and extends SAI, OpenNSL and OF-DPA

Complete choice of merchant silicon, CPU and NOS



Layer 3

	Suite	Protocol	Reference Specification
Routing	BGP Core	BGP	RFC 4271
	BGP4 Extensions	Route Reflection	RFC 4456
		Capabilities Advertisement	RFC 5492
		4-byte ASN	RFC 4893
		Multiprotocol	RFC 4760
		Add-Path	RFC 6774
	BGP4 Security	TCP MD5 Signature	RFC 4279
	OSPF Core	OSPFv2	RFC 2328 (Partial)
	VRRP	VRRP	RFC 5798
	ECMP	ECMP	RFC 2991, RFC 2992
	RIB	BGP, OSPF, Connected Static	
	Policy Engine	All Routing Protocols	

IPv4 & Bridging

	Suite	Protocol	Reference Specification
IPv4	IPv4	IPv4	RFC 791
		31-Bit Prefixes	RFC 3021
	DHCPv4	DHCPv4 Relay	RFC 6607 (Partial)
	ARP		RFC 894, RFC 5494

	Suite	Protocol	Reference Specification
Bridging	VLAN	802.1q	IEEE Std. 802.1Q-2005
	LACP	802.3ad	IEEE Std. 802.1AX-2014
	STP	802.1d	IEEE Std. 802.D-1998
	RSTP	802.1w	IEEE Std. 802.D-2004
	PVST	802.1d and 802.1w	

High Availability, Management, & Hardware

	Suite	Protocol	Reference Specification
High Availability	BFD	BFD Base (Async/Demand)	RFC 5880
		BFD on LAG	RFC 7130

	Suite	Protocol	Reference Specification
Management	ConfigD	REST APIs	
		State Database	
		Config Database	

	Suite	Protocol	Reference Specification
Hardware	AsicD	Broadcom OpenNSL	
		Mellanox SAI	
		Barefoot SAI (Soft Simulator)	

Comprehensive Approach

- Reliable Open Source stack pervasive across market
- Full support of ecosystem including kernel, standards, open SDKs, and required validation
- OEM differentiation via Dev Ops extensions, telemetry, support, etc.

ROADMAP

Where we are today

- BGP
- LACP
- ARP
- DHCP Relay
- RSTP+
- Rapid STP
- Bridge Assurance
- VRRP
- SVI
- ECMP
- L3 LAG
- Route Policies
- OSPF
- BFD
- BPDU Guard

Datacenter

Ready in August

- RFC 5549
- AddPath
- MGMT VRF
- LLDP
- ACLs
- VxLAN
- Graceful Restart
- Port Mirroring
- CoPP

Enterprise

Released in the fall

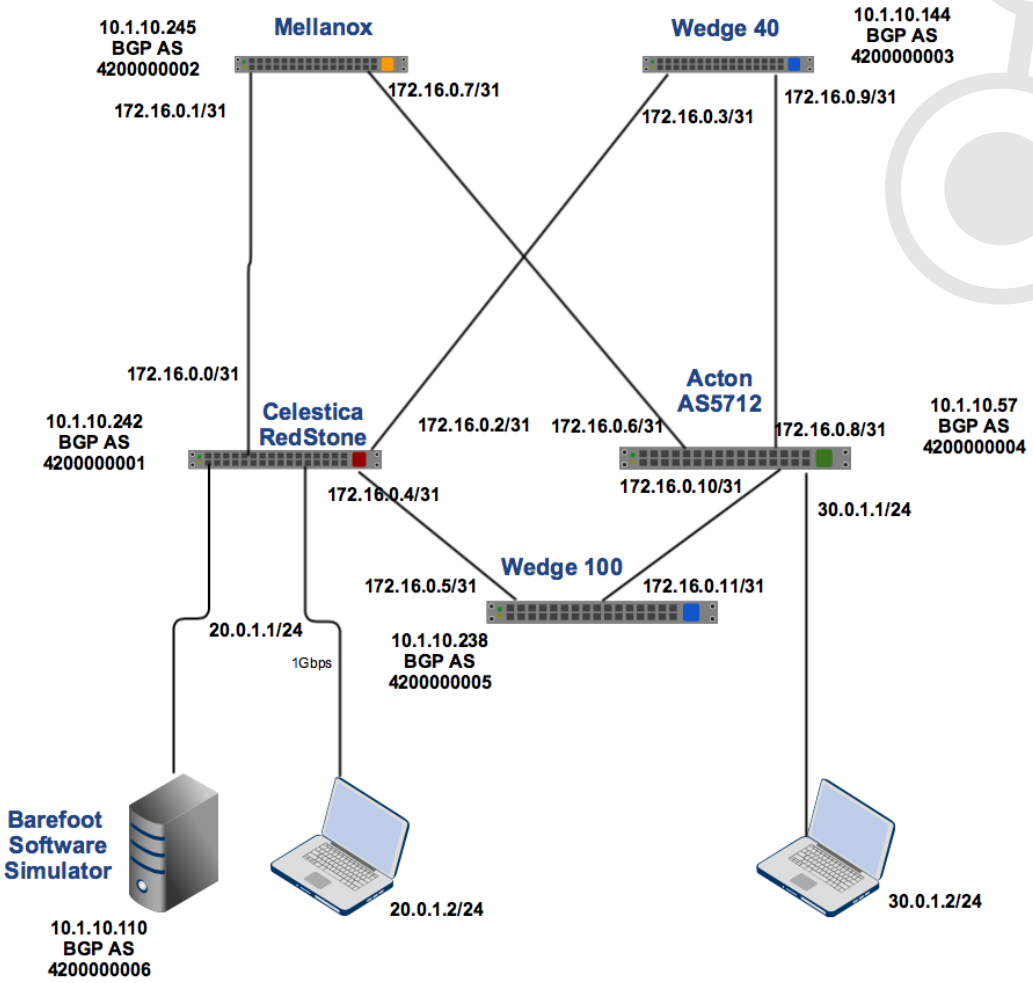
- EVPN
- L3VPN
- MPLS (Edge LDP)
- MLAG
- MPLS (LFIB)
- VRF
- Edge Monitoring
- RFC3107
- Hitless Upgrades
- VPLS

WAN EDGE / Telco

DEMO!

- Different hardware platforms: Wedge-40, Wedge-100 Celestica, Mellanox, Acton, Barefoot
- Different ASICs: Broadcom Trident II, Tomahawk, Barefoot(software simulator)
- Different Kernels: 3.10, 3.2, 3.16 etc
- Different Distros: Debian, Ubuntu, Open Network Linux
- Protocols: BGP, BFD, IPv4, ECMP, Policies
- Interaction: CLI, Rest API, Python module

DEMO Topology



SnapRoute

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