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Building Routing, Not Routers

Speaker:

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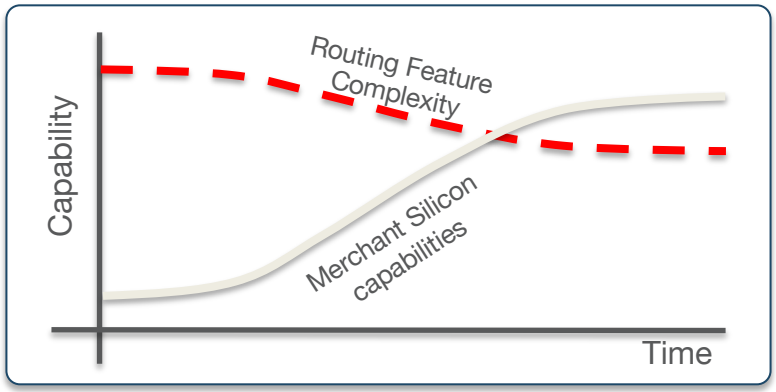
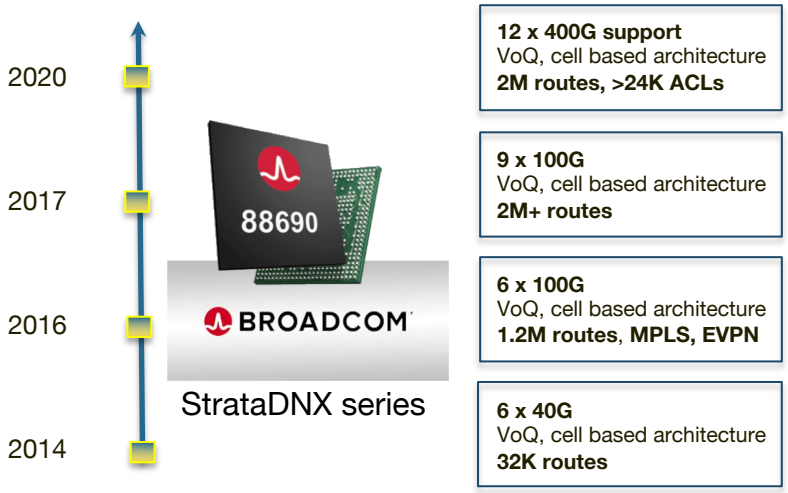
Bringing Merchant Silicon to Routing

- Look at the legacy routing market
  - Network vendor custom silicon
  - Due to complexity of functionality and table scale requirements
  - Service Blades often caused lock-in
  - Port Density is reduced
  - Costly $$$$ price per Gb



- Lines are blurring with the latest merchant silicon
- Increase scaled and capability while achieving hardware cost savings



Today: The Inflection Point Where Merchant Silicon and Routing Meet

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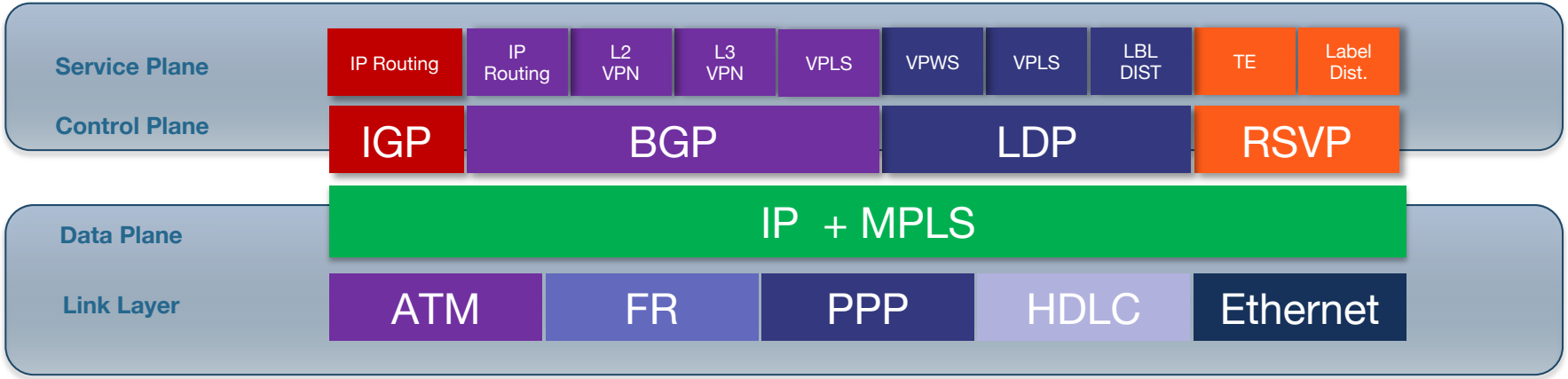
Growing The Technology Stack From...



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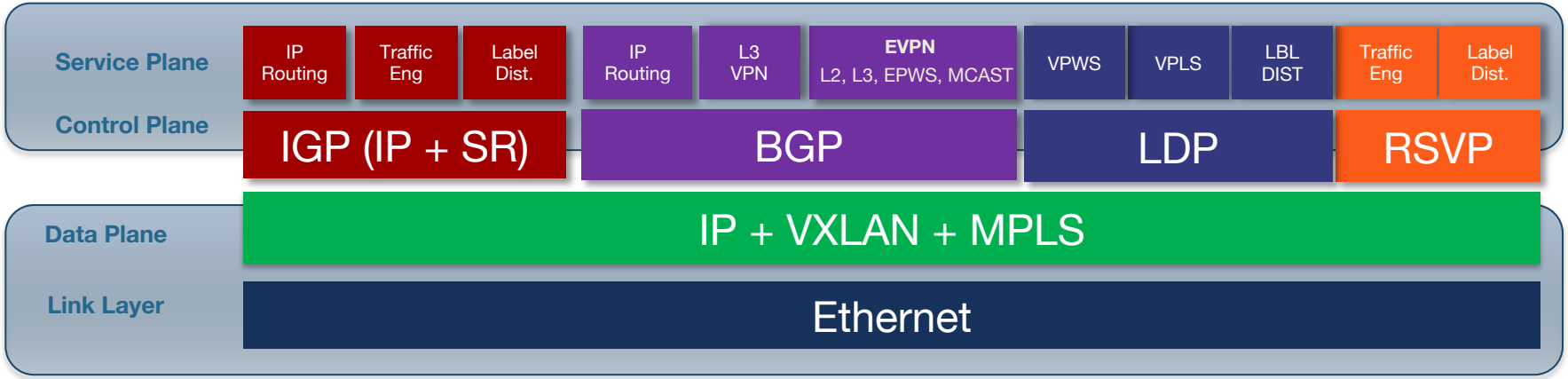
Growing The Technology Stack To...



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Arista Routing Evolution

Flexible Control Plane

Modern Protocols, Quality First
High Fidelity Telemetry
Industry Leading Automation

Scalable Platforms

Arista R Series Platforms

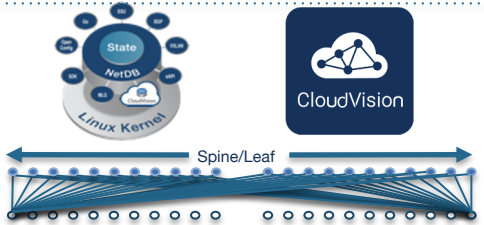
Universal Spine and Leaf

1G - 400G, 1 OS

DC Foundation

Cloud Principles

Scale-Out
Simplify
Software-Driven Control



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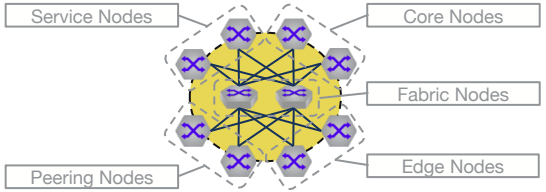
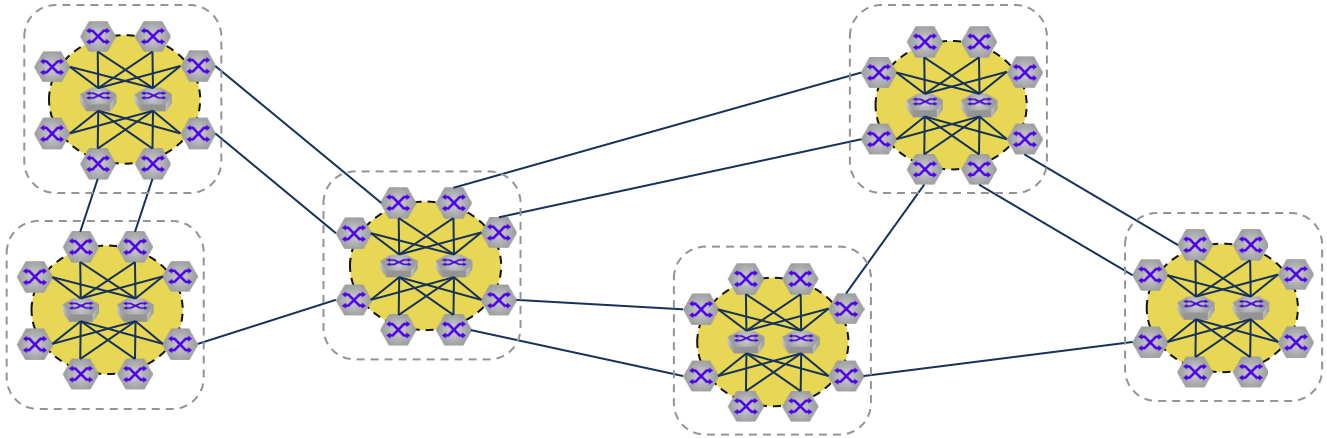
Scale-out – Disaggregated, Deconstructed, Distributed

Putting all pieces together

- Distributed Leaf-Spine design inside of the POP cluster
  - Leaves play Linecards role
  - Leaf set is chosen in accordance to real-life requirements
  - Adding / removing nodes doesn't affect the network
- Each POP is represented as a single node in the network
- Unlimited scaling





Supernode idea:

- Extensible elastic architecture
- Balance between cost and functions
- BGP SR-TE
- ISIS-SR
- Anycast SID
- TI-LFA
- Dynamic Flooding (draft-ietf-lsr-dynamic-flooding)
- Area Abstraction (draft-li-lsr-isis-area-proxy)

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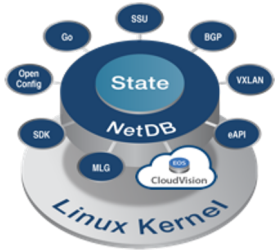
ARISTA FlexRoute™



2M Routes
30M Paths (32GB)
512-way ECMP
EVPN, MPLS, SR-TE, VPWS, RSVP

Modern OS	• Lean OS • Programmable @ all layers • Rich routing feature-set
Automation & visibility	• NETCONF/YANG • CloudVision Turnkey Automation • OpenConfig → State Streaming
Carrier-class Scaling	• Massive scaling 64 bit architecture OS • Multi million FIB scaling (2M Routes)
Agile Certification	• cEOS/vEOS to simulate large-scale networks

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Thank You

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