

THEJUDAGROUP

A DIVISION OF CONCEPT CAPITAL MARKETS, LLC

THEJUDAGROUP INVESTMENT RESEARCH

SWITCHING UPDATE

ARISTA INNOVATES AGAIN WITH SPLINE™ SWITCH

▪ NEW SPLINE™ SWITCHES PROVIDE SINGLE TIER, MIDDLE OF ROW SOLUTION

On November 4th, Arista Networks, a leading provider of datacenter (DC) switches introduced the X-Series Spline™ switches, for single tier, middle of row connectivity for up to 2000 servers. While the DC switching market has seen several product introductions in the last few weeks leading up to the Insieme announcement, we believe the X-Series is noteworthy since it creates a new category of collapsed leaf and spine solutions providing scale out in a single tier solution with attractive economics (cost of 10G connectivity is 60% below that of a 2-Tier leaf-spine). The X-series will be available in fixed and modular form factors and we believe uses the Broadcom Trident II chipset providing density of 32x 40G/128x 10G per 1U or line card. We believe the Arista 7500E switch, which uses the Broadcom Dune chipset, will remain Arista's and the industry's highest density/line card chassis and will likely be used by operators in a spine/leaf architecture to scale to over 10K servers, while the Spline™ will likely be used for clusters up to 2000 servers running single high performance applications such as storage and high performance computing.

▪ EOS LIKELY THE LONG-TERM DIFFERENTIATOR

Arista initially gained traction due to its hardware merits including low latency and high density, and continues to be a market leader in density and power with its new TOR, Spline™ and 7500E chassis. However, we believe Cisco will catch up with Arista on hardware capabilities in 2014, leveraging merchant silicon and internal development, and Arista's long-term differentiator is likely to be its EOS operating system given cloud operator focus on openness and programmability of network hardware. EOS is i) a modular Linux based OS (allows use of Linux tools), which is open and programmable with a rich set of APIs; ii) provides services such as Open Workload allowing Arista to work with overlay controllers to simplify vm mobility, and Network Telemetry and Tracer which provide analytics, making Arista a partner of choice for vendors including VMware, Microsoft, F5, SAP, Palo Alto and Splunk; iii) capable of being abstracted out and run on bare metal switches allowing Arista to be flexible in participating in software licensing opportunities.

▪ ESTABLISHING A STRONG POSITION IN THE WEB 2.0 MARKET

We believe there is a transition in the DC switching market with move to 10G server connectivity and SDN, and large cloud operators are pursuing a multi-vendor strategy, creating requirement for a clear #2 behind Cisco in the \$8 billion DC switching market. We believe Arista is establishing itself as that #2 best of breed player among large early adopter cloud operators, successfully penetrating several of the major Web 2.0 and cloud operators including Microsoft, Facebook, eBay and Verizon as well as several large enterprises, especially in the financial vertical, while large competitors such as Juniper and Brocade have experienced execution challenges. We estimate that Arista exited 2012 at a revenue run rate in excess of \$200 million and is seeing solid share gain and growth in 2013.

COMMUNICATIONS TECHNOLOGY

SWITCHING

INDUSTRY UPDATE

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DETAILS

SINGLE TIER SCALE OUT OPTION WITH ATTRACTIVE ECONOMICS. We believe the X-series will be available in fixed (7250X with 64x 40G/256x 10G ports in a 2RU configuration) and modular (7300X with 4, 8 and 16 slot) form factors and uses the Trident II chipset from Broadcom. We believe the Spline™ architecture lowers the cost of 10G server port connectivity by over 60% versus a leaf-spine architecture. The 16 slot 7316 is the highest capacity modular switch in the industry supporting 2048x 10G (128 per slot) though we would point out that the 7500E chassis has higher density line cards supporting 144x 10G per slot (the fabric can support up to 192x 10G per slot) likely making the 7500E the spine platform of choice for a scale out architecture supporting over 10k servers while the X-series will likely be used for high density single application clusters with up to 2000 servers. We also believe the 7300X will likely be positioned against CAT 6K deployments in the DC given the 7300X offers 10G density which is equivalent to 1G density of the CAT 6K in a similar form factor and power/port.

40G LRL-4 TRANSCEIVER LIKELY TO MATCH INSIEME OPTICS INNOVATION. We believe Arista will likely offer a standards based 40G single mode 2-fiber bidirectional transceiver with 1k reach providing longer reach and significant fiber reduction versus current generation qsfp xsr which uses 8 fibers to transmit 40G bidirectional with a reach of up to 400 m. We believe this offering will likely counter Insieme's 40G transceiver innovation (developed exclusively for Insieme in conjunction with Avago) which will likely allow 40G bidirectional 2-fiber transmission on multimode fiber. We believe the Insieme solution will likely be lower cost than the industry standard single mode solution (which Arista is likely to use), given it works on multimode/VCSEL though reach is likely to be lower than significant (sub 300 meter) than the single mode solution.

CISCO LIKELY TO LEVEL HARDWARE PLAYING FIELD BY MID 2014. We expect Cisco to catch up to Arista on platform density by mid 2014 with products from Insieme. We expect Cisco/Insieme to announce a complete SDN solution including high density leaf and spine switches as well as a scalable controller – we believe that the first product available will be a Trident II based TOR/leaf, likely trialing in late 2013 with FCS in early 2014 and believe the controller and spine/core switch will be available by mid 2014. We believe Cisco/Insieme has focused on low cost design using fewer components, more merchant silicon and innovation in optics and will likely introduce the products at very competitive prices. We also believe Cisco will likely offer L4-7 service chaining in the controller and will likely provide open APIs and analytics out of the controller and switch hardware. However operators are concerned about vendor lock in

given the Insieme controller is likely to work only with Cisco switches and potential lack of openness and flexibility could negatively impact network programmability and agility, as well as customers' ability to leverage lower cost hardware options such as bare metal switches. We believe these opinions are likely to evolve, or even change, over the next few weeks as operators fully understand the details of the Cisco Insieme offerings including pricing. As discussed earlier, we believe Arista's sustained long-term differentiation versus competitors is likely to be around the openness, programmability and rich feature set of its EOS operating system.

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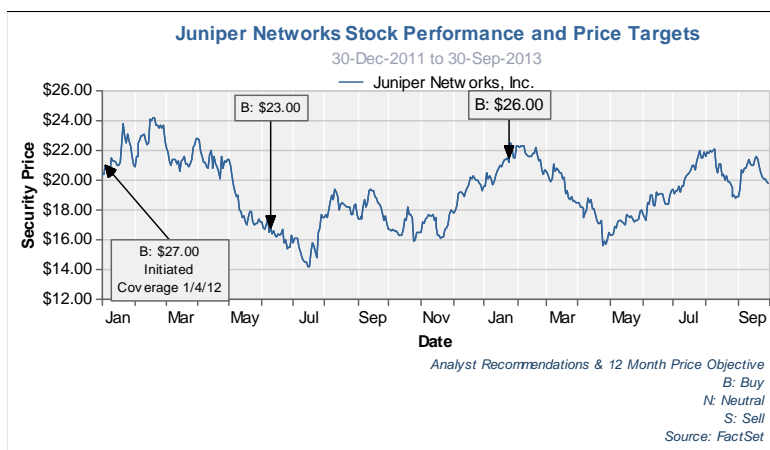
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