

Competitive Update:	Force10 Targets IP Core Market by Adding MPLS Support to Its ExaScale Routers
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Analyst:	Hunt, Glen
Market:	Carrier Infrastructure 

Standard View

Summary

Event Summary

December 7, 2009 -- Force10 announced the availability of MPLS (multi-protocol label switching) functionality for its ExaScale E-Series IP core routers. Extending MPLS label switch router (LSR) support to the ExaScale platform will enable wholesale carriers, Internet exchange carriers, Internet portals, and large enterprises to expand capacity seamlessly within their MPLS core infrastructure to support the growth of "best effort" multimedia traffic cost-effectively.

Analytical Summary

- **Current Perspective:** Positive on Force10's announcement that it will be adding MPLS label switch router (LSR) functionality to its ExaScale E-Series routers, because it will enable Force10 to compete with other companies at the IP edge and core, where MPLS rules and represents table stakes. Although the ExaScale E-Series provides impressive switching capacities and GigE/10GigE port densities, it has been constrained to pure BGP/IS-IS routing applications. The addition of MPLS LSR functionality as well as its surrounding data center vision better positions Force10 to compete for new business opportunities in the network as well as the data center.
- **Vendor Importance:** High to Force10, because without MPLS capabilities, much of its future success would be limited to pure routing and switching opportunities, which hampered wide-scale adoption of the earlier TeraScale E-Series. The addition of MPLS is a natural step forward for the company following the launch of the ExaScale-based routers in March 2009, and it is critical not only for success in the IP core network, but also for its data center and cloud-based services vision.
- **Market Impact:** Moderate on the carrier IP core router market, because although the new features enable the company to compete on a much broader scale, this does not in itself provide Force10 with any significant level of product or solution differentiation. All major competitors have been delivering MPLS-based solutions for some time, which means the company will need to fight hard to gain market momentum in the IP core router market, specifically against Cisco and Juniper, which hold the dominant market share positions. Perhaps the greater leverage from the announcement will come from the company's visions to deliver compelling cloud-based solutions, which will benefit from the ExaScale E-Series MPLS and virtualization capabilities.

Positives and Concerns

Competitive Positives

- The addition of MPLS label switch router (LSR) functionality to the ExaScale E-Series positions Force10's flagship router to support IP core networks that leverage MPLS for the scale, virtualization, and traffic management needed to meet the challenges presented by rapidly growing data and video traffic. The move is a logical one for the company, and it leverages its 10-plus-year track record of delivering high-performance BGP and IS-IS-based routing solutions.
- The addition of MPLS support further evolves Force10's data center solution capabilities by leveraging MPLS tunnel capabilities in support of cloud networking. The ExaScale E-Series offers the 10GigE densities and performance necessary to provide the seamless interconnects necessary to support end-to-end resource

allocation, flow control, and domain management, which are needed to build an intelligent virtualized services network.

- The announcement provides support for functions such as MPLS LSR, RSVP, and LDP, which are all needed to support the IP core router requirements in Tier 1 carrier networks. Service providers can now leverage the ExaScale E-Series routers' 3.5 Tbps switching capacity and support for up to one hundred forty 10GigE line-rate ports per chassis for all-IP core routing requirements. Prior to the system supporting MPLS, it was somewhat limited to pure BGP/IS-IS applications.
- The new MPLS LSR capabilities run on Force10's FTOS, which is common across all of the company's ExaScale and TeraScale routers. The common operating system environment enables service providers to leverage their current operational systems, which reduces operations and overhead costs and complexities.

Competitive Concerns

- Force10 is introducing support of MPLS technologies in its high-performance router products much later than its competitors, and it faces an uphill battle to gain the requisite mind share needed to compete in the highly contested IP router market. This is especially true in the Tier 1 incumbent carriers, which have historically leveraged products from Cisco (CRS-1) and Juniper (T Series).
- Although Force10 highlights a diverse customer base of well-known service providers such as Level 3, Qwest, NTT Communications, and others, the announcement did not contain a service provider endorsement, which would have added a level of market validation for its newly announced MPLS features.
- Product metrics and features aside, Force10 is a private company; selling strategic solutions, such as IP core routers, for example, to Tier 1 service providers will represent a significant challenge. The road to success for the new MPLS capabilities might well prove to be a long one requiring extensive lab testing and trials before significant revenues are realized.

Recommended Actions

Recommended Vendor Actions

- Force10 should unveil more of its strategic market vision and product roadmaps, which cover continued investments specifically targeted toward service provider market segments that leverage the ExaScale E-Series high-performance routers, as well as the access and mobile backhaul technologies gained via the Turin acquisition. Service providers are seeking full-service providers in an attempt to purchase more solutions from fewer suppliers.
- Force10, although still a private company, should continue to provide a level of transparency regarding its financial health and progress on the revenue and product front. The company should continue its regular financial disclosures through informative quarterly press releases and targeted analyst calls to review its latest business metrics.
- Force10 should continue to position its ExaScale E-Series routers as being an ideal choice to support future cloud-based networking applications. The evolving 'cloud mania' will provide the opportunity for the company to show its leadership in a new and evolving market segment where service providers are open to best-of-breed solutions – especially if they can link the data center and networking via a common operating environment such as offered by Force10's FTOS.
- Although Force10 hinted at its ability to deliver the scale and performance at the price points necessary to satisfy large IP core router network requirements, it should provide TCO projections and competitive cost comparisons centered on its ExaScale E-Series-based solutions. It should provide network-centric scenarios as well as data center-centric perspectives to show the depth of its capabilities and highlight any obvious cost advantages.

Recommended Competitor Actions

- Alcatel-Lucent should stress its upcoming 7750 Service Router enhancements, such as the 10x10GbE and 100 GigE line cards, which give it 100/10 fully subscribed 10/100GigE interfaces per chassis. Alcatel-Lucent should also tout its successes in providing MPLS-based carrier services for both edge and core network applications to

notable service providers such as AT&T for its U-verse services, as well as others.

- Cisco should announce the release of its higher-density 10GigE full line-rate interface cards for the ASR 9000 to minimize Force10's high ground claim on having the maximum 10GigE density on an edge platform (140). Cisco should also provide an updated roadmap for 100GigE support and reiterate its virtualized data center 3.0 and IP NGN 2.0 network visions based on the CRS-1 running IOS XR and equivalent functionality on the Nexus 7000 series family of switches.
- Juniper should demonstrate how the T Series and MX Series features and capabilities address the demanding requirements for IP core networks. It should consider tying verifiable traffic studies/projections to show how its routing portfolio addressed the massive 10GbE and 100GbE capabilities needed to keep abreast/ahead of demand. Similar messaging should be created around the need to support MPLS-based services on an end-to-end basis.
- Huawei should provide a timeline that offers visibility into the launch of its unified software platform (VRP8.0) to show how existing users of its networking gear will be impacted, as well as providing further information related to the benefits of the convergence as it relates to IP/access/optical integration. VRP8.0 is obviously a critical step in meeting the lower TCO and unified solutions for its transport portfolio. Huawei should show that its MPLS capabilities are second to none and provide several use case examples based on its NE5000E IP core router deployments.
- Brocade should highlight that it is no stranger to performance, scale, and MPLS by noting that its NetIron XMR and MLX series routers have supported MPLS-based services since their inception. Brocade should also reference its long history of success in the data center and show how its network products are enabling next-generation network and data center architectures.
- Extreme should counter Force10's entry into the MPLS segment with its high-scale BlackDiamond 20808/20804 family, which provides 120 Gbps/slot and 2 Tbps (5 Tbps future) capabilities that are necessary to address high-scale Ethernet services. In addition to supporting 64/128 line-rate 10GbE ports per chassis/rack, it can claim the high ground when it comes to cost leadership with an announced per-port price tag of under \$5,800.

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