Agile Data Center™ Solutions for the Enterprise

Challenges in the Data Center (The Problem)

A rapidly changing global economy means that enterprises need to respond to shifting market dynamics, competitive threats, and customer demands quickly. Most organizations have recognized the need to become more agile and have embraced new digital and IT transformation initiatives and DevOps principles. These initiatives are all focused on rethinking how they architect and operate their IT infrastructure to enable faster time to market, competitive advantage, and higher quality customer experiences.

As a result, in the data center – where it stores, manages, and disseminates data, the network must provide the requisite connectivity and services for an ever-changing and always-on environment when and where it is needed. To provide that level of agility and enable new sources of digital revenue, organizations need to implement greater levels of network automation, visibility, and device programmability. Automation promises to reduce time to value and create greater operational agility. Since it is difficult to automate what is not understood, organizations will require deeper visibility into their networks to intelligently automate changes with context.

Data Center Networks Must Enable – Enterprises to obtaining the business outcome of digital transformation with a flexible, vendor interoperable architectures offering simple automation, visibility and valuable analytics. This

will significantly reduce difficulties and delays provisioning and troubleshooting network services and devices, work within budget constraints, improve network performance, decrease complexity and leverage current cloud trends.

Data Center Markets and Use Cases Must – Span all vertical markets and address customers of any size. Common use cases include general purpose networks, IP Storage, Big Data (Hadoop), High Performance Computing and Data Backup.

> **Our Message to Data Center IT** – Agile Data Center *automation, network visibility and analytics and open adaptable platforms enable any vertical and all sizes of organizations to quickly respond to technology transitions and deliver services at the speed of business.*

Delivering Features and Benefits With Extreme Solutions

Helping customers consider, select, and deploy data center network solutions for current and planned needs is top priority. Using repeatable reference network architectures that have been engineered and tested to address specific use cases and deployment scenarios provide the blueprints by which data centers are built. Solutions centered around IP Fabrics both within the data center and inter-connecting data centers are core building blocks for enterprises.

Data Center IP Fabric solutions facilitate server & services connectivity within the data center supporting Layer 2 and Layer 3 networks. The flagship solution includes SLX switches and routers for spine, leaf and border leaf architectures and can be deployed flexibly in an IP Fabric of any scale. IP Fabric solutions leverage a BGP underlay with an EVPN overlay using VXLAN to provide simplicity, interoperability, and scale-out capabilities in the data center. This allows customers to build networks of any size without having to constantly re-tool the network. Key highlights of the solution include:

- Industry Standard BGP underlay with EVPN overlay supporting vendor interoperability
- Embedded Automation for Plug-n-Play IP Fabric provisioning
- Spine/Leaf Architecture – Scalable deployments from small to 1000's of switches per fabric
- Insight Architecture with On-board Guest VM for network visibility and other value-added capabilities
- Extreme Management Center providing a Single Pane of Glass into the end-to-end network, including the Data Center

Data Center Interconnect (DCI) solutions deliver extension of Layer 2 and/or Layer 3 networks across multiple data centers over any existing IP/WAN. The flagship offering includes SLX switching and routing platforms providing virtual tunnel endpoint (VTEP) high availability and redundancy across a WAN. Ideally, a DCI solution supports BGP for the underlay and BGP-EVPN for the overlay with VXLAN – the same exact technologies as the data center IP Fabric. There are no dependencies on the existing data center infrastructure or IP/WAN, making it simple to drop in the solution without disrupting the existing environment. Key highlights of the solution include:

- Seamless Extension, supporting Layer 2 and/or Layer 3
- Flexible Interoperability working with any data center and WAN

- Logical VTEP for Built-in High Availability
- Insight Architecture with On-board Guest VM for network visibility
- Extreme Management Center providing a Single Pane of Glass into the end-to-end network, including the Data Center Interconnect

Extreme's Agile Data Center Value

Automation – Improve and accelerate IT agility with options to automate at your pace. From simple embedded automation for Day-0 provisioning to customizable solutions from Extreme or 3rd parties such as Ansible, up to full cross domain IT automation with Extreme Workflow Composer.

Visibility - Network visibility from wire to workload deliver pervasive real-time monitoring and intelligent automated actions leveraging the guest VM capabilities. Integration with Extreme Analytics will give a deeper look into application telemetry with valuable and timely information regarding what is going across the data center networks.

Adaptability– Delivers agility at all layers of the data center stack with programmable ASICs in the hardware, open APIs for interoperability and future proof designs adaptable to emerging speeds, standards, and protocols. Design it once with the ability to future proof and easily adjust to meet business requirements without a rip and replace of hardware.

Better financing options and services get you up and running quicker, keep your network optimized, and prevent outages. Extreme Capital Solutions provide the financing options that best fit your needs. Our services can provide 24/7 operation support, including maintenance, professional services, and training. Our support center (GTAC) provides technical support 24 hours a day, 365 days a year. SupportNet offerings let you choose the exact level of service ideal for your organization.

Extreme™
Customer-Driven Networking

http://www.extremenetworks.com/contact / Phone +1-408-579-2800