FREQUENTLY ASKED QUESTIONS

Extreme Networks SDN Architecture & Development Platform FAQ

What is Extreme Networks Announcing?

Extreme Networks is fulfilling its promise of advancing SDN technology and building proven solutions that solve the problems of our enterprise customers. We believe a simple, fast and smart SDN solution will create successful business outcomes. The Town of Enfield’s deployment of Extreme Networks’ open, standards-based OneController demonstrates a comprehensive, real-worlds SDN implementation being seamlessly added to an existing network. This deployment proves Extreme Networks’ differentiated brownfield strategy, which enables a “no rip-and-replace” migration from existing multivendor networks to SDN. Extreme Networks is the first wired/wireless networking company to have completed an OpenDaylight-based integration with Microsoft Skype for Business (formerly known as Lync) via OneController. In addition, NetSight is the industry’s first network management application that can provision consistent network policies across a multivendor network using the Group-Based Policy project in OpenDaylight. To further accelerate industry innovation velocity, Extreme Networks is also enhancing its SDN ecosystem by announcing the future availability of its online Marketplace including an App Store and online Developer Portal.

What Are the Benefits of the Extreme Networks SDN Solution?

- Flexibility that allows the customer to choose - We are leveraging both open and standards-based protocols, and application programming interfaces (APIs), such as OpenDaylight and OpenFlow and combining industry-leading Extreme Networks solutions including EXOS and OneFabric Connect SDN, as well as many predefined applications that are already available and deployed.
- Simplicity via unified OS and SDN controller in a multi-platform environment – Full integration with OpenDaylight by developing plug-ins for our management tools (such as NetSight) and hardening the overall OpenDaylight offering for increased reliability.
- Adding additional applications (NAC, Purview, wireless, session management, etc.) that extend the benefits of SDN beyond the basic functions offered by most providers.
- Unifying Network Management as well as network access control, network optimization and advanced application analytics to the same SDN solution. This is all managed through a simple, single-pane-of-glass GUI front-end for the whole network including the wireless edge, campus and data center.
- Investment protections – Extreme Networks open and standards-based SDN solutions allow customers to easily trial and deploy new services regardless of who develops or provides them.
- Works with existing network in order to protect your investment.
- Modular, standards-based architecture reduces uncertainty, variability, unpredictability and overall cost enabling choice and letting customers select their own best-in-breed solution.

Why is SDN and Extreme Networks’ Solution Important?

Software Defined Networking (SDN) is a new architectural approach that provides network abstractions to enable automation, orchestration and virtualization of the network. A primary roadblock to SDN adoption has been the requirement to either “rip-and-replace” or be locked into closed and proprietary vendor solutions. Extreme Network’s SDN Deployments differentiates itself by being able to provide measurable, proven benefits to migrating to an open, standards-based SDN in a brownfield environment.

What Are Complementary Products to This Solution?

This solution is part of the Extreme Networks’ SDN architecture that accelerates application innovation and reduces risks for the whole network (Wi-Fi, Campus and Data Center). We do this through a modular, open and standards-based development environment as well as turnkey solutions that integrate with existing infrastructure and avoid architecture lock-in. The architecture will include existing SDN solutions (OneFabric Control Center, OneFabric Connect, several integrated 3rd party apps, and EXOS with its OpenFlow and inSite SDK) and an OpenDayLight-based OneController that is hardened and enhanced. Please contact sdn@extremenetworks.com for help with a specific use-case.
Why is Extreme Networks Participating in OpenDaylight?

OpenDaylight is an open source project that aims to accelerate the adoption of SDN. By participating in OpenDaylight Extreme Networks will not only gain awareness as a serious player in the SDN market, but will also be able to participate in all OpenDaylight activities and potentially contribute code and increase our leadership role. Most importantly, this participation ensures that our solution is open source and accessible to SDN application developers worldwide.

What Value Will Extreme Networks Customers Get by Your Inclusion in the OpenDaylight Consortium?

Our customers will benefit because of the superior products that we will continue to build and knowledge we acquire so that we can educate and consult them on the upcoming OpenDaylight changes, new applications and best practices that will further save them money and increase their abilities to innovate. They will also know that we are actively participating and contributing to an open body whose goal is to make SDN open and interoperable between vendors.

Is Extreme Networks Releasing Its Own Controller? If so, When?

Yes, the Extreme Networks SDN OneController, is now in Limited Availability. Subsequent versions of the OneController will also integrate other Extreme Networks software solutions such as: The IdentiFi wireless controller functionality, NAC, and Purview. This will open our software to the greater development community and allow other SDN compliant third parties to control these as well. For information on how to provide the OneController to your customers, please contact sdn@extremenetworks.com.

Is Extreme Networks Supporting Other Controller Platforms Today?

Yes, we are also supporting our OneFabric SDN which is not a controller (in the OpenFlow SDN sense) but provides management and control functions. In addition, our OpenFlow-based switches can be controlled by other controllers today, but we don’t support those controllers as they are supported by their respective vendors.

Is the OpenDaylight Software Being Integrated Into Existing Software Solutions Like NetSight?

Our OpenDaylight-based OneController will encompass the controllers for Purview, NAC, and IdentiFi. NetSight is an application that runs on top of this controller. The OneController license does not include licenses for any other products - they are sold separately.

What Is Your Vision Around Northbound APIs and Southbound APIs?

Southbound is for brownfield/interoperability. We will be supporting Openflow and a myriad of others. Our goal is to maximize operability across multi-vendor devices.

Northbound is more important to developers who want to develop their own apps. We will be working with developers to drive standardization. We will develop the mindshare that will allow the development community to innovate.

What is OneFabric Connect?

OneFabric Connect provides Northbound APIs to integrate OneFabric Control Center (NetSight, Mobile IAM and NAC) with other IT solutions, management systems and databases (CMDB’s, etc.), MDM solutions, NG Firewalls, Web Filtering solutions etc.

What Does the Extreme Networks SDN Solution Consist of?

The Extreme Networks’ SDN architecture accelerates application innovation and reduces risks for the entire network, including wireless, campus and data center. We do this through a modular, open and standards-based development environment (as well as turn-key solutions) that integrates with existing infrastructure and avoid architecture lock-in. This architecture includes our existing SDN solutions:

1. OneFabric Control Center
2. OneFabric Connect (with many integrated 3rd-party applications)
3. EXOS with its OpenFlow and inSite SDK
4. A hardened and enhanced OpenDaylight-Based OneController

This means existing Extreme Networks customers will be able to immediately take advantage of this solution and also seamlessly evolve to integrate new SDN applications in the future. As well, new development partners will be able to start developing applications on our architecture with maximum flexibility for innovation and success.

Can You Describe the New OneController SKUs?

OneController leverages the OpenDayLight framework to provide an open, standards-based SDN Controller. OneController can be ordered either as a physical or a virtual appliance.
OneC-A-600: OneController physical appliance. Key Specs:
- 1 U Form Factor
- Data Ports: 3x10/100/1000 Base-T, Future: Optional 2x1/10Gbe SFP+
- Mgmt. Ports: 1x10/100/1000 Base-T, 5xUSB, 1xRJ45 Console
- 2 Xeon CPUs (24 cores), 32 GB RAM, 2x1TB Hard drive with RAID controller, Dual power supplies: 750 Watt (max), each power supply

OneC-V: OneController virtual appliance. Key Requirements:
- VMware® ESXi™ 5.5 server (requires V9.01 or higher)
- Virtual Machine CPUs: 8 cores
- Virtual Machine Memory: 4G or higher
- Virtual Machine Storage: 100G
- Virtual Network Interfaces: Two data ports and one management

Do I Have to Replace My Existing Network to Move to SDN?
Not with Extreme Networks – the whole point of our open and standards-based model is to avoid vendor lock-in and protect your existing investment in your network. Unlike most of our competitors, our SDN solution is designed specifically to integrate seamlessly with ‘brownfield’ deployments without any need to ‘rip-and-replace’ your existing multivendor network.

Is SDN Really Being Used in Networks Today or Is It a Bunch of Hype?
Yes, SDN is really in use in networks today. We have proven implementations with a number of customers including the Town of Enfield, CT and the University of New England, Australia (among others). Both of these customers prove not only that our SDN solution is NOT vaporware, but also show how it solves real-world problems that impact end-users. As well, the Town of Enfield perfectly illustrates the fact that SDN is suitable for enterprise-class networks: their current IT team consists of two administrators. Not only does this disprove the common misconception that SDN is a solution only for highly-virtualized data centers or hyper-scale networks, it also highlights the tremendous benefits SDN automation can bring to small IT teams that absolutely must operate efficiently. Case studies for both these customers can be found on www.extremenetworks.com.

Do I Need a Datacenter to Deploy SDN?
No, SDN has a wide variety of use cases for all networking applications, not just data center.

What Considerations Do I Need to Be Aware of to Help Choose between the Physical and Virtual Appliances?
With the OneC-A-600, OneController software comes bundled with perpetual right to use and no capacity limits (all cores available for use). A valid service contract on OneC-A-600 also entitles you to software updates, upgrades, and bug fixes.

OneC-V software is available as subscription-based license. The license provides the user right to use the software for the specified duration and capacity. It also entitles the user to software updates, upgrades, bug fixes, and TAC support for the specified duration. It is available to be deployed in increments of 8 cores making it friendly towards the growing trend of virtualization of network functions and workloads. With no other artificial capacity limits like number of switches, ports, or VMs you are able to maximize your resource utilization and leverage a simplified pay-as-you-grow model that is in line with how you manage the rest of your virtualized environments. A single instance (of Virtual Appliance) can run over multiple cores. To use additional cores, additional license(s) will need to be purchase. Additional instances need to be purchased separately as well.

Where Can I Find Ordering Information?
Please contact sdn@extremenetworks.com for help with a specific solution to determine the correct SKUs to order including product and services.

What Are Some Use-Cases for OneController?
OneController is ideally suited for today’s rapidly evolving, dynamic environments.

Some of the use-cases it enables:
- Network Virtualization - Examples include multi-tenant data centers, DDoS mitigation, and VM migration.
- Traffic Engineering - Examples include WAN Optimization, Elephant Flow Handling, and Unified Communications
- Analytics & Security - Examples include predictive analytics, network behavior anomaly detection, application policy enforcement
- Service Function Chaining - Examples include Firewall Upgrades, and consolidation of workloads into a single cloud from a traditional non-virtualized data centers.
What Are the Key Competitive Differentiators with Extreme’s SDN Solution?

Extreme Networks has been developing SDN like functions for years with our, software-defined architecture or SDA and flowbased networking solutions. This experience has given us a deep understanding of SDN requirements and architectures. Not only are our SDN solutions proven with real customers, they also take advantage of Extreme Network’s proven technology innovations. The Extreme Networks solutions provide additional value by leveraging our proven technology in operating systems (XOS and EOS), SDN (OneFabric Connect, OpenFlow and OpenStack), network and policy management (Netsight, NAC), wireless (Identifi) and advanced network analytics (Purview). Today you don’t buy all of your software from Oracle or Microsoft or SalesForce or IBM, etc. In an SDN world it won’t be any different. You won’t buy all of your SDN software from just Extreme Networks, or HP or Dell or VMware or Cisco either. Extreme Networks is different because of how we are focused on implementing our industry standard open-ness platform to enable the customer to have choice of buying the industry leading solutions to address their needs. For customers’ convenience and simplicity, we will have our own SDN solution—but we won’t disadvantage other solutions for the purpose of steering customers to lock-in to our own; unlike what our competitors are doing – which is to use open standards to lure in the customer, then trap them within a vendor-centric, closed lock-in solution. Other advantages we have include industry leading Network management and business analytics which include NetSight, NAC and Purview – by providing a single pane of glass integrated into the solution it means existing infrastructures can harness the benefits of these solutions. Finally, our insourced customer support is unique in the market. Since SDN is about costs savings and innovation having a group of resources that knows your network and always capable of helping you is critical.

Where Can I Get More Information or Support with SDN Solutions?

VMware, Microsoft, Citrix, Palo Alto, Airwatch, MobileIron, iBoss, Splunk, Lightspeed Systems, Polycom, Unify, Avaya, Cisco, Brocade and many others.

Where Can I Get More Information on the Extreme Networks SDN Solution?

For details about the Extreme Networks SDN Platform, including the Town of Enfield case study, please visit our solution page at http://www.extremenetworks.com/solutions/sdn. For additional information, please contact sdn@extremenetworks.com.

I’m a Developer - How do I Get Started?

Join our upcoming online developer forum which will be launched in September of 2014. You can sign up to receive updates at www.extremenetworks.com/solutions/SDN/.

Do You Have Professional Services to Help the Customer Make the Move to SDN?

Yes, professional services are available as from Extreme Networks contact SDN@extremenetworks.com.

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