PRESS RELEASE

Stateless Revolutionizes Interconnect
Ecosystem with Dynamic Network Programmability

Combined Solution Enables the Creation of New Network Applications to
Support Multi-Cloud Connections, Encryption Everywhere, 5G and More

BOULDER, Colo. – Mar. 10, 2020 – Stateless, Inc., the company reinventing network connectivity, today announced that its Luxon™ dynamically programmable network product is now leveraging Intel's Barefoot Tofino™, the world's fastest P4-programmable switch ASIC, in its software-defined interconnect (SD-IX) platform.

Luxon, combined with the Tofino P4-programmable switch, allows developers and DevOps more flexibility to deploy traditional networking functions, such as routing and encryption using software to support emerging applications like multi-cloud connections, encryption everywhere and 5G. Luxon's microservice network function infrastructure provides an ecosystem that meets the demands of the new era of connectivity and enables innovation through the creation of revolutionary network applications.

"Enterprises have grown accustomed to controlling infrastructure through software in the cloud age, but the network has been relatively slow to catch up to that trend," said Craig Matsumoto, senior analyst, 451 Research. "Stateless Inc.'s move to add P4 programmable switch technology to its Luxon platform provides high-level network control and allows users to more easily build software-configurable networks."

Innovation fueled by modern cloud computing and software design is driving next-generation interconnect requirements that surpass the capabilities of existing networking devices. Despite the introduction of technologies such as network function virtualization (NFV) to try to address the needs of emerging technologies, existing devices are inflexible and lack the full programmability needed by developer and DevOps teams.

"New interconnect requirements driven by emerging network applications and functions are causing networks to undergo tectonic shifts in how they are designed, built and operated," said Arkadiy Shapiro, product line manager at Barefoot Networks, an Intel Company. "Stateless' move to combine the power of its software-defined interconnect platform with the agility of Barefoot Tofino's P4 programmability, elevates networking capabilities and offers users a modern, fully-programmable network functions platform."

The combination of Stateless' programmable microservice ecosystem and the Tofino chip provides full programmability of network functions spanning the data link through application layers. It allows true machine-to-machine (M2M) control of lower layer byte-to-packet framing and provides enhanced flexibility to meet today's networking needs. Luxon features enabled by the Tofino P4 include:

- Horizontally scalable clusters;
- IPsec load balancing;
- Tenant-level elasticity; multi-tenancy;
- VXLAN parsing;
- Fine-grained quality of service (QoS); and
- Future proofing with new interface protocols and algorithms.

The Tofino-enabled Luxon platform opens opportunities for integration and compatibility between new and old networking topologies. The platform will support the creation of networking applications that incorporate new technologies and unlocks many new possibilities, including:

- Instant cloud connections on demand;
- Self-healing networks;
- Rapid prototyping;
- Intent-based connections; and
- The ability to dynamically adjust edge connections.

Intel's Barefoot Tofino is built using a protocol-independent switch architecture and is P4-programmable. The high-level, open-source programming language allows true programmability of low-level packet processing to enable expanded network functionality for a new generation of applications and microservices.

"We designed Luxon to be an ecosystem-driven platform that enables innovation to be injected into networks through the creation of revolutionary network applications," said Eric Keller, CTO and co-founder of Stateless. "The combination of Luxon with the Tofino switch gives us full access to programmatic control of the foundational aspects of packet processing, in addition to allowing network packets to be manipulated fully via software. These capabilities provide full network control and allow developers and DevOps to build software-configurable networks more easily."

Stateless' Luxon platform is ideal for businesses or service providers who want to automate the management and creation of interconnects to reach resources accessed over networks. The Luxon platform works with existing infrastructure assets to provide greater security, visibility and control, no matter the endpoint. Stateless' ground-breaking architecture provides users with the flexibility, agility and resiliency that current network devices and virtual functions have failed to deliver.

P4 is the de-facto standard programming language for networking, maintained by a thriving and growing P4.org community. P4 is easy to learn and intuitive, enabling software engineers to define forwarding plane functionality in minutes.

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Supporting Resources

- Read blog: ["Designing better connectivity means building from the bottom up"](#)
- To see Luxon in action, view [video](#)
- More on the [integration of P4-programmability](#)
- More on Stateless' [Luxon](#) SD-IX Platform
- More on [SD-IX Architecture](#)

About Stateless

At Stateless, we are reinventing network connectivity. Dedicated to relentlessly solving the network challenges others deem impossible, Stateless delivers an industry-first SD-IX platform that gives network providers the power to monetize their connectivity assets in new ways while streamlining network operations and minimizing capital expenditures. The revolutionary Stateless platform gives users the power to optimize existing network assets to control and connect every endpoint, including portfolio data centers, tenant sites and hyperscale clouds. Stateless is proudly based in Boulder, Colorado. Learn more at www.stateless.net

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