20 Most Promising SDN Solution Providers 2015

The deluge of data from social media, mobile and cloud computing is straining the traditional networks within enterprises. This is leading organizations today to largely embrace software defined networking—a centralized network management for an easy flow of information such as images, videos, and documents across the IT networks. This shift in network management has provided an added advantage of centralized network provisioning, holistic enterprise management, low operating costs and reduced capital expenditures for businesses. SDN makes networks work in a much smarter way and directs information within an organization to its destination as fast as possible, without any delays.

The functionalities of SDN enable centralized and programmable networks, and revolutionize the legacy data centers for a virtualized version of compute and storage. This helps network operators to easily address their changing needs with agility and flexibility, provide an insight of network bandwidth and general computing resources, and increase their network responsiveness. There is an array of solution providers who help enterprises embrace SDN for these added benefits.

In the last few months we have looked at scores of SDN solution providers and have shortlisted the ones that are at the forefront of tackling networking challenges in the enterprise landscape. A distinguished panel comprising of CEOs, CIOs, VCs, Analysts and the editorial board of CIO Review selected the final 20. The companies featured in this special edition offer innovative solutions that enable enterprises to build new applications, services, and business models for new revenue streams and value from the networks.

We present to you CIO Review's of 20 Most Promising SDN Solution Providers 2015.

PARPRO

recognized by *CIOReview* magazine as

CIOSDN
20 MOST PROMISING
Review SOLUTION PROVIDERS 2015

An annual listing of 20 companies that are in the forefront of providing SDN solutions and impacting the marketplace

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PARPRO

Key Person:
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Website:
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Description:
Specializing in the design and manufacturer of high performance embedded platforms along with expertise in the development of mixed technology solutions

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PARPRO
Transforming SDN with Custom Designs and Manufacturing

With the mounting pressure in the technological landscape, companies are transforming their data center into a flexible cloud infrastructure to run demanding applications. Software-Defined Networking (SDN) promises to enhance the benefits of data center virtualization, increasing resource flexibility by automating on-demand applications. SDN allows companies to accelerate application deployment which dramatically reduces an organization's IT costs through workflow automation. In this present scenario, PARPRO Embedded Systems (PES) provides application-specific design and manufacturing services for SDN servers and supports all areas of the SDN ecosystem. As a division of PARPRO Corporation, a Taiwan based company, PES in conjunction with other PARPRO divisions also specializes in contract manufacturing along with the design and manufacture of embedded solutions for a variety of vertical markets. "Our design team can integrate exactly the right combination of technology, in the form-factor required for a customer's target market space," says Matthew Dharm, CTO, PARPRO Embedded Systems.

PARPRO which stands for "Partners in Production and Design," has a diverse range of systems that serve in the SDN arena. The company's flagship product—N5R-100, which integrates an EZchip NP-5 NPU with a Broadcom NK12K TCAM and an Intel mobile-class control-plane CPU can be used as an OpenFlow switch. The NP-5 and TCAM together can process 240G of wire-speed traffic while doing multiple rule lookups per packet. "An Intel CPU, along with our integrated Board Management Controller (BMC), provides an easy-to-use development and operation environment, with plenty of pre-existing software," describes Dharm.

Another offering of PARPRO in the SDN space is the PRM-120/121/122 and its latest version the PRM-130, which offer CPUs from Intel's mobile lines of Core i5 and i7 (including the v4 on the PRM-130), along with integrated 10G and 1G networking, video, SSD, and all the usual components companies need for a complete processing element. "Our variety of CPU, memory, and SSD configurations provides customers with different price options to meet their respective requirements," says Dharm.

The company is driven by a simple strategy—to push to be the best in manufacturing and design. PARPRO extensively engages its engineering staff directly with the customer's technical team; where everyone in the engineering team is aware of the target markets. "It is this Engineering-driven approach which is the key differentiator as it allows us to deliver designs which are affordable to build and deliver," claims Dharm. PARPRO's methodic engineering allows them to deliver high-quality designs that meet the customer's needs.

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For instance, a client of PARPRO in the SDN arena started as a research project at a University. As part of that project, they worked with "reference design" boxes and a tier one telecommunications provider to develop some data-path application code to implement SDN features. They were eventually a separate company which had a great deal of IP, but didn't have a platform to run it. PARPRO developed its first generation platform and helped the company to launch their first hardware product, a 200G OpenFlow switch. Recently, PARPRO completed and helped the company to launch their second product, which gives the same bandwidth but with more processing capability per packet and does so at a lower price-point.

Moving ahead, the company aims to develop more powerful platforms with more features and better pricing to the customers. The company plans for incremental improvements in technology by bringing in new technologies which have a disruptive effect on the market. "Internet of Things (IoT) is something we're following very closely right now. But with the new encoding scheme for 100G SR4 and compact optical module form-factors such as QSFP+, 100G may be more disruptive than incremental," concludes Dharm.

Matthew Dharm