Mystery open source switching company claims top-of-rack price edge

Pica8 roots unknown, but claims to offer 10G Ethernet switch at $250/port

By Jim Duffy

Follow

Another top-of-rack switch , based on open source code, is being offered for data center and cloud computing environments.

Pica8, a mysterious company "committed to providing open source solutions of L2/L3 switch software" is pushing 48-port Gigabit Ethernet and 10G Ethernet switches with open source software and at half the price of comparable products from Force10 and Arista Networks. The company says that combining its open source software with off-the-shelf ASICs from companies like Broadcom, Fulcrum and Marvell on switches from "white-box vendors" like Pronto Systems, achieves a tenfold increase in price performance over "legacy embedded switches."

Extreme's latest Gigabit Ethernet switch ups ante with Cisco, Juniper

The Pica8 website gives no information on the company itself, such as its management team, its investors, or even its location. An e-mail from a purported distributor shed light on the company's products, market and claimed price/performance achievements.

[**Update**: According to the distributor, Pica8 is located in Beijing. It is led by Lin Du, a former Woven Systems Beijing executive. The Pronto hardware is sourced from Quanta Computer of Taiwan, which is described on Wikipedia as the largest manufacturer of notebook computers in the world. A Quanta official says the company has a business partnership with, but no investment in, Pica8, and does not yet have a business relationship with the purported distributor.]

The Pica8 software is called XorPlus. According to the Pica8 website, the software "provides no-cost L2/L3 protocol stacks and enables the community to innovate" by developing protocols and data traffic management applications "without the limitation of traditional embedded switches."

The company's website says its software extends the eXtensible Open-source Routing Platform (XORP) architecture to leverage the performance of commercial ASICs. The

XorPlus protocol stack and management interface are available through open source avenues, but the software development kit and driver are encapsulated into the Pica8 NetDriver module, "which has to be close sourced," the Pica8 website says.

XorPlus 1.0 supports common Layer 2 and Layer 3 protocols, such as Spanning Tree, LLDP, VLAN, RIP, OSPF, PIM-SM, VRRP, IGMP, IGMP Snooping,IPv6, RADIUS/TACACS+, OpenFlow 1.0 and SNMP, the Pica8 website and distributor e-mail claim. It is also extensible, and protocol stacks can run on a different platform than the driver software and switching hardware, the website states.

Arista also claims its switch software is extensible, in that different operating system processes can run and be modified independent of the others while they are still in operation.

The Pronto switches, meanwhile, are the Pronto 3290, 3295 and 3780. The 3290 and 3295 are 1RU switches with 48 non-blocking RJ45 Gigabit Ethernet ports and four SFP+ non-blocking 10G Ethernet uplinks. The 3295 supports dual power supplies.

Up to 12 of the switches can be stacked to achieve 576 ports of non-blocking Gigabit Ethernet, Pica8 claims.

Both switches feature front-to-rear airflow, 130 watts of power consumption, 4MB packet buffers and 512MB of system memory.

The 3780 is also 1RU sand sports 48 non-blocking SFP+ 10G ports. It consumes 350 watts of power, includes 9MB of packet buffer and 512MB of system memory, and supports front-to-back or back-to-front airflow.

The 3290/95 costs $3,000, or about $63 per Gigabit Ethernet port. The 3295 will be available in January. The 3780 costs $12,000, according to the distributor's e-mail, or about $250 per 10G port, almost half the price quoted by Arista on its 7148 10G switch.

Pica8 also claims 50% savings over Force10 and Arista on a pod that includes 91 switches – 84 3290/95s plus seven 3780s – networking 4,000 servers. The comparable Force10/Arista arrangement, according to Pica8, includes 84 Force10 S55 switches and seven Arista 7148s, and costs $700,000, compared to Pica8's $350,000.

Force10 and Arista declined comment on Pica8.