

## Juniper leapfrogs Cisco with QFabric data center product blitz

Juniper's 40G QFabric promises 10-fold performance boost for data center



By Tim Greene | Follow

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*Juniper Networks today announced its new architecture for data center infrastructure called QFabric that it says will boost data center throughput 10-fold.*

Juniper Networks today announced the results of \$100 million in research and development: a new architecture for data center infrastructure called QFabric, formerly code-named Project Stratus. The company says QFabric will boost data center throughput 10-fold and be able to scale 12 times larger than conventional architectures while cutting costs for infrastructure and operations. Analysts and beta users say they are impressed.

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Four years in the making, QFabric promises to flatten data center architecture from two or three layers to one, drastically reducing the number of devices needed to build a data-center network.

The new architecture creates what is logically a single data center switch overseen by a management platform that gives one view of the fabric. QFabric is supported by three devices – QF Director management platform; QF Internconnect chassis, which is the logical switch fabric; and the QFX3500 node, which supplies high-density ingress and egress ports.



Juniper's speed and scalability claims put QFabric ahead of Cisco's and HP's offerings, says Rob Whiteley, an analyst with Forrester Research. Brocade comes the closest as a competitor for a data center fabric, he says, and it remains to be seen how the two will stack up. There are no full-fabric deployments of either yet, he says.

Even so, because of the promised boost to speed and scalability, QFabric devices are worth considering even if a business has a data center built on another vendor's gear, says Tom Nolle, president of CIMI Corp. consulting firm. "If you are a business refreshing data-center infrastructure in the next two or three years, you need to take a look at this," Nolle says.

QFabric is the outcome of what Juniper has been calling Project Stratus, which was thought to be a faster conventional data center core switch. And in fact the QFX3500 does function as a conventional switch in its first iteration coming out later this quarter. But in Q3, a software upgrade will turn it into a node in the QFabric architecture, enabling it to make peer-to-peer routing decisions and rate limit to handle congestion as part of a distributed control plane.

Juniper's founder and CTO Pradeep Sindhu says customers could migrate to the new fabric gradually even if they currently use another vendor's gear. As current network equipment is refreshed, modules of QFabric could be deployed in tandem with legacy infrastructure. Because the Juniper line uses standard interfaces – Ethernet and Fibre Channel – it can interface with other products.

QFabric won't be limited to data centers, Sindhu says. Later this year the company will explain how it can be worked into the WAN so data centers can be connected with improved performance.

Nolle says this is important because it would enable a scalable cloud infrastructure that can truly disperse resources anywhere yet provide reliable and predictable performance.

The QF Director is an x86 server with gigabit Ethernet ports connecting to all of the nodes in the data center. The QF Interconnect Chassis supports 128 QSFP ports at wire speed. The QFX3500 has 48 10G Ethernet QSFP+ ports as well as 2G, 4G and 8G Fibre Channel interfaces and four QSFP 40G Ethernet uplinks.

Andrew Bach, senior vice president of technology for the New York Stock Exchange says he is in the middle of two months of testing the new Juniper gear and that so far the results are promising. He says they seem to meet Juniper's performance claims and that if they live up to the company's claims, will enable the exchange to avoid its drastically accelerating traffic from overwhelming its data centers.

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