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Alcatel-Lucent prepares a new core router for battle

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Alcatel-Lucent introduced its 7950 XRS router this week, addressing the ever-evolving needs of today's core networks invaded by video, mobile devices and cloud-based services. Alcatel-Lucent aims to break the core router duopoly created by Cisco and Juniper, and then tap into a \$4 billion dollar market. With 100G Ethernet ports, a 400G FP3 processor and an elegant power-saving design, the Paris-based hardware maker wants to "modernize the global backbone of the Internet." Verizon is applauding. But are enough service providers willing – in such a critical area – to give Alcatel-Lucent their core networks based simply on performance specs.

It's a tough racket. Grizzled, entrenched and highly methodical, the core router market will be difficult for ALU to penetrate, even with a top-shelf product.

The 7950 XRS comes in three flavors, a family of power boxes with the top-of-the-line model – the XRS-40 – sporting 32 terabits per second capacity, 160 100GE ports, multi-chassis expansion and two 19 inch racks. ALU claims it is five times faster than standard IP core routers, and cuts power consumption by 66 percent. The power savings courtesy of smart design and an in-house 400G NPU – "the industry's first and only 400G network processing silicon."

The 7950 XRS scales nicely and matches the IP routing and MPLS switching requirements rooted in contemporary service-provider networks. This strength and synergy would presumably help extend MPLS to the metro cores overrun by a proliferation of heavy and eclectic data sources.

So it's fast, flexible and efficient – and built for the future. And the time is right. Right?

Video and cloud-based services create a dilemma for metro core networks. That mountain of traffic is kept close to the end user and trips traditional routers conditioned to either scale and sacrifice functionality or deliver optimum functionality and shrink in scale. ALU wants to fix the problem, and undermine the trade-offs, with flexible switching and routing dictated by service mix, not router limitations.

Datacenters are being called out, too. The more content tagged for network-based storage, the faster interconnect speeds need to be. So based on demand, the 7950 XRS promises 100G density to interconnect at speeds high enough to relieve metro cores of network pressure and lower latency between data centers.

ALU is on to something because 10G systems become power-hungry, expensive upgrades when under siege by Hulu and Netflix. And offloading your startup – or life – to the cloud is too convenient. So beyond phone companies and backbone providers – the usual suspects for this kind of network thump – big datacenters may suddenly find ALU attractive. And Google and Amazon do make trophy clients.

But what may really boost the 7950 XRS curb appeal is what you don't see, what's under the hood. ALU unveiled the FP3 network processor last year as a next-generation solution for bottlenecks and slow play. With 400G transmission speeds, IP routing support and serious power management, the FP3 could help bridge the network gap between fact and fiction, empowering the 100GE movement and lighting the way for true ultra broadband.

The well-received chipset elevated ALU's industry status while serving as a harbinger of radical things to come. And as edge and core silicon morph, ALU appears to have a lethal chip and router combination capable of taking IP deeper into the metro and saving future buyers tons of money.

Alcatel-Lucent has a good plan, rosy prospects, a tech heritage and more than enough qualified partners. They also own approximately 25 percent of the edge router market. So is it enough to steamroll the competition – own the core? Some analysts are concerned ALU won't even make a dent.

Cisco and Juniper have had a death grip on the core router space since the dawn of the Internet as we use it. With over half the market, Cisco not only sits at the top but also continues – according to Cisco, but debatable based on market dynamics - to gain share. Core routing has been good business for Cisco. People like to forget Cisco was once the world's biggest public company, with a market cap of \$557 billion. They have been humbled since, but nothing has stopped the flood of IP traffic bursting through Cisco gear.

Juniper, depending on the report and measurement, holds approximately 30 percent of the core router market. The takeaway? The market has been static for years and is rarely subject to change because of the deep ties that bind core routers together.

True market share is often a blurry reflection of how much a vendor's customers are growing, and not necessarily wholesale changes in equipment. It's complicated. Incremental changes move the market, counted by the project and buried in the sands of time. It's hard to rip Cisco's core routers out and replace them with Juniper. Much less replace them with an untested core product from Alcatel-Lucent.

Too many risky variables hamstring a new entrant: strategy, investment, compatibility, reliability, and limited opportunities to bid on new projects, or Greenfield deployments. It smells political. And maybe it is because the best offense in this mature market is incumbency. Incumbents like Cisco and Juniper have a built-in competitive advantage. Literally.

But the salvo ALU is preparing to launch is being watched with genuine curiosity and analyzed with enthusiasm. ALU has an audience with their edge router customers. A leading-edge offering designed for a booming Internet full of disparate data. And so many controls engineered into 7950 XRS, a big service provider measuring flat revenues against rising network costs may be willing to listen.