

networking

FIXED & WIRELESS NETWORKS FOR THE ENTERPRISE

WWW.networkingplus.co.uk

router developments

Will 'Open Source' routing kill-off the router vendors?

Traditional proprietary router vendors have invested a fortune developing new products based on custom designs, chipsets and boards. But this time-consuming process pulls proprietary vendors into a spiral of maintaining and supporting rapidly aging technologies that they cannot scrap due to inertia in aging technologies, argues 'Case Communications' Andrew Saoulis. Customers must therefore swallow poor performance and pay high prices to support custom development. Fortunately, a revolution experienced by desktop publishers, mainframe users and other technology segments is at hand.



Case Communications Transport Router-Replaces Cisco 1600, 1700, 2600. With its 3 10/100Mbps ports the Transport is guaranteed wire speed to 4Mbps (tested by Network Fusion to 90Mbps). Supports up to 2 x E1 Trunks, 128Mbytes of RAM as standard Routing protocols – RIP1, RIP 2, OSPF, IS-IS, support for VLAN VRRP, IP Sec, IPV6 QOS, Interface Bonding, IP Firewall, SSH and menu driven configuration

Over the last few years, providers and enterprises have increasingly participated in a silent revolution. Proprietary router vendors have lost market share in the middle of their products lines, while focusing on a chase for the top twenty or thirty customers (witness Cisco's billion-euro investment in their new high-end switch architecture). Instead of purchasing proprietary products, organisations increasingly turned to products based on industry standard hardware and the open source Linux operating system. The outcome has been that the commodity hardware vendors now enjoy greater flexibility, since they can react to technology advances using the same 'just-in-time' manufacturing perfected by DELL and Toyota. With today's PC processors gaining in performance almost monthly and prices falling precipitously, vendors are able to retail high performance products, but at dramatically lower cost bases than their proprietary brethren.

The router revolution is being driven by two key components: industry-standard hardware and open source software

The benefits of adopting an open source platform are:

- **Industry-standard hardware**
- **Pricing** – Significantly lower, without the long lead times to develop products and hardware. With hardware that is readily available 'off-the-shelf' customers can avoid expensive proprietary upgrades.
- **Performance** – Increases rapidly: yesterday's 1Ghz router is today's 2Ghz router. Commodity hardware vendors can adopt the latest technology within a few weeks, not years. High performance processors provide commodity vendors with the ability to offer 'all-in-one' systems that combine routing/switching, security and telephony into one low-cost platform.
- **Cross-platform compatibility** – With standards based hardware, customers no longer suffer through 'forklift upgrades' where prior investments in hardware are lost because of incompatibilities in proprietary vendor platforms
- **Open source software** – With Linux vendors can focus on developing core applications for routing and switching,

and rely on the worldwide Linux community to develop the underlying platform.

- **Flexibility** – Organisations can easily modify the Linux operating system to meet their specific needs. Unlike proprietary platforms, Linux users can choose from thousands of software packages to add to commodity routers.
- **Cross-Platform functionality** – with a Linux platform, commodity vendors can offer a single platform that operates throughout a product line. Proprietary vendors often use different software platforms for different products, creating a morass of complicated contingencies.
- **No Software Licences** – vendors can easily and inexpensively include all software with the hardware, without additional cost to themselves or users.

Enterprise Market Drivers

According to Infonetics Research, "The traditional layer 2 enterprise router market is evolving into an IP-centric market where enterprise routers are supporting voice over IP, in addition to security features"

Linux, combined with some of the custom enhancements to its security and quality of Service mechanisms offers commodity vendors with powerful, all in one capabilities eliminating multi-box solutions from proprietary vendors.

US vendor ImageStream note that Linux and commodity platforms, "...enable ImageStream to deliver results in the increasingly IP – enabled corporate environment. Q-of-S and Network security, traditional weaknesses in under powered proprietary platforms, represent two of the strongest features of Linux"

With telecommunications defined by globally accept standards; organisations can safely adopt commodity platforms knowing that interoperability is guaranteed. The router revolution is a paradigm shift that has changed the way that many people think about routers and switches. Each day, organisations join the shift to commodity platforms by abandoning slow and expensive products from traditional manufacturers, and adopting this new breed of low cost, high performance routers and switches