



SWITCHES

Productivity, Efficiency, and ROI—the Criteria

Buying decisions are getting delayed due to the slowdown. ROI has become an important if not the only criterion in the selection of solution.

Market Dynamics*

The Indian switches market was valued at Rs. 2500 crore in 2008–09. Growth was slower in comparison to previous years and primarily spanned across key sectors of the Indian economy like manufacturing, infrastructure, banking, government, defense, IT and ITeS, telecom, outsourcing/off shoring, retail, SMB etc. Increasing consolidation, virtualization, and automation of data centers and growth in the complexity of networks and demand for solutions to create an end-to-end integrated security system were other growth drivers.

Cisco continued to dominate the market with over 70 percent market

**based on independent ADI MEDIA RESEARCH*

share. D-Link and Nortel fought aggressively to account for a major portion of the *balance market*. Other significant players included: Dax, 3com, HP Procurve, Enterasys, MRO-Tek, and a few others. Juniper is a relatively new entrant in the market.

Market Trends

Sanjay Joshi, Director, (Enterprise and Channels), India & SAARC, Juniper Networks says, "In India, increase in the number of endpoints connected to the LAN, increasing diversity of traffic flows on the LAN through network convergence, and more awareness regarding security caused by an underlying technology shift in the ethernet switch market, have resulted in LANs becoming more intelligent and requiring increased bandwidth. Gigabit ethernet and

Layer 3 switches, too, are expected to fuel the switching demand further in the coming years".

There is greater adoption of high performance networks as businesses demand more from IT. The Indian switch market has transformed significantly with wide adoption of world class IT networks across all verticals. Switches have continued to maintain the edge they had in speed while gaining in features. The market is booming with high PC penetration, helping to buyout the IT, ITeS, & BPO segments. Convergence of voice, video, and applications is driving huge investments in high performance networks. Metro ethernet deployment too is fuelling this growth.

On the technology front, greater traction will come from the increased adoption of collaborative technology, unified communications, data center,

Green Initiatives



Cisco

Cisco is committed to a high level of environmental responsibility in its culture, business operations, products, and customer solutions. The Nexus 7000 Series is a modular data center-class switching system designed for 10 Gigabit Ethernet networks. It supports green initiatives on a number of levels. First of all, the system is designed to be 'greener' with features like more efficient power supplies and efficient cooling. Architecturally, the Cisco Nexus Series supports higher densities which reduce the need for networking equipment and its associated power and cooling load. With its unified fabric support, the Cisco Nexus Series displaces further equipment and allows the deployment of smaller server form factors. Furthermore, the Cisco Nexus Series supports broader based adoption of virtualization across the data center (i.e. server virtualization, storage virtualization, services virtualization) which further reduces power and cooling demands.

Juniper

Juniper Networks products are designed with high utility, long usable life, high energy efficiency, scalability, and small footprint in mind. Juniper complies with and sometimes exceeds international standards for product design, production and waste reduction. It participates in the Electronics Industry Code of Conduct and complies with regional requirements as well. It fully complies with the European Union's WEEE requirements for recycling and disposal of products, and RoHS guidelines to minimize the environmental impacts of the materials that are used.

Dax

Dax's Green Initiatives include environmental friendly packaging, field up-gradable features, and buy back offers for old generation hubs. The design aspect is one of the green initiatives. Technology up gradation can be done through firmware upgrade thereby increasing the life and usability of the product.

and security solutions in India. There is greater emphasis on local innovation as Tier II and Tier III markets will emerge stronger and companies will focus on areas such as rural banking, connected agriculture, and healthcare. All forms of communication and IT are moving onto the network, which is becoming a revolutionary new platform. The evolving nature and structure of the network are generating new rules of engagement and interaction.

Subashini Prabhakar, CTM, Dax Networks says, "Data center automation, virtualization, PoE enabled switches, adoption of metro ethernet, demand for bandwidth-intensive applications, and SMBs' increased spend on ERP implementation have been some of the major growth driving factors. Apart from this the telecom infrastructure and IPTV deployment as well as e-governance programs as part of the ICT initiatives driving the demand for switches have also contributed to the switch market's growth".

Internationally, one sees increased penetration of PoE (power over ethernet), decline in the prices of gigabit and 10 gigabit ports, migration to higher performance switches and growth of 10 gigabit switches.

Greater functionalities are delivered via the LAN switching infrastructure like added/integrated security, integrated wireless, virtualization, and more. Another noticeable trend is evolution of SP carrier/metro market. The prices on the gigabit switches are coming down, though fast ethernet still dominates.

Tata Rao, Sr. Vice President, System Engineering, Cisco India & SAARC says, "Switches have maintained their edge in speed, but have added more features. The trend in switching has been to have both managed gigabyte switches. Switching is also moving toward integrated solutions architecture with wire-speed firewall, IPS, and identity-based networking services. Network admission control and end-point security is going to become mandatory in most of the networks".

Challenges

Remote management in telecom infrastructure networks and establishing un-manned kiosks is a big challenge. POE dependent nodes such as access points, IP phones that demand POE enabled switches, no back up termination on switches in the last mile links that results in low uptime,

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and intense competition prevailing in the market are some of the market-related challenges.

In today's increasingly complex business environments, the network is facing new challenges and must offer more services than ever before. Applications and the network infrastructure of switches and routers that transport them, are crucial tools for enhancing user productivity and increasing an organization's ability to grow and remain competitive. Large enterprises, small businesses, educational institutions, and government agencies alike must optimize their network switching.

"Notwithstanding the tremendous growth of the switching industry, a lot of concerns still exist. The industry's major concern has been inter-operating with certain existing LAN infrastructure where customers have been made to deploy proprietary technologies. This is a major hurdle in penetrating some sectors. However, once customers are made aware of the facts, they are willing to move toward standards-based implementation" adds Joshi.

Impact of the Slowdown

Buying decisions are getting delayed due to the slowdown. RoI has become an important if not the only criterion in the selection of solution. However, the demand from the government segment is relatively less affected.

Says Sanjay Joshi—"The economic downturn favours carrier ethernet technologies and products since they are less expensive alternatives to legacy equipment. In fact, service provider investment in carrier ethernet equipment is growing faster than overall telecom capex. Carrier ethernet is one of the key technologies globally integral to IP next-gen network transformation projects pushing the move from TDM to packet based networks".

Rao adds, "The current economic slowdown has created reluctance among customers to invest in IT as their liquidity has been affected. Investments are being re-evaluated or postponed to be re-visited at a later date, with the financial team now becoming an integral part of the decision making process.

Customers are also having to make a tough decision on whether to make the investment now and stay at the edge of technology, thereby differentiating themselves from competition or not. The need to increase productivity, efficiency, and RoI during these difficult times is becoming the focus".

The Future

Prabhakar elaborates, "Smart and intelligent switches help companies to realize the full benefits of adding intelligent services in to their networks. Deployments of capabilities that make the network infrastructure highly available to accommodate time-critical needs, scalable to accommodate growth, secure enough to protect confidential information, and capable of differentiating and controlling traffic flows is critical to further optimizing network operations. From a market perspective, the traditional high growth segments will continue to be IT/ITES and BFSI. In the coming years, Switching buys will move around 10/100/1000 to desktops, Layer 3 standardization, increased usage of POE and 10G adaptation".

Today's globally competitive business environment has made companies focus on expanding their business and improving customer satisfaction. Fortunately, the Internet and networked applications have levelled the playing field. Buying decisions are getting delayed due to the slowdown. RoI has become an important if not the only criterion in the selection of solution.

"As companies increasingly rely on networks as the strategic business infrastructure, it is more important than ever to ensure their high availability, security, scalability, and control. Switches should support intelligent services that consistently address these requirements from the desktop to the core and through the WAN. Smart and intelligent switches help enable companies to realize the full benefits of adding intelligent services into their networks. Deployments of capabilities that make the network infrastructure highly available to accommodate time-critical needs, scalable to accommodate growth, secure enough to protect confidential information, and capable of differentiating and controlling traffic flows is critical to further optimizing network operations" concludes Rao. ■