

## Networking

### Building intelligent networks

*Converged networks are the order of the day today. The mid-market, government and education verticals have emerged as big spenders on networking and wireless networks pushing the overall market to grow by more than 20%. By **Vinita Gupta***

The Indian market is moving towards the adoption of high performance networks as businesses demand more from their IT set-ups. Today, the performance of a network has matured and the criterion for buying and operating one has changed dramatically. The Indian networking market has been spurred on by high PC penetration, along with demand from the IT/ITES and BPO segments. The convergence of voice, video and applications is resulting in huge investments in high performance networks.



Alamuri Sitaramaiah, GM - Sales, Fluke Networks, India revealed that the market for networking, if defined as one for structured cabling, communication devices like switches and routers, network integration services, network management and test gear, is close to \$2.5 billion. About 50-60% of this comes from communication devices, 15-20% from cabling, about 5% from network test gear and the rest from systems integration.

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Country Manager, India and SAARC,  
Extreme Networks

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Country Manager-India,  
F5 Networks

“Networking hardware spend jumped by a healthy 24% from last year, the networking market is estimated to be \$900 million. Within the networking arena, routers and LAN switches made up a large majority of the Indian SMB annual spend on networking hardware in 2008. Wireless LAN and other networking hardware—like network interface cards, structured cabling, etc.—follow close behind,” said Nagendra Venkaswamy, Managing Director, India and SAARC, Juniper Networks.

Jitendra Gupta, Country Manager, India and SAARC, Extreme Networks mentioned that despite global meltdown, we see India as the fastest growing market and can foresee good investment and growth in verticals like telecom, healthcare, hospitality, public infrastructure, the government and education. The growth in the LAN switching space would be around 10% and around 6-7% in the WLAN segment.

### Key drivers

The rapid deployment of IT by Indian businesses as well as the availability of the latest technology in the form of MPLS and other services that connect offices or businesses cost-effectively has boosted the market for networking products.

With convergence in the network becoming a worldwide reality, we are seeing a shift in network architecture. Unlike earlier times when there was a separate network built for separate applications or services, the convergence or Next Generation Networking (NGN) as it is popularly known, talks about having one single infrastructure for various applications.

Suresh Balasubramanian, National Sales Director, Consumer Business Group, Cisco, said, “The expansion of broadband Internet connections and the proliferation of digital multimedia content are creating a major shift in how people communicate and enjoy their entertainment options.”

For consumers, home networking adds a lot of flexibility in the way that they spend time with their computers and electronic devices. With a network, people not only can access the Internet, share an Internet connection with their friends and families, they can also play online games, download and stream music and videos, etc.

India has been at the forefront in adopting new wireless services and technologies, largely fuelled by the rapid growth in broadband penetration. People have called 2008-09 the year of wireless broadband in India. The increasing growth of broadband penetration has been a key driver in the adoption of wireless technologies. According to TRAI, there would be 20 million broadband connections and 40 million Internet connections by 2010.

Jayesh Kotak, VP, Product Management, D-Link India, stated that education, the government and medium business are the key verticals. The medium business segment is driving growth of networking in India as they have realized that IT and networking operations help retain strong market competitiveness. Besides basic computerization, the SMB segment is adopting sophisticated applications such as ERP leading to the need for reliable network infrastructure.

The low rate of broadband penetration is one of the key barriers to growth. Broadband is a cost-effective way to be a part of the networked ecosystem, especially for the SMB sector and their customers who cannot afford VSATs and leased lines. The technology is available to secure broadband access with Firewalls and VPNs. However, the last mile continues to be a major bottleneck. This could change with the rollout of 3G in 2009.

### Rise in UC adoption

The scope of Unified Communications (UC) in India is tremendous. The reduced cost of communication, improved employee productivity, access to and sharing of information are all propelling this segment.

Factors instrumental in driving companies to adopt UC include the needs of an increasingly mobile workforce for a mobile workspace. The proliferation of communications options has actually a burden and it has to be simplified and integrated.

Organizations are beginning to see that they will be left behind if they do not make a decision on UC, as this is the future. Work/life balance and providing teleworkers with choices as well as tools to work from anywhere, still stay connected, and collaborate is becoming the order of the day. CIOs may find it challenging to integrate onto different platforms.

Significant interest has been observed across industry verticals like hospitality, IT-ITES, banking and financial services, telecom, etc. There has been a rise in the percentage of deployment of UC products and applications.

“UC is a key facilitator for any organization as it provides high availability and scalability. It also helps mitigate potential networking and infrastructure issues to help ensure that users experience optimal performance and reliability from their communications tools,” said Harvinder Singh, Country Manager- India, F5 Networks.

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Networks

Sudha Jagadish, Chief Operating Officer, Dax Networks believed that UC helps businesses, small and large alike, to streamline information delivery and ensure ease of use. UC also allows for easier, more direct collaboration between co-workers and with suppliers and clients, even if they are not physically on the same site. This allows for possible reductions in business travel, especially with multi-party video communications, reducing an organization's carbon footprint.

She added, "UC can be implemented without any change in the existing infrastructure, thereby reducing the overall investment cost. Human delays are minimized resulting in better, faster interaction and service-delivery for the customer, and cost savings for the business."

### Remote management

The networking areas are managed by service providers to save cost, flexibility and ease of support. The remote management services are the best option for any small or big company. This change is happening as we are getting faster connectivity due to ample bandwidth through the current service providers. This helps not only in the development but also the growth of the industry as a whole.

Sitaramaiah revealed that businesses are back to basics that are now trying to focus on their core competencies. If a business' core competency lies in manufacturing, such business are better off today with outsourcing the tactical operations of the IT infrastructure to managed or specialized service providers and instead focusing on strategic issues that make IT a tool for competitive advantage and satisfied customers.

"Remote management is true for SMBs, however for large enterprises it is better addressed internally as customized adoption is better addressed by internal IT teams who understand the business well," said Vivek Porwal, BU Head-Unified Communications, Avaya GlobalConnect.

Jagadish pointed out that organizations choose to focus their efforts on their core strengths instead of managing IT. Therefore, they are increasingly outsourcing IT/bandwidth management to service providers. Managed services have opened a new window of opportunity for the service providers.

### Networking trends for 2008-09

- **Network and data center consolidation:** Organizations have been focusing on this as a way to reduce operating expenditure, but many networks are still far too complex. 2009 will see a shift in focus to look across the entire organization and address complexity.
- **Network virtualization:** The network will get the virtualization treatment.
- **Migration from IPv4 to IPv6:** It appears on these lists every year, but as the number of available IPv4 addresses rapidly dwindles, 2009 may just be the

year that the industry really starts to embrace IPv6 as operators and companies look to future proof their networks. 2008 saw an uptake in interest, but only a few real implementations.

- **Network operating systems:** Maximizing network and server resources depends on using them more effectively and this needs proper management. The network operating system is a key way to achieve this and as such, it is likely to emerge as a more important part of the buying decision in 2009.
- **Demand for UC and collaboration solutions:** The demand for UC and collaboration solutions will continue to rise in 2009 despite the economic slowdown. This could mark the start of a broad-based adoption of UC and collaboration solutions as businesses start to look hard at cutting costs. The SMB market having crossed the first wave of networking will witness considerable adoption of UC solutions.
- **Expansion of broadband:** The expansion of broadband Internet connections and the proliferation of digital multimedia content are creating a major shift in how people communicate and enjoy their entertainment options.
- **Achieving more with less:** Customers will opt for next generation products that can assure investment protection. For instance, in case of Gigabit connectivity, 10 Gigabit is suitable for better connectivity with the core, easily manageable and has no extra cost attached for upgradation.
- **Automation framework:** This shall be a key requirement in order to save deployment cost of equipments complemented with lower OPEX.
- **Increased focus on services and applications:** With the emergence of virtualization, embedded software on open platforms and the software-as-a-service (SaaS) model, there is increased focus on services and applications delivered over a robust network infrastructure.
- **End-to-end security:** Integration between security devices and LAN switches for better control—for access and risk mitigation from viruses and Day Zero DoS attacks.

## Future of networking

Networking has a good future in India, both in terms of user willingness to adopt newer networking technologies as well as the availability of volumes to justify pricing to market strategies by vendors. Indian businesses are not far behind countries like the US and those in Europe in adopting the latest technologies.

Balasubramanian asserted that India has been at the forefront in adopting new wireless services and technologies, largely fuelled by the rapid growth in broadband penetration. The wireless industry been backed by the Government of India. Hence, we have seen the Indian market, gain traction.

India's market for networking hardware continues to grow, driven by factors such as higher PC penetration and adoption of IT by the Indian Government. India is the fastest growing IT networking products market in the Asia Pacific region with most of the prominent global as well as local vendors are operating in a competitive market.

Additionally, the Indian software and BPO industry is also creating jobs. All of these make India one of the most exciting markets for the IT hardware vendors. As more multinational companies set up office in India, the demand for hardware will increase.

Venkaswamy revealed that 2009 is likely to be filled with uncertainties. Against this backdrop of economic uncertainties, environmental pressures and tighter budgets, technologies and trends that help companies lower their costs, like virtualization and consolidation, will still be deployed. Investments in network and Internet security will continue as the impact on the business can be devastating to a company in these times should there be a breach, especially since security threats have been reported to have increased in recent times. In addition, some organizations will supplement that with identity management and access control to tighten their information security.

“The future of Ethernet in the enterprise can be found in two distinct places, the data center, where 10 gigabit technologies will flourish and at the network edge, where intelligence and emerging wireless standards, 802.11n, will also take hold. Enterprises should be paying particular attention to 10 gigabit technology because customers are already beginning to deploy servers with high speed interfaces to support their most intensive applications,” said Gupta.

According to Kotak, customers are a bit cautious while making buying decisions and that they do prefer to go for technology, which will help them safeguarding their investment and business process. This means customers will continue to invest in technology like network security and surveillance security along with basic infrastructure needs. They will also prefer to go for value for money products and solutions rather than going only for their brand preferences.

Porwal believed that the adoption of the UC technology while customizing the deployment to targeting to improving business results has huge potential. This is true given the low level of technology adoption in several sectors in the country. These sectors can significantly benefit from jumping to the latest technology phase and gaining significantly by simple yet effective adoption of the right applications.

Networking technologies, including UC can see significant growth in coming years with innovative deployment customized to specific businesses. Further, the need of organizations to address the green environment needs would gain momentum, further pushing adoption of these technologies while helping improve profit margins of businesses.

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