

VENDOR PROFILE

Juniper Networks: Application Networking Profile

Lucinda Borovick

IDC OPINION

Juniper Networks has grown to a \$2+ billion organization, achieving significant presence in the service provider market with comprehensive offerings in the IP networking and security segments. The company has forged a series of lucrative strategic partnerships with Siemens, Lucent, and Ericsson and is a formidable competitor to Cisco in IP networking. In 2007, the company's growth strategy includes aggressively expanding its market presence and share within enterprise accounts. In 2007, IDC believes a key area to watch for Juniper in the enterprise is the company's ability to sell its application networking portfolio into strategic datacenter and remote branch opportunities, both of which will enable Juniper to be viewed as a strategic partner to IT. Key metrics of success to watch include:

- Juniper's ability to leverage its strategic service provider partnerships and expertise into sales to support managed services opportunities
- Execution and delivery of products that provide a combination of management and product integration across routing, security, and WAN application delivery for remote branch deployments
- Datacenter products that provide scale and performance to enable the real-time datacenter of the future

IN THIS VENDOR PROFILE

This IDC Vendor Profile provides a detailed look at Juniper Networks' datacenter and WAN application delivery offerings, a small but increasingly strategic part of Juniper's overall product portfolio and key to Juniper's success in penetrating enterprise accounts. Juniper Networks is currently a key player in the IP network and security markets, with a strong penetration in service providers with its core and edge routers as well as its firewall, VPN, and intrusion detection products (IDPs). In the past two years, Juniper has made several acquisitions and announced products within both the datacenter and the WAN application delivery space. This profile specifically highlights these products (marketed under Juniper Networks' application acceleration products), with detailed analysis of the company's go-to-market strategy, product integration, and competitive differentiation. IDC analyzes the opportunities and challenges that impact Juniper and other competitors in these markets as well as the overall dynamics that affect both vendors and end users investing in this technology.

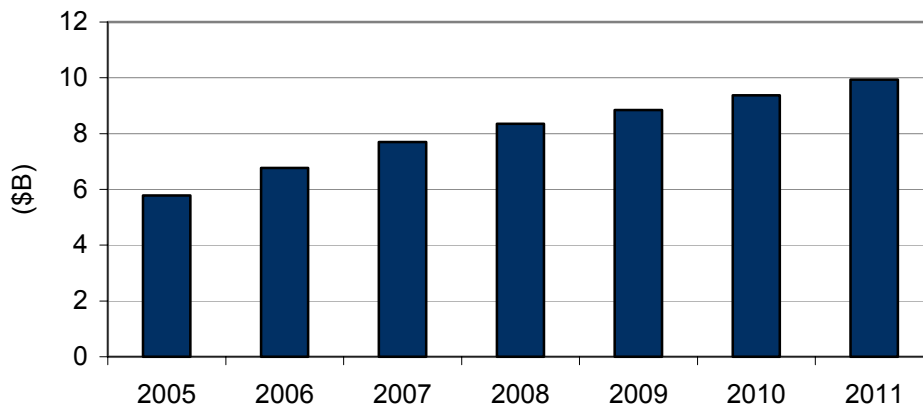
SITUATION OVERVIEW

Datacenter networking, which encompasses all network equipment that is installed within the datacenter, achieved double-digit growth from 2005 to 2006, reaching \$6.8 billion in 2006. End users continue to build out their datacenters with network hardware equipment to support strategic initiatives such as datacenter centralization and consolidation and improved (and distributed) application performance and security to enable better data protection, replication, and compliance over enterprisewide networks. As a result, IDC predicts this market will grow at a healthy 8% CAGR, reaching \$9.9 billion in 2011 (see Figure 1).

More specifically, Juniper has product offerings that compete within two segments of the application networking market (a subset of the overall datacenter networking market). IDC includes the DX platform in the datacenter Layer 4–7 switch market and the WX platform in the WAN application delivery products. In 2006, these two segments represented approximately \$895 million and \$670 million, respectively, in worldwide revenue (see Figure 2). These application networking products enable Juniper to have strategic conversations with its customers. Application networking is a key technology in enabling the network to provide business value to the enterprise. By securing and optimizing the application, the network can provide a flexible platform to meet changing business requirements. These products are deployed in the datacenter as well as the remote branch.

FIGURE 1

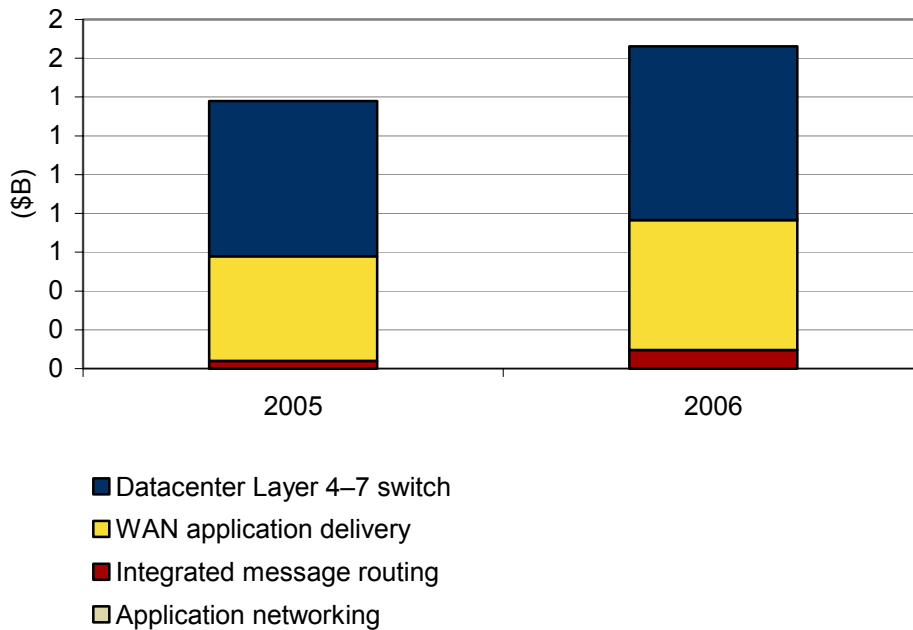
Worldwide Datacenter Network Revenue, 2005–2011



Source: IDC, 2007

FIGURE 2

Worldwide Application Networking Revenue, 2005 and 2006



Source: IDC, 2007

Customer Requirements

Customer requirements for application networking are influenced heavily by the storage, server, and application requirements of the datacenter. The datacenter customer is typically sold to via direct sales (mostly from one or two strategic vendor partners) and is driven by following key trends:

- Ongoing datacenter consolidation projects
- Centralization of storage and server resources into the datacenter for ease of management as well as the need to meet compliance and regulatory requirements
- The migration of client/server applications to Web front ends (http) and secure Web front ends (https), which is creating very different network traffic load and patterns across an enterprise network
- Changes in server architecture such as the migration to blade server platforms
- Migration to virtualized x86 servers
- Continued demand for storage networking, increasing demand for Fibre Channel switches, and future demand for Ethernet switches to support iSCSI-based storage

- ☒ Upgrades to 10 Gigabit Ethernet (10GbE), driven by the need to support newer dense computing environments in the datacenter such as blade servers and multicore processors

A thorough understanding of these initiatives within each account is critical to effective sales of datacenter networking products within enterprise accounts.

In addition to these strategic initiatives, customer priorities for datacenter switches and WAN application delivery products include the following specific requirements:

- ☒ Movement toward mission-critical reliance on Web applications
- ☒ Improved application access and performance as well as security improvements over wide area networks
- ☒ Improved data protection, replication, and compliance across remote sites/branch offices
- ☒ Support of branch office resources and growth

Company Overview

Headquartered in Sunnyvale, California, Juniper Networks is a 10-year-old company that provides a full suite of IP network and security products. The company has strong market share position within the service provider market but also sells into enterprise and government accounts.

At the close of 2006, the company had just over 4,600 employees, with revenue of \$2.3 billion. Juniper is a publicly traded company (Nasdaq: JNPR) with an IPO in June 1999.

Juniper has acquired several companies over the past three years in the telephony, security, and WAN acceleration markets. Acquisitions include Pacific Broadband, Micromagic (ASIC design), Unisphere Networks (a subsidiary of Siemens), NetScreen Technologies (security), Nexsi Systems (network infrastructure and bandwidth management), Kagoor (VoIP technologies), Redline (application front-end technology), Peribit Networks (WAN application delivery), Acorn Packet Solutions (TDM and IP networking), and Funk Software (security solutions). In 2007, Juniper's focus will be to continue to integrate products and technologies from these acquisitions.

Notable new customer wins during 2006 include the Philadelphia Stock Exchange; Dow Corning; China Mobile; Diageo, a large beverage company; SITA, a global IT service provider for airlines; Oracle; Intuit; the Kibo technology fund; TelstraClear, a telecommunications provider in New Zealand; China Telecom Shanghai; Cox Communications; MGM Mirage; Methodist Hospital; Commonwealth Bank in Australia; Esquel Group, a leading apparel manufacturer; etisalat, one of the UAE's leading teleco providers; MagnaChip Semiconductor, a South Korean semiconductor manufacturer; Global Crossing; GHAFARI, an architecture/engineering firm; eHarmony; Jordan Telcom; Bestel, Telefonica; A-Pressen, a leading Norwegian newspaper; Deposit Insurance of Vietnam; Norwegian municipal authority Fredrikstad

Kommune; FastWeb, an Italian telephony provider; RTL, Germany's leading TV station; Telgi Energy, a communications provider in Sweden; Finnish Defense Force; Australia's Commonwealth Bank; British Telecom; Sharper Image; Sara Lee; Canada's Globe and Mail; Daimler Chrysler; the North Atlantic Treaty Organization (NATO); and the U.S. Air force.

Financial Performance

Table 1 shows quarterly and annual revenue growth for Juniper Networks for 2005 and 2006. For the first nine months of 2006, Juniper's revenue increased at a healthy rate of 15% (compared with the first nine months of 2005) and reached \$1.7 billion. During 4Q06, the company posted revenue of \$595.8 million, representing 4% sequential quarterly growth and 4% year-over-year growth compared with 4Q05. 4Q06 revenue generated over \$200 million in cash, bringing the company's cash balances to over \$2.6 billion.

TABLE 1								
Juniper Networks' Revenue, 1Q05-4Q06								
	1Q05	2Q05	3Q05	4Q05	1Q06	2Q06	3Q06	4Q06
Revenue (\$M)	449	493	546	575	567	568	574	595
Growth (%)	NA	9.8	10.8	5.3	-1.4	0.2	1.1	3.7

Source: Juniper Networks, 2007

Most of Juniper's revenue is product related (approximately 82%), with the remainder of revenue (18%) coming from its services business. Gross margins on the company's products are in the 70%+ range, while services contribute approximately 52-54 points of margin.

Juniper's core business includes its infrastructure products, comprising the core, edge, and enterprise routers. In 2006, just over 60% of the company's revenue was attributable to these product lines. Juniper has historically been very successful selling its core and edge routers to service providers. Service layer technologies, including the company's security, J Series, and application acceleration products, account for approximately 20% of Juniper's revenue. IDC believes that these products will begin to comprise a higher percentage of Juniper's overall revenue as the company sharpens its focus and execution on enterprise sales.

The geographical mix of the company's revenue in 2006 is approximately 45% Americas, 33% EMEA, and 22% Asia. All regions performed strongly from 2005 to 2006, with EMEA having the strongest growth through 3Q06. IDC believes that the company may have an uptick in the Americas during 2007 as the company focuses on enterprise accounts.

Finally, Juniper was recently added to the S&P 500 Index. The company's stock was trading in the \$18–21 range at the end of 2006, with 603.6 million shares of stock outstanding.

Company Strategy

2006 was a year of integration and product development for Juniper. The company executed strongly within the service provider market and launched a new suite of products during the year. With the new product announcements, Juniper began the process of unifying all of its offerings under a common operating environment (JUNOS software).

During 2007, Juniper's overall corporate strategy is to continue to grow market share in its core business offerings and achieve absolute revenue and earnings growth. The company remains committed and focused on the market space that it is already in, with priorities surrounding market execution and product integration. Priorities for the company include:

- ☒ **Focus on the enterprise.** Juniper is actively investing in sales and marketing resources that will be specifically targeted toward penetrating enterprise accounts with solutions for both the datacenter and branch office networking. Developing strategic OEM partners (with the large system and telecom players) and leveraging its current channel network (currently at 6,000+ partners) will be key to this initiative. Additionally, managing the R&D process to leverage service provider development into the enterprise space will be another key component of success.
- ☒ **Integration of product and technology features.** IDC expects to see Juniper roll out products that integrate routing, security, and application acceleration functions. Specifically relevant to the company's branch office strategy, the new J-series enterprise routers will integrate IP telephony, WAN application delivery technology (WXC), and security features. IP telephony (VoIP) functionality is through a joint development partnership with Avaya and is expected in 1Q07.
- ☒ **Application traffic prioritization and QoS.** Integration of the WXC WAN optimization capabilities is slated for later in 2007 and will include compression and caching, TCP and application-specific acceleration, and visibility and reporting functions.
- ☒ **Integration under a common operating environment.** Over the next year, IDC expects to see Juniper migrate its application acceleration offerings to the JUNOS operating system, with advanced management functionality under the company's enterprise management software.

Product Strategy

Juniper has a suite of networking and security products that improve the performance, security, and scalability of IP networks. The company has network infrastructure platforms (a series of IP routers), network security solutions (firewall, VPN, and IDP products), and application acceleration solutions (WAN and datacenter acceleration products). For the purposes of this profile, IDC will highlight Juniper's application acceleration solutions, categorized under IDC's WAN application delivery segment.

In this segment, Juniper markets its offerings under the broad category of application acceleration with two major product lines:

- ☒ **DX (datacenter application acceleration products).** These products offload core networking and I/O responsibilities from Web and application servers to improve the performance of Web-based applications, increasing the productivity of local, remote, and mobile users. Juniper claims that by implementing the DX product line, time to access for Web applications is typically cut in half. Functionality includes server load balancing, SSL encryption and termination, HTTP acceleration and compression, 3G caching, and application security (some of the advanced features require a license upgrade). Four models are available: the DX 3200, 3280, 3600, and 3680. The 3280 and 3680 were announced in October 2006. The 3600 and 3680 add GigE network interface support as well as increased performance and capacity. The xx80 models are a new hardware architecture that is optimized for offloading SSL. The company claims these new models are triple the performance versus the older models.
- ☒ **WX/WXC (WAN application acceleration products).** The WX platforms help improve application performance over the WAN by eliminating redundant transmissions, accelerating TCP and application-specific protocols, prioritizing and allocating access to bandwidth, and ensuring high availability at sites with multiple WAN links. This product family includes the WX 15, WX 20, WX 60, WX 100, and WX Stack. The product line provides performance ranging from 64Kbps to 155Mbps with support for up to 2,000 remote sites. The WXC includes hard drives to store repeated data patterns, and the company claims this can increase WAN capacity. The WXC platforms support disk capacity from 40GB to 3TB and WAN links from 128Kbps to 155Mbps. The WXC product family includes the WXC 250, WXC 500, and WX 590.

As referenced previously, Juniper also announced in October 2006, the integration of the WXC WAN optimization capabilities into the J4350 and J6350 routers. Functional integration includes compression and caching, TCP and application-specific acceleration, and visibility and reporting functions. The integration will be implemented via a services module and is due out in mid-2007.

Distribution Strategy

IDC expects Juniper's distribution strategy will change somewhat over the next two years as the company increasingly targets enterprise accounts. In 2006, 20–25% of the company's distribution went through direct sales efforts, with the majority (75–80%) through indirect channels including strategic distribution partners, VARs, and distributors. It is worth noting that both Siemens (a 15% customer) and Ericsson (a 10% customer) generated significant revenue for the company in 2006.

With respect to enterprise sales, Juniper will leverage its current strategic partnerships and service provider relationships for managed services sales to the enterprise. However, for enterprise accounts that do not deploy managed services for their datacenter infrastructure (and there are many), Juniper will need to continue to enhance and educate its dedicated enterprise direct touch sales force in addition to continued investment in the application acceleration overlay sales organization (sales and SEs). The overlay organization is compensated specifically for sales of the DX, WX, and WXC products. Juniper also has channel partners focused on the enterprise.

Reseller alliances with Motorola, Nortel, Avaya, IBM, AT&T, and Verizon Business and Symantec are other recently announced partnerships that could help build traction within enterprise accounts. Juniper also has strategic alliance relationships with Oracle and SAP.

FUTURE OUTLOOK

Challenges and Opportunities

Juniper Networks has reached an interesting point in development. Juniper has grown to a \$2+ billion organization, achieving significant presence in the service provider market with comprehensive offerings in the IP networking and security segments. The company's size and growth, however, may become somewhat of a double-edged sword. Although Juniper is well past start-up phase, some enterprises may consider Juniper too small of a player and be hesitant to buy datacenter networking equipment outside their preferred systems and telecom suppliers. Strategic OEM and reseller partnerships, similar to the triple play Juniper has secured on the service provider side of its business, will be key to success for datacenter sales within enterprise accounts.

While considered "too small" by some enterprises, Juniper may be considered "too large" for companies looking to acquire leading-edge networking and security technology. At this point in the company's development, Juniper is likely to be an acquisition candidate for only the largest systems and telecom players, most of which have already made strategic investments in networking and security technology.

In 2006, Juniper executed on product development and delivery, beginning the process of integrating disparate technologies that the company had acquired during the previous two years in the telephony, security, and WAN application delivery markets. If the company can aggressively deliver on its integration road map across its routing, security and application acceleration offerings, then IDC believes Juniper will be well poised to expand share not only within the service provider segment but additionally within enterprise accounts.

Juniper has the opportunity to deliver products relevant to the place in the network where they are typically deployed. This includes both a datacenter network strategy and a remote branch strategy. In more detail:

- ☒ Datacenter network customers have historically been willing to venture away from Cisco if they are confident in the vendor's financial position and the product solution set is viewed as leading edge. Application networking is an avenue for Juniper to gain share in the enterprise network.

- ☒ The ability to target branch office and remote site networking is another area where Juniper has the opportunity to gain share. Juniper needs to aggressively present an integrated solution that includes telephony, security, and application acceleration functions to be effective at both the datacenter and branch. Accelerating product development and delivery timelines for both the datacenter switch and the WAN application delivery offerings will be key to success during 2007.

In addition to focusing on a place in the network product portfolio, Juniper will need to build strategic partnerships (similar to its triple play on the service provider side of its business) and a seasoned direct sales force to effectively penetrate large enterprise datacenter sales. Resellers and VARs are also important channel partners if the company wants to target campus and remote site sales. This is an area in which leveraging strategic service provider partnerships is a potential upside to the company's long-term revenue stream.

ESSENTIAL GUIDANCE

Advice for Juniper Networks

Juniper's enterprise sales strategy, whether direct or through strategic partners, should address the following IT trends:

- Leverage expertise in MPLS networks in sales and marketing activities
 - Capitalize on its expertise in the service provider market to be the platform of choice for managed services offerings
 - Foster a strategy that can complement Microsoft's plans for applications that are optimized for distributed multisite IT infrastructures
 - Stay the course with plans to for management and product integration
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Advice for Buyers

For end customers looking to invest in datacenter network intelligences and WAN application delivery tools, IDC believes that the following are critical deployment factors:

- Evaluation of this technology relative to overall datacenter consolidation and storage/server virtualization initiatives
- Evaluation relative to application, bandwidth, and networking infrastructure as well as remote site requirements (take a holistic approach to assessing branch office needs)
- Evaluation of MPLS networks and their impact on network traffic between major datacenters and branch offices as well as between branches
- Evaluation of WAN optimization products and technologies from installed networking vendor(s)
- Evaluation of how datacenter networking products from vendors outside the major networking players will work with the installed networking infrastructure especially routing infrastructure
- Evaluation of how this technology fits into existing and future security policies

LEARN MORE

Related Research

- ☒ *Worldwide Enterprise Datacenter Networks 2007–2011 Forecast and Analysis* (forthcoming)
- ☒ *IDC's Worldwide Application Networking Taxonomy, 2007* (IDC #205950, March 2007)
- ☒ *Place in the Network* (IDC #204644, December 2006)
- ☒ *WAN Application Delivery Enables IT to Achieve the Best at the Branch* (IDC #204234, November 2006)
- ☒ *Worldwide WAN Application Delivery 2006–2011 Forecast and Analysis* (IDC #204228, November 2006)
- ☒ *Cisco Introduces Integrated Branch Office WAN Application Delivery Solution* (IDC #cUS20341606, September 2006)
- ☒ *Microsoft and Citrix Announce Joint Product to Target the Remote Branch* (IDC #203287, August 2006)
- ☒ *Citrix Purchases Orbital Data* (IDC #203065, August 2006)
- ☒ *Blue Coat to Acquire NetCache Business from Network Appliance* (IDC #202353, June 2006)
- ☒ *Worldwide Datacenter Layer 4–7 Switch 2006–2010 Forecast and Analysis* (IDC #201654, May 2006)
- ☒ *Application Networking News from Interop* (IDC #201641, May 2006)
- ☒ *Worldwide Datacenter Layer 4–7 Switch 2005 Vendor Shares* (IDC #201391, April 2006)

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