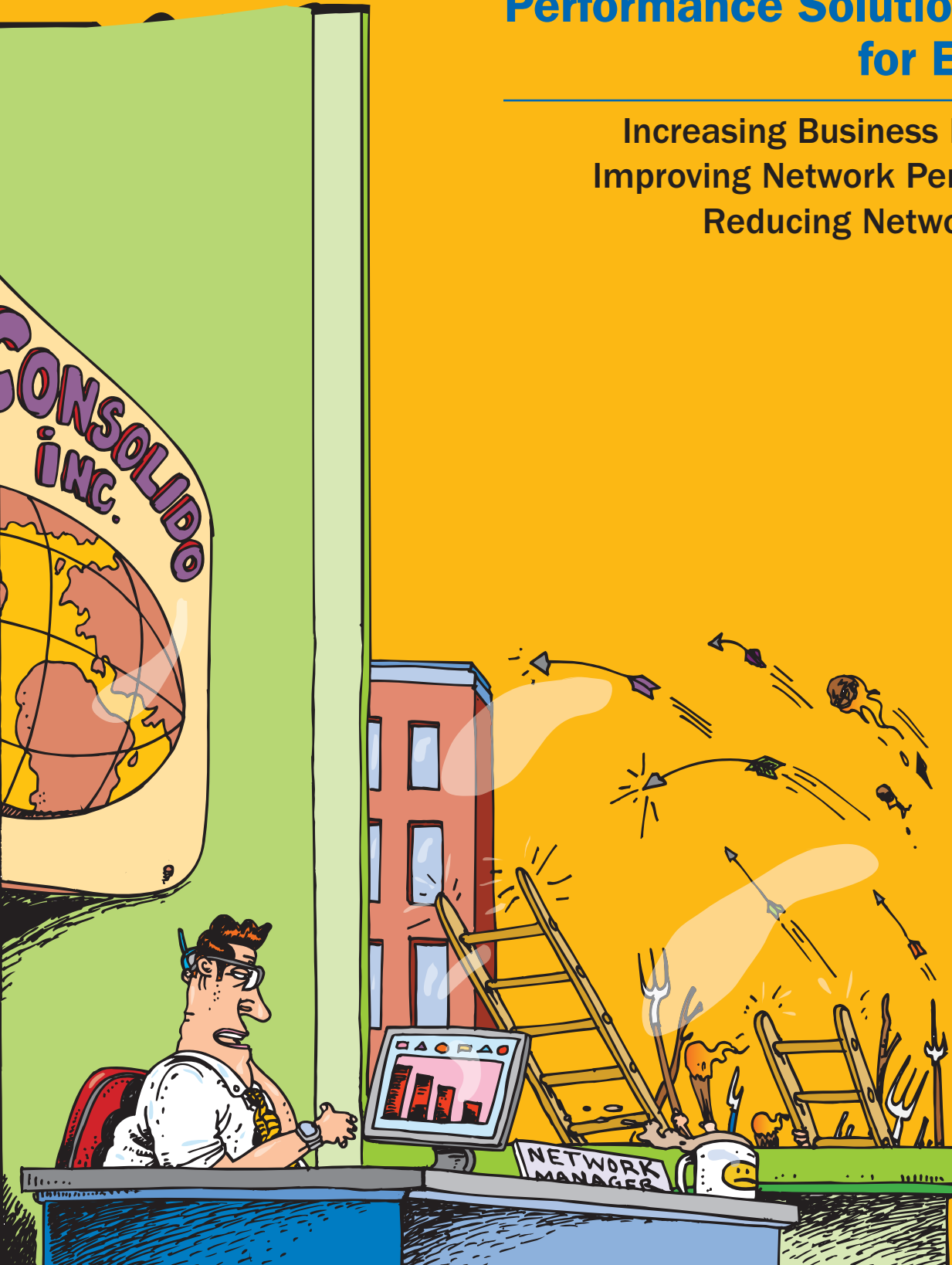


Juniper Networks Application Performance Solution Portfolio for Enterprises

Increasing Business Productivity by
Improving Network Performance and
Reducing Network Complexity



Application Performance Solution Overview

The goals of today's enterprises—from increasing customer loyalty to new product or service innovations—cannot be met without the support and involvement of their IT departments. Today's innovative enterprises view their IT investment as critical to their success. We call these innovative enterprises High-Performance Enterprises, since they invest in IT not only to maintain their existing services through growth and change, but also to create new services that help reach business goals and differentiate them from the competition.

Besides employees, High-Performance Enterprise network users can include contractors, business partners, customers and suppliers. Each type of user plays a distinct role in achieving business goals and shares many of the same requirements as employees. In order to be productive workers, they expect business information to be available whenever and wherever they need it.

Challenges

Network users in High-Performance Enterprises expect reliable and consistent performance from their business applications, whether they're sitting in their office or halfway around the world. That assurance isn't always easy to provide, since enterprise network bandwidth is often shared between mission-critical business applications, less critical business applications and casual Web browsing. It's even more difficult if users are situated on different networks, far from corporate data centers where business applications and data reside. Public networks can wreak havoc on certain applications that expect quick response times, for example.

According to Information Week, enterprise executives view boosting network performance as one of the most effective ways to increase productivity. It's easy—and tempting—to throw more money and equipment at the problem. Unfortunately, aside from the obvious cost, more equipment just adds complexity. And more complex networks increase operating expenses and decrease network agility simultaneously.

Trends

More locations and more tightly integrated business partners are fueling the demand for consistent, reliable application performance in the enterprise. Enterprises are going global, extending geographically by opening branch offices and production facilities around the world. The trend to outsource certain business processes also puts pressure on enterprises to extend and maintain adequate IT infrastructure to these new partners. In this environment, slow or unavailable business information becomes a competitive disadvantage.

On the IT side, consolidating server and data center locations is one trend affecting application performance. Consolidating into fewer but larger data centers reduces facilities costs. Server virtualization also makes consolidating applications and servers into fewer data centers attractive. Fewer data centers also make sense for enterprises that must capture and store data to meet regulatory requirements. But fewer data centers can increase the distance between user and server, which can directly affect application performance.

Another enterprise IT trend affecting application performance is the Webification of client-server applications. While these improve application access for far-flung enterprise network users, they require additional security which often impacts application performance. Web-enabled applications place an unpredictable load on networks, resulting in inconsistent user experiences, particularly from remote locations or branch offices. According to Gartner, 50% of newly designed business processes will suffer from end user-related network performance problems.

The move to applications based on Service Oriented Architecture (SOA) can also affect the performance of existing enterprise applications. SOA applications generally increase network traffic between locations, leading to congested WAN links and slower response times for users. An enterprise's current security infrastructure may not be able to keep up with the volume of SOA traffic, causing users and applications to experience additional delay.

In short, the challenge for High-Performance Enterprises is figuring out how to meet the performance expectations and needs of users without increasing both costs and network complexity.

Juniper Networks Application Performance Solution Portfolio for Enterprises

Juniper Networks Application Performance solutions help organizations meet their business goals without sacrificing the performance of their network. Juniper Networks delivers the industry's most complete application performance solution with its WAN application acceleration, and routing platforms.

- **Juniper Networks WAN application acceleration platforms** optimize applications traveling over the WAN, increasing the amount of bandwidth available for mission-critical or time-sensitive business applications.
- **Juniper Networks routing platforms** provide a reliable, high-performance connection to enterprise resources, and accommodate networking security services with minimal performance impact.

Working together, these three solutions deliver high-performance, reliable connectivity without having to re-engineer the network every time the business needs IT to help with a new initiative. Application Performance solutions optimize network bandwidth, streamline application delivery and provide visibility into network performance—all within highly available standards-based platforms that secure resources from threats. And their reliance on standards, common management infrastructure and common code base means that they integrate easily into existing networks.

Increase User Satisfaction

Juniper Networks Application Performance solutions provide fast and consistent access to business resources without adding complexity.

Juniper Networks WAN acceleration platforms improve application delivery and performance over wide area networks. Web-based and client-server applications, custom software, file sharing, voice and video are all optimized for wide area bandwidth using a mix of bandwidth management, compression and optimization techniques. Complementing these application-aware platforms, Juniper Networks routing platforms further boost voice, video and other collaboration tools through comprehensive quality of service (QoS) functions.

Simplify Network Operations

Many High-Performance Enterprises rely on completely separate networks to deliver different services, creating both costly and complex IT environments. Juniper Networks routing platforms let enterprises consolidate multiple services into a single, common environment without sacrificing performance, security or scalability. Enterprises can segment and secure traffic completely without impacting the throughput of any one stream.

Reduce Costs

Reducing network complexity can also reduce both capital and operating costs. Juniper Networks WAN acceleration platforms reduce data center equipment costs by offloading server processing tasks and freeing up WAN bandwidth, delaying the need for WAN link upgrades or additional server purchases. By delaying or eliminating the need for more servers or bandwidth, these platforms often pay for themselves in a matter of months. By preventing the proliferation of point IT solutions, these solutions also reduce the cost of operating and managing the network.

Juniper Networks gives enterprises other ways to shrink operations costs. Since IT can configure, monitor, upgrade and manage Application Performance platforms from a single location, IT travel and training is reduced and productivity goes up.

Minimize Service Disruptions

Juniper Networks Application Performance solutions support the business continuity requirements of High-Performance Enterprises. All platforms have built-in redundancy and resiliency features designed to support enterprise disaster recovery plans. Based on technology that drives the world's largest service provider networks, Juniper Networks platforms enable fast recovery from network attack, smooth cutover in the event of failures, continuous data replication and secure remote access to network resources.

Juniper Networks Application Performance solutions incorporate critical security functionality that protects against service disruptions caused by security breaches or threats without sacrificing performance.

Organization See's Candies

Situation: See's Candies is a specialty candy manufacturer founded in 1921. Its headquarters in South San Francisco, along with seven corporate locations throughout California, serves hundreds of retail locations throughout the U.S. and its busy retail Web site. Following a particularly demanding holiday season, See's realized it needed a solution to help alleviate the burden that overwhelming orders from its Web site placed on its network infrastructure.

Solution: Juniper Networks WAN application acceleration platforms

Results: The Juniper Networks solution dramatically improved the performance of several business-critical applications, including Oracle, Windows file services and Microsoft Exchange. Typically, Juniper Networks WAN acceleration platforms reduced traffic over the WAN by over 70%.

Quote: "We have an Oracle application that replicates every hour across the T-1, and that used to take 40-50 minutes. Now it takes two minutes."
David Kallman, IT manager at See's Candies

Juniper Product Line Matrix

	Infrastructure		Services			Policy and Management
	Routing	Switching	Security/VPN	Access Control	WAN Optimization	Policy and Management
Data Center	MX960 MX480 MX420 M320 M120 M10i	EX 4200-24T EX 4200-48T EX 4200-24F	ISG 2000 ¹ ISG 1000 ¹ NetScreen-5400 NetScreen-5200	SA 6000 IC 6000 IC 4000	WXC 590 stack WXC 500 stack WX 60 stack WXC 590 WXC 500 WX 100	IC 6000 IC 4000 NSM CMS SBR
Campus	M10i M7i	EX 4200-24T EX 4200-24T EX 4200-48F EX 4200-48T EX 4200-24F EX 3200-24P EX 3200-24T EX 3200-48P EX 3200-48T	ISG 2000 ¹ ISG 1000 ¹ NetScreen-5400 NetScreen-5200 IDP 1100 IDP 600	SA 6000 IC 6000 IC 6000 IC 4000	Typically no application acceleration needed in Campus environment	IC 6000 IC 4000 NSM OAC SBR
Branch/Regional Office	J6350 ² J4350 ² J2350 ² J2320 ²	EX 4200-24P EX 4200-24T EX 4200-48P EX 4200-48T EX 4200-24F EX 3200-24P EX 3200-24T EX 3200-48P EX 3200-48T	SSG 550 SSG 520 SSG 140 SSG 20 ³ SSG 5 ³ IDP 200 IDP 50	SA 2000 SA 700 IC 4000	WXC 500 WXC 250 WX 60 WX 20 WX 15	OAC SBR Provided from Central Location
Teleworker			SSG 20 ³ SSG 5 ³			
Extended Enterprise	Secure client access via SSL VPN					
Mobile Worker	OAC; Secure clientless access via SSL VPN					

¹Optional Integrated IDP

²Optional Integrated Avaya IG550 Media Gateway and Modules

³Optional Integrated Wireless

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Organization Philadelphia Stock Exchange (PHLX)

Situation: The PHLX wanted to move to an electronic model that would enable it to capture increased trading volume. Excellent performance with little application latency or downtime is not only required, it can be a competitive advantage. In addition, the PHLX wanted to be able to disseminate real-time market data, report quotes and trades faster to the national markets, while continually meeting the demands for increased capacity to keep up with the exponential growth of the industry's real-time quote feeds.

Solution: Juniper Networks M-series Routing Platforms

Results: The Juniper Networks MPLS mesh backbone design met PHLX's stringent benchmark targets for providing quality of execution reports for equity transactions in less than 5 milliseconds, end-to-end round-trip time from its new all-electronic equity trading platform, PHLX XLE. In addition, the reroute capabilities of Juniper MPLS reduced the total cost of network ownership. Now the PHLX requires less optic network, since they no longer have to maintain multiple, separate infrastructures for different functions, nor do they need to double their optics for failover purposes.

Quote: "Juniper has virtual logical routing capabilities for a common regional infrastructure that can separate different services on a single network. We can ensure that the applications that are the very heart of the Exchange itself achieve maximum uptime—and that's vital when our customers are making split-second decisions and have a choice of electronic platforms on which to execute trades. This is more than simply a new network—it's the foundation upon which we're meeting our customers' needs and building the Exchange of the future."
Frank Ziegler, Vice President, Philadelphia Stock Exchange

Juniper Customer Support Services

Juniper Networks provides a comprehensive and flexible portfolio of industry leading technical support, professional services and education programs to help customers and partners realize maximum value from their network investments.

- **Support Services** provide the support that large networks demand, and let customers select from a variety of options to augment their in-house technical expertise. There are 15 Juniper Networks Global Technical Assistance Centers (JTACs) located around the world that manage customer cases 24x7x365.
- **Professional Services** provide customized consulting services to assist customers in planning and designing networks with maximum efficiency.
- **Educational Services** deliver expert education and technical certification programs to help customers build their IP network expertise through standard technical programs, Web-based courses, customized workshops and hands-on lab sessions.

Summary—Quick, Safe, and Simple Application Delivery

With Juniper Networks, High-Performance Enterprises can support their business goals and meet user expectations without sacrificing network performance. Juniper Networks Application Performance solutions deliver LAN-like performance for users regardless of location, without increasing network complexity or cost. High-Performance Enterprises can deliver new applications and features to users more easily, increasing their network agility and improving overall productivity.

About Juniper Networks

Juniper Networks, Inc. is the leader in high-performance networking. Juniper offers a high-performance network infrastructure that creates a responsive and trusted environment for accelerating the deployment of services and applications over a single network. This fuels high-performance businesses. Additional information can be found at www.juniper.net.

To purchase Juniper Networks solutions, please contact your Juniper Networks sales representative at 1-866-298-6428 or authorized reseller.