UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2016

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from__________ to____________

Commission file number 001-34501

JUNIPER NETWORKS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**77-0422528**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*
1133 Innovation Way	
Sunnyvale, California	**94089**
(Address of principal executive offices)	*(Zip code)*

(408) 745-2000
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Name of each exchange on which registered**
Common Stock, par value $0.00001 per share	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filings requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 229.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒	Accelerated filer ☐	Non-accelerated filer ☐ (Do not check if a smaller reporting company)	Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

The aggregate market value of the common stock held by non-affiliates of the registrant was approximately $8,334,000,000 as of the end of the registrant's second fiscal quarter (based on the closing sale price for the common stock on the New York Stock Exchange on June 30, 2016).

As of February 17, 2017 , there were 381,982,043 shares of the registrant's common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

As noted herein, the information called for by Part III is incorporated by reference to specified portions of the registrant's definitive proxy statement to be filed in conjunction with the registrant's 2017 Annual Meeting of Stockholders, which is expected to be filed not later than 120 days after the registrant's fiscal year ended December 31, 2016 .

Juniper Networks, Inc.
Form 10-K

Table of Contents

Forward-Looking Statements

This Annual Report on Form 10-K, which we refer to as the Report, including "Management's Discussion and Analysis of Financial Condition and Results of Operations," contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 regarding future events and the future results of Juniper Networks, Inc., which we refer to as "we," "us," or the "Company," that are based on our current expectations, estimates, forecasts, and projections about our business, our results of operations, the industry in which we operate and the beliefs and assumptions of our management. All statements other than statement of historical facts are statements that could be deemed to be forward-looking statements. Words such as "expects," "anticipates," "targets," "goals," "projects," "would," "could," "intends," "plans," "believes," "seeks," "estimates," variations of such words, and similar expressions are intended to identify such forward-looking statements. Forward-looking statements by their nature address matters that are, to different degrees, uncertain, and these forward-looking statements are only predictions and are subject to risks, uncertainties, and assumptions that are difficult to predict. Therefore, actual results may differ materially and adversely from those expressed in any forward-looking statements. Factors that might cause or contribute to such differences include, but are not limited to, those discussed in this Report under the section entitled "Risk Factors" in Item 1A of Part I and elsewhere, and in other reports we file with the U.S. Securities and Exchange Commission, or the SEC. While forward-looking statements are based on reasonable expectations of our management at the time that they are made, you should not rely on them. We undertake no obligation to revise or update publicly any forward-looking statements for any reason, except as required by applicable law.

PART I

ITEM 1. *Business*

Overview

Juniper Networks designs, develops, and sells products and services for high-performance networks, to enable customers to build scalable, reliable, secure and cost-effective networks for their businesses, while achieving agility, efficiency and value through automation. We sell our products in more than 100 countries in three geographic regions: Americas; Europe, Middle East, and Africa, which we refer to as EMEA; and Asia Pacific, which we refer to as APAC. We sell our high-performance network products and service offerings across routing, switching, and security.

Our products address high-performance network requirements for global service providers, cloud providers, national governments, research and public sector organizations and other enterprises who view the network as critical to their success. We believe our silicon, systems, and software represent innovations that transform the economics and experience of networking, helping our customers achieve superior performance, greater choice, and flexibility, while reducing overall total cost of ownership. In addition to our products, we offer our customers worldwide services, including technical support, professional services, and education and training programs.

We were incorporated in California in 1996 and reincorporated in Delaware in 1998. Our corporate headquarters are located in Sunnyvale, California. Our website address is www.juniper.net.

Strategy

We deliver highly scalable, reliable, secure and cost-effective networks, while transforming the network's agility, efficiency and value through automation. We focus on customers and partners across our key market verticals, who view these network attributes as fundamental to their business; including Telecom, Cable Providers, Cloud Providers, National Government, Financial Services, and Strategic Enterprise Verticals. We see significant opportunities from the shift towards the cloud (large public and private data centers) and network automation across three market verticals:

- Cloud Providers - these customers continue to require high performance networking and we believe cloud providers will invest in data center networks that operate at significantly higher densities and scale, while operating at much lower cost-per-bit-per-second. These customers also require a high degree of automation.

- Telecom - these customers are moving from legacy networks to next-generation cloud-like infrastructure, essentially transforming their network locations into data centers which provides us opportunities to deliver secured telco cloud solutions via hardware, software and services.

- Strategic Enterprise - enterprises are transitioning their workloads and applications onto private and public clouds and our opportunity is to help these customers transition to public and hybrid cloud architectures that are optimized for operating costs, security, and that enable business agility.

We believe that these industry trends present an opportunity for Juniper Networks—one that is shaping our strategy. We believe our history as an innovation leader and our understanding of high performance networking technology position us to capitalize on this industry transition.

Maintain and Extend Technology Leadership

We are recognized as a leader in networking innovation in both software and hardware. Our Junos Operating System, or Junos OS, application-specific integrated circuit, or ASIC, technology, and network-optimized product architecture were key elements to establishing and, we believe, will continue to be key elements to maintaining our technology leadership.

Leverage Position as Supplier of High-Performance Network Infrastructure

From inception, we have focused on designing, developing, and building high-performance network infrastructure for the world's most demanding networking environments. We consistently deliver leading technologies that transform the economics and experience of networking—significantly improving customer economics by lowering the capital expenditures required to build networks and the operating expenses required to manage and maintain them. We believe that many customers will deploy networking equipment from only a few vendors, and that the scale, performance, reliability, and security of our products provides us with a competitive advantage, which is critical to being selected as one of those vendors.

Be a Strategic Partner to Our Customers

In developing our solutions, we work very closely with customers to design and build best-in-class products and solutions specifically designed to meet their complex needs. Over time, we have expanded our understanding of the escalating demands and risks facing our customers, which has enabled us to design additional capabilities into our products. We believe our close relationships with, and constant feedback from, our customers have been key elements in our design wins and rapid deployments to date. We plan to continue to work with our customers to implement product enhancements, as well as to design products that meet the evolving needs of the marketplace, while enabling customers to reduce costs. We are committed to investing in research and development, or R&D, at a level that drives our innovation agenda, enabling us to deliver highly differentiated products and outstanding value to our customers.

Establish and Develop Industry Partnerships

Our customers have diverse requirements. Therefore, we believe that it is important that we attract and build relationships with other industry leaders with diverse technologies and services that extend the value of the network to our customers. These partnerships ensure that our customers have access to those technologies and services, whether through technology integration, joint development, resale, or other collaboration, in order to better support a broader set of our customers' requirements. In addition, we believe an open network infrastructure that invites partner innovation provides customers with greater choice and control in meeting their evolving business requirements, while enabling them to reduce costs.

Markets and Customers

We sell our high-performance network products and service offerings through direct sales; distributors; value-added resellers, or VARs; and original equipment manufacturers, or OEMs to end-users in the service provider and enterprise markets. We believe the network needs for service providers, such as Telecom, Cable and Cloud Providers are converging, as are those of National Government, Financial Services, and Strategic Enterprise Verticals, as all of these customers focus on high performance networks and build cloud environments.

Service Providers

Service providers generally include wireline and wireless carriers, and cable operators, as well as major Internet content and application providers, including those that provide social networking and search engine services. We support most of the major service provider networks in the world and our high-performance network infrastructure offerings are designed and built for the performance, reliability, and security that service providers demand. We believe our networking infrastructure offerings benefit our service provider customers by:

- Reducing capital and operational costs by running multiple services over the same network using our secure, high density, highly automated, and highly reliable platforms;
- Creating new or additional revenue opportunities by enabling new services to be offered to new market segments, which includes existing customers and new customers, based on our product capabilities;
- Increasing customer satisfaction, while lowering costs, by enabling customers to self-select automatically provisioned service packages that provide the quality, speed, and pricing they desire; and
- Providing increased asset longevity and higher return on investment as our customers' networks can scale to higher throughput based on the capabilities of our platforms.

While many of these service providers have historically been categorized separately as wireline, wireless, or cable operators, in recent years, we have seen increased convergence of these different types of service providers through acquisitions, mergers, and partnerships. Service providers are increasingly investing in the build-out of high performance networks and the transformation of existing central offices to distributed cloud environments.

We believe that there are several other industry trends affecting service providers for which we are well positioned to deliver products and solutions. These trends include: significant growth in Internet Protocol, or IP, traffic on service provider networks because of peer-to-peer interaction; broadband usage; video; an increasing reliance on the network as a mission critical business tool in the strategies of our service provider customers and of their enterprise customers; the advent of data center "clouds" to deliver business applications via IP network connected facilities; Network Functions Virtualization, or NFV, to allow more flexible deployment models; and growth in mobile traffic as a result of the increase in mobile device usage including smartphones, tablets, and connected devices of various kinds.

The infrastructure market for service providers includes: products and technology at the network core; the network edge to enable access; the aggregation layer; the data center where many services are created; security to protect from the inside out and the outside in; the application awareness and intelligence to optimize the network to meet business and user needs; and the management, service awareness, and control of the entire infrastructure.

Enterprise

Our high-performance network infrastructure offerings are designed to meet the performance, reliability, and security requirements of the world's most demanding enterprises. The enterprise market generally is comprised of financial services; national, federal, state, and local governments; research and educational institutions; and other business that view their networks as critical to their success. We believe that our enterprise customers are able to deploy our solutions as a powerful component in delivering the advanced network capabilities needed for their leading-edge applications. In addition, our solutions:

- Assist in the consolidation and delivery of existing services and applications;
- Accelerate the deployment of new services and applications;
- Offer network security across every environment—from the data center to campus and branch environments to assist in the protection and recovery of services and applications; and
- Offer operational improvements that enable cost reductions, including lower administrative, training, customer care, and labor costs.

As with the service provider market, innovation continues to be a critical component in our strategy for the enterprise market. We believe that as enterprises transition their workloads to the cloud, they will seek greater flexibility in how they consume networking and security services. Whether they plan to move to a public cloud or hybrid cloud architecture, these are key technology areas where we are innovating. High-performance enterprises require IP networks that are global, distributed, and always available. Network equipment vendors serving these enterprises need to demonstrate performance, reliability, and security with best-in-class open solutions for maximum flexibility. We offer enterprise solutions and services for data centers as well as branch and campus applications.

Customers

In 2016 , 2015 and 2014 , no single customer accounted for 10% or more of our net revenues.

Products, Services, and Technology

Early in our history, we developed, marketed, and sold the first commercially available purpose-built IP backbone router optimized for the specific high-performance requirements of service providers. As the need for core bandwidth continued to increase, the need for service-rich platforms at the edge of the network was created.

We have expanded our portfolio to address multiple domains in the network: core; edge; access and aggregation; data centers; and campus and branch. We have systematically focused on how we innovate in silicon, systems, and software (including our Junos Operating System, virtualized network functions such as firewall, as well as software-defined networks, or SDN, cloud-delivered services, and automation software) to provide a range of hardware and software solutions in high-performance networking that can solve unique problems for our customers.

We conduct business globally and are managed, operated, and organized by major functional departments that operate on a consolidated basis. As a result, we operate in one reportable segment. We are focused on high-performance routing, switching, and security networking products and service offerings. See Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations* , in Part II of this Annual Report on Form 10-K, or Report, and Note 13, *Segments* , in Notes to Consolidated Financial Statements in Item 8 Part II of this Report, for an analysis of net revenues by product and service. The following is an overview of our major product families and service offerings in 2016 :

Routing Products

- ACX Series: Our ACX Series Universal Access Routers cost-effectively address current operator challenges to rapidly deploy new high-bandwidth services. With industry-leading performance of up to 2.56Tbps and support for 1GbE, 10 GbE and 40GbE interfaces, the ACX Series is well positioned to address the growing metro Ethernet and mobile backhaul needs of service providers. The platforms deliver the necessary scale and performance needed to support multi-generation wireless technologies.

- MX Series: Our MX Series is a family of high-performance, enterprise class and service provider Ethernet routers that function as a Universal Edge platform capable of supporting business, mobile, and residential services. Available in both physical and virtual form factors, powerful routing, switching and security features give the MX Series 3D Universal Edge Routers unmatched flexibility, versatility, and reliability to support advanced services and applications at the edge of the network. The MX platforms utilize our Trio silicon and provide carrier-class performance, scale, and reliability to support large-scale Ethernet deployments. In addition, in 2014, we introduced the vMX, a virtual version of the MX router, which is a fully featured MX Series 3D Universal Edge Router optimized to run as software on x86 servers. We believe that the vMX helps service providers and enterprises quickly and economically address their requirements with carrier-class routing and a DevOps style service-focus to the network.

- PTX Series: Our PTX Series Packet Transport Routers are designed for the Converged Supercore. The system is the first supercore packet system in the industry, and delivers powerful capabilities based on innovative ExpressPlus silicon and a forwarding architecture that is focused on optimizing IP/multi-protocol label switching, or MPLS and Ethernet. The PTX, now available in three form factors —PTX1000, PTX3000 and PTX5000, delivers several critical core functionalities and capabilities, including market-leading density and scalability, cost optimization, high availability, and network simplification. Our PTX Series products can readily adapt to today's rapidly changing traffic patterns for video, mobility, and cloud-based services.

- Cloud Customer Premises Equipment, or CPE, Solution: Our Cloud CPE is a fully automated, end-to-end NFV solution that builds on Juniper Networks Contrail Networking and supports cloud-based and premises-based virtual network functions, or VNFs, for both service provider and enterprise network services. This solution includes Contrail Service Orchestration, a comprehensive management and orchestration platform that delivers and manages virtualized network services such as virtual security, and the NFX250, a network services platform that can operate as a secure, on-premises device running software defined wide area network, or SD WAN, and multiple virtual service, from Juniper and third parties, simultaneously. The NFX250, when used as part of our Cloud CPE solution, eliminates the operational complexities associated with deploying multiple boxes at the customer site.

- NorthStar Controller: Our wide-area network SDN controller automates the creation of traffic-engineering paths across the network, increasing network utilization and enabling a customized programmable networking experience. With the power of Junos OS; optimization algorithms; and transport abstraction, we believe the NorthStar Controller enables efficient design, bringing new levels of control and visibility to help service providers avoid costly over-provisioning.

Switching Products

- EX Series: Our EX Series Ethernet switches address the access, aggregation, and core layer switching requirements of micro branch, branch office, and campus and data center environments, providing a foundation for the fast, secure, and reliable delivery of applications able to support strategic business processes. EX Series enterprise Ethernet switches are designed to deliver operational efficiency, business continuity, and agility, enabling customers to invest in innovative business initiatives that increase revenue and help them gain a competitive advantage. Our EX switches can also serve as security enforcement points as part of our Software-Defined Secure Networks, or SDSN, solution. Our SDSN solution provides end-to-end network visibility that helps secure the entire network, both physical and virtual. It leverages cloud economics to find and stop threats faster.

- QFX Series: Our QFX Series of core, spine and top-of-rack data center switches offer a revolutionary approach to switching that delivers dramatic improvements in data center performance, operating costs, and business agility for enterprises, high-performance computing networks, and cloud providers. Our QFX family, including QFX Series Switches (QFX10002, QFX10008, QFX10016, QFX5100, and QFX5200), combined with innovative fabric and high availability software features in Junos OS, enables improvements in speed, scale, and efficiency by removing complexity and improving business agility, and the QFabric System designed to enhance operational control. Our QFX switches can also serve as security enforcement points as part of our SDSN solution.

- OCX1100: Our open networking switch is designed to combine a cloud-optimized Open Compute Project, or OCP, hardware design with the performance and reliability of the proven, carrier-class Junos OS, to deliver a cost-effective switching solution for customers that require massive-scale cloud deployments.

Security Products

- SRX Series Services Gateways for the Data Center: Our mid-range, high-end and virtual SRX Series platforms, including the new SRX4100 and SRX4200 firewalls, provide high-performance, scalability, and service integration which are ideally suited for medium to large enterprise and service provider data centers, service provider backbones, and large campus environments where scalability, high performance, and concurrent services, are essential. The SRX Series of both physical and virtual dynamic services gateways provides firewall/Virtual Private Network, or VPN, performance and scalability, and includes the AppSecure suite of next-generation security capabilities that deliver greater visibility, enforcement, control, and protection over the network.

- Branch SRX, Security Policy and Management: The Branch SRX family, including the SRX300 Series and SRX1500, provide an integrated firewall and next-generation firewall capabilities with industry-leading price and performance. Junos Space Security Director is a network security management product that offers efficient, highly scalable, and comprehensive network security policy management. These solutions enable organizations to securely, reliably, and economically deliver powerful new services and applications to all locations and users with superior service quality.

- vSRX Virtual Firewall: Our vSRX Firewall delivers all of the features of our physical firewalls, including the AppSecure next-generation firewall functionality, advanced security, and automated lifecycle management capabilities for enterprises and service providers. The vSRX provides scalable, secure protection across private, public, and hybrid clouds. We also offer the cSRX which has been designed and optimized for container and cloud environments.

- Advanced Malware Protection: Sky Advanced Threat Prevention, or Sky ATP, is a cloud-based service that is designed to use both static and dynamic analysis with machine learning to find unknown threat signatures (zero-day attacks). It is integrated with SRX firewalls and secure routers for automated enforcement against threats, providing advanced anti-malware protection to data center, campus and branch environments.

- Spotlight Secure Threat Intelligence Platform: Our Spotlight Secure Threat Intelligence Platform is a threat intelligence platform that aggregates threat feeds from multiple sources to deliver open, consolidated, actionable intelligence to SRX Series Services Gateways (firewalls) across the organization for automated enforcement against threats. These sources include our own threat feeds, third-party threat feeds, and threat detection technologies that customers can deploy.

Services

In addition to our products, we offer support, professional, and educational services. We deliver these services through our channel partners and directly to end-users and utilize a multi-tiered support model, leveraging the capabilities of our channel partners, and other third-party organizations, as appropriate.

We also train our channel partners in the delivery of support, professional, and educational services to ensure these services can be locally delivered.

As of December 31, 2016 , we employed 1,860 people in our worldwide customer service and support organization. We believe that a broad range of services is essential to the successful customer deployment and ongoing support of our products, and we employ remote technical support engineers, on-site resident engineers, spare parts planning and logistics staff, professional services consultants and educators with proven network experience to provide those services.

Platform Strategy

In addition to our major hardware product families, our software portfolio has been a key technology element in our goal to be a leader in high-performance networking.

Our Junos Platform enables our customers to expand network software into the application space, deploy software clients to control delivery, and accelerate the pace of innovation with an ecosystem of developers. The Junos Platform includes the following products:

- Junos OS: At the heart of the Junos Platform is Junos OS. We believe Junos OS is fundamentally differentiated from other network operating systems not only in its design, but also in its development capabilities. The advantages of Junos OS include:

    - One modular operating system with common base of code and a single, consistent implementation for each control plane feature;

    - A highly disciplined and firmly scheduled development process; and

    - One common modular software architecture that scales across all Junos-based platforms.

  Junos OS is designed to improve the availability, performance, and security of business applications running across the network. Junos OS helps to automate network operations by providing a single consistent implementation of features across the network in a single release train that seeks to minimize the complexity, cost, and risk associated with implementing network features and upgrades. This operational efficiency allows network administrators more time to innovate and deliver new revenue-generating applications, helping to advance the economics of high-performance networking.

  The security and stability of Junos OS, combined with its modular architecture and common source code base, provides a foundation for delivering performance, reliability, security, and scale at a lower total cost of ownership than multiple operating code base environments. With an increasing number of our platforms able to leverage Junos OS, including routing, switching, and security products, we believe Junos OS provides us a competitive advantage over other major network equipment vendors.

- *Junos Space:* Our Junos Space network management platform offers an open, Service-Oriented Architecture-based, or SOA, platform for creating organic network management applications to drive network innovation. Junos Space includes applications for network infrastructure management and automation that help customers reduce operational cost and complexity and scale services. These include Network Director, Services Activation Director, Security Director, Edge Services Director, Service Now, and Service Insight.

Our Contrail Networking and Contrail Cloud Platform offer an open-source, standards-based platform for SDN and NFV. This platform enables our customers to address their key problems in the area of network automation, agility, and time-to-service deployment by providing a mechanism to virtualize the network over any physical network and automating the provisioning and management of networking services (such as security and load balancing). Contrail's differentiation includes a distributed architecture that allows us to build in scale-out, high-availability and in-service upgrade capabilities; a multi-vendor solution familiar to our customers that allows Contrail to seamlessly interoperate with equipment from major networking vendors; an open-source licensing model to provide a true freedom of choice without lock-in, and sophisticated granular analytics for network and infrastructure performance, all fully driven by Representational State Transfer based application program interfaces, or REST APIs, that can be used by customers to work with any provisioning and management system. Contrail Service Orchestration provides simplicity and automation with service design application, VNF lifecycle management and service administration and troubleshooting.

Significant Product Development Projects

In 2016, we continued to execute on our strategy with significant advancements in performance and automation across a number of key solution areas and announced a number of new products and enhancements to our hardware and software products across routing, switching, and security.

In routing, our solution for wide area IP transport across Data Center Interconnect, Metro, and Core was enhanced with the introduction of our newest PTX line-cards, coupled with our multi-layer optimization controller, NorthStar.

In switching, we announced two new access switches, the EX2300 and EX3400 in 2016. Further, we introduced Juniper Networks Cloud-Enabled Branch, a solution that will allow enterprises and managed service providers alike to create and automate delivery of branch office networking services on-demand.

In security, we announced Juniper Networks cSRX, a next-generation containerized firewall providing advanced security services for SDSN, as well as a multi-core version of the Juniper Networks vSRX. We also announced Junos Space Security Director Policy Enforcer, new SRX4100 and SRX4200 firewalls, and new enhancements to Sky ATP to further build out our SDSN platform.

We also expanded our global alliances with NEC to deliver NFV-based solutions that allow service providers and enterprises to gain greater service agility through automation.

In addition, in 2016 we completed three acquisitions that we expect will further enhance our product portfolio to accelerate our strategy in the cloud transition. First, we acquired BTI Systems Inc., or BTI, to accelerate our ability to address the fast growing data center interconnect, or DCI, and metro Ethernet markets with a breadth of open, programmable and automated, packet optical transport solutions. Second, we acquired Aurrion, Inc., or Aurrion, which we expect will strengthen our long-term competitive advantage in cost-effective, high-density, high-speed optical networks. Lastly, we acquired AppFormix, Inc., which we expect will complement the analytics and capabilities of Contrail and help customers enhance their cloud operations. We will continue to look at targeted and strategic acquisitions that we believe can complement our product portfolio, operations or R&D strategy.

Research and Development

We have assembled a team of skilled engineers with extensive experience in the fields of high-end computing, network system design, ASIC design, security, routing protocols, software applications and platforms, and embedded operating systems. As of December 31, 2016 , we employed 4,054 people in our worldwide R&D organization.

We believe that strong product development capabilities are essential to our strategy of enhancing our core technology, developing additional applications, integrating that technology, and maintaining the competitiveness and innovation of our product and service offerings. In our products, we are leveraging our software, ASIC and systems technology, developing additional network interfaces targeted to our customers' applications, and continuing to develop technology to support the build-out of high performance networks and cloud environments. We continue to expand the functionality of our products to improve performance, reliability and scalability, and to provide an enhanced user interface.

Our R&D process is driven by the availability of new technology, market demand, and customer feedback. We have invested significant time and resources in creating a structured process for all product development projects. Following an assessment of market demand, our R&D team develops a full set of comprehensive functional product specifications based on inputs from the product management and sales organizations. This process is designed to provide a framework for defining and addressing the steps, tasks, and activities required to bring product concepts and development projects to market. Expenditures for R&D were $1,013.7 million , $994.5 million , and $1,006.2 million in 2016 , 2015 , and 2014 , respectively.

Sales and Marketing

As of December 31, 2016 , we employed 2,590 people in our worldwide sales and marketing organization. These sales and marketing employees operate in different locations around the world in support of our customers.

Our sales organization, with its structure of sales professionals, business development teams, systems engineers, marketing teams, channel teams, and an operational infrastructure team are generally distributed between vertical markets. Within each team, sales team members serve the following three geographic regions: (i) Americas (including United States, Canada, Mexico, Caribbean and Central and South America), (ii) EMEA, and (iii) APAC. Within each region, there are regional and country teams, as well as vertical market focused teams, to ensure we operate close to our customers.

Our sales teams operate in their respective regions and generally either engage customers directly or manage customer opportunities through our distribution and reseller relationships as described below.

We sell to a number of service providers directly. Otherwise, we sell to both service providers and enterprise customers primarily through distributors and resellers.

Direct Sales Structure

The terms and conditions of direct purchasing arrangements are governed either by customer purchase orders and our order acknowledgment terms for those orders or by purchase contracts. The direct contracts with these customers set forth only general terms of sale and generally do not require customers to purchase specified quantities of our products. We directly receive and process customer purchase orders.

Channel Sales Structure

A critical part of our sales and marketing efforts are our channel partners through which we conduct the majority of our sales. We utilize various channel partners, including but not limited to the following:

- A global network of strategic distributor relationships, as well as region-specific or country-specific distributors who in turn sell to local VARs who sell to end-user customers. Our distribution channel partners resell routing, switching and security products and services, which are purchased by both enterprise and service provider customers. These distributors tend to be focused on particular regions or countries within regions. For example, we have substantial distribution relationships with Ingram Micro in the Americas and Hitachi in Japan. Our agreements with these distributors are generally non-exclusive, limited by region, and provide product and service discounts and other ordinary terms of sale. These agreements do not require our distributors to purchase specified quantities of our products or services. Further, most of our distributors sell our competitors' products and services, and some sell their own competing products and services.

- VARs and Direct value-added resellers, including our strategic worldwide alliance partners referenced below, resell our products to end-users around the world. These channel partners either buy our products and services through distributors, or directly from us, and have expertise in designing, selling, and deploying complex networking solutions in their respective markets. Our agreements with these channel partners are generally non-exclusive, limited by region, and provide product and service discounts and other ordinary terms of sale. These agreements do not require these channel partners to purchase specified quantities of our products or services. Increasingly, our service provider customers also resell our products or services to their customers or purchase our products or services for the purpose of providing managed or cloud-based services to their customers.

- Strategic worldwide reseller relationships with established Juniper alliances, comprised of Dimension Data Holdings, or Dimension Data; Ericsson Telecom A.B., or Ericsson; International Business Machines, or IBM; and NEC Corporation. These companies each offer services and products that complement our own product and service offerings and act as a reseller, and in some instances as an integration partner for our products. Our arrangements with these partners allow them to resell our products and services on a non-exclusive and generally global basis, provide for product and service discounts, and specify other general terms of sale. These agreements do not require these partners to purchase specified quantities of our products or services.

Manufacturing and Operations

As of December 31, 2016 , we employed 358 people in worldwide manufacturing and operations who primarily manage relationships with our supply chain, which include our contract manufacturers, original design manufacturers, component suppliers, warehousing and logistics.

Our manufacturing is primarily conducted through contract manufacturers and original design manufacturers in the United States, or U.S.; China; Malaysia; Mexico; and Taiwan. As of December 31, 2016 , we utilized Celestica Incorporated, Flextronics International Ltd., Accton Technology Corporation, and Alpha Networks Inc. for the majority of our manufacturing activity. Our contract manufacturers and original design manufacturers in all locations are responsible for all phases of manufacturing from prototypes to full production and assist with activities such as material procurement, surface mount assembly, final assembly, test, control, shipment to our customers, and repairs. Together with our contract manufacturers and original design manufacturers, we design, specify, and monitor the tests that are required for our products to meet internal and external quality standards. These arrangements provide us with the following benefits:

- We can quickly ramp up and deliver products to customers with turnkey manufacturing;
- We gain economies of scale by leveraging our buying power with our contract manufacturers and original design manufacturers when we manufacture large quantities of products;
- We operate with a minimum amount of dedicated space and employees for manufacturing operations; and
- We can reduce our costs by reducing what would normally be fixed overhead expenses.

Our contract manufacturers and original design manufacturers build our products based on our rolling product demand forecasts. Each contract manufacturer procures components necessary to assemble the products in our forecast and tests the products according to agreed-upon specifications. Products are then shipped to our distributors, VARs, or end-users. Generally, we do not own the components. Title to the finished goods is generally transferred from the contract manufacturers to us when the products leave the contract manufacturer's location. Customers take title to the products upon delivery at a specified destination. If the product or components remain unused or the products remain unsold for a specified period, we may incur carrying charges or obsolete materials charges.

Our contracts with our contract manufacturers and original design manufacturers merely set forth a framework within which the contract manufacturer and original design manufacturer, as applicable, may accept purchase orders from us. These contracts do not represent long-term commitments.

We also purchase and hold inventory for strategic reasons and to mitigate the risk of shortages of certain critical component supplies. The majority of this inventory is production components. As a result, we may incur additional holding costs and obsolescence charges, particularly resulting from uncertainties in future product demand.

Some of our custom components, such as ASICs, are manufactured primarily by sole or limited sources, each of which is responsible for all aspects of production using our proprietary designs.

By working collaboratively with our suppliers, we endeavor to promote socially responsible business practices beyond our company and throughout our worldwide supply chain. To this end, we have adopted a supplier code of conduct and promote compliance with such code of conduct to our suppliers. One element of our supplier code of conduct is adoption and compliance with the Electronic Industry Code of Conduct, or the EICC. The EICC, a coalition of electronics, retail, auto and toy companies, provides guidelines and resources to drive performance and compliance with critical corporate social responsibility policies. Its goal is to promote ethical business practices, eliminate human trafficking, and to ensure that working conditions in the electronic industry supply chain are safe, that workers are treated with respect and dignity, and that manufacturing processes are environmentally responsible. Our Corporate Citizenship Report and Supplier Code of Conduct are available on our website.

Backlog

Our sales are made primarily pursuant to purchase orders under framework agreements either with our distributors, resellers or customers. At any given time, we have backlog orders for products that have not shipped. Because customers may cancel purchase orders or change delivery schedules without significant penalty, we believe that our backlog at any given date may not be a reliable indicator of future operating results. As of December 31, 2016 and December 31, 2015 , our total product backlog was approximately $441.2 million and $517.4 million , respectively. Our product backlog consists of confirmed orders for products scheduled to be shipped to customers, generally within the next six months, and excludes orders from distributors as we recognize product revenue on sales made through distributors upon sell-through to end-users. Backlog also excludes certain future revenue adjustments for items such as product revenue deferrals, sales return reserves, service revenue allocations, and early payment discounts.

Seasonality

We, as do many companies in our industry, experience seasonal fluctuations in customer spending patterns. Historically, we have experienced stronger customer demand in the fourth quarter and weaker demand in the first quarter. This historical pattern should not be considered a reliable indicator of our future net revenues or financial performance.

Competition

We compete in the network infrastructure markets. These markets are characterized by rapid change, converging technologies, and a migration to networking solutions that offer agility advantages. In the network infrastructure business, Cisco Systems, Inc., or Cisco, has historically been the dominant player. However, our principal competitors also include Arista Networks, Inc., or Arista; Brocade Communications Systems, Inc., or Brocade, which is expected to be acquired by Broadcom Limited in 2017; Dell Inc., or Dell; Hewlett Packard Enterprise Co., or HPE; Huawei Technologies Co., Ltd., or Huawei; and Nokia Corporation or Nokia.

Many of our current and potential competitors, such as Cisco, Nokia, HPE, and Huawei, among others, have broader portfolios which enable them to bundle their networking products with other networking and information technology products in a manner that may discourage customers from purchasing our products. Many of our current and potential competitors have greater name recognition, marketing budgets, and more extensive customer bases that they may leverage to compete more effectively. Increased competition could result in price reductions, fewer customer orders, reduced gross margins, and loss of market share, negatively affecting our operating results.

In addition, there are a number of other competitors in the security network infrastructure space, including Palo Alto Networks, Inc., or Palo Alto Networks; Check Point Software Technologies, Ltd., or Check Point; F5 Networks, Inc., or F5 Networks; and Fortinet, Inc., or Fortinet; among others, who tend to be focused specifically on security solutions and, therefore, may be considered specialized compared to our broader product line.

We expect that over time, large companies with significant resources, technical expertise, market experience, customer relationships, and broad product lines, such as Cisco, Nokia, and Huawei, will introduce new products designed to compete more effectively in the market. There are also several other companies that aim to build products with greater capabilities to compete with our products. Further, there has been significant consolidation in the networking industry, with smaller companies being acquired by larger, established suppliers of network infrastructure products. We believe this trend is likely to continue which may increase the competitive pressure faced by us due to their increased size and breadth of their product portfolios.

In addition to established competitors, a number of public and private companies have announced plans for new products to address the same needs that our products address. We believe that our ability to compete depends upon our ability to demonstrate that our products are superior and cost effective in meeting the needs of our current and potential customers.

As a result, we expect to face increased competition in the future from larger companies with significantly more resources than we have and also from emerging companies that are developing new technologies. Although we believe that our technology and the purpose-built features of our products make them unique and will enable us to compete effectively with these companies, we cannot guarantee that we will be successful.

Environment

We are committed to maintaining compliance with all environmental laws applicable to our operations, products and services and to reducing our environmental impact across our business and supply chain. Our operations and many of our products are subject to various federal, state, local and foreign regulations that have been adopted with respect to the environment, such as the Waste

Electrical and Electronic Equipment, or WEEE, Directive; Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, or RoHS; and Registration, Evaluation, Authorization, and Restriction of Chemicals, or REACH, regulations adopted by the European Union and China. To date, compliance with federal, state, local, and foreign laws enacted for the protection of the environment has had no material effect on our capital expenditures, earnings, or competitive position. However, see the risk factor entitled "Regulation of our industry in general and the telecommunications industry in particular could harm our operating results and future prospects" in the section entitled *Risk Factors* in Item 1A of Part I of this Report for additional information concerning regulatory compliance.

Juniper's greatest impact on the environment is through our products and services. Juniper has an environmental program, based on our new product introduction process, that focuses on energy efficiency, materials innovation, and recyclability.

We are committed to the environment through our efforts to improve the energy efficiency per gigabit of throughput of key elements in our high-performance network product offerings. With the launch of the PTX series, we pioneered, among other ground-breaking achievements, record energy efficiency of 1.5W per Gigabit of throughput. Since then, we have continued to enhance the PTX series, delivering market-leading energy efficiency of 1.2W per Gigabit of throughput in 2014 and further improving energy efficiency of 0.4W per Gigabit with the 3Tbps FPC3 line-card in 2015. In addition, our MX series 3D Universal Edge Routers are delivering breakthrough energy efficiency of 0.8W per Gigabit at the network edge, breaking the 1W per Gigabit barrier. The environment will remain a focus area across multiple aspects of our business.

We are also voluntarily participating in the Carbon Disclosure Project, or CDP, climate and water disclosures and encourage our direct material suppliers representing an aggregate of at least 80% of our consolidated total direct expenditure to do the same. CDP is a global standardized mechanism by which companies report their greenhouse gas emissions to institutional investors and customers. Additionally, Juniper is a member of the EICC and has adopted and promotes the adoption by our suppliers of the practices of the EICC Code of Conduct, as discussed above. We continue to invest in the infrastructure and systems required to execute on, monitor and drive environmental improvements in our global operations and within our supply chain.

Intellectual Property

Our success and ability to compete are substantially dependent upon our internally developed technology and expertise, as well as our ability to obtain and protect necessary intellectual property rights. While we rely on patent, copyright, trade secret, and trademark law, as well as confidentiality agreements, to protect our technology, we also believe that factors such as the technological and creative skills of our personnel, new product developments, frequent product enhancements, and reliable product maintenance are essential to establishing and maintaining a technology leadership position. There can be no assurance that others will not develop technologies that are similar or superior to our technology.

In addition, we integrate licensed third-party technology into certain of our products and, from time to time, we need to renegotiate these licenses or license additional technology from third parties to develop new products or product enhancements or to facilitate new business models. There can be no assurance that third-party licenses will be available or continue to be available to us on commercially reasonable terms or at all. Our inability to maintain or re-license any third-party licenses required in our products or our inability to obtain third-party licenses necessary to develop new products and product enhancements could require us to obtain substitute technology of lower quality or performance standards or at a greater cost, any of which could harm our business, financial condition, and results of operations.

As of December 31, 2016 , we had over 2,900 patents worldwide and numerous patent applications are pending. Patents generally have a term of twenty years from filing. As our patent portfolio has been built over time, the remaining terms on the individual patents vary. We cannot be certain that patents will be issued on the patent applications that we have filed, that we will be able to obtain the necessary intellectual property rights, or that other parties will not contest our intellectual property rights.

Employees

As of December 31, 2016 , we had 9,832 full-time employees. We have not experienced any work stoppages, and we consider our relations with our employees to be good. Competition for qualified personnel in our industry is intense. We believe that our future success depends in part on our continued ability to hire, motivate, and retain qualified personnel. We believe that we have been successful in recruiting qualified employees, but there is no assurance that we will continue to be successful in the future.

Our future performance depends significantly upon the continued service of our key technical, sales, and senior management personnel, none of whom are bound by an employment agreement requiring service for any defined period of time. The loss of one or more of our key employees could have a material adverse effect on our business, financial condition, and results of operations.

Executive Officers of the Registrant

The following sets forth certain information regarding our executive officers as of the filing of this Report:

Name	Age	Position
Rami Rahim	46	Chief Executive Officer and Director
Jonathan Davidson	43	Executive Vice President and General Manager, Juniper Development and Innovation
Brian Martin	55	Senior Vice President, General Counsel and Secretary
Kenneth Miller	46	Executive Vice President and Chief Financial Officer
Vince Molinaro	53	Executive Vice President and Chief Customer Officer
Pradeep Sindhu	64	Executive Vice President, Chief Technology Officer, Chief Scientist and Vice Chairman of the Board
Terrance F. Spidell	48	Vice President, Corporate Controller and Chief Accounting Officer

RAMI RAHIM joined Juniper in January 1997 and became Chief Executive Officer of Juniper, and a member of the Board of Directors, in November 2014. From March 2014 until he became Chief Executive Officer, Mr. Rahim served as Executive Vice President and General Manager of Juniper Development and Innovation, or JDI. His responsibilities included driving strategy, development and business growth for routing, switching, security, silicon technology, and the Junos operating system. Previously, Mr. Rahim served Juniper in a number of roles, including Executive Vice President, Platform Systems Division, Senior Vice President and General Manager, Edge and Aggregation Business Unit, or EABU, and Vice President, Product Management for EABU. Prior to that, Mr. Rahim spent the majority of his time at Juniper in the development organization where he helped with the architecture, design and implementation of many Juniper core, edge, and carrier Ethernet products. Mr. Rahim holds a Bachelor of Science degree in Electrical Engineering from the University of Toronto and a Master of Science degree in Electrical Engineering from Stanford University.

JONATHAN DAVIDSON joined Juniper in March 2010 and became Executive Vice President and General Manager of JDI in January 2015. From July 2014 until he became Executive Vice President and General Manager of JDI, Mr. Davidson served as Senior Vice President and General Manager for Juniper Networks Security, Switching and Solutions Business Unit. Previously, Mr. Davidson was Juniper's Senior Vice President and General Manager of the Campus and Data Center Business Unit and Vice President, Product Line Management, where he was responsible for Edge Routing and Aggregation Business product management and strategy. Prior to joining Juniper, Mr. Davidson had a 15-year career at Cisco Systems, Inc., a manufacturer of communications and information technology networking products, where he served as Director of Product Management and led the enterprise routing product management team and service provider Layer 4 through Layer 7 services team.

BRIAN MARTIN joined Juniper in October 2015 as Senior Vice President, General Counsel and Secretary. From April 2007 to September 2015, Mr. Martin served as Executive Vice President, General Counsel and Corporate Secretary of KLA-Tencor Corporation, or KLA-Tencor, a provider of process control and yield management solutions. Prior to joining KLA-Tencor, Mr. Martin spent ten years in senior legal positions at Sun Microsystems, Inc., or Sun, most recently as Vice President, Corporate Law Group, responsible for legal requirements associated with Sun's corporate securities, mergers, acquisitions and alliances, corporate governance and Sarbanes-Oxley compliance, and litigation management. Prior to joining Sun, Mr. Martin was in private practice where he had extensive experience in antitrust and intellectual property litigation. Mr. Martin holds a bachelor's degree in economics from the University of Rochester and a J.D. from the State University of New York at Buffalo Law School.

KENNETH MILLER joined Juniper in June 1999 and has served as the Company's Executive Vice President and Chief Financial Officer since February 2016. From April 2014 to February 2016, Mr. Miller served as our Senior Vice President, Finance, where he was responsible for the finance organization across the Company, as well as our treasury, tax and global business services functions. Previously, Mr. Miller served as our Vice President, Go-To-Market Finance; Vice President, Platform Systems Division; Vice President, SLT Business Group Controller and in other positions in the Finance and Accounting organizations. Mr. Miller holds a Bachelor of Science degree in Accounting from Santa Clara University.

VINCE MOLINARO joined Juniper in 2009 as Senior Vice President of Sales, and served as Executive Vice President, Sales, Services and Support from July 2013 to February 2014, and currently serves as our Executive Vice President and Chief Customer Officer. Prior to joining Juniper, Mr. Molinaro held senior leadership positions at a number of technology companies, including Bell Laboratories, Inc., Lucent Technologies, Inc. (prior to its acquisition by Alcatel Inc.), Alcatel-Lucent USA Inc. and Internap Network Services Corporation. He has extensive domestic and international experience having lived and managed large organizations throughout Europe and the U.S. Mr. Molinaro holds a Bachelor of Science degree in Biomedical Engineering from Boston University and a Master of Science degree in Electrical Engineering from University of Bridgeport.

PRADEEP SINDHU founded Juniper in February 1996 and served as Chief Executive Officer and Chairman of the Board until September 1996. Since then, Dr. Sindhu has served as Vice Chairman of the Board and Chief Technology Officer of Juniper. In February 2017, Dr. Sindhu transitioned to the role of Chief Scientist in order to devote a majority of his time to Fungible, Inc., a startup company that Dr. Sindhu co-founded in 2015. Dr. Sindhu will continue to serve as the Company's Chief Technology Officer until a successor is found. In connection with Juniper's 2017 annual meeting of stockholders, Dr. Sindhu will transition from Vice Chairman to Technical Advisor to the Board. From September 1984 to February 1991, Dr. Sindhu worked as a Member of the Research Staff, from March 1987 to February 1996, as the Principal Scientist, and from February 1994 to February 1996, as Distinguished Engineer at the Computer Science Lab at Xerox Corporation, Palo Alto Research Center, a technology research center. Dr. Sindhu holds a Bachelor of Technology degree in Electrical Engineering from the Indian Institute of Technology, a Master of Science degree in Electrical Engineering from the University of Hawaii, and a Masters and PhD in Computer Science from Carnegie-Mellon University.

TERRANCE F. SPIDELL joined Juniper in August 2011 as Vice President, Assistant Corporate Controller, and has served as Vice President, Corporate Controller since November 2012. In 2013, Mr. Spidell assumed the position of Chief Accounting Officer of the Company. Before joining the Company, Mr. Spidell was at VeriSign, Inc., a provider of Internet infrastructure services, as Vice President, Corporate Controller, from June 2009 through July 2011 and as Vice President, Accounting Operations, from March 2008 through June 2009. Prior to VeriSign, Mr. Spidell held various positions, most recently Senior Manager, at PricewaterhouseCoopers, a registered public accounting firm. Mr. Spidell is a Certified Public Accountant and holds a Bachelor in Business Administration, with degrees in Finance and Accounting, from Boise State University.

Available Information

We file our annual reports on Form 10-K, quarterly reports on Form 10-Q, and current reports on Form 8-K pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, with the U.S. Securities and Exchange Commission, or the SEC, electronically. The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers, including Juniper Networks, that file electronically with the SEC. The address of that website is https://www.sec.gov.

You may obtain a free copy of our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports on our website at http://www.juniper.net, by contacting our Investor Relations Department at our corporate offices by calling 1-408-745-2000, or by sending an e-mail message to investorrelations@juniper.net. Such reports and other information are available on our website as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Our Corporate Governance Standards, the charters of our Audit Committee, Compensation Committee, Stock Committee, and Nominating and Corporate Governance Committee, as well as our Worldwide Code of Business Conduct are also available on our website. Information on our website is not, and will not be deemed, a part of this Report or incorporated into any other filings the Company makes with the SEC.

Investors and others should note that we announce material financial and operational information to our investors using our Investor Relations website (http://investor.juniper.net), press releases, SEC filings and public conference calls and webcasts. We also use the Twitter accounts @JuniperNetworks and the Company's blogs as a means of disclosing information about the Company and for complying with our disclosure obligations under Regulation FD. The social media channels that we use as a means of disclosing information described above may be updated from time to time as listed on our Investor Relations website.

Item 1A. ***Risk Factors***

Factors That May Affect Future Results

Investments in our securities involve significant risks. Even small changes in investor expectations for our future growth and earnings, whether as a result of actual or rumored financial or operating results, changes in the mix of the products and services sold, acquisitions, industry changes, or other factors, could trigger, and have triggered in the past, significant fluctuations in the market price of our common stock. Investors in our securities should carefully consider all of the relevant factors disclosed by us, including, but not limited to, the following factors, that could affect our business, operating results and stock price.

Our quarterly results are unpredictable and subject to substantial fluctuations; as a result, we may fail to meet the expectations of securities analysts and investors, which could adversely affect the trading price of our common stock.

Our revenues and operating results may vary significantly from quarter-to-quarter due to a number of factors, many of which are outside of our control and any of which may cause our stock price to fluctuate.

The factors that may cause our quarterly results to vary quarter by quarter and be unpredictable include, but are not limited to: limited visibility into customer spending plans, changes in customer mix, changes in the mix of products and services sold, changes in the mix of geographies in which our products and services are sold, changing market and economic conditions, current and potential customer, partner and supplier consolidation and concentration, competition, long sales and implementation cycles, unpredictable ordering patterns, changes in the amount and frequency of share repurchases or dividends, regional economic and political conditions, and seasonality. For example, we, and many companies in our industry, experience adverse seasonal fluctuations in customer spending, particularly in the first quarter. Furthermore, market trends, competitive pressures, commoditization of products, seasonal rebates, increased component or shipping costs, issues with product quality, regulatory impacts and other factors may result in reductions in revenue or pressure on gross margins in a given period, which may necessitate adjustments to our operations. Such adjustments may be difficult or impossible to execute in the short or medium term.

As a result of these factors, as well as other variables affecting our operating results, we believe that quarter-to-quarter comparisons of operating results are not necessarily a good indication of what our future performance will be. It is likely that in some quarters, our operating results will be below our guidance, our long-term financial model or the expectations of securities analysts or investors, in which case the price of our common stock may decline and has declined in the past. Such a decline could also occur, and has occurred in the past, even when we have met our publicly stated revenues and/or earnings guidance.

Fluctuating economic conditions make it difficult to predict revenues and gross margin for a particular period and a shortfall in revenues or increase in costs of production may harm our operating results.

Our revenues and gross margin depend significantly on general economic conditions and the demand for products in the markets in which we compete. Economic weakness or uncertainty, customer financial difficulties, and constrained spending on network expansion and enterprise infrastructure have in the past resulted in, and may in the future result in, decreased revenues and earnings. Such factors could make it difficult to accurately forecast sales and operating results and could negatively affect our ability to provide accurate forecasts to our contract manufacturers and manage our contract manufacturer relationships and other expenses. In addition, economic instability or uncertainty, as well as continued turmoil in the geopolitical environment in many parts of the world, have, and may continue to, put pressure on economic conditions, which has led and could lead, to reduced demand for our products, to delays or reductions in network expansions or infrastructure projects, and/or higher costs of production. More generally-speaking, economic weakness may also lead to longer collection cycles for payments due from our customers, an increase in customer bad debt, restructuring initiatives and associated expenses, and impairment of investments. Furthermore, instability in the global markets may adversely impact the ability of our customers to adequately fund their expected capital expenditures, which could lead to delays or cancellations of planned purchases of our products or services. Our operating expenses are largely based on anticipated revenue trends and a high percentage of our expenses is, and will continue to be, fixed in the short and medium term. Therefore, fluctuations in revenue could cause significant variations in our operating results and operating margins from quarter to quarter. Uncertainty about future economic conditions also makes it difficult to forecast operating results and to make decisions about future investments. Future or continued economic weakness, failure of our customers and markets to recover from such weakness, customer financial difficulties, increases in costs of production, and reductions in spending on network maintenance and expansion could result in price concessions in certain markets or have a material adverse effect on demand for our products and consequently on our business, financial condition, and results of operations.

Our success depends upon our ability to effectively plan and manage our resources and restructure our business through rapidly fluctuating economic and market conditions, and such actions may have an adverse effect on our financial and operating results.

Our ability to successfully offer our products and services in a rapidly evolving market requires an effective planning, forecasting, and management process to enable us to effectively scale and adjust our business in response to fluctuating market opportunities and conditions.

From time to time, we have increased investment in our business by, for example, increasing headcount, acquiring companies, and increasing our investment in R&D, sales and marketing, and other parts of our business. Conversely, in 2014, to refocus the Company's strategy, optimize its structure and improve operational efficiencies, we implemented a new strategic focus, realigned our organization into a One-Juniper structure, reduced our workforce, consolidated and closed facilities, made changes to enhance efficiency, improved cost management measures and instituted a new capital allocation plan. In connection with our cost management measures, we implemented a substantial cost reduction plan accomplished through various restructuring activities across research and development, sales and marketing, and general and administrative. We recorded a goodwill impairment charge of $850.0 million in the fourth quarter of 2014 due to the underperformance of our Security reporting unit and product rationalizations. Further strategy-related pivots could lead to delays in achieving revenue and profit forecasts and result in additional impairment. Some of our expenses are fixed costs that cannot be rapidly or easily adjusted in response to fluctuations in our business or numbers of employees. Rapid changes in the size, alignment or organization of our workforce, including sales account coverage, could adversely affect our ability to develop and deliver products and services as planned or impair our ability to realize our current or future business and financial objectives. Our ability to achieve the anticipated cost savings and other benefits from our restructuring initiatives within the expected time frame is subject to many estimates and assumptions. These estimates and assumptions are subject to significant economic, competitive and other uncertainties, some of which are beyond our control. If these estimates and assumptions are incorrect, if we are unsuccessful at implementing changes, or if other unforeseen events occur, our business and results of operations could be adversely affected.

We expect our gross margins and operating margins to vary over time, and the level of gross margins achieved by us in recent years may not be sustainable.

We expect our product and service gross margins to vary, both in the near-term and in the long-term, and the gross margins we have achieved in recent years may not be sustainable and may be adversely affected in the future by numerous factors, some of which have occurred and may occur in the future, including customer, product and geographic mix shifts, an increase or decrease in our software sales or services we provide, increased price competition in one or more of the markets in which we compete, changes in the actions of our competitors or their pricing strategies, which may be difficult to predict and respond to, currency fluctuations that impact our costs or the cost of our products and services to our customers, increases in material, labor, or inventory carrying costs, excess product component or obsolescence charges from our contract manufacturers, issues with manufacturing or component quality or efficiencies, increased costs due to changes in component pricing or charges incurred due to component holding periods if we do not accurately forecast product demand, warranty related issues, or our introduction of new products and enhancements or entry into new markets with different pricing and cost structures. For example, in fiscal year 2016, our margins decreased compared to fiscal year 2015, primarily due to elevated pricing pressure and product mix. In fiscal year 2015, our margins increased compared to fiscal year 2014, as a result of higher restructuring and other charges recorded in 2014 but not in 2015, in connection with the restructuring plan we initiated in the first quarter of 2014. In fiscal year 2014, our margins declined compared to fiscal year 2013, as a result of higher inventory charges resulting from product rationalizations in connection with our 2014 restructuring plan and an industry-wide memory product quality defect for a component from a third party. We determine our operating expenses largely on the basis of anticipated revenues and a high percentage of our expenses are fixed in the short and medium term. As a result, a failure or delay in generating or recognizing revenue could cause significant variations in our operating results and operating margin from quarter-to-quarter. Failure to sustain or improve our gross margins reduces our profitability and may have a material adverse effect on our business and stock price.

Further, we will continue to remain diligent in our long-term financial objective to increase revenue and operating margins and manage our operating expenses as a percentage of revenue. We expect that our margins will vary with our ability to achieve these goals. We can provide no assurance that we will be able to achieve all or any of the goals of these plans or meet our announced expectations, in whole or in part, or that our plans will have the intended effect of improving our margins on the expected timeline, or at all.

A limited number of our customers comprise a material portion of our revenues and any changes in the way they purchase products and services from us could affect our business. In addition, there is an ongoing trend toward consolidation in the industry in which our customers and partners operate. Any decrease in revenues from our customers or partners could have an adverse effect on our net revenues and operating results.

A material portion of our net revenues depend on sales to a limited number of customers and distribution partners, particularly in our service provider market. Changes in the business requirements or focus, vendor selection, project prioritization, financial prospects, capital resources, and expenditures, or purchasing behavior (including product mix purchased) of our key customers could significantly decrease our sales to such customers or could lead to delays or cancellations of planned purchases of our products or services, which increases the risk of quarterly fluctuations in our revenues and operating results. Any of these factors could adversely affect our business, financial condition, and results of operations.

In addition, in recent years, there has been movement towards consolidation in the telecommunications industry (for example, Altice's purchase of Cablevision and Portugal Telecom, Liberty Global's acquisition of Cable & Wireless Communications, Charter Communications, Inc.'s acquisition of Time Warner Cable, Inc., and CenturyLink's proposed acquisition of Level 3 Communications) and that consolidation trend has continued. Certain telecommunications companies have also announced their intent towards vertical consolidation through acquisitions of media and content companies, such as Verizon's proposed acquisition of Yahoo and AT&T's proposed acquisition of Time Warner. If our customers or partners are parties to consolidation transactions they may delay, suspend or indefinitely reduce or cancel their purchases of our products or other direct or indirect unforeseen consequences could harm our business, financial condition, and results of operations.

We face intense competition that could reduce our revenues and adversely affect our business and financial results.

Competition is intense in the markets that we serve. The network equipment market has historically been dominated by Cisco, with competition coming from other companies such as Nokia Corporation (following its acquisition of Alcatel-Lucent), Arista, Brocade, HPE, and Huawei. In the security market, we face intense competition from Cisco and Palo Alto Networks, as well as companies such as Check Point, F5 Networks, Fortinet, and HPE. Further, a number of other small public and private companies have products or have announced plans for new products to address the same challenges and markets that our products address.

In addition, actual or speculated consolidation among competitors, or the acquisition by, or of, our partners and/or resellers by competitors can increase the competitive pressures faced by us as customers may delay spending decisions or not purchase our products at all. For example, in recent years, Nokia Corporation merged with Alcatel-Lucent, HPE acquired Aruba Networks, Cisco acquired OpenDNS, Symantec Corporation acquired Blue Coat Systems, and Dell acquired EMC, which further consolidated our market. A number of our competitors have substantially greater resources and can offer a wider range of products and services for the overall network equipment market than we do. In addition, some of our competitors have become more integrated, including through consolidation, and offer a broader range of products and services, which could make their solutions more attractive to our customers. Many of our competitors sell networking products as bundled solutions with other IT products, such as computer and storage systems. If we are unable to compete successfully against existing and future competitors on the basis of product offerings or price, we could experience a loss in market share and revenues and/or be required to reduce prices, which could reduce our gross margins, and which could materially and adversely affect our business, financial condition, and results of operations. Our partners and resellers generally sell or resell competing products on a non-exclusive basis and consolidation could delay spending or require us to increase discounts to compete, which could also adversely affect our business.

The long sales and implementation cycles for our products, as well as our expectation that some customers will sporadically place large orders with short lead times, may cause our revenues and operating results to vary significantly from quarter-to-quarter.

A customer's decision to purchase certain of our products, particularly new products, involves a significant commitment of its resources and a lengthy evaluation and product qualification process. As a result, the sales cycle may be lengthy. In particular, customers making critical decisions regarding the design and implementation of large network deployments may engage in very lengthy procurement processes that may delay or impact expected future orders. Throughout the sales cycle, we may spend considerable time educating and providing information to prospective customers regarding the use and benefits of our products. Even after making the decision to purchase, customers may deploy our products slowly and deliberately. Timing of deployment can vary widely and depends on the skill set of the customer, the size of the network deployment, the complexity of the customer's network environment, and the degree of hardware and operating system configuration necessary to deploy the products. Customers with large networks usually expand their networks in large increments on a periodic basis. Accordingly, we may receive purchase orders for significant dollar amounts on an irregular basis. These long cycles, as well as our expectation that customers will tend to sporadically place large orders with short lead times, both of which may be exacerbated by the impact of continued global economic weakness, may cause revenues and operating results to vary significantly and unexpectedly from quarter-to-quarter.

The timing of product orders and/or our reliance on revenue from sales of software or subscription and professional, support and maintenance services may cause us to recognize revenue in a different period than the one in which a transaction takes place. This may make it difficult for investors to observe quarterly trends and may cause significant variations in our operating results and operating margin on a quarterly basis.

Generally, our network equipment products are stocked only in limited quantities by our distributors and resellers due to the cost, complexity and custom nature of configurations required by our customers; we generally build such products as orders are received. The volume of orders received late in any given fiscal quarter remains unpredictable. If orders for certain products are received late in any quarter, we may not be able to recognize revenue for these orders in the same period, which could adversely affect our ability to meet our expected revenues for such quarter.

In addition, services revenue accounts for a significant portion of our revenue, comprising 29%, 27%, and 26% of total revenue in fiscal year 2016, 2015, and 2014, respectively. Sales of new or renewal professional services, support and maintenance contracts may decline and/or fluctuate as a result of a number of factors, including end-customers' level of satisfaction with our products and services, the prices of our products and services, the prices of products and services offered by our competitors, and reductions in our end-customers' spending levels. We recognize professional services, support and maintenance revenue periodically over the term of the relevant service period.

The introduction of new software products is part of our intended strategy to expand our software business, and software revenues may be recognized periodically over the term of the relevant use period or subscription period. As a result, much of the software, subscription and support and maintenance revenue we report each fiscal quarter is the recognition of deferred revenue from software, subscription and support and maintenance contracts entered into during previous fiscal quarters. Consequently, a decline in new or renewed contracts in any one fiscal quarter will not be fully or immediately reflected in revenue in that fiscal quarter but will negatively affect our revenue in future fiscal quarters. Accordingly, the effect of significant downturns in new or renewed sales of our software, subscriptions or support and maintenance is not reflected in full in our operating results until future periods. Also, it is difficult for us to rapidly increase our software or services revenue through additional software or services sales in any period, as revenue from new and renewal software, subscription and support and maintenance contracts must be recognized over the applicable service period.

Additionally, we determine our operating expenses largely on the basis of anticipated revenues and a high percentage of our expenses are fixed in the short and medium term. As a result, a failure or delay in generating or recognizing revenue could cause significant variations in our operating results and operating margin from quarter-to-quarter.

If we do not successfully anticipate technological shifts, market needs and opportunities, and develop products, product enhancements and business strategies that meet those technological shifts, needs and opportunities, or if those products are not made available or strategies are not executed in a timely manner or do not gain market acceptance, we may not be able to compete effectively and our ability to generate revenues will suffer.

The markets for our products are characterized by rapid technological change, frequent new product introductions, changes in customer requirements, continued price pressures and a constantly evolving industry. We cannot guarantee that we will be able to anticipate future technological shifts, market needs and opportunities or be able to develop new products, product enhancements or business strategies to meet such technological shifts, needs or opportunities in a timely manner or at all. For example, the move from traditional network infrastructures towards software-defined networking, or SDN, has been receiving considerable attention. In our view, it will take several years to see the full impact of SDN, and we believe the successful products and solutions in this market will combine hardware and software elements. If we fail to anticipate market requirements or opportunities or fail to develop and introduce new products, product enhancements or business strategies to meet those requirements or opportunities in a timely manner, it could cause us to lose customers, and such failure could substantially decrease or delay market acceptance and sales of our present and future products and services, which would significantly harm our business, financial condition, and results of operations. In addition, if we invest time, energy and resources in developing products for a market that doesn't develop, it could likewise significantly harm our business, financial condition, and results of operations. Even if we are able to anticipate, develop, and commercially introduce new products, enhancements or business strategies, there can be no assurance that new products, enhancements or business strategies will achieve widespread market acceptance.

In the past two years, we have announced a number of new products and enhancements to our hardware and software products across routing, switching and security, including ACX5000 and ACX500 routers, QFX10000 line of spine switches, QFX5100, QFX5200, QFX5100-AA, QFX-PFA, SRX300, SRX1500, SRX5000 with Express Path and SRX5800 Series Services Gateways, EX9200, EX4600, EX2300 and EX3400 Ethernet Switches, new MX Series line-cards and routers (including the vMX 3D Universal Edge Router), new PTX Series line cards (powered by our ExpressPlus custom silicon), Junos Fusion Provider Edge, Junos Fusion Data Center, Junos Fusion Enterprise, a disaggregated version of Junos Software, PTX1000, vSRX virtual firewall, Sky Advanced

Threat Prevention (ATP), Junos Space Security Director, Junos Space Virtual Director, Juniper Networks Contrail Networking, Contrail Service Orchestration, the NFX250 network services platform, cSRX compact and containerized firewall, enhancements to Junos Space Security Director and Sky ATP, SRX4100 and SRX4200 firewalls, and Junos Space Security Director Policy Enforcer . The success of our new products depends on several factors, including, but not limited to, component costs, timely completion and introduction of these products, prompt resolution of any defects or bugs in these products, differentiation of new products from those of our competitors and market acceptance of these products.

The introduction of new software products is part of our intended strategy to expand our software business. We have also begun to disaggregate certain software from certain hardware products, such that customers would be able to purchase or license our hardware and software products independently, which we expect could in time enable our hardware to be deployed with third party networking applications and services and our software to be used with third party hardware. For example, we have developed a disaggregated version of our Junos software and introduced our QFX5200 series of switches, which runs our disaggregated Junos software. The success of our strategy to expand our software business, including our strategy to disaggregate software from certain hardware products, is subject to a number of risks and uncertainties, including:

- the additional development efforts and costs required to create new software products and/or to make our disaggregated products compatible with multiple technologies;
- the possibility that our new software products or disaggregated products may not achieve widespread customer adoption;
- the potential that our strategy could erode our revenue and gross margins;
- the impact on our financial results of longer periods of revenue recognition and changes in tax treatment associated with software sales;
- the additional costs associated with regulatory compliance and changes we need to make to our distribution chain in connection with increased software sales;
- the ability of our disaggregated hardware and software products to operate independently and/or to integrate with current and future third party products; and
- the risk that issues with third party technologies used with our disaggregated products will be attributed to us.

If any of our new products or business strategies do not gain market acceptance or meet our expectations for growth, our ability to meet future financial targets may be adversely affected and our competitive position and our business and financial results could be harmed.

We are dependent on contract manufacturers with whom we do not have long-term supply contracts, and changes to or disruptions in those relationships or manufacturing processes, expected or unexpected, may result in delays that could cause us to lose revenues and damage our customer relationships.

We depend on independent contract manufacturers (each of which is a third-party manufacturer for numerous companies) to manufacture our products. Although we have contracts with our contract manufacturers, these contracts do not require them to manufacture our products on a long-term basis in any specific quantity or at any specific price. In addition, it is time-consuming and costly to qualify and implement additional contract manufacturer relationships. Therefore, if we fail to effectively manage our contract manufacturer relationships, which includes failing to provide accurate forecasts of our requirements, or if one or more of them experiences delays, disruptions, or quality control problems in our manufacturing operations, or if we had to change or add additional contract manufacturers or contract manufacturing sites, our ability to ship products to our customers could be delayed. We have experienced in the past and may experience in the future an increase in the expected time required to manufacture our products or ship products. Such delays could result in supply shortfalls that damage our ability to meet customer demand for those products and could cause our customers to purchase alternative products from our competitors. Also, the addition of manufacturing locations or contract manufacturers or the introduction of new products by us would increase the complexity of our supply chain management. Moreover, an increasing portion of our manufacturing is performed in China and other foreign countries and is therefore subject to risks associated with doing business outside of the United States, including the possibility of import tariffs imposed by the new administration. Each of these factors could adversely affect our business, financial condition and results of operations.

If we fail to accurately predict our manufacturing requirements, we could incur additional costs or experience manufacturing delays, which would harm our business.

We provide demand forecasts for our products to our contract manufacturers and original design manufacturers, who order components and plan capacity based on these forecasts. If we overestimate our requirements, our original design or contract manufacturers may assess charges, or we may have liabilities for excess inventory, each of which could negatively affect our gross margins. For example, in certain prior quarters, our gross margins were reduced as a result of an inventory charge resulting from inventory we held in excess of forecasted demand. Conversely, because lead times for required materials and components vary significantly and depend on factors such as the specific supplier, contract terms, and the demand for each component at a given time, and because our contract manufacturers are third-party manufacturers for numerous other companies, if we underestimate our requirements, as we have in certain prior quarters with respect to certain products, our contract manufacturers may have inadequate time, materials, and/or components required to produce our products, which could increase costs or delay or interrupt manufacturing of our products resulting in delays in shipments and deferral or loss of revenues and negatively impacting customer satisfaction.

System security risks, data protection breaches, and cyber-attacks could compromise our proprietary information, disrupt our internal operations and harm public perception of our products, which could cause our business and reputation to suffer and adversely affect our stock price.

In the ordinary course of business, we store sensitive data, including intellectual property, personal data, our proprietary business information and proprietary business information of our customers, suppliers and business partners on our networks. In addition, we store sensitive data through cloud-based services that may be hosted by third parties and in data center infrastructure maintained by third parties. The secure maintenance of this information is critical to our operations and business strategy. The growing cyber risk environment means that individuals, companies, and organizations of all sizes, including Juniper, are increasingly subject to the threat of intrusions on their networks and systems by a wide range of actors on an ongoing and regular basis. Despite our security measures, and those of our third-party vendors, our information technology and infrastructure may be vulnerable to penetration or attacks by computer programmers, hackers or sophisticated nation-state and nation-state supported actors or breached due to employee error, malfeasance or other disruptions. If any breach compromises our networks, creates system disruptions or slowdowns or exploits security vulnerabilities of our products, the information stored on our networks could be accessed and modified, publicly disclosed, lost or stolen, and we may be subject to liability to our customers, suppliers, business partners and others, and suffer reputational and financial harm. In addition, sophisticated hardware and operating system software and applications that we produce or procure from third parties may contain defects in design or manufacture, including "bugs" and other problems that could unexpectedly interfere with the operation of our networks. This can be true even for “legacy” products that have been determined to have reached an end of life engineering status but will continue to operate for a limited amount of time.

For example, in December 2015, we disclosed that we identified unauthorized code in our ScreenOS security system that could allow a knowledgeable attacker to gain administrative access to NetScreen devices and to decrypt VPN connections. Following the identification of the ScreenOS vulnerabilities, we launched an investigation into the matter, developed patched releases for the latest versions of ScreenOS and notified customers, all of which required significant time and attention from management and our employees. In addition, in April 2016, we made additional changes to ScreenOS in response to our additional analysis as a part of an update of ScreenOS. At this time, we do not have an estimate of third party costs related to the ScreenOS matter that could result from any third party claims brought against us, including, for example, indemnification for damages our customers may incur or actions instituted by governmental or regulatory entities that could result in fines or other penalties. Costs related to the ScreenOS matter, including the costs to resolve third party claims, may be material.

As a result of the ScreenOS matter, or any other actual or perceived breach of network security that occurs in our network or in the network of a customer of our products, regardless of whether the breach is attributable to our products, the market perception of the effectiveness of our products and our overall reputation could be harmed. Because the techniques used by attackers, many of whom are highly sophisticated and well-funded, to access or sabotage networks change frequently and generally are not recognized until after they are used, we may be unable to anticipate or immediately detect these techniques or the vulnerabilities they have caused. This could impede our sales, manufacturing, distribution or other critical functions, which could have an adverse impact on our financial results. The economic costs to us to eliminate or alleviate cyber or other security problems, bugs, viruses, worms, malicious software systems and security vulnerabilities, including the ScreenOS matter, could be significant and may be difficult to anticipate or measure, because the damage may differ based on the identity and motive of the attacker, which are often difficult to pinpoint. Additionally, we could be subject to regulatory investigations, potential fines and litigation in connection with a security breach or related issue and be liable to third parties for these types of breaches.

We are dependent on sole source and limited source suppliers for several key components, which makes us susceptible to shortages, quality issues or price fluctuations in our supply chain, and we may face increased challenges in supply chain management in the future.

We rely on single or limited sources of certain of our components. During periods of high demand for electronic products, component shortages are possible, and the predictability of the availability of such components may be limited. For example, some optical transceivers and memory components used in our networking solutions might experience extended lead times, given the demand in the market. Any future spike in growth in our business, or more likely in IT spending and the economy in general is likely to create greater short-term pressures on us and our suppliers to accurately forecast overall component demand and to establish optimal component inventories. If shortages or delays persist, the price of these components may increase, or the components may not be available at all. We may not be able to secure enough components at reasonable prices or of acceptable quality to build new products in a timely manner, and our revenues and gross margins could suffer until other sources can be developed. For example, from time to time, we have experienced component shortages or quality issues that resulted in delays of product shipments and/or warranty claims. We currently purchase numerous key components, including ASICs and other semiconductor chips, from single or limited sources and many of our component suppliers are concentrated in China. In addition, there has been consolidation among certain suppliers of our components. For example, GLOBALFOUNDRIES recently acquired IBM’s semiconductor manufacturing business, Avago Technologies Limited recently acquired Broadcom Corporation and Intel Corporation recently acquired Altera Corporation. Consolidation among suppliers can result in the reduction of the number of independent suppliers of components available to us, which could negatively impact our ability to access certain component parts or the prices we have to pay for such parts. In addition, our suppliers may determine not to continue a business relationship with us for other reasons that may be beyond our control. Any disruptions to our supply chain could decrease our sales, earnings and liquidity or otherwise adversely affect our business and result in increased costs. Such a disruption could occur as a result of any number of events, including, but not limited to, increases in wages that drive up prices, the imposition of regulations, quotas or embargoes on key components, labor stoppages, transportation failures affecting the supply and shipment of materials and finished goods, the unavailability of raw materials, severe weather conditions, natural disasters, civil unrest, geopolitical developments, war or terrorism and disruptions in utility and other services.

The development of alternate sources for key components is time-consuming, difficult, and costly. In addition, the lead times associated with certain components are lengthy and preclude rapid changes in quantities and delivery schedules. Also, long-term supply and maintenance obligations to customers increase the duration for which specific components are required, which may further increase the risk of component shortages or the cost of carrying inventory. In the event of a component shortage or supply interruption from these suppliers, we may not be able to develop alternate or second sources in a timely manner. If we are unable to buy these components in quantities sufficient to meet our requirements on a timely basis, we will not be able to deliver products and services to our customers, which would seriously affect present and future sales, which would, in turn, adversely affect our business, financial condition, and results of operations.

In addition, the development, licensing, or acquisition of new products in the future may increase the complexity of supply chain management. Failure to effectively manage the supply of key components and products would adversely affect our business.

We rely on value-added and other resellers, as well as distribution partners, to sell our products, and disruptions to, or our failure to effectively develop and manage, our distribution channel and the processes and procedures that support it could adversely affect our ability to generate revenues from the sale of our products.

Our future success is highly dependent upon establishing and maintaining successful relationships with a variety of value-added and other reseller and distribution partners, including our worldwide strategic partners such as Ericsson, IBM, Dimension Data and NEC Corporation. The majority of our revenues are derived through value-added resellers and distributors, most of which also sell our competitors’ products, and some of which sell their own competing products. Our revenues depend in part on the performance of these partners. The loss of or reduction in sales to our resellers or distributors could materially reduce our revenues. For example, in 2011 and 2012, one of our OEM partners, Dell, acquired Force10 and SonicWall, both competitors of ours. As a result, Dell became increasingly competitive in certain areas, their resale of our products declined, and we ultimately terminated our OEM relationship with Dell. In addition, in 2016, Nokia Corporation merged with Alcatel-Lucent, a competitor of ours, and in 2015 Cisco recently announced a partnership with Ericsson, which is one of our existing partners. Our competitors may in some cases be effective in leveraging their market share positions or in providing incentives to current or potential resellers and distributors to favor their products or to prevent or reduce sales of our products. If we fail to develop and maintain relationships with our partners, fail to develop new relationships with value-added resellers and distributors in new markets, fail to expand the number of distributors and resellers in existing markets, fail to manage, train or motivate existing value-added resellers and distributors effectively, determine that we cannot continue to do business with these partners for any reason or if these partners are not successful in their sales efforts, sales of our products may decrease, and our business, financial condition, and results of operations would suffer.

In addition, we recognize a portion of our revenues based on a sell-through model using information provided by our distributors. If those distributors provide us with inaccurate or untimely information, the amount or timing of our revenues could be adversely impacted.

Further, in order to develop and expand our distribution channel, we must continue to offer attractive channel programs to potential partners and scale and improve our processes and procedures that support the channel. As a result, our programs, processes and procedures may become increasingly complex and inherently difficult to manage. We have previously entered into OEM agreements with partners pursuant to which they rebrand and resell our products as part of their product portfolios. These types of relationships are complex and require additional processes and procedures that may be challenging and costly to implement, maintain and manage. Our failure to successfully manage and develop our distribution channel and the programs, processes and procedures that support it could adversely affect our ability to generate revenues from the sale of our products. We also depend on our global channel partners to comply with applicable legal and regulatory requirements. To the extent that they fail to do so, that could have a material adverse effect on our business, operating results, and financial condition.

Our ability to process orders and ship products in a timely manner is dependent in part on our business systems and performance of the systems and processes of third parties such as our contract manufacturers, suppliers, data center providers or other partners, as well as the interfaces between our systems and the systems of such third parties. If our systems, the systems and processes of those third parties, or the interfaces between them experience delays or fail, our business processes and our ability to build and ship products could be impacted, and our financial results could be harmed.

Some of our business processes depend upon our information technology, or IT, systems, the systems and processes of third parties, and the interfaces of our systems with the systems of third parties. For example, our order entry system feeds information into the systems of our contract manufacturers, which enables them to build and ship our products. If those systems fail or are interrupted, our processes may function at a diminished level or not at all. This could negatively impact our ability to ship products or otherwise operate our business, and our financial results could be harmed. For example, although it did not adversely affect our shipments, an earthquake in late December of 2006 disrupted our communications with China, where a significant part of our manufacturing occurs.

We are also in the process of further consolidating our on-site data centers to the cloud and to off-site facilities that are hosted and controlled by third-parties. These cloud providers and off-site facilities are vulnerable to damage, interruption or performance problems from earthquakes, hurricanes, floods, fires, power loss, telecommunications failures, equipment failure, adverse events caused by operator error and similar events. In addition, because we lease our cloud storage space and off-site data center facilities, we cannot be assured that we will be able to expand our data center infrastructure to meet user demand in a timely manner, or on favorable economic terms. If we have issues receiving and processing data, this may delay our ability to provide products and services to our customers and damage our business. We also rely upon the performance of the systems and processes of our contract manufacturers to build and ship our products. If those systems and processes experience interruption or delay, our ability to build and ship our products in a timely manner may be harmed. For example, we have experienced instances where our contract manufacturers were not able to ship products in the time periods expected by us, which prevented us from meeting our commitments to our customers. If we are not able to ship our products or if product shipments are delayed, our ability to recognize revenue in a timely manner for those products would be affected and our financial results could be harmed.

Integration of acquisitions could disrupt our business and harm our financial condition and stock price and may dilute the ownership of our stockholders.

We have made, and may continue to make, acquisitions in order to enhance our business. For example, in December 2016, we acquired AppFormix Inc.; in August 2016, we acquired Aurrion, Inc.; and in April 2016, we acquired BTI Systems Inc.; in 2014, we acquired WANDL, Inc.; and in 2012, we acquired Contrail Systems Inc. and Mykonos Software, Inc. Acquisitions involve numerous risks, including, but not limited to, problems combining the purchased operations, technologies or products, unanticipated costs and liabilities, diversion of management's attention from our core businesses, adverse effects on existing business relationships with suppliers and customers, risks associated with entering markets in which we have no or limited prior experience, and potential loss of key employees. There can be no assurance that we will be able to integrate successfully any businesses, products, technologies, or personnel that we might acquire. The integration of businesses that we may acquire is likely to be a complex, time-consuming, and expensive process and we may not realize the anticipated revenues or other benefits associated with our acquisitions if we fail to successfully manage and operate the acquired business. If we fail in any acquisition integration efforts and are unable to efficiently operate as a combined organization utilizing common information and communication systems, operating procedures, financial controls, and human resources practices, our business, financial condition, and results of operations may be adversely affected.

In connection with certain acquisitions, we may agree to issue common stock or assume equity awards that dilute the ownership of our current stockholders, use a substantial portion of our cash resources, assume liabilities, record goodwill and amortizable intangible assets that will be subject to impairment testing on a regular basis and potential periodic impairment charges, incur amortization expenses related to certain intangible assets, and incur large and immediate write-offs and restructuring and other related expenses, all of which could harm our financial condition and results of operations.

Telecommunications, cable and cloud service provider companies and our other large customers generally require onerous terms and conditions in our contracts with them. As we seek to sell more products to such customers, we may be required to agree to terms and conditions that could have an adverse effect on our business or ability to recognize revenues.

Telecommunications, cable and cloud service provider companies, which comprise a significant portion of our customer base, and other large companies, generally have greater purchasing power than smaller entities and, accordingly, often request and receive more favorable terms from suppliers. For example, our customers France Telecom-Orange and Deutsche Telekom AG have formed a company for the purpose of purchasing products from, and negotiating more favorable contractual terms with, suppliers. As we seek to sell more products to this class of customer, we may be required to agree to such terms and conditions, which may include terms that affect the timing of our ability to recognize revenue, increase our costs and have an adverse effect on our business, financial condition, and results of operations. Consolidation among such large customers can further increase their buying power and ability to require onerous terms.

In addition, service providers have purchased products from other vendors who promised but failed to deliver certain functionality and/or had products that caused problems or outages in the networks of these customers. As a result, these customers may request additional features from us and require substantial penalties for failure to deliver such features or may require substantial penalties for any network outages that may be caused by our products. These additional requests and penalties, if we are required to agree to them, may require us to defer revenue recognition from such sales, which may negatively affect our business, financial condition and results of operations. In addition, increased patent litigation brought against customers by non-practicing entities in recent years, may result, and in some cases has resulted, in customers requesting or requiring vendors to absorb a portion of the costs of such litigation or providing broader indemnification for litigation, each of which could increase our expenses and negatively affect our business, financial condition and results of operations.

We are a party to lawsuits, investigations, proceedings, and other disputes, which are costly to defend and, if determined adversely to us, could require us to pay fines or damages, undertake remedial measures or prevent us from taking certain actions, any or all of which could harm our business, results of operations, financial condition or cash flows.

We, and certain of our current and former officers and current and former members of our Board of Directors, have been or are subject to various lawsuits. We have been served with lawsuits related to employment matters, commercial transactions and patent infringement, as well as securities laws. As noted in Note 16, *Commitments and Contingencies* , in Notes to Consolidated Financial Statements of this Report, under the heading of “Legal Proceedings”, the U.S. Securities and Exchange Commission, or the SEC, and the U.S. Department of Justice, or the DOJ, are conducting investigations into possible violations by the Company of the U.S. Foreign Corrupt Practices Act, or the FCPA, in a number of countries. The investigations relate to whether the Company or any third party on behalf of the Company gave money or anything else of value to any government official in violation of the FCPA. The Company’s Audit Committee, with the assistance of independent advisors, has been investigating and conducting a thorough review of possible violations of the FCPA, and has made recommendations for remedial measures, including employee disciplinary actions in foreign jurisdictions, which the Company has implemented and continues to implement. Litigation and investigations are inherently uncertain. We therefore cannot predict the duration, scope, outcome or consequences of litigation and government investigations. In connection with any government investigations, including those in which we are currently involved as described above, if the government takes action against us or we agree to settle the matter, we may be required to pay substantial fines and incur other sanctions, which may be material, and suffer reputational harm. The lawsuits and investigations are expensive and time-consuming to defend, settle, and/or resolve, and may require us to implement certain remedial measures that could prove costly or disruptive to our business and operations. The unfavorable resolution of one or more of these matters could have a material adverse effect on our business, results of operations, financial condition or cash flows.

We are a party to litigation and claims regarding intellectual property rights, resolution of which may be time - consuming and expensive, as well as require a significant amount of resources to prosecute, defend, or make our products non-infringing.

Our industry is characterized by the existence of a large number of patents and frequent claims and related litigation regarding patent and other intellectual property rights. We expect that infringement claims may increase as the number of products and competitors in our market increases and overlaps occur. Third parties have asserted and may in the future assert claims or initiate litigation related to patent, copyright, trademark, and other intellectual property rights to technologies and related standards that are relevant to our products. The asserted claims and/or initiated litigation may include claims against us or our manufacturers, suppliers, partners, or customers, alleging that our products or services infringe proprietary rights. In addition, increased patent litigation brought by non-practicing entities in recent years may result, and in some cases has resulted, in our customers requesting or requiring us to absorb a portion of the costs of such litigation or providing broader indemnification for litigation, each of which could increase our expenses and negatively affect our business, financial condition and results of operations. Regardless of the merit of these claims, they have been and can be time-consuming, result in costly litigation, and may require us to develop non-infringing technologies, enter into license agreements, or cease engaging in certain activities or offering certain products or services. Furthermore, because of the potential for high awards of damages or injunctive relief that are not necessarily predictable, even arguably unmeritorious claims may be settled for significant amounts of money. If any infringement or other intellectual property claim made against us or anyone we are required to indemnify by any third-party is successful, if we are required to settle litigation for significant amounts of money, if we fail to develop non-infringing technology or if we license required proprietary rights, our business, financial condition, and results of operations could be materially and adversely affected.

Regulation of our industry in general and the telecommunications industry in particular could harm our operating results and future prospects.

We are subject to laws and regulations affecting the sale of our products in a number of areas. For example, some governments have regulations prohibiting government entities from purchasing security products that do not meet specified indigenous certification criteria, even though those criteria may be in conflict with accepted international standards. Other regulations that may negatively impact our business include country of origin regulations. These types of regulations are in effect or under consideration in several jurisdictions where we do business.

The Dodd-Frank Wall Street Reform and Consumer Protection Act includes disclosure requirements applicable to public companies regarding the use of “conflict minerals” mined from the Democratic Republic of Congo and adjoining countries, which we refer to collectively as the DRC, and procedures regarding a manufacturer's efforts to prevent the sourcing of such “conflict minerals.” These minerals are present in our products. SEC rules implementing these requirements may have the effect of reducing the pool of suppliers who can supply DRC “conflict free” components and parts, and we may not be able to obtain DRC conflict free products or supplies in sufficient quantities for our operations. Since our supply chain is complex, we may face reputational challenges with our customers, stockholders and other stakeholders if we are unable to sufficiently verify the origins for the "conflict minerals" used in our products. In addition, the European Union reached agreement in late 2016 on a EU-wide conflict minerals rule under which most EU importers of tin, tungsten, tantalum, gold and their ores will have to conduct due diligence to ensure the minerals do not originate from conflict zones and do not fund armed conflicts. Large manufacturers also will have to disclose how they plan to monitor their sources to comply with the rules. The regulation is expected to be adopted in 2017 with compliance required by 2021.

In addition, environmental laws and regulations relevant to electronic equipment manufacturing or operations, including laws and regulations governing the hazardous material content of our products and laws relating to the collection of and recycling of electrical and electronic equipment, may adversely impact our business and financial condition. These laws and regulations include, among others, the European Union, or EU, Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Directive, or RoHS. The EU RoHS and the similar laws of other jurisdictions limit the content of certain hazardous materials, such as lead, mercury, and cadmium, in the manufacture of electrical equipment, including our products. Currently, our products comply with the EU RoHS requirements. However, certain exemptions are scheduled to lapse, or have lapsed, including an exemption for lead in network infrastructure equipment upon which we and our competitors had relied, which expired in July 2016. The lapse of this exemption, further changes to this or other laws, or passage of similar laws in the EU or other jurisdictions, would require us to cease selling non-compliant products in the EU and to reengineer our products to use components compatible with these regulations. This reengineering and component substitution could result in additional costs to us, disrupt our operations or logistics, and result in an adverse impact on our operating results. In addition, in validating the compliance of our products with applicable hazardous materials restrictions, we rely substantially on affirmations by our component suppliers as to the compliance of their products with respect to those same restrictions. Failure by our component suppliers to furnish accurate and timely information could subject us to penalties or liability for violation of such hazardous materials restrictions, interrupt our supply of products to the EU, and result in our customers refusing or being unable to purchase our products. Additionally, the EU and a number of other countries have adopted regulations requiring producers of electrical and electronic equipment to assume certain responsibilities for collecting, treating, recycling and disposing of products when they have reached the end of their useful life. Finally, the EU REACH regulations regulate the handling of certain chemical substances that may be used in our products.

The traditional telecommunications industry is highly regulated, and our business and financial condition could be adversely affected by changes in regulations relating to the Internet telecommunications industry. Currently, there are few laws or regulations that apply directly to access to or commerce on IP networks, but future regulations could include sales taxes on products sold via the Internet and Internet service provider access charges. We could be adversely affected by regulation of IP networks and commerce in any country where we market equipment and services to service providers or cloud provider companies. Regulations governing the range of services and business models that can be offered by service providers or cloud provider companies could adversely affect those customers' needs for products. For instance, the U.S. Federal Communications Commission has issued regulations governing aspects of fixed broadband networks and wireless networks. These regulations, which were challenged in court, and which the new Federal Communications Commission leadership is considering removing or modifying, might impact service provider and cloud provider business models and, as such, providers' needs for Internet telecommunications equipment and services. Also, many jurisdictions are evaluating or implementing regulations relating to cyber security, supply chain integrity, privacy and data protection, any of which can affect the market and requirements for networking and security equipment.

The adoption and implementation of additional regulations could reduce demand for our products, increase the cost of building and selling our products, result in product inventory write-offs, impact our ability to ship products into affected areas and recognize revenue in a timely manner, require us to spend significant time and expense to comply, and subject us to fines and civil or criminal sanctions or claims if we were to violate or become liable under such regulations. Any of these impacts could have a material adverse effect on our business, financial condition, and results of operations.

Governmental regulations and economic sanctions affecting the import or export of products generally or affecting products containing encryption capabilities could negatively affect our revenues and operating results.

The United States and various foreign governments have imposed controls and restrictions on the import or export of, among other things, our products that contain or use encryption technology. Most of our products contain or use encryption technology and, consequently, are subject to such controls, requirements and restrictions. In addition, from time to time, governmental agencies have proposed additional regulation of encryption technology, such as requiring certification, notifications, review of source code, limiting the encryption features or the escrow and governmental recovery of private encryption keys. For example, China has proposed new conditions on eligibility of encryption products for purchase by government and certain non-government organizations. India recently proposed and then withdrew regulations imposing serious conditions on the use of encryption in telecommunications products. We sell our products to both commercial customers and, directly and indirectly, to governments around the world. Our ability to sell into substantial government markets (whether or not the products we sell include encryption) is vulnerable to changes in government procurement regulations, any associated local content requirements and changes in the government’s interpretation of such regulations. In addition, the U.S. government has broader sanctions and embargoes that generally forbid supply of most items to or involving certain countries, territories, governments, legal entities and individuals, including recent restrictions imposed by the U.S. and EU on exports to Russia and Ukraine. We have implemented systems to detect and prevent sales into these countries or to prohibited entities or individuals, but there can be no assurance that they will always be effective.

Governmental regulation of encryption or IP networking technology and regulation of imports or exports, or our failure to obtain required import or export approval for our products, or related economic sanctions could harm our international and domestic sales and adversely affect our revenues and operating results. In addition, failure to comply with such regulations could result in harm to our reputation and ability to compete in international markets, penalties, costs, seizure of assets (including source code) and restrictions on import or export privileges or adversely affect sales to government agencies or government-funded projects.

Our actual or perceived failure to adequately protect personal data could adversely affect our business, financial condition and results of operations.

A variety of state, national, foreign, and international laws and regulations apply to the collection, use, retention, protection, disclosure, transfer, and other processing of personal data. These privacy- and data protection-related laws and regulations are evolving, with new or modified laws and regulations proposed and implemented frequently and existing laws and regulations subject to new or different interpretations. Compliance with these laws and regulations can be costly and can delay or impede the development and offering of new products and services.

For example, we previously relied upon adherence to the U.S. Department of Commerce’s Safe Harbor Privacy Principles and compliance with the U.S.-EU Safe Harbor Framework, which we refer to as the Safe Harbor, agreed to by the U.S. Department of Commerce and the EU. The Safe Harbor, which established means for legitimizing the transfer of personal data by U.S. companies from the European Economic Area, or EEA, to the U.S., was invalidated in 2015 by a decision of the European Court of Justice, or the ECJ. Now that the EU and U.S. have implemented a successor privacy framework called the Privacy Shield, we are reviewing and documenting our practices required to obtain certification under the Privacy Shield, in addition to entering into EU Model Contracts with our vendors where appropriate and feasible in anticipation of the possibility that the Privacy Shield may be legally challenged or voided like Safe Harbor in an uncertain political environment. In addition, the June 2016 approval by voters in the United Kingdom, or U.K., of a referendum to leave the EU could require us to make additional changes to the way we conduct our business and transmit data between the U.K. and the EU.

Our actual or alleged failure to comply with applicable laws and regulations, or to protect personal data, could result in enforcement actions, significant penalties or other legal action against us or our customers or suppliers, which could result in negative publicity, increase our operating costs, subject us to claims or other remedies and have a material adverse effect on our business, financial condition, and results of operations.

Our ability to develop, market, and sell products could be harmed if we are unable to retain or hire key personnel.

Our future success depends upon our ability to recruit and retain the services of executive, engineering, sales and marketing, and support personnel. The supply of highly qualified individuals, in particular engineers in very specialized technical areas, or sales people specializing in the service provider and enterprise markets, is limited and competition for such individuals is intense. None of our officers or key employees is bound by an employment agreement for any specific term. The loss of the services of any of our key employees, the inability to attract or retain personnel in the future or delays in hiring required personnel, engineers and sales people, and the complexity and time involved in replacing or training new employees, could delay the development and introduction of new products, and negatively impact our ability to market, sell, or support our products.

A number of our team members are foreign nationals who rely on visas and entry permits in order to legally work in the United States and other countries. In recent years, the United States has increased the level of scrutiny in granting H-1(B), L-1 and other business visas. In addition, the current U.S. administration has indicated that immigration reform is a priority. Compliance with United States immigration and labor laws could require us to incur additional unexpected labor costs and expenses or could restrain our ability to retain skilled professionals. Any of these restrictions could have a material adverse effect on our business, results of operations and financial conditions.

Our financial condition and results of operations could suffer if there is an additional impairment of goodwill or other intangible assets with indefinite lives.

We are required to test intangible assets with indefinite lives, including goodwill, annually or more frequently if certain circumstances change that would more likely than not reduce the fair value of a reporting unit and intangible assets below their carrying values. As of December 31, 2016 , our goodwill was $3,081.7 million and intangible assets with indefinite lives was $49.0 million . When the carrying value of a reporting unit's goodwill exceeds its implied fair value of goodwill, or if the carrying amount of an intangible asset with an indefinite life exceeds its fair value, a charge to operations is recorded. Either event would result in incremental expenses for that quarter, which would reduce any earnings or increase any loss for the period in which the impairment was determined to have occurred.

In the past, we recorded a goodwill impairment charge of $850.0 million due to the underperformance of our Security reporting unit and product rationalizations.

In recent years, economic weakness has contributed to extreme price and volume fluctuations in global stock markets that have reduced the market price of many technology company stocks, including ours. Declines in our level of revenues due to restructuring or cost reductions or declines in our operating margins, or sustained declines in our stock price, increase the risk that goodwill and intangible assets with indefinite lives may become impaired in future periods.

Our goodwill impairment analysis is sensitive to changes in key assumptions used in our analysis, such as expected future cash flows, the degree of volatility in equity and debt markets, and our stock price. If the assumptions used in our analysis are not realized, it is possible that an impairment charge may need to be recorded in the future. We cannot accurately predict the amount and timing of any impairment of goodwill or other intangible assets. However, any such impairment would have an adverse effect on our results of operations.

Changes in effective tax rates or adverse outcomes resulting from examination of our income or other tax returns could adversely affect our results.

Our future effective tax rates could be subject to volatility or adversely affected by the following: earnings being lower than anticipated in countries where we have lower statutory rates and higher than anticipated earnings in countries where we have higher statutory rates; changes in the valuation of our deferred tax assets and liabilities; expiration of, or lapses in, the R&D tax credit laws applicable to us; transfer pricing adjustments related to certain acquisitions, including the license of acquired intangibles under our intercompany R&D cost sharing arrangement; costs related to intercompany restructuring; tax effects of share-based compensation; challenges to our methodologies for valuing developed technology or intercompany arrangements; or changes in tax laws, regulations, accounting principles, or interpretations thereof. On October 5, 2015, the Organisation for Economic Co-operation and Development, or OECD, an international association of 35 countries including the U.S., published final proposals under its Base Erosion and Profit Shifting, or BEPS, Action Plan. The BEPS Action Plan includes fifteen Actions to address BEPS in a comprehensive manner and represents a significant change to the international corporate tax landscape. These proposals, as adopted by countries, may increase tax uncertainty and adversely affect our provision for income taxes. Furthermore, the current U.S. administration and key members of Congress have made public statements indicating that tax reform is a priority. Certain changes to U.S. tax laws, including limitations on the ability to defer U.S. taxation on earnings outside of the United States until those earnings are repatriated to the United States, could affect the tax treatment of our foreign earnings. In addition, we are subject to the continuous examination of our income tax returns by the Internal Revenue Service, or IRS, and other tax authorities. It is possible that tax authorities may disagree with certain positions we have taken and any adverse outcome of such a review or audit could have a negative effect on our financial position and operating results. We regularly assess the likelihood of adverse outcomes resulting from these examinations to determine the adequacy of our provision for income taxes, but the determination of our worldwide provision for income taxes and other tax liabilities requires significant judgment by management, and there are transactions where the ultimate tax determination is uncertain. Although we believe that our estimates are reasonable, the ultimate tax outcome may differ from the amounts recorded in our consolidated financial statements and may materially affect our financial results in the period or periods for which such determination is made. There can be no assurance that the outcomes from continuous examinations will not have an adverse effect on our business, financial condition, and results of operations.

We may face difficulties enforcing our proprietary rights, which could adversely affect our ability to compete.

We generally rely on a combination of patents, copyrights, trademarks, and trade secret laws and contractual restrictions on disclosure of confidential and proprietary information, to establish and maintain proprietary rights in our technology and products. Although we have been issued numerous patents and other patent applications are currently pending, there can be no assurance that any of our patent applications will result in issued patents or that any of our patents or other proprietary rights will not be challenged, invalidated, infringed or circumvented or that our rights will, in fact, provide competitive advantages to us or protect our technology, any of which could result in costly product redesign efforts, discontinuance of certain product offerings and other competitive harm.

In addition, despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our products or obtain and use information that we regard as proprietary. We generally enter into confidentiality or license agreements with our employees, consultants, vendors, and customers, and generally limit access to and distribution of our proprietary information. However, we cannot assure you that we have entered into such agreements with all parties who may have or have had access to our confidential information or that the agreements we have entered into will not be breached. We cannot guarantee that any of the measures we have taken will prevent misappropriation of our technology.

Furthermore, the laws of some foreign countries may not protect our proprietary rights to the same extent as do the laws of the United States. The outcome of any actions taken in these foreign countries may be different than if such actions were determined under the laws of the United States. Although we are not dependent on any individual patents or group of patents for particular segments of the business for which we compete, if we are unable to protect our proprietary rights in a market, we may find ourselves at a competitive disadvantage to others who need not incur the substantial expense, time, and effort required to create innovative products that have enabled our success.

We are subject to risks arising from our international operations, which may adversely affect our business, financial condition, and results of operations.

We derive a substantial portion of our revenues from our international operations, and we plan to continue expanding our business in international markets. We conduct significant sales and customer support operations directly and indirectly through our distributors and VARs in countries throughout the world and depend on the operations of our contract manufacturers and suppliers that are located outside of the United States. In addition, a portion of our R&D and our general and administrative operations are conducted outside the United States. In some countries, we may experience reduced intellectual property protection.

As a result of our international operations, we are affected by economic, business regulatory, social, and political conditions in foreign countries, including the following:

- changes in general IT spending,
- the imposition of government controls, inclusive of critical infrastructure protection;
- changes or limitations in trade protection laws or other regulatory requirements, which may affect our ability to import or export our products from various countries;
- varying and potentially conflicting laws and regulations;

- fluctuations in local economies;
- wage inflation or a tightening of the labor market;
- tax policies that could have a business impact;
- potential import tariffs imposed by the United States;
- data privacy rules and other regulations that affect cross border data flow; and
- the impact of the following on customer spending patterns: political considerations, unfavorable changes in tax treaties or laws, natural disasters, epidemic disease, labor unrest, earnings expatriation restrictions, misappropriation of intellectual property, military actions, acts of terrorism, political and social unrest and difficulties in staffing and managing international operations.

Any or all of these factors could have a material adverse impact on our business, financial condition, and results of operations.

In addition, the June 2016 approval by voters in the U.K. of a referendum to leave the EU, commonly referred to as Brexit, has caused, and may continue to cause, uncertainty in the global markets. The U.K.'s proposed exit from the EU, if implemented, will take some period of time to complete and could result in regulatory changes that impact our business. For example, changes to the way service providers conduct business and transmit data between the U.K. and the EU could require us to make changes to the way we handle customer data. We will also review the impact of any resulting changes to EU or U.K. law that could affect our operations, such as labor policies, financial planning, product manufacturing, and product distribution. Political and regulatory responses to the vote are still developing and we are in the process of assessing the impact the vote may have on our business as more information becomes available. Nevertheless, because we conduct business in the EU, including the U.K., any of the effects of Brexit, including those we cannot anticipate, could have a material adverse effect on our business, operating results, financial condition and cash flows.

Moreover, local laws and customs in many countries differ significantly from or conflict with those in the United States or in other countries in which we operate. In many foreign countries, it is common for others to engage in business practices that are prohibited by our internal policies and procedures or U.S. regulations applicable to us. There can be no assurance that our employees, contractors, channel partners, and agents will not take actions in violation of our policies and procedures, which are designed to ensure compliance with U.S. and foreign laws and policies. Violations of laws or key control policies by our employees, contractors, channel partners, or agents could result in termination of our relationship, financial reporting problems, fines, and/or penalties for us, or prohibition on the importation or exportation of our products, and could have a material adverse effect on our business, financial condition and results of operations.

We are exposed to fluctuations in currency exchange rates, which could negatively affect our financial condition and results of operations.

Because a substantial portion of our business is conducted outside the United States, we face exposure to adverse movements in non-U.S. currency exchange rates. These exposures may change over time as business practices evolve and could have a material adverse impact on our financial condition and results of operations.

The majority of our revenues and expenses are transacted in U.S. Dollars. We also have some transactions that are denominated in foreign currencies, primarily the British Pound, Euro, Indian Rupee, and Japanese Yen related to our sales and service operations outside of the United States. An increase in the value of the U.S. Dollar could increase the real cost to our customers of our products in those markets outside the United States in which we sell in U.S. Dollars. This could negatively affect our ability to meet our customers' pricing expectations in those markets and may result in erosion of gross margin and market share. A weakened U.S. Dollar could increase the cost of local operating expenses and procurement of raw materials to the extent we must purchase components in foreign currencies.

Currently, we hedge only those currency exposures associated with certain assets and liabilities denominated in nonfunctional currencies and periodically hedge anticipated foreign currency cash flows. The hedging activities undertaken by us are intended to offset the impact of currency fluctuations on certain nonfunctional currency assets and liabilities. However, such attempts to offset the impact of currency fluctuations are costly and no amount of hedging can be effective against all circumstances, including long-term declines in the value of the U.S. Dollar. If our attempts to hedge against these risks are not successful, or if long-term declines in the value of the U.S. Dollar persist, our financial condition and results of operations could be adversely impacted.

Approximately $125 million of the transaction consideration we received from the divestiture of our Junos Pulse product portfolio is in the form of a non-contingent seller promissory note and we may not receive the amount owed to us (including accrued interest), including in the time frame contemplated, by the buyer under the note.

In the fourth quarter of fiscal 2014, we completed the sale of our Junos Pulse product portfolio to an affiliate of Siris Capital, a private equity firm, for total consideration of $230.7 million, of which $105.7 million was in cash, net of a $19.3 million working capital adjustment, and $125.0 million was in the form of an 18-month non-contingent interest-bearing promissory note issued to the Company. On October 2, 2015, the Company and the issuer of the promissory note agreed to modify the original terms of the note to extend the maturity date from April 1, 2016 to December 31, 2018. Since approximately $125.0 million of the transaction consideration is in the form of a non-contingent seller promissory note, there is the risk that we may not receive the amount owed to us (including accrued interest), including in the time frame contemplated, under the note. In the event that the promissory note is not repaid on the terms we contemplate, any collection or restructuring efforts we undertake may be costly and require significant time and attention from our management and there is no guarantee that we will be able to recover the amounts owed to us in full.

If we fail to adequately evolve our financial and managerial control and reporting systems and processes, our ability to manage and grow our business will be negatively affected.

Our ability to successfully offer our products and implement our business plan in a rapidly evolving market depends upon an effective planning and management process. We will need to continue to improve our financial and managerial control and our reporting systems and procedures in order to manage our business effectively in the future. If we fail to effectively improve our systems and processes, our ability to manage our business, financial condition, and results of operations may be negatively affected.

Our products are highly technical and if they contain undetected defects, errors or malware or do not meet customer quality expectations, our business could be adversely affected, and we may be subject to additional costs or lawsuits or be required to pay damages in connection with any alleged or actual failure of our products and services.

Our products are highly technical and complex, are critical to the operation of many networks, and, in the case of our security products, provide and monitor network security and may protect valuable information. Our products have contained and may contain one or more undetected errors, defects, malware, or security vulnerabilities. Some errors in our products may only be discovered after a product has been installed and used by end-customers. For example, in December 2015, we disclosed that we identified unauthorized code in ScreenOS that could allow a knowledgeable attacker to gain administrative access to NetScreen devices and to decrypt VPN connections.

Any errors, defects, malware or security vulnerabilities discovered in our products after commercial release could result in monetary penalties, loss of revenues or delay in revenue recognition, loss of customers, loss of future business and reputation, penalties, and increased service and warranty cost, any of which could adversely affect our business, financial condition, and results of operations. Following the identification of the ScreenOS vulnerabilities, we launched an investigation into the matter, developed patched releases for the latest versions of ScreenOS and notified customers, all of which required significant time and attention from management and our employees. In addition, in the event an error, defect, malware, or vulnerability is attributable to a component supplied by a third-party vendor, we may not be able to recover from the vendor all of the costs of remediation that we may incur. In addition, we could face claims for product liability, tort, or breach of warranty or indemnification. Defending a lawsuit, regardless of its merit, is costly and may divert management’s attention. If our business liability insurance coverage is inadequate, or future coverage is unavailable on acceptable terms or at all, our financial condition and results of operations could be harmed. Moreover, if our products fail to satisfy our customers' quality expectations for whatever reason, the perception of and the demand for our products could be adversely affected.

If our products do not interoperate with our customers’ networks, installations will be delayed or cancelled and could harm our business.

Our products are designed to interface with our customers’ existing networks, each of which have different specifications and utilize multiple protocol standards and products from other vendors. Many of our customers’ networks contain multiple generations of products that have been added over time as these networks have grown and evolved. Our products must interoperate with many or all of the products within these networks as well as future products in order to meet our customers’ requirements. If we find errors in the existing software or defects in the hardware used in our customers’ networks, we may need to modify our software or hardware to fix or overcome these errors so that our products will interoperate and scale with the existing software and hardware, which could be costly and could negatively affect our business, financial condition, and results of operations. In addition, if our products do not interoperate with those of our customers' networks, demand for our products could be adversely affected or orders for our products could be cancelled. This could hurt our operating results, damage our reputation, and seriously harm our business and prospects.

Our products incorporate and rely upon licensed third-party technology, and if licenses of third-party technology do not continue to be available to us or are not available on terms acceptable to us, our revenues and ability to develop and introduce new products could be adversely affected.

We integrate licensed third-party technology into certain of our products. From time to time, we may be required to renegotiate our current third party licenses or license additional technology from third-parties to develop new products or product enhancements or to facilitate new business models. Third-party licenses may not be available or continue to be available to us on commercially reasonable terms. The failure to comply with the terms of any license, including free open source software, may result in our inability to continue to use such license. Some of our agreements with our licensors may be terminated for convenience by them. In addition, we cannot be certain that our licensors are not infringing the intellectual property rights of third parties or that our licensors have sufficient rights to the licensed intellectual property in all jurisdictions in which we may sell our products. Our inability to maintain or re-license any third-party licenses required in our products or our inability to obtain third-party licenses necessary to develop new products and product enhancements, could require us, if possible, to develop substitute technology or obtain substitute technology of lower quality or performance standards or at a greater cost, any of which could delay or prevent product shipment and harm our business, financial condition, and results of operations.

We sell our products to customers that use those products to build networks and IP infrastructure, and if the demand for network and IP systems does not continue to grow, our business, financial condition, and results of operations could be adversely affected.

A substantial portion of our business and revenues depends on the growth of secure IP infrastructure and on the deployment of our products by customers that depend on the continued growth of IP services. As a result of changes in the economy, capital spending or the building of network capacity in excess of demand, all of which have in the past particularly affected telecommunications service providers, spending on IP infrastructure can vary, which could have a material adverse effect on our business, financial condition, and results of operations. In addition, a number of our existing customers are evaluating the build-out of their next generation networks. During the decision-making period when our customers are determining the design of those networks and the selection of the software and equipment they will use in those networks, such customers may greatly reduce or suspend their spending on secure IP infrastructure. Such delays in purchases can make it more difficult to predict revenues from such customers can cause fluctuations in the level of spending by these customers and, even where our products are ultimately selected, can have a material adverse effect on our business, financial condition, and results of operations.

We are required to evaluate the effectiveness of our internal control over financial reporting and publicly disclose material weaknesses in our controls. Any adverse results from such evaluation may adversely affect investor perception, and our stock price.

Section 404 of the Sarbanes-Oxley Act of 2002 requires our management to assess the effectiveness of our internal control over financial reporting and to disclose in our filing if such controls were unable to provide assurance that a material error would be prevented or detected in a timely manner. We have an ongoing program to review the design of our internal controls framework in keeping with changes in business needs, implement necessary changes to our controls design and test the system and process controls necessary to comply with these requirements. If in the future, our internal controls over financial reporting are determined to be not effective resulting in a material weakness or significant deficiency, investor perceptions regarding the reliability of our financial statements may be adversely affected which could cause a decline in the market price of our stock and otherwise negatively affect our liquidity and financial condition.

Failure to maintain our credit ratings could adversely affect our cost of funds and related margins, liquidity, competitive position and access to capital markets.

The major credit rating agencies routinely evaluate our indebtedness. This evaluation is based on a number of factors, which include financial strength as well as transparency with rating agencies and timeliness of financial reporting. There can be no assurance that we will be able to maintain our credit ratings and failure to do so could adversely affect our cost of funds and related margins, liquidity, competitive position and access to capital markets.

We may be unable to generate the cash flow to satisfy our expenses, make anticipated capital expenditures or service our debt obligations, including the Senior Notes and the Revolving Credit Facility.

In February 2016, we issued $350.0 million aggregate principal amount of 3.125% senior notes due 2019, which we refer to as the 2019 Notes, and $150.0 million aggregate principal amount of 4.5% senior notes due 2024, which we refer to as the 2024 Notes. In March 2015, we issued $300.0 million aggregate principal amount of 3.30% senior notes due 2020, which we refer to as the 2020 Notes, and $300.0 million aggregate principal amount of 4.35% senior notes due 2025, which we refer to as the 2025 Notes. In addition, in March 2014, we issued $350.0 million aggregate principal amount of our 2024 Notes and in March 2011, we issued $1.0 billion aggregate principal amount of senior unsecured notes, which we refer to as the Senior Notes and together with the 2019 Notes, 2020 Notes, 2024 Notes and 2025 Notes, the Notes (see discussion in Note 9, *Debt and Financing* , in the Notes to Consolidated Financial Statements of this Report). As of December 31, 2016 , we had $2,133.7 million in outstanding long-term debt. In June 2014, we entered into a Credit Agreement with certain institutional lenders that provides for a five year $500.0 million unsecured revolving credit facility, which we refer to as the Revolving Credit Facility, with an option to increase the Revolving Credit Facility, up to a maximum of $700.0 million. The Credit Agreement will terminate in June 2019, at which point all amounts borrowed must be repaid. As of December 31, 2016 , no amounts were outstanding under the Credit Agreement.

We may not be able to generate sufficient cash flow to enable us to satisfy our expenses, make anticipated capital expenditures or service our indebtedness, including the Notes and the Revolving Credit Facility (if drawn upon). Our ability to pay our expenses, satisfy our debt obligations, refinance our debt obligations and fund planned capital expenditures will depend on our future performance, which will be affected by general economic, financial, competitive, legislative, regulatory and other factors beyond our control. Based upon current levels of operations, we believe cash flow from operations and available cash will be adequate for at least the next twelve months to meet our anticipated requirements for working capital, capital expenditures and scheduled payments of principal and interest on our indebtedness, including the Notes and the Revolving Credit Facility (if drawn upon). However, if we are unable to generate sufficient cash flow from operations or to borrow sufficient funds in the future to service our debt, we may be required to sell assets, reduce capital expenditures, refinance all or a portion of our existing debt (including the Notes), repatriate off-shore cash to the U.S. at unfavorable tax rates or obtain additional financing. There is no assurance that we will be able to refinance our debt, sell assets or borrow more money on terms acceptable to us, or at all.

The indentures that govern the Notes contain various covenants that limit our ability and the ability of our subsidiaries to, among other things:

- incur liens;
- incur sale and leaseback transactions; and
- consolidate or merge with or into, or sell substantially all of our assets to, another person.

The Credit Agreement contains two financial covenants along with customary affirmative and negative covenants that include the following:

- maintenance of a leverage ratio no greater than 3.0x and an interest coverage ratio no less than 3.0x
- covenants that limit or restrict the ability of the Company and its subsidiaries to, among other things, grant liens, merge or consolidate, dispose of all or substantially all of its assets, change their accounting or reporting policies, change their business and incur subsidiary indebtedness, in each case subject to customary exceptions for a credit facility of this size and type.

As a result of these covenants, we are limited in the manner in which we can conduct our business, and we may be unable to engage in favorable business activities or finance future operations or capital needs. Accordingly, these restrictions may limit our ability to successfully operate our business. A failure to comply with these restrictions could lead to an event of default, which could result in an acceleration of the indebtedness. Our future operating results may not be sufficient to enable compliance with these covenants to remedy any such default. In addition, in the event of an acceleration, we may not have or be able to obtain sufficient funds to make any accelerated payments, including those under the Notes, and the Revolving Credit Facility (if drawn upon).

Our failure to pay quarterly dividends to our stockholders or the failure to meet our commitments to return capital to our stockholders could have a material adverse effect on our stock price.

In January 2017, we announced a cash dividend of $0.10 per share of common stock payable on March 22, 2017 to stockholders of record as of the close of business on March 1, 2017. Our ability to pay quarterly dividends or achieve our intended capital return policy will be subject to, among other things, our financial position and results of operations, available cash and cash flow, capital and debt service requirements, use of cash for acquisitions and other factors. Any failure to pay or increase future dividends as announced, or a reduction or discontinuation of quarterly dividends could have a material adverse effect on our stock price.

We have announced that, beginning in 2017, we intend to target a capital return policy, inclusive of share repurchases and dividends, of approximately 50% of annual free cash flow. Free cash flow is calculated as net cash provided by operating activities less capital expenditures. Any failure to meet our commitments to return capital to our shareholders could have a material adverse effect on our stock price.

The investment of our cash balance and our investments in government and corporate debt securities are subject to risks, which may cause losses and affect the liquidity of these investments.

At December 31, 2016 , we had $1,833.2 million in cash and cash equivalents and $1,824.1 million in short- and long-term investments. We have invested these amounts primarily in asset-backed securities, certificates of deposit, commercial paper, corporate debt securities, foreign government debt securities, government-sponsored enterprise obligations, money market funds, mutual funds, publicly-traded equity securities, time deposits and U.S. government securities. Certain of these investments are subject to general credit, liquidity, market, sovereign debt, and interest rate risks. Our future investment income may fall short of expectations due to changes in interest rates or if the decline in fair value of our publicly traded debt or equity investments is judged to be other-than-temporary. These market risks associated with our investment portfolio may have a material adverse effect on our liquidity, financial condition, and results of operations.

Our amended and restated bylaws provide that the Court of Chancery of the State of Delaware will be the sole and exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees.

Our amended and restated bylaws provide that, unless we consent to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or if the Court of Chancery does not have jurisdiction, the U.S. District Court for the District of Delaware) is the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf; (ii) any action asserting a claim of breach of fiduciary duty owed by any of our current or former directors, officers, or other employees to us or to our stockholders; (iii) any action asserting a claim arising pursuant to the Delaware General Corporation Law, our restated certificate of incorporation, or our bylaws; (iv) any action or proceeding asserting a claim as to which Delaware General Corporation Law confers jurisdiction on the Court of Chancery or (v) any action asserting a claim governed by the internal affairs doctrine. The exclusive forum provisions in our bylaws may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our current or former directors, officers, or other employees, which may discourage such lawsuits against us and our current or former directors, officers, and other employees. Alternatively, if a court were to find the exclusive forum provisions contained in our bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could have a material and adverse impact on our business.

Uninsured losses could harm our operating results.

We self-insure against many business risks and expenses, such as intellectual property litigation and our medical benefit programs, where we believe we can adequately self-insure against the anticipated exposure and risk or where insurance is either not deemed cost-effective or is not available. We also maintain a program of insurance coverage for various types of property, casualty, and other risks. We place our insurance coverage with various carriers in numerous jurisdictions. The types and amounts of insurance that we obtain vary from time to time and from location to location, depending on availability, cost, and our decisions with respect to risk retention. The policies are subject to deductibles, policy limits, and exclusions that result in our retention of a level of risk on a self-insurance basis. Losses not covered by insurance could be substantial and unpredictable and could adversely affect our financial condition and results of operations.

ITEM 1B. ***Unresolved Staff Comments***

Not applicable.

ITEM 2. ***Properties***

Our corporate headquarters are located on 80 acres of owned land in Sunnyvale, California and includes approximately 0.7 million square feet of owned buildings. In addition to our owned facilities, we lease approximately 0.2 million square feet in buildings as part of our corporate headquarters as of December 31, 2016.

In addition to our leased offices in Sunnyvale, we also lease offices in various locations throughout the United States, Canada, South America, EMEA, and APAC regions, including offices in Australia, China, Hong Kong, India, Ireland, Israel, Japan, the Netherlands, Russia, United Arab Emirates, and the United Kingdom. As of December 31, 2016 , we leased approximately 1.8 million square feet worldwide, with approximately 39 percent in North America. The respective operating leases expire at various times through March 2026 . In addition, in July 2015 we entered into a lease arrangement through March 2026 for approximately 63,000 square feet of space in the State of Washington. Each leased facility is subject to an individual lease or sublease, which could provide various options to renew/terminate the agreement or to expand/contract the leased space. We believe that our current offices and other facilities are in good condition and appropriately support our business needs.

For additional information regarding obligations under our leases, see Note 16, *Commitments and Contingencies* , in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report. For additional information regarding properties by geographic region, see Note 13, *Segments* , in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report.

ITEM 3. ***Legal Proceedings***

The information set forth under the heading “Legal Proceedings” in Note 16, *Commitments and Contingencies* , in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report, is incorporated herein by reference.

ITEM 4. ***Mine Safety Disclosures***

Not applicable.

PART II

ITEM 5. *Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities*

Price Range of Common Stock

The principal market in which our common stock is traded is the New York Stock Exchange, or NYSE, under the symbol JNPR. The following table sets forth the high and low sales prices for our common stock for each full quarterly period within the two most recent fiscal years as reported on the NYSE.

	2016		2015	
	High	Low	High	Low
First quarter	$ 27.73	$ 21.49	$ 24.60	$ 21.24
Second quarter	$ 25.69	$ 21.18	$ 28.26	$ 22.21
Third quarter	$ 24.45	$ 21.18	$ 29.13	$ 24.74
Fourth quarter	$ 29.21	$ 22.41	$ 32.39	$ 25.48

Stockholders

As of February 17, 2017 , there were 846 stockholders of record of our common stock and we believe a substantially greater number of beneficial owners who hold shares through brokers, banks or other nominees.

Dividends

In 2016 and 2015 , we paid cash dividends of $0.10 per share each quarter, totaling $152.5 million and $156.3 million per annum, respectively. The declaration and amount of any future cash dividends are at the discretion of the Board of Directors and will depend on our financial performance, economic outlook, and any other relevant considerations. Beginning in 2017, we currently intend to target a capital return policy, inclusive of share repurchases and dividends, of approximately 50% of annual free cash flow. Free cash flow is calculated as net cash provided by operating activities less capital expenditures.

Unregistered Securities Issued in Fiscal 2016

On December 6, 2016, we issued 101,767 shares of our common stock as consideration to four individuals in connection with an acquisition of all the outstanding shares of AppFormix in the fourth quarter of 2016.

The sales of the above securities were exempt from registration under the Securities Act of 1933, as amended (the "Securities Act"), in reliance upon Section 4(2) of the Securities Act as transactions by an issuer not involving any public offering and/or the private offering safe harbor provision of Rule 506 of Regulation D promulgated under the Securities Act.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

The following table provides stock repurchase activity during the three months ended December 31, 2016 (in millions, except per share amounts):

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (2)	Maximum Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (2)
October 1 - October 31, 2016 (1)	—	$ 0.36	—	$ 219.7
November 1 - November 30, 2016	—	$ —	—	$ 219.7
December 1 - December 31, 2016	—	$ —	—	$ 219.7
Total (1)	—	$ 0.36	—	

(1) Includes 1,219 shares repurchased associated with unvested restricted stock awards.

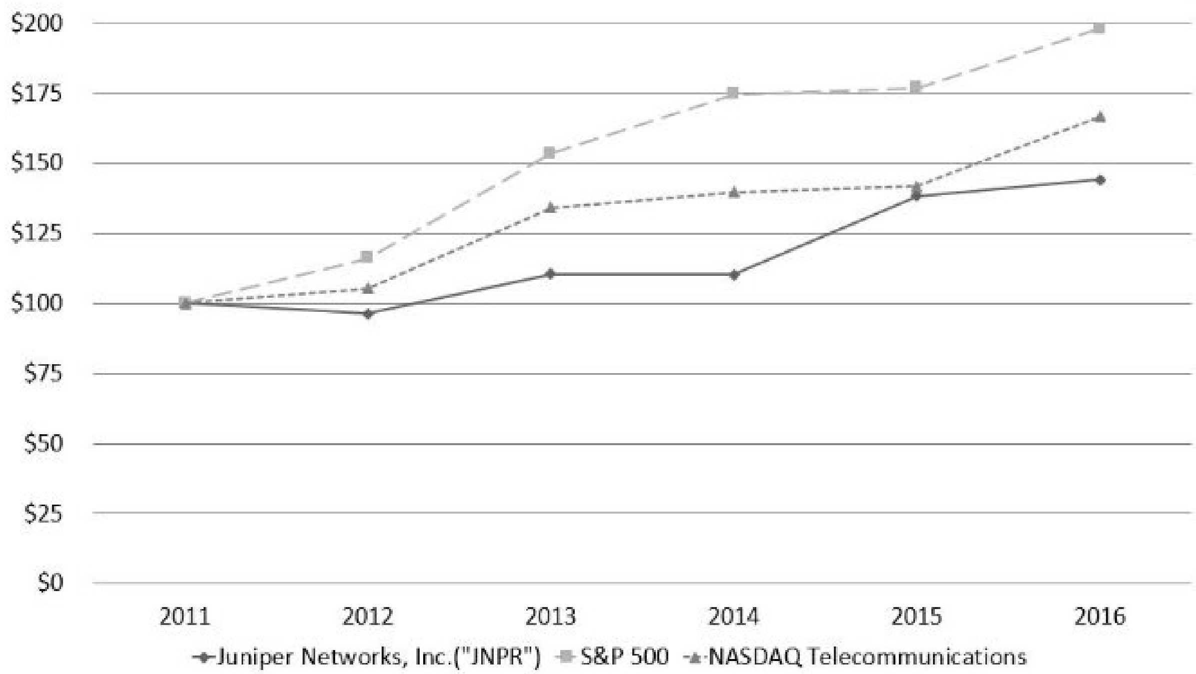
(2) No shares were repurchased during the periods set forth in the table above under our stock repurchase program approved by the Board in February 2014, October 2014, and July 2015, which authorized us to purchase an aggregate of up to $3.9 billion of our common stock. Future share repurchases under our capital return plan will be subject to a review of the circumstances in place at that time and will be made from time to time in private transactions or open market purchases as permitted by securities laws and other legal requirements. This program may be discontinued at any time.

Company Stock Performance

The performance graph below shows the cumulative total stockholder return over a five-year period assuming the investment of $100 on December 31, 2011, in each of Juniper Networks' common stock (with the reinvestment of all dividends), the Standard & Poor's 500 Stock Index ("S&P 500"), and the NASDAQ Telecommunications Index ("IXTC").

The performance graph shall not be deemed to be incorporated by reference into other U.S. Securities and Exchange Commission, or SEC, filings; nor deemed to be soliciting material or filed with the Commission or subject to Regulation 14A or 14C or subject to Section 18 of the Exchange Act. The comparisons in the performance graph below are based upon historical data and are not indicative of, or intended to forecast, future performance of our common stock.

Stock Performance Graph



	As of December 31,					
	2011	2012	2013	2014	2015	2016
JNPR	$ 100.00	$ 96.37	$ 110.58	$ 110.33	$ 138.47	$ 144.13
S&P 500	$ 100.00	$ 115.99	$ 153.55	$ 174.55	$ 176.95	$ 198.10
NASDAQ Telecommunications Index	$ 100.00	$ 105.48	$ 134.26	$ 139.71	$ 141.78	$ 166.72

ITEM 6. ***Selected Financial Data***

The following selected consolidated financial data is derived from our audited Consolidated Financial Statements. As our operating results are not necessarily indicative of future operating results, this data should be read in conjunction with Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations* , and the Consolidated Financial Statements and the notes thereto in Item 8, *Financial Statements and Supplementary Data* , of this Report, which are incorporated herein by reference.

The information presented below reflects the impact of certain significant transactions and the adoption of certain accounting pronouncements, which makes a direct comparison difficult between each of the last five fiscal years. For a complete description of matters affecting the results in the tables below during the three years ended December 31, 2016 , see *Notes to Consolidated Financial Statements* in Item 8 of Part II of this Report.

Consolidated Statements of Operations Data

	Years Ended December 31,				
	2016	2015	2014 (*)	2013	2012
	(In millions, except per share amounts)				
Net revenues	$ 4,990.1	$ 4,857.8	$ 4,627.1	$ 4,669.1	$ 4,365.4
Gross margin	3,104.5	3,078.6	2,858.2	2,941.4	2,708.8
Operating income (loss)	889.7	912.0	(419.7)	565.9	308.1
Net income (loss)	$ 592.7	$ 633.7	$ (334.3)	$ 439.8	$ 186.5
Net income (loss) per share:					
Basic	$ 1.55	$ 1.62	$ (0.73)	$ 0.88	$ 0.36
Diluted	$ 1.53	$ 1.59	$ (0.73)	$ 0.86	$ 0.35
Shares used in computing net income per share:					
Basic	381.7	390.6	457.4	501.8	520.9
Diluted	387.8	399.4	457.4	510.3	526.2
Cash dividends declared per share of common stock	$ 0.40	$ 0.40	$ 0.20	$ —	$ —

(*) Fiscal year 2014 includes the following significant pre-tax items: impairment of goodwill of $850.0 million; restructuring and other charges of $208.5 million; gain on the sale of equity investments of $163.0 million; gain, net of legal fees in connection with the litigation settlement with Palo Alto Networks of $196.1 million; and gain on the sale of Junos Pulse $19.6 million.

Consolidated Balance Sheet Data

	As of December 31,				
	2016	2015	2014	2013	2012
	(In millions)				
Cash, cash equivalents, and investments	$ 3,657.3	$ 3,192.2	$ 3,104.9	$ 4,097.8	$ 3,837.4
Working capital	2,236.0	1,110.5	1,297.2	2,182.7	2,006.1
Goodwill	3,081.7	2,981.3	2,981.5	4,057.7	4,057.8
Total assets (*)	9,656.5	8,607.9	8,273.6	10,267.1	9,787.9
Short-term and long-term debt (*)	2,133.7	1,937.4	1,341.2	993.7	993.3
Total long-term liabilities (excluding long-term debt)	824.4	594.1	499.9	529.8	373.1
Total Juniper Networks stockholders' equity	$ 4,962.5	$ 4,574.4	$ 4,919.1	$ 7,302.2	$ 6,999.0

(*) Fiscal year 2016 includes the adoption of Accounting Standards Update ("ASU") No. 2015-03 (Subtopic 835-30) - *Simplifying the Presentation of Debt Issuance Costs* , requiring that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. Other long-term assets and long-term debt in the prior years were retrospectively adjusted to conform to the current-year presentation.

ITEM 7. ***Management's Discussion and Analysis of Financial Condition and Results of Operations***

The following discussion should be read with the Consolidated Financial Statements and the related notes in Item 8 of Part II of this Report.

The following discussion is based upon our Consolidated Financial Statements included elsewhere in this Report, which have been prepared in accordance with U.S. generally accepted accounting principles, or U.S. GAAP. In the course of operating our business, we routinely make decisions as to the timing of the payment of invoices, the collection of receivables, the manufacturing and shipment of products, the fulfillment of orders, the purchase of supplies, and the building of inventory and spare parts, among other matters. Each of these decisions has some impact on the financial results for any given period. In making these decisions, we consider various factors including contractual obligations, customer satisfaction, competition, internal and external financial targets and expectations, and financial planning objectives. For further information about our critical accounting policies and estimates, see "Critical Accounting Policies and Estimates" section included in this "Management's Discussion and Analysis of Financial Condition and Results of Operations."

To aid in understanding our operating results for the periods covered by this Report, we have provided an executive overview and a summary of the business and market environment. These sections should be read in conjunction with the more detailed discussion and analysis of our consolidated financial condition and results of operations in this Item 7, our "Risk Factors" section included in Item 1A of Part I, and our Consolidated Financial Statements and notes thereto included in Item 8 of Part II of this Report.

Business and Market Environment

Juniper Networks designs, develops, and sells products and services for high-performance networks, to enable customers to build scalable, reliable, secure and cost-effective networks for their businesses, while achieving agility, efficiency and value through automation. We focus on customers and partners across our key market verticals who view these network attributes as fundamental to their business; including Telecom, Cable Providers, Cloud Providers, National Government, Financial Services, and Strategic Enterprise Verticals.

Our products are sold in three geographic regions: Americas; Europe, Middle East, and Africa, or EMEA; and Asia Pacific, or APAC. Our high-performance routing, switching, and security networking products and service offerings are sold to global service providers, cloud providers, national governments, research and public sector organizations and other enterprises who view the network as critical to their success. We believe that our silicon, systems, and software represent innovations that transform the economics and experience of networking, helping our customers achieve superior performance, greater choice, and flexibility, while reducing overall total cost of ownership. In addition to our products, we offer our customers worldwide services, including technical support, professional services, and education and training programs.

Our fiscal 2016 results saw modest net revenue growth that was primarily driven by Cloud Providers, which increased more than 25% in 2016, compared to the same period in 2015. While routing revenue was slightly down, our PTX family of products had significant year-over-year growth. Switching revenue increased 12% in 2016, compared to the same period in 2015 driven by continued data center strength led by our QFX family of products, which increased more than 50% year-over-year. Our security revenues continued to decline as this component of our business is transitioning from legacy security products to our new SRX security offerings, which were introduced throughout 2016. We expect this transition in security to continue over the next few quarters. Our Services business continues to be strong with another year of solid year-over-year revenue growth, increasing 13% in 2016 compared to the same period in 2015.

In reviewing our top 10 customers for the year, four were Cloud Providers, four were Telecoms, and two were Enterprises. Of these customers, two were located outside of the U.S.

We continue to operate in a competitive market and expect the timing of our customers' deployment patterns to vary from quarter to quarter. We intend to manage our business in 2017 with these considerations in mind and will continue to focus on driving shareholder value. We expect to adhere to the following three financial principles that provide insight into our operating plans for 2017:

- We will continue to pursue opportunities for revenue growth in 2017 with our differentiated product portfolio within our target markets and will focus on growth from emerging technologies as the market landscape continues to evolve.

- We remain focused on earnings expansion with long-term consistency. We will remain diligent in managing our operating expenses while also investing in our product portfolio for the short and long-term.

- We intend to maintain a healthy balance sheet and an optimized capital structure, while balancing internal investments and the potential for value-enhancing M&A. We expect continued strong cash flow generation and intend to return approximately 50% of free cash flow to shareholders. Free cash flow is calculated as net cash provided by operating activities less capital expenditures.

We are focused on operational excellence, cost discipline and targeted growth initiatives, as well as partnerships and expect to continue to evaluate strategic acquisitions. In 2016, we completed three acquisitions that we expect will further enhance our product portfolio and that we believe will allow us to accelerate our strategy to transition to cloud-based markets. In April 2016, we acquired optical equipment provider BTI Systems Inc., or BTI, which we expect will accelerate our ability to address the data center interconnect, or DCI, and metro Ethernet markets with open, programmable and automated, packet optical transport solutions. Then in August 2016, we acquired Aurrion, Inc., or Aurrion, a provider of fabless silicon photonic technology, which we expect will strengthen our long-term competitive advantage in cost-effective, high-density, high-speed optical networks. Lastly, in December 2016 we acquired AppFormix, a company focused on cloud infrastructure optimization software, which we expect will complement the analytics and capabilities of Contrail and help customers enhance their cloud operations. We expect that we will continue to look at targeted and strategic acquisitions that we believe can complement our product portfolio, operations or R&D strategy.

Further, our intent is to lead in the area of software solutions that simplify the operation of networks, and to allow our customers across our key verticals to deliver real value over those networks. We anticipate that our increased focus on software business models will result in an increase in software revenue as a percentage of total revenue over time.

In 2016, we continued to execute on our strategy with significant advancements in performance and automation across a number of key solution areas and announced a number of new products and enhancements to our hardware and software products across routing, switching, and security.

In routing, our solution for wide area IP transport across Data Center Interconnect, Metro, and Core was enhanced with the introduction of our newest PTX line-cards, coupled with our multi-layer optimization controller, NorthStar.

In switching, we announced two new access switches, the EX2300 and EX3400 in 2016. Further, we introduced Juniper Networks Cloud-Enabled Branch, a solution that will allow enterprises and managed service providers alike to create and automate delivery of branch office networking services on-demand.

In security, we announced Juniper Networks cSRX, a next-generation containerized firewall providing advanced security services for Software-Defined Secure Networks, or SDSN, as well as a multi-core version of the Juniper Networks vSRX. We also announced Junos Space Security Director, Policy Enforcer, new SRX4100 and SRX4200 firewalls, and new enhancements to Sky Advanced Threat Prevention, or Sky ATP, to further build out our SDSN platform.

We also expanded our global alliances with NEC to deliver NFV-based solutions that allow service providers and enterprises to gain greater service agility through automation.

We believe we are entering 2017 with a competitive product portfolio and a determination to enable our customers' cloud businesses, or to successfully migrate to cloud architectures. The cloud transformation is our primary area of strategic focus as we see significant opportunities arising from the shift towards the cloud and network automation. We believe our history as an innovation leader and our understanding of high performance networking technology position us to capitalize on this industry transition.

Financial Results and Key Performance Metrics Overview

The following table provides an overview of our key financial metrics for the years ended December 31, 2016 , 2015 , and 2014 (in millions, except per share amounts, percentages, days sales outstanding, or DSO, and product book-to-bill):

	As of and for the Years Ended December 31,						
	2016	2015	2014	2016 vs. 2015		2015 vs. 2014	
				$ Change	% Change	$ Change	% Change
Net revenues	$ 4,990.1	$ 4,857.8	$ 4,627.1	$ 132.3	3 %	$ 230.7	5 %
Gross margin	$ 3,104.5	$ 3,078.6	$ 2,858.2	$ 25.9	1 %	$ 220.4	8 %
Percentage of net revenues	*62.2%*	*63.4%*	*61.8 %*				
Operating income (loss)	$ 889.7	$ 912.0	$ (419.7)	$ (22.3)	(2)%	$ 1,331.7	(317)%
Percentage of net revenues	*17.8%*	*18.8%*	*(9.1)%*				
Net income (loss)	$ 592.7	$ 633.7	$ (334.3)	$ (41.0)	(6)%	$ 968.0	(290)%
Percentage of net revenues	*11.9%*	*13.0%*	*(7.2)%*				
Net income (loss) per share							
Basic	$ 1.55	$ 1.62	$ (0.73)	$ (0.07)	(4)%	$ 2.35	(322)%
Diluted	$ 1.53	$ 1.59	$ (0.73)	$ (0.06)	(4)%	$ 2.32	(318)%
Cash dividends declared per common stock	$ 0.40	$ 0.40	$ 0.20	$ —	— %	$ 0.20	100 %
Stock repurchase plan activity	$ 312.9	$ 1,142.5	$ 2,250.0	$ (829.6)	(73)%	$ (1,107.5)	(49)%
Operating cash flows	$ 1,106.0	$ 892.5	$ 763.4	$ 213.5	24 %	$ 129.1	17 %
DSO (*)	68	53	49	15	28 %	4	8 %
Product book-to-bill (*)	>1	>1	>1				
Deferred revenue	$ 1,481.1	$ 1,168.1	$ 1,075.7	$ 313.0	27 %	$ 92.4	9 %

(*) DSO and product book-to-bill are for the fourth quarter ended December 31, 2016 , 2015 , and 2014 .

- Net Revenues: During 2016 , net revenues increased , compared to 2015 , due to strong growth in services revenues partially offset by a slight decline in product revenue. The decline in product revenue was primarily driven by a decline in revenues from our MX products, as well as our security products. In addition, we saw continued competitive pricing pressures, partially offset by revenue growth from our new products, specifically in switching where we saw continued data center strength.

- Gross Margin: Our gross margin as a percentage of net revenues decreased during 2016 , compared to 2015 , primarily due to elevated pricing pressures, product mix, and charges related to the expected remediation costs for certain products containing a defect in a clock-signal component from a third-party supplier, partially offset by an improvement in services margin and our supply chain cost structure. We expect that we will continue to experience elevated pricing pressures in the near term.

- Operating income (loss): During 2016 , compared to 2015 , operating income as a percentage of net revenues decreased as a result of higher operating expense primarily due to acquisitions completed in 2016 as well as a decline in gross margin as a percentage of net revenue, partially offset by savings in variable compensation and improvements to our supply chain cost structure.

- Capital Return: During 2016, we completed our full commitment to return $4.1 billion of capital, inclusive of share repurchases and dividends, to shareholders from 2014 through the end of 2016. During 2016, we repurchased 13.5 million shares of our common stock for an aggregate purchase of $312.9 million and paid cash dividends of $0.10 per share each quarter for an aggregate annual amount of $152.5 million. Beginning in 2017, we intend to target a capital return policy of approximately 50% of annual free cash flow, inclusive of share repurchases and dividends.

- Operating Cash Flows: Cash flow from operations increased by $213.5 million in 2016 , compared to 2015 , primarily driven by timing differences in working capital.

- DSO: DSO is calculated as the ratio of ending accounts receivable, net of allowances, divided by average daily net sales for the preceding 90 days. DSO for the quarter ended December 31, 2016 increased by 15 days, or 28% compared to the quarter ended December 31, 2015 . The elevated DSO was primarily due to a significant increase in invoicing of services which occurred late in 2016 and resulted in higher deferred services revenue, as well as the timing of product invoicing. We believe the quality of our receivables is strong as the majority has been received early in the first quarter of 2017. Going forward we expect DSO to be in the 50 to 60 days range.

- Product Book-to-Bill: Product book-to-bill represents the ratio of product orders booked divided by product revenues during the respective period. Product book-to-bill was greater than one for the quarters ended December 31, 2016 , 2015 and 2014 , which we believe indicates positive product demand.

- Deferred Revenue: Total deferred revenue increased by $313.0 million to $1,481.1 million as of December 31, 2016 , compared to $1,168.1 million as of December 31, 2015 , primarily due to (1) an increase in deferred service revenue of $230.4 million driven by an increase in multi-year support agreements, which are billed in advance, and (2) an increase in product deferred revenue primarily due to higher deferrals related to software revenue arrangements, which are recognized ratably over the agreement, and other shipments that have not met all revenue recognition criteria. In circumstances when costs are deferred, deferred product revenue is recorded net of the related costs of product revenue.

In February 2017, we completed our evaluation of the impact of a defect in a clock-signal component contained in certain of our products which may begin to fail after the product has been in operation for 18 months as advised by the third party component supplier. As a result, we recorded a product cost of revenue charge of approximately $10.8 million in other accrued liabilities on the Consolidated Balance Sheet as of December 31, 2016 for the expected remediation costs of the component defect. We are in the process of working with our customers and the component supplier to implement a remediation.

Critical Accounting Policies and Estimates

The preparation of the financial statements and related disclosures in conformity with U.S. GAAP requires us to make judgments, assumptions, and estimates that affect the amounts reported in the Consolidated Financial Statements and the accompanying notes. On an ongoing basis, we evaluate our estimates, including those related to sales returns, pricing credits, warranty costs, allowance for doubtful accounts, impairment of long-term assets, especially goodwill and intangible assets, contract manufacturer exposures for carrying and obsolete material charges, assumptions used in the valuation of share-based compensation, and litigation. We base our estimates and assumptions on current facts, historical experience, and various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. For further information about our significant accounting policies, see Note 2, *Significant Accounting Policies* , in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report, which describes the significant accounting policies and methods used in the preparation of the Consolidated Financial Statements. The accounting policies described below are significantly affected by critical accounting estimates. Such accounting policies require significant judgments, assumptions, and estimates used in the preparation of the Consolidated Financial Statements and actual results could differ materially from the amounts reported based on these policies. To the extent there are material differences between our estimates and the actual results, our future consolidated results of operations may be affected.

- Goodwill. We make significant estimates, assumptions, and judgments when valuing goodwill and other intangible assets in connection with the initial purchase price allocation of an acquired entity, as well as when evaluating impairment of goodwill and other intangible assets on an ongoing basis. These estimates are based upon a number of factors, including historical experience, market conditions, and information obtained from the management of the acquired company. Critical estimates in valuing certain intangible assets include, but are not limited to, historical and projected customer retention rates, anticipated growth in revenue from the acquired customer and product base, and the expected use of the acquired assets. These factors are also considered in determining the useful life of the acquired intangible assets. The amounts and useful lives assigned to identified intangible assets impacts the amount and timing of future amortization expense.

  Goodwill represents the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recorded. The excess of the purchase price over the estimated fair value of net assets of businesses acquired in a business combination is recognized as goodwill. We evaluate our goodwill for impairment on an annual basis, as of November 1 st , or more frequently if an event occurs or facts and circumstances change that would more likely than not reduce the fair value of our reporting units below their carrying amount.

Goodwill is tested for impairment at the reporting unit level, which is one level below our operating segment level, by comparing the reporting unit's carrying value, including goodwill, to the fair value of the reporting unit. The reporting units are determined based on the components of our operating segment that constitutes a business for which discrete financial information is available and segment management regularly review the operating results of the component.

The provisions of the accounting standard for goodwill and other intangibles allows us to first assess qualitative factors to determine whether it is necessary to perform the two-step quantitative goodwill impairment test. Various factors are considered in the qualitative assessment, including macroeconomic conditions, financial performance, or a sustained decrease in share price. If as a result of the qualitative assessment, it is deemed more likely than not that the fair value of a reporting unit is less than its carrying amount, management will perform the quantitative test.

The quantitative goodwill impairment test, if necessary, involves a two-step process to identify goodwill impairment and measure the amount of goodwill impairment loss to be recognized, if any. The first step tests for potential impairment by comparing the fair value of reporting units with the reporting unit’s net asset values. If the fair value of the reporting units exceeds the carrying value of the reporting unit’s net assets, goodwill is not impaired and no further testing is required. If the fair value of the reporting units does not exceed the carrying value of the net assets assigned to the reporting unit, then we perform the second step of the impairment test in order to determine the implied fair value of the reporting unit's goodwill. The second step requires an assignment of the reporting unit’s fair value to the reporting unit’s assets and liabilities, using the relevant acquisition accounting guidance, to determine the implied fair value of the reporting unit’s goodwill. The implied fair value of the reporting unit’s goodwill is then compared with the carrying amount of the reporting unit’s goodwill, and if the carrying value of a reporting unit's goodwill exceeds its implied fair value, we record an impairment loss equal to the difference.

In the first step, the fair value of each of our reporting units is determined using both the income and market valuation approaches. We believe the income approach and the market approach are equally representative of the reporting unit’s fair value. Under the income approach, the fair value of the reporting unit is based on the present value of estimated future cash flows that the reporting unit is expected to generate over its remaining life. Under the market approach, the value of the reporting unit is based on an analysis that compares the value of the reporting unit to values of publicly-traded companies in similar lines of business. In the application of the income and market valuation approaches, we are required to make estimates of future operating trends and judgments on discount rates and other variables. Determining the fair value of a reporting unit is highly judgmental in nature and involves the use of significant estimates and assumptions. We base our fair value estimates on assumptions we believe to be reasonable but that are unpredictable and inherently uncertain. Actual future results related to assumed variables could differ from these estimates. In addition, we make certain judgments and assumptions in allocating shared assets and liabilities to determine the carrying values for each of our reporting units.

Under the income approach, we calculate the fair value of a reporting unit based on the present value of estimated future cash flows. Cash flow projections are based on management's estimates of revenue growth rates and operating margins, taking into consideration industry and market conditions. The discount rate used is based on the weighted-average cost of capital adjusted for the relevant risk associated with business-specific characteristics and the uncertainty related to the business's ability to execute on the projected cash flows. Under the market approach, we estimate the fair value based on market multiples of earnings derived from comparable publicly-traded companies with similar operating and investment characteristics as the reporting units, and then apply a control premium which is determined by considering control premiums offered as part of the acquisitions that have occurred in market segments that are comparable with our reporting units. The income approach and the market approach are equally weighted to derive the fair value of the reporting unit.

During the fourth quarter of 2016, we performed a quantitative assessment for all of our reporting units: Routing, Switching, and Security. This quantitative assessment was performed by determining the fair value of each reporting unit using a combination of the income approach and the market approach. Based on the outcome of the quantitative assessments, we determined that the fair values of each reporting unit significantly exceeded its respective carrying value, resulting in no goodwill impairment .

Refer to Item 8 of Part II, Note 7, *Goodwill and Purchased Intangible Assets* , of the notes to the Consolidated Financial Statements, for further information.

- Inventory Valuation and Contract Manufacturer Liabilities. Inventory consists primarily of component parts to be used in the manufacturing process and is stated at lower of cost or market. A provision is recorded when inventory is determined to be in excess of anticipated demand or obsolete, to adjust inventory to its estimated realizable value. In determining the provision, we also consider estimated recovery rates based on the nature of the inventory. As of December 31, 2016 and December 31, 2015 , our net inventory balances were $95.5 million and $75.0 million , respectively.

  We establish a liability for non-cancelable, non-returnable purchase commitments with our contract manufacturers for quantities in excess of our demand forecasts or obsolete materials charges for components purchased by the contract manufacturers based on our demand forecasts or customer orders. We also take estimated recoveries of aged inventory into consideration when determining the liability. As of December 31, 2016 and December 31, 2015 , our contract manufacturer liabilities were $14.0 million and $18.0 million, respectively.

  Significant judgment is used in establishing our forecasts of future demand, recovery rates based on the nature and age of inventory, and obsolete material exposures. We perform a detailed analysis and review of data used in establishing our demand forecasts. If the actual component usage and product demand are significantly lower than forecast, which may be caused by factors within and outside of our control, or if there were a higher incidence of inventory obsolescence because of rapidly changing technology and our customer requirements, we may be required to increase our inventory write-downs and contract manufacturer liabilities, which could have an adverse impact on our gross margins and profitability. We regularly evaluate our exposure for inventory write-downs and adequacy of our contract manufacturer liabilities. Inventory and supply chain management remains an area of focus as we balance the risk of material obsolescence and supply chain flexibility in order to reduce lead times.

- Revenue recognition. Revenue is recognized when all of the following criteria have been met: (1) persuasive evidence of an arrangement exists, (2) delivery has occurred, (3) sales price is fixed or determinable, and (4) collectability is reasonably assured. We enter into contracts to sell our products and services, and while some of our sales agreements contain standard terms and conditions, there are agreements that contain multiple elements or non-standard terms and conditions. As a result, significant contract interpretation may be required to determine the appropriate accounting, including whether the deliverables specified in a multiple element arrangement should be treated as separate units of accounting for revenue recognition purposes, and, if so, how the price should be allocated among the elements and when to recognize revenue for each element. Changes in the allocation of the sales price between elements may impact the timing of revenue recognition but will not change the total revenue recognized on the contract.

  Under our revenue recognition policies, we allocate revenue to each element based on a selling price hierarchy. The selling price for a deliverable is based on our vendor-specific objective evidence, or VSOE, if available, third-party evidence, or TPE, if VSOE is not available, or estimated selling price, or ESP, if neither VSOE nor TPE is available. We establish VSOE of selling price using the price charged for a deliverable when sold separately. TPE of selling price is established by evaluating largely interchangeable competitor products or services in stand-alone sales to similarly situated customers. We do not use TPE as we do not consider our products to be similar or interchangeable to our competitors' products in standalone sales to similarly situated customers. ESP is established considering internal factors such as margin objectives, pricing practices and controls, customer segment pricing strategies and product life cycle. Consideration is also given to market conditions such as industry pricing strategies and technology life cycles. When determining ESP, we apply management judgment to establish margin objectives and pricing strategies and to evaluate market conditions and product life cycles. Revenue from maintenance service contracts is deferred and recognized ratably over the contractual support period, which is generally one to three years.

- Income Taxes. We are subject to income taxes in the United States and numerous foreign jurisdictions. Significant judgment is required in evaluating our uncertain tax positions and determining our taxes. Although we believe our reserves are reasonable, no assurance can be given that the final tax outcome of these matters will not be different from that which is reflected in our historical income tax provisions and accruals. We adjust these reserves in light of changing facts and circumstances, such as the closing of a tax audit or the refinement of an estimate. To the extent that the final tax outcome of these matters is different than the amounts recorded, such differences will affect the provision for income taxes in the period in which such determination is made.

  Significant judgment is also required in determining any valuation allowance recorded against deferred tax assets. In assessing the need for a valuation allowance, we consider all available evidence, including past operating results, estimates of future taxable income, and the feasibility of tax planning strategies. In the event that we change our determination as to the amount of deferred tax assets that can be realized, we will adjust our valuation allowance with a corresponding impact to the provision for income taxes in the period in which such determination is made.

Our provision for income taxes is subject to volatility and could be adversely affected by earnings being lower than anticipated in countries that have lower tax rates and higher than anticipated in countries that have higher tax rates; by changes in the valuation of our deferred tax assets and liabilities; by expiration of or lapses in the R&D tax credit laws; by transfer pricing adjustments, including the effect of acquisitions on our intercompany R&D cost-sharing arrangement and legal structure; by tax effects of nondeductible compensation; by tax costs related to intercompany realignments; by changes in accounting principles; or by changes in tax laws and regulations, including possible U.S. changes to the taxation of earnings of our foreign subsidiaries, the deductibility of expenses attributable to foreign income, or the foreign tax credit rules. In addition, the OECD's recommended changes to numerous long-standing tax principles, as adopted by countries, will increase tax uncertainty and may adversely affect our provision for income taxes. Significant judgment is required to determine the recognition and measurement attributes prescribed in the accounting guidance for uncertainty in income taxes. The accounting guidance for uncertainty in income taxes applies to all income tax positions, including the potential recovery of previously paid taxes, which if settled unfavorably could adversely affect our provision for income taxes or additional paid-in capital. In addition, we are subject to the continuous examination of our income tax returns by the IRS and other tax authorities. We regularly assess the likelihood of adverse outcomes resulting from these examinations to determine the adequacy of our provision for income taxes. There can be no assurance that the outcomes from these continuous examinations will not have an adverse effect on our operating results and financial condition.

- Loss Contingencies. We use significant judgment and assumptions to estimate the likelihood of loss or impairment of an asset, or the incurrence of a liability, in determining loss contingencies. An estimated loss contingency is accrued when it is probable that an asset has been impaired or a liability has been incurred and the amount of loss can be reasonably estimated. We record a charge equal to the minimum estimated liability for litigation costs or a loss contingency only when both of the following conditions are met: (i) information available prior to issuance of our consolidated financial statements indicates that it is probable that an asset had been impaired or a liability had been incurred at the date of the financial statements and (ii) the range of loss can be reasonably estimated. We regularly evaluate current information available to us to determine whether such accruals should be adjusted and whether new accruals are required.

Recent Accounting Pronouncements

See Note 2, *Significant Accounting Policies* , in Notes to the Consolidated Financial Statements in Item 8 of Part II of this Report for a full description of recent accounting pronouncements, including the expected dates of adoption and estimated effects on financial condition and results of operations, which is incorporated herein by reference.

Results of Operations

We sell our high-performance networking products and service offerings across routing, switching, and security to two primary markets: Service Provider and Enterprise. Our determination of the market to which a particular revenue transaction relates is based primarily upon the customer's industrial classification code, but may also include subjective factors such as the intended use of the product. The Service Provider market generally includes wireline and wireless carriers, and cable operators, as well as major Internet content and application providers. The Enterprise market is generally comprised of federal, state, and local governments; research and education institutions; financial services and other businesses.

The following table presents product and service net revenues (in millions, except percentages):

	Years Ended December 31,						
	2016	2015	2014	2016 vs. 2015		2015 vs. 2014	
				$ Change	% Change	$ Change	% Change
Routing	$ 2,352.9	$ 2,359.2	$ 2,223.9	$ (6.3)	— %	$ 135.3	6 %
Percentage of net revenues	*47.2%*	*48.6%*	*48.1%*				
Switching	858.0	768.3	721.2	89.7	12 %	47.1	7 %
Percentage of net revenues	*17.2%*	*15.8%*	*15.6%*				
Security	318.0	435.6	463.6	(117.6)	(27)%	(28.0)	(6)%
Percentage of net revenues	*6.4%*	*9.0%*	*10.0%*				
Total Product	3,528.9	3,563.1	3,408.7	(34.2)	(1)%	154.4	5 %
Percentage of net revenues	*70.7%*	*73.3%*	*73.7%*				
Total Service	1,461.2	1,294.7	1,218.4	166.5	13 %	76.3	6 %
Percentage of net revenues	*29.3%*	*26.7%*	*26.3%*				
Total net revenues	$ 4,990.1	$ 4,857.8	$ 4,627.1	$ 132.3	3 %	$ 230.7	5 %

2016 Compared to 2015

Routing product net revenues decreased slightly in 2016, compared to the same period in 2015, primarily due to a decline in revenues from our MX products, resulting from lower demand from Telecom in the Americas and EMEA, which is impacted by the timing of large deployments. Net revenues from our legacy T series products continued to decline, as expected, as we continue to transition to our next-generation PTX series of products. These declines were significantly offset by a strong increase in revenues from our PTX series products due to higher sales to Cloud Providers and Telecom, as well as the ramp up of sales of our new products, which we expect to continue over the next few quarters.

Switching product net revenues increased in 2016, compared to the same period in 2015, as a result of continued growth from our data center switching portfolio, driven by higher net revenues from our QFX product family, which increased over 50% year-over-year, driven by the ramp up of sales of our new product offerings, as well as an increase in revenue from Cloud Providers. This was partially offset by lower demand for our EX products, as we transition to our new EX product portfolio. We are focused on the growing cloud and data center market, and expect our expanded data center switching portfolio will continue to drive revenue growth in our switching business in the foreseeable future.

Security product net revenues decreased in 2016, compared to the same period in 2015, primarily due to lower net revenues from our SRX products, which have been undergoing a product refresh cycle, as well as the continued decline of our Screen OS and Other Legacy products. We continue to expect that our Screen OS and Other Legacy products will not contribute to meaningful Security product revenue growth and should continue to decline over time. We are continuing to introduce newer SRX products, and expect this transition to continue over the next few quarters.

The increase in service net revenues in 2016, compared to the same period in 2015 was primarily driven by strong attach rates and renewals of support contracts.

2015 Compared to 2014

Routing product net revenues increased in 2015, compared to 2014, as a result of an increase from Cloud Providers, Cable, and Telecom in EMEA and APAC. During 2015, we saw a strong increase in demand from both service provider and enterprise markets for our routing products, as well as an overall increase in net revenues from our MX960, MX2020, and PTX series products.

Switching product net revenues increased in 2015, compared to 2014, primarily due to data center build-outs with Telecom and Cloud Providers. This result was enabled by the significant growth with our QFX product family. Additionally, we saw switching net revenues growth in the Americas and APAC, which was slightly offset by a decrease in EMEA. We also saw a year-over-year increase in the service provider market for our switching products.

Security product net revenues decreased in 2015, compared to 2014, primarily due to the divestiture of our Junos Pulse product lines and a continuing decline in our ScreenOS products, which was partially offset by an increase in sales of our SRX platform and security software year-over-year. Additionally, we also saw a decrease in security net revenues within the enterprise market, which was partially offset by a slight increase in the service provider market.

The increase in service net revenues in 2015, compared to 2014, was primarily driven by new service contracts and strong contract renewals. Service revenues are largely correlated with product revenues, therefore if product net revenues decline, it can have an impact on future service revenues.

Net Revenues by Geographic Region

The following table presents net revenues by geographic region (in millions, except percentages):

	Years Ended December 31,						
	2016	2015	2014	2016 vs. 2015		2015 vs. 2014	
				$ Change	% Change	$ Change	% Change
Americas:							
United States	$ 2,737.0	$ 2,568.6	$ 2,410.6	$ 168.4	7 %	$ 158.0	7%
Other	231.8	223.6	219.7	8.2	4 %	3.9	2%
Total Americas	2,968.8	2,792.2	2,630.3	176.6	6 %	161.9	6%
Percentage of net revenues	*59.5%*	*57.5%*	*56.8%*				
EMEA	1,238.1	1,320.3	1,263.3	(82.2)	(6)%	57.0	5%
Percentage of net revenues	*24.8%*	*27.2%*	*27.3%*				
APAC	783.2	745.3	733.5	37.9	5 %	11.8	2%
Percentage of net revenues	*15.7%*	*15.3%*	*15.9%*				
Total net revenues	$ 4,990.1	$ 4,857.8	$ 4,627.1	$ 132.3	3 %	$ 230.7	5%

2016 Compared to 2015

Net revenues in the Americas increased in 2016, compared to the same period in 2015 , primarily driven by strong growth from Cloud Providers, which increased almost 30% year-year-over, as they build out data center environments, as well as a strong increase in service revenues. This was partially offset by lower revenues from Cable Providers, due to lower demand for our MX products. In the Americas, we continue to see opportunities for us to diversify our revenue as Cloud Provider customers continue to invest in data center networks and network automation.

Net revenues in EMEA decreased in 2016, compared to the same period in 2015 , primarily due to a decrease in revenues from our Strategic Enterprise vertical and the timing of deployments of large Telecoms, partially offset by growth from Cloud Providers. To a lesser extent, certain macroeconomic uncertainties in the region and elevated pricing pressures also contributed to the decline in net revenues.

Net revenues in APAC increased in 2016, compared to the same period in 2015 . The increase was driven by Cloud Providers, partially offset by Telecom. Geographically, revenue growth was primarily driven by an increase in revenues from China and Japan, which was partially offset by a decline in revenues from Australia.

2015 Compared to 2014

Net revenues in the Americas increased in 2015, compared to 2014, primarily due to a strong increase in net revenues from both the service provider and enterprise markets. The increase in both the Service Provider and Enterprise markets within the Americas was due to an increase in net revenues across routing, switching, and SRX product net revenues, as well as service net revenues. In addition, we saw a strong increase in net revenues from Cloud Providers, Cable, and Enterprise, partially offset by Telecom.

Net revenues in EMEA increased in 2015, compared to 2014, primarily due to an increase in net revenues from Telecom and Cloud Providers slightly offset by a decrease in the enterprise market.

Net revenues in APAC increased in 2015, compared to 2014, primarily due to an increase in net revenues from Telecom and Cloud Providers. We experienced a significant decline in China, which was partially offset by an increase in net revenues in Japan and Australia.

Net Revenues by Market and Customer

The following table presents net revenues by market (in millions, except percentages):

	Years Ended December 31,						
	2016	2015	2014	2016 vs. 2015		2015 vs. 2014	
				$ Change	% Change	$ Change	% Change
Service Provider	$ 3,452.2	$ 3,289.8	$ 3,100.4	$ 162.4	5 %	$ 189.4	6%
Percentage of net revenues	*69.2%*	*67.7%*	*67.0%*				
Enterprise	1,537.9	1,568.0	1,526.7	(30.1)	(2)%	41.3	3%
Percentage of net revenues	*30.8%*	*32.3%*	*33.0%*				
Total net revenues	$ 4,990.1	$ 4,857.8	$ 4,627.1	$ 132.3	3 %	$ 230.7	5%

2016 Compared to 2015

Net revenues from the Service Provider market increased in 2016 , compared to 2015 , driven by strong growth in the Americas and to a lesser extent, growth in APAC, partially offset by EMEA. Services and switching growth was partially offset by a decline in security.

Net revenues from the Enterprise market slightly decreased in 2016 , compared to 2015 , primarily due to a decline in revenues from security, partially offset by growth in service revenue. Net revenue declines from the Enterprise market in EMEA and APAC were partially offset by growth in the Americas.

2015 Compared to 2014

Net revenues from the service provider market increased in 2015, compared to 2014, with growth from Cloud Providers, Telecom in EMEA and APAC, and Cable. Within the service provider market, we saw strength across routing, switching, and security, with the largest increase in net revenues from routing revenue.

Net revenues from the enterprise market increased in 2015, compared to 2014, primarily due to strength in service and routing, and to a lesser extent, switching, which was partially offset by a slight decrease in revenue from our security products. Net revenues in the Americas from the enterprise market increased across routing, switching, and SRX security.

Customer

No customer accounted for greater than 10% of our net revenues during the years ended December 31, 2016 , 2015, and 2014.

Gross Margins

The following table presents gross margins (in millions, except percentages):

	Years Ended December 31,						
	2016	2015	2014	2016 vs. 2015		2015 vs. 2014	
				$ Change	% Change	$ Change	% Change
Product gross margin	$ 2,202.7	$ 2,293.5	$ 2,121.9	$ (90.8)	(4)%	$ 171.6	8%
Percentage of product revenues	*62.4%*	*64.4%*	*62.2%*				
Service gross margin	901.8	785.1	736.3	116.7	15 %	48.8	7%
Percentage of service revenues	*61.7%*	*60.6%*	*60.4%*				
Total gross margin	$ 3,104.5	$ 3,078.6	$ 2,858.2	$ 25.9	1 %	$ 220.4	8%
Percentage of net revenues	*62.2%*	*63.4%*	*61.8%*				

Our gross margins have been and will continue to be affected by a variety of factors, including the mix and average selling prices of our products and services, new product introductions and enhancements, manufacturing costs, expenses for inventory obsolescence and warranty obligations, cost of support and service personnel, and the mix of distribution channels through which our products are sold.

2016 Compared to 2015

Product gross margin decreased as a percentage of product net revenues in 2016 , compared to 2015 , primarily due to elevated pricing pressures, product mix, and expected remediation costs of $10.8 million for certain products containing a defect in a clock-signal component from a third-party supplier, partially offset by improvements in our cost structure. We expect that our product gross margin will continue to vary in the future due to the mix of products sold and competitive pricing pressures. We believe product gross margins as a percentage of net revenues will improve in the long-term from the continued expected acceptance of our new products and technologies, the expected increase in software revenues as a percentage of total revenues as we transition to software-based business models, and as we continue to manage costs within our supply chain.

Service gross margin as a percentage of service net revenues increased in 2016 , compared to 2015 . Service gross margin increased year-over-year due to an increase in support revenue as well as improvements in labor productivity and logistics, partially offset by increased support costs related to the ramp up of new products.

2015 Compared to 2014

Product gross margin increased as a percentage of product net revenues in 2015, compared to 2014, primarily due to a decrease in product cost of revenues. The decrease in cost of revenues is attributable to the non-recurrence of restructuring charges recorded in 2014 for asset write-downs. No such charges were incurred in 2015. Excluding these components from prior year cost of sales, year-over-year gross margin would remain relatively consistent.

Service gross margin as a percentage of service net revenues increased in 2015, compared to 2014. Services delivery costs increased at a slower rate than service revenue as a result of better labor efficiency and improved product quality.

Operating Expenses

The following table presents operating expenses (in millions, except percentages):

	Years Ended December 31,						
	2016	2015	2014	2016 vs. 2015		2015 vs. 2014	
				$ Change	% Change	$ Change	% Change
Research and development	$ 1,013.7	$ 994.5	$ 1,006.2	$ 19.2	2 %	$ (11.7)	(1)%
Percentage of net revenues	*20.3%*	*20.5 %*	*21.7%*				
Sales and marketing	972.9	943.8	1,023.6	29.1	3 %	(79.8)	(8)%
Percentage of net revenues	*19.5%*	*19.4 %*	*22.1%*				
General and administrative	224.9	228.9	231.1	(4.0)	(2)%	(2.2)	(1)%
Percentage of net revenues	*4.5%*	*4.7 %*	*5.0%*				
Restructuring and other charges (benefits)	3.3	(0.6)	167.0	3.9	N/M	(167.6)	(100)%
Percentage of net revenues	*0.1%*	*— %*	*3.6%*				
Impairment of goodwill	—	—	850.0	—	N/M	(850.0)	(100)%
Percentage of net revenues	*—%*	*— %*	*18.4%*				
Total operating expenses	$ 2,214.8	$ 2,166.6	$ 3,277.9	$ 48.2	2 %	$ (1,111.3)	(34)%
Percentage of net revenues	*44.4%*	*44.6 %*	*70.8%*				

N/M - percentage is not meaningful.

Our operating expenses have historically been driven in large part by personnel-related costs, including wages, commissions, bonuses, benefits, share-based compensation, and travel. Facility and information technology, or IT, departmental costs are allocated to each department based on usage and headcount. We had a total of 9,832, 9,058, and 8,806 employees as of December 31, 2016 , 2015 , and 2014 , respectively. Our headcount increased by 774 employees, or 9%, in 2016, compared to 2015, primarily in research and development, driven by our 2016 business acquisitions, as well as higher services and sales headcount as we focus on delivering our new products to our customers.

2016 Compared to 2015

Research and development

Research and development expense increased in 2016 , compared to 2015 , primarily as a result of an increase in depreciation and amortization expense of $17.8 million, which was driven by higher capital expenditures related to research and development projects. Also contributing to the increase in research and development expense was $13.6 million of higher outside service costs, such as consulting, and higher facilities expense. To a lesser extent, personnel-related expenses increased due to higher salaries, wages, and fringe expense partially offset by lower bonus expense. The increase in salaries and wages was driven by a higher headcount of 4,054 in 2016, compared to 3,723 in 2015, as a result of our 2016 business acquisitions. These increases were partially offset by lower costs of $14.1 million related to the completion of development of new products.

Sales and marketing

Sales and marketing expense increased in 2016 , compared to 2015 , primarily due to an increase in personnel-related expenses of $26.6 million driven by higher salaries and wages related to an increase in headcount of 2,590 in 2016, compared to 2,464 in 2015 as well as an increase in share-based compensation expense, partially offset by lower bonus and commissions expense.

General and administrative

General and administrative expense decreased in 2016 , compared to 2015 , primarily as a result of lower personnel-related expenses which includes a decline in share-based compensation and lower bonus expense, partially offset by higher salaries and wages. Additionally, facilities expense decreased in 2016 , compared to 2015 , due to the consolidation of our buildings in Sunnyvale, California. These declines were partially offset by an increase in outside services related to consulting projects as well as an increase in acquisition costs related to our 2016 business acquisitions.

Restructuring and other charges (benefits)

Restructuring and other charges (benefits) increased in 2016 , compared to 2015 , related to severance costs in connection with our 2016 business combinations.

2015 Compared to 2014

Research and development

Research and development expense decreased in 2015, compared to 2014, as a result of lower headcount. Headcount declined from an average of 3,888 in 2014 to 3,724 in 2015, leading to a reduction in payroll costs and share-based compensation. In addition, outside consulting services decreased due to reduced consulting expenses, which was partially offset by an increase in depreciation expense on R&D equipment and bonus expense.

Sales and marketing

Sales and marketing expense decreased in 2015, compared to 2014. Average headcount increased from 2,360 in 2014 to 2,464 in 2015, however the mix of employees hired in 2015 was significantly different to 2014, which resulted in lower salary and bonus expense. Additionally, commissions expense decreased compared to 2014 as a result of the elimination of certain commission programs and a reduction in sales staff.

General and administrative

General and administrative expense decreased in 2015, compared to 2014 primarily as a result of higher litigation and investigation related costs incurred in 2014, in connection with the investigations into possible violations of the U.S. Foreign Corrupt Practices Act, and to a lesser extent, our patent litigation case with Palo Alto Networks. Additionally, we saw a decrease in general and administrative consulting fees, which was slightly offset by a higher bad debt expense amount.

Restructuring and other charges (benefits)

Restructuring and other charges (benefits) decreased in 2015, compared to 2014, due to higher charges recorded in 2014 in connection with our 2014 Restructuring Plan. During 2014, we implemented the 2014 Restructuring Plan and incurred restructuring charges of $166.2 million related to workforce reductions, contract terminations, project cancellations, and facility closures. The 2014 Restructuring Plan has been substantially completed as of December 31, 2014.

During the year ended December 31, 2015, we recorded $0.4 million of severance costs and a benefit of $1.0 million for facilities that were recorded in restructuring and other charges (benefits) in the Consolidated Statements of Operations, in connection with the 2014 Restructuring Plan. See Note 9 *, Restructuring and Other Charges (Benefits)* , in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report for further discussion of our restructuring activities.

Impairment of goodwill

In 2014, we determined that the Security reporting unit's carrying value of goodwill exceeded the implied fair value of goodwill, resulting in a goodwill impairment charge of $850.0 million, which was recorded in the Consolidated Statement of Operations. No such charges were recorded in 2015 or 2016.

Share-Based Compensation

Share-based compensation expense associated with equity incentive awards, or awards, which include stock options; restricted stock units, or RSUs; restricted stock awards, or RSAs; and performance share awards, or PSAs; as well as our Employee Stock Purchase Plan, or ESPP, was recorded in the following cost and expense categories (in millions, except percentages):

	Years Ended December 31,						
	2016	2015	2014	2016 vs. 2015		2015 vs. 2014	
				$ Change	% Change	$ Change	% Change
Cost of revenues - Product	$ 6.4	$ 5.6	$ 5.0	$ 0.8	14 %	$ 0.6	12 %
Cost of revenues - Service	15.3	13.8	14.2	1.5	11 %	(0.4)	(3)%
Research and development	126.5	125.4	134.5	1.1	1 %	(9.1)	(7)%
Sales and marketing	55.2	45.6	60.2	9.6	21 %	(14.6)	(24)%
General and administrative	23.4	26.9	26.1	(3.5)	(13)%	0.8	3 %
Total	$ 226.8	$ 217.3	$ 240.0	$ 9.5	4 %	$ (22.7)	(9)%

2016 Compared to 2015

Share-based compensation expense increased in 2016 , compared to 2015 primarily due to an increase in actual shares vested as well as additional expense related to equity-based awards assumed in connection with our 2016 business acquisitions.

2015 Compared to 2014

Share-based compensation expense decreased in 2015, compared to 2014. The decrease in expense was primarily related to a decline in actual shares vested.

Other (Expense) Income, Net

The following table presents other (expense) income, net (in millions, except percentages):

	Years Ended December 31,						
	2016	2015	2014	2016 vs. 2015		2015 vs. 2014	
				$ Change	% Change	$ Change	% Change
Interest income	$ 35.4	$ 21.8	$ 10.0	$ 13.6	62 %	$ 11.8	118 %
Interest expense	(97.7)	(83.3)	(66.9)	(14.4)	17 %	(16.4)	25 %
Gain on legal settlement, net	—	—	196.1	—	— %	(196.1)	(100)%
(Loss) gain on investments, net	(1.8)	6.8	167.9	(8.6)	(126)%	(161.1)	(96)%
Gain on sale of Junos Pulse	—	—	19.6	—	— %	(19.6)	(100)%
Other	1.8	(5.1)	6.7	6.9	N/M	(11.8)	N/M
Total other (expense) income, net	$ (62.3)	$ (59.8)	$ 333.4	$ (2.5)	4 %	$ (393.2)	(118)%
Percentage of net revenues	*(1.2)%*	*(1.2)%*	*7.2%*				

N/M - percentage is not meaningful.

Other (Expense) Income, Net

Interest income primarily includes interest earned from our cash, cash equivalents, investments, and promissory note issued to Juniper in connection with the sale of Junos Pulse. Interest expense primarily includes interest, net of capitalized interest expense,
from our short-term and long-term debt and customer financing arrangements. (Loss) gain on investments, net, primarily includes gains and losses from the sale of investments in privately-held companies and includes any impairment charges recorded on these investments. Other typically consists of foreign exchange gains and losses and other non-operational income and expense items.

2016 Compared to 2015

Interest Income

Interest income increased in 2016 compared to 2015 , primarily due to higher interest income on our Pulse note receivable due to an increase in the interest rate, as well as higher yields from our investment portfolio. See Note 8, *Other Financial Information* , in Notes to Consolidated Financial Statements in Item 8 in Part II of this Report for additional information regarding our Pulse note receivable.

Interest Expense

Interest expense increased in 2016, compared to 2015, primarily due to the issuance of our 2019 and 2024 Notes, partially offset by the repayment of debt, in the first quarter of 2016. See Note 10, *Debt and Financing* , in Notes to Consolidated Financial Statements in Item 8 in Part II of this Report for additional information regarding our 2019 and 2024 Notes.

(Loss) Gain on Investments, Net

During the year ended December 31, 2016 , we recorded net losses on investments of $1.8 million , which was primarily driven by impairments on our investments in privately-held companies. Whereas during the year ended December 31, 2015, we recorded a gain on investments of $7.3 million related to the sale of an investment in a privately-held company, which was partially offset by impairments in investments of other privately-held companies.

2015 Compared to 2014

Interest Income

Interest income increased in 2015 compared to 2014, primarily due to a higher balance of longer term investments yielding higher interest as well as a full year of interest income on the Pulse note receivable.

Interest Expense

Interest expense increased in 2015, compared to 2014, primarily due to the issuance of our 2020 and 2025 Notes in the first quarter of 2015. See Note 10, *Debt and Financing* , in Notes to Consolidated Financial Statements in Item 8 in Part II of this Report for additional information regarding our 2020 and 2025 Notes.

Gain on Legal Settlement, Net

During the year ended December 31, 2015, no litigation-related gains were recorded, while in 2014, we entered into a settlement agreement with Palo Alto Networks resolving patent litigation between the two companies, which resulted in a realized gain on legal settlement and subsequent sale of related securities of $196.1 million, net of legal fees.

(Loss) Gain on Investments, Net

During the year ended December 31, 2015, we recorded a gain of $7.3 million, primarily related to the sale of privately held investments. During the year ended December 31, 2014, we recorded a gain of $163.0 million related to the sale of investments, which were converted from privately-held investments to publicly-traded equity upon initial public offering, or IPO, and subsequently sold.

Income Tax Provision

The following table presents the income tax provision (in millions, except percentages):

	Years Ended December 31,						
	2016	2015	2014	2016 vs. 2015		2015 vs. 2014	
				$ Change	% Change	$ Change	% Change
Income tax provision	$ 234.7	$ 218.5	$ 248.0	$ 16.2	7%	$ (29.5)	(12)%
Effective tax rate	*28.3%*	*25.6%*	*(287.4)%*				

2016 Compared to 2015

The effective tax rate for the tax year 2016 was higher than 2015, primarily due to a change in the geographic mix of earnings. The effective tax rate for the tax year 2015 includes a benefit of $13.2 million related to a change in the tax treatment of share-based compensation in our cost sharing arrangement.

As a result of recommendations by the Organisation for Economic Cooperation and Development (OECD) on Base Erosion and Profit Shifting (BEPS), certain countries in EMEA and APAC have either enacted new corporate tax legislation or have indicated that they are considering enacting such legislation in the near future. We expect the effect of these reform measures to potentially impact long-standing tax principles, particularly in regards to transfer pricing. Consequently, we expect global tax authorities to increasingly challenge our cost sharing and other intercompany arrangements, and the related sourcing of taxable profits in global jurisdictions. In 2016, we entered into discussions with the UK tax authorities and the Australian tax authorities regarding corporate tax reform legislation enacted by those countries.

2015 Compared to 2014

The effective rate for the tax year 2015 was lower than 2014, primarily due to the income tax that was provided in 2014 on the non-deductible goodwill charge included in the pre-tax loss. In addition, the 2014 effective tax rate includes $52.8 million related to the gain on the sales of Junos Pulse offset by the release of the Company's valuation allowance attributable to investment losses.

Our effective tax rate could fluctuate significantly on a quarterly basis and could be adversely affected to the extent earnings are lower than anticipated in countries that have lower statutory rates and higher than anticipated in countries that have higher statutory rates. Our effective tax rate could also fluctuate due to changes in the valuation of our deferred tax assets or liabilities, or by changes in tax laws, regulations, or accounting principles, as well as certain discrete items. See Item 1A of Part II, *Risk Factors* of this Report for a description of relevant risks which may adversely affect our results.

For a complete reconciliation of our effective tax rate to the U.S. federal statutory rate of 35% and further explanation of our income tax provision, see Note 14, *Income Taxes* , in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report.

Liquidity and Capital Resources

We have funded our business primarily through our operating activities, the issuance of our common stock, and the issuance of our long-term debt. The following table presents our capital resources (in millions, except percentages):

	As of December 31,			
	2016	2015	$ Change	% Change
Working capital	$ 2,236.0	$ 1,110.5	$ 1,125.5	101 %
Cash and cash equivalents	$ 1,833.2	$ 1,420.9	$ 412.3	29 %
Short-term investments	752.3	527.1	225.2	43 %
Long-term investments	1,071.8	1,244.2	(172.4)	(14)%
Total cash, cash equivalents, and investments	3,657.3	3,192.2	465.1	15 %
Short-term and long-term debt (*)	2,133.7	1,937.4	196.3	10 %
Cash, cash equivalents, and investments, net of debt	$ 1,523.6	$ 1,254.8	$ 268.8	21 %

(*) On January 1, 2016, we adopted Accounting Standards Update, or ASU, No. 2015-03 (Subtopic 835-30) - *Simplifying the Presentation of Debt Issuance Costs* . Short-term and long-term debt as of December 31, 2015 was retrospectively adjusted to conform to the current-year presentation.

The significant components of our working capital are cash and cash equivalents, short-term investments, and accounts receivable, reduced by short-term debt, accounts payable, and accrued liabilities. Working capital increased by $1,125.5 million during the year ended December 31, 2016 , primarily due to $1,106.0 million of cash provided from our operating activities and $494.0 million of proceeds received from the issuance of long-term debt, partially offset by $477.1 million of payments for purchases and retirement of our common stock and cash dividends and payment of short-term debt of $300.0 million.

Summary of Cash Flows

As of December 31, 2016 , our cash and cash equivalents increased by $412.3 million from December 31, 2015 primarily due to cash generated from operations and proceeds from the issuance of our 2019 Notes and 2024 Notes, partially offset by purchases and retirement of our common stock in connection with our stock repurchase program, payment of our 2016 Notes, capital expenditures, dividend payments, payments for business acquisitions, and net purchases of available-for-sale investments.

The following table summarizes cash flows from our Consolidated Statements of Cash Flows (in millions, except percentages):

	Years Ended December 31,						
	2016	2015	2014	2016 vs. 2015		2015 vs. 2014	
				$ Change	% Change	$ Change	% Change
Net cash provided by operating activities	$ 1,106.0	$ 892.5	$ 763.4	$ 213.5	24 %	$ 129.1	17 %
Net cash (used in) provided by investing activities	$ (450.1)	$ (508.7)	$ 434.0	$ 58.6	(12)%	$ (942.7)	(217)%
Net cash used in financing activities	$ (229.6)	$ (581.4)	$ (1,824.2)	$ 351.8	(61)%	$ 1,242.8	(68)%

Operating Activities

Our primary source of operating cash flows is cash collections from our customers. Our primary uses of cash from operating activities are for personnel-related expenditures, and other general operating expenses, as well as payments related to taxes, interest, and facilities.

2016 Compared to 2015

Net cash provided by operating activities increased by $213.5 million in 2016, compared to 2015. The increase was primarily due an increase in cash received from customers, partially offset by an increase in income taxes paid.

2015 Compared to 2014

Net cash provided by operating activities increased by $129.1 million in 2015, compared to 2014. The increase was primarily due to a decrease in cash payments for personnel-related expenditures, income tax paid in 2015, and an increase in cash received from customers, partially offset by an increase in cash payments to suppliers.

Investing Activities

Investing cash flows consist primarily of capital expenditures; investment purchases, sales, maturities and redemptions; and cash used for business combinations.

2016 Compared to 2015

Net cash used in investing activities decreased by $58.6 million in 2016, compared to 2015. The decrease was primary due to a decrease in net purchases of available-for-sale investments, partially offset by an increase in cash used for business acquisitions in 2016.

2015 Compared to 2014

Net cash used in investing activities increased by $942.7 million in 2015, compared to 2014. The increase was primary due to lower net proceeds from available-for-sale securities in 2015, compared to 2014. In 2014, the sale of available-for-sale securities were higher in order to partially fund our accelerated share repurchase program. In addition, we completed our sale of Junos Pulse in 2014.

Financing Activities

Financing cash flows consist primarily of purchases and retirement of common stock, payment of cash dividends to stockholders, issuance and repayment of short-term and long-term debt, and proceeds from the issuance of shares of common stock through employee equity incentive plans.

2016 Compared to 2015

Net cash used in financing activities decreased by $351.8 million in 2016, compared to 2015. The decrease was primarily due to lower purchases and retirements of our common stock in 2016, partially offset by the payment of our 2016 Notes and a decrease in cash proceeds received from the issuance of long-term debt and the issuance of common stock in 2016.

2015 Compared to 2014

Net cash used in financing activities decreased by $1,242.8 million in 2015, compared to 2014. The decrease was primarily due to lower purchases and retirement of our common stock in 2015.

Capital Return

In February 2014, our Board of Directors, which we refer to as the Board, approved a stock repurchase program that authorized us to repurchase up to $2.1 billion of our common stock, including $1.2 billion pursuant to an accelerated share repurchase program, or the Stock Repurchase Program. In October 2014 and July 2015, the Board authorized a $1.3 billion and $500.0 million increase, respectively, to the Stock Repurchase Program for a total of $3.9 billion . As of December 31, 2016 , there was $219.7 million of authorized funds remaining under the Stock Repurchase Program. In February 2017, the Board approved an incremental $500.0 million stock repurchase authorization under the Stock Repurchase Program.

The following table summarizes our stock repurchase activities (in millions, except per share amounts):

	Shares Repurchased	Average price per share	Amount Repurchased
2016			
Repurchases under stock repurchase programs	13.5	$ 23.25	$ 312.9
Repurchases for tax withholding	0.5	$ 24.51	$ 11.7
2015			
Repurchases under stock repurchase programs	45.4	$ 25.16	$ 1,142.5
Repurchases for tax withholding	0.4	$ 26.70	$ 11.1
2014			
Repurchases under stock repurchase programs	46.8	$ 22.42	$ 1,050.0
Accelerated share repurchase (*)	49.3	$ 24.35	$ 1,200.0
Repurchases for tax withholding	0.6	$ 19.69	$ 12.5

(*) As part of the Stock Repurchase Program, we entered into two separate accelerated share repurchase agreements, or collectively, the ASR, with two financial institutions to repurchase $1.2 billion of our common stock. We made an up-front payment of $1.2 billion pursuant to the ASR to repurchase our common stock. The aggregate number of shares ultimately purchased was determined based on a volume weighted average repurchase price, less an agreed upon discount. The shares received with respect to the ASR have been retired. Retired shares return to authorized but unissued shares of common stock.

Future stock repurchases under our stock repurchase program will be subject to a review of the circumstances at that time and will be made from time to time in private transactions or open market purchases as permitted by securities laws and other legal requirements.

In 2016 and 2015 , we paid cash dividends of $0.10 per share each quarter, totaling $152.5 million and $156.3 million per annum, respectively. The declaration and amount of any future cash dividends are at the discretion of the Board of Directors, or an authorized committee thereof, and will depend on our financial performance, economic outlook, and any other relevant considerations.

We completed our full commitment to return $4.1 billion of capital, inclusive of share repurchases and dividends, to stockholders by the end of 2016. Beginning in 2017, we intend to return approximately 50% of annual free cash flow to our stockholders, inclusive of share repurchases and dividends. Free cash flow is calculated as net cash provided by operating activities less capital expenditures.

Deferred Revenue

Deferred product revenue represents unrecognized revenue related to shipments to distributors that have not sold through to end-users, undelivered product commitments, and other shipments that have not met all revenue recognition criteria. Deferred product revenue is recorded net of the related costs of product revenue. Deferred service revenue represents customer payments made in advance for services, which include technical support, hardware and software maintenance, professional services, and training.

The following table summarizes our deferred product and service revenues (in millions):

	As of December 31,			
	2016	2015	$ Change	% Change
Deferred product revenue:				
Undelivered product commitments and other product deferrals	$ 302.4	$ 210.1	$ 92.3	44 %
Distributor inventory and other sell-through items	74.2	81.8	(7.6)	(9)%
Deferred gross product revenue	376.6	291.9	84.7	29 %
Deferred cost of product revenue	(53.7)	(51.6)	(2.1)	4 %
Deferred product revenue, net	322.9	240.3	82.6	34 %
Deferred service revenue	1,158.2	927.8	230.4	25 %
Total	$ 1,481.1	$ 1,168.1	$ 313.0	27 %

Total deferred revenue increased by $313.0 million to $1,481.1 million as of December 31, 2016 , compared to $1,168.1 million as of December 31, 2015 , primarily due to (1) an increase in deferred service revenue of $230.4 million driven by an increase in multi-year support agreements, which are billed in advance, and (2) an increase in product deferred revenue primarily due to higher deferrals related to subscription and software revenue arrangements and other shipments that have not met all revenue recognition criteria. In circumstances when costs are deferred, deferred product revenue is recorded net of the related costs of product revenue.

Off-Balance Sheet Arrangements

As of December 31, 2016 and 2015 , we did not have any off-balance sheet arrangements, as defined in Item 303 (a)(4)(ii) of SEC Regulation S-K. It is not our business practice to enter into off-balance sheet arrangements. However, in the normal course of business, we enter into contracts consisting of guarantees of product and service performance, standby letters of credit for certain lease facilities and insurance programs. See *Guarantees* below for additional information regarding our guarantees.

Contractual Obligations

Our principal commitments consist of obligations outstanding under operating leases, purchase commitments, debt, and other contractual obligations. The following table summarizes our principal contractual obligations as of December 31, 2016 and the effect such obligations are expected to have on our liquidity and cash flow in future periods (in millions):

	Payments Due by Period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Operating leases [1]	$ 114.9	$ 33.1	$ 43.5	$ 21.0	$ 17.3
Build-to-suit lease arrangement [2]	115.5	3.5	23.0	27.3	61.7
Purchase commitments with contract manufacturers and suppliers [1]	686.2	678.4	7.8	—	—
Long-term debt [3]	2,150.0	—	350.0	600.0	1,200.0
Interest payment on long-term debt [3]	986.9	94.0	182.5	144.4	566.0
Other contractual obligations [1]	46.2	32.5	13.7	—	—
Total	$ 4,099.7	$ 841.5	$ 620.5	$ 792.7	$ 1,845.0

(1) See Note 16, *Commitments and Contingencies,* in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report for additional information regarding our contractual commitments.

(2) Lease arrangement is related to a data center lease agreement that we entered in to on July 10, 2015. See Note 16, *Commitments and Contingencies* , in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report for further explanation on the data lease agreement.

(3) See Note 10, *Debt and Financing,* in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report for additional information regarding our debt.

As of December 31, 2016 , we had $209.2 million included in long-term income taxes payable in the Consolidated Balance Sheets for unrecognized tax positions. At this time, we are unable to make a reasonably reliable estimate of the timing of payments related to this amount due to uncertainties in the timing of tax audit outcomes. As a result, this amount is not included in the table above.

Revolving Credit Facility

On June 27, 2014, we entered into a Credit Agreement with certain institutional lenders that provides for a five year $500.0 million unsecured revolving credit facility, with an option to increase the amount of the credit facility by up to an additional $200.0 million , subject to certain conditions. Proceeds from borrowing made under the Credit Agreement may be used by us for working capital and general corporate purposes. Revolving loans may be borrowed, repaid and reborrowed until June 27, 2019, at which time all amounts borrowed must be repaid.

The Credit Agreement requires us to maintain a leverage ratio no greater than 3.0 x and an interest coverage ratio no less than 3.0 x during the term of the credit facility. In addition, the Credit Agreement contains customary affirmative and negative covenants, including covenants that limit or restrict our ability and that of our subsidiaries to, among other things, grant liens, merge or consolidate, dispose of all or substantially all of its assets, change their accounting or reporting policies, change their business and incur subsidiary indebtedness, in each case subject to customary exceptions for a credit facility of this size and type. As of December 31, 2016 , we were in compliance with all covenants in the Credit Agreement, and no amounts were outstanding. See Note 10, *Debt and Financing* , in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report.

Guarantees

We have entered into agreements with customers that contain indemnification provisions relating to potential situations where claims could be alleged that our products solely, or in combination with other third party products, infringe the intellectual property rights of a third-party. As of December 31, 2016 , we recorded $28.9 million for such indemnification obligations in other accrued liabilities and other long-term liabilities on the Consolidated Balance Sheets. We also have financial guarantees consisting of guarantees of product and service performance, standby letters of credit for certain lease facilities and insurance programs, and guarantees related to third-party customer-financing arrangements of $6.0 million and $15.8 million , as of December 31, 2016 and December 31, 2015 , respectively.

Liquidity and Capital Resources

Liquidity and capital resources may be impacted by our operating activities as well as acquisitions and investments in strategic relationships that we have made or we may make in the future. Additionally, beginning in 2017 we intend to target a capital return policy of approximately 50% of annual free cash flow, inclusive of share repurchases and dividends. To the extent we repurchase additional shares of our common stock under our stock repurchase program or pay cash dividends on our common stock, our liquidity may be impacted. As of December 31, 2016 , 87% of our cash, cash equivalents, and investment balances were held outside of the U.S., which may be subject to U.S. taxes if repatriated.

In August 2016, we filed an automatic shelf registration statement with the SEC enabling us to offer for sale, from time to time, an unspecified amount of securities in one or more offerings and is intended to give us flexibility to take advantage of financing opportunities as needed or deemed desirable in light of market conditions. Our 2019 Notes and 2024 Notes were issued under an automatic shelf registration statement that we filed in August 2013 pursuant to a prospectus supplement filed with the SEC on February 24, 2016. Our 2020 Notes and 2025 Notes were issued under an automatic shelf registration statement pursuant to a prospectus supplement filed with the SEC on February 26, 2015, and our $350.0 million in principal amount of our 2024 Notes, which form a single series and are fully fungible with our 2024 Notes issued in 2016, were issued under an automatic shelf registration statement pursuant to a prospectus filed with the SEC on February 28, 2014. Any offerings of securities under our automatic shelf registration statement will be made pursuant to a prospectus. In addition, our Revolving Credit Facility will also provide additional flexibility for future liquidity needs.

We have been focused on managing our annual equity usage as a percentage of the common stock outstanding to align with peer group competitive levels and have made changes in recent years to reduce the number of shares underlying the equity awards we grant. For fiscal year 2016, we intended to target the number of shares underlying equity awards granted on an annual basis at 2.40% or less of our common stock outstanding on a pure share basis (where each option, RSU, RSA or PSA granted is counted as one share, and each PSA granted is counted based on target achievement). Based upon shares underlying our grants to date of options, RSUs, RSAs, and PSAs, we met this target for 2016.

Based on past performance and current expectations, we believe that our existing cash and cash equivalents, short-term, and long-term investments, together with cash generated from operations and access to capital markets and the revolving credit facility under the Credit Agreement will be sufficient to fund our operations, planned stock repurchases and dividends, and anticipated growth for at least the next twelve months. We believe our working capital is sufficient to meet our liquidity requirements for capital expenditures, commitments, and other liquidity requirements associated with our existing operations during the same period. However, our future liquidity and capital requirements may vary materially from those now planned depending on many factors, including, but not limited to:

- level and mix of our product, sales, and gross profit margins;
- our business, product, capital expenditures and R&D plans;
- repurchases of our common stock;
- payment of dividends;
- incurrence and repayment of debt and related interest obligations;
- litigation expenses, settlements, and judgments, or similar items related to resolution of tax audits;
- volume price discounts and customer rebates;

- accounts receivable levels that we maintain;
- acquisitions and/or funding of other businesses, assets, products, or technologies;
- changes in our compensation policies;
- capital improvements for new and existing facilities;
- technological advances;
- our competitors' responses to our products and/or pricing;
- our relationships with suppliers, partners, and customers;
- possible future investments in raw material and finished goods inventories;
- expenses related to future restructuring plans;
- tax expense associated with share-based awards;
- changes in U.S tax policy or rates;
- issuance of share-based awards and the related payment in cash for withholding taxes in the current year and possibly during future years;
- level of exercises of stock options and stock purchases under our equity incentive plans; and
- general economic conditions and specific conditions in our industry and markets, including the effects of disruptions in global credit and financial markets, international conflicts, and related uncertainties.

ITEM 7A. ***Quantitative and Qualitative Disclosures about Market Risk***

Interest Rate Risk

We maintain an investment portfolio of various holdings, types, and maturities. The value of our investments is subject to market price volatility. In addition, as of December 31, 2016 , 87% of our cash, cash equivalents, and investments were held outside of the United States, which may be subject to U.S. taxes if repatriated. Our investments are generally classified as available-for-sale and, consequently, are recorded on our Consolidated Balance Sheets at fair value with unrealized gains or losses reported as a separate component of accumulated other comprehensive loss. These investments are also reviewed to identify and evaluate indications of potential other-than-temporary impairments as discussed in Note 4, *Cash Equivalents and Investments,* in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report.

At any time, a rise in interest rates could have a material adverse impact on the fair value of our investment portfolio. Conversely, a decline in interest rates could have a material impact on interest income from our investment portfolio. We do not currently hedge these interest rate exposures. We recognized immaterial gains and losses during the years ended December 31, 2016 , 2015 , and 2014 , related to the sales of certain investments.

The following tables present hypothetical changes in fair value of our available-for-sale fixed income securities held as of December 31, 2016 that are sensitive to changes in interest rates (in millions):

	Valuation of Securities Given an Interest Rate Decrease of BPS			Fair Value as of December 31, 2016	Valuation of Securities Given an Interest Rate Increase of BPS		
	(150 BPS)	(100 BPS)	(50 BPS)		50 BPS	100 BPS	150 BPS
Available-for-sale fixed income securities	$ 2,199.0	$ 2,191.8	$ 2,184.5	$ 2,177.3	$ 2,170.1	$ 2,162.8	$ 2,155.6

These instruments are not leveraged and are held for purposes other than trading. The modeling technique used measures the changes in fair value arising from selected potential changes in interest rates. Market changes reflect immediate hypothetical parallel shifts in the yield curve of plus or minus 50 basis points, or BPS, 100 BPS, and 150 BPS, which are representative of the historical movements in the Federal Funds Rate.

Foreign Currency Risk and Foreign Exchange Forward Contracts

Periodically, we use derivatives to hedge against fluctuations in foreign exchange rates. We do not enter into derivatives for speculative or trading purposes.

We use foreign currency forward contracts to mitigate variability in gains and losses generated from the re-measurement of certain monetary assets and liabilities denominated in non-functional currencies. These derivatives are carried at fair value with changes recorded in other (expense) income, net in our Consolidated Statements of Operations in the same period as the changes in the fair value from the re-measurement of the underlying assets and liabilities. These foreign exchange contracts have maturities of eighteen months or less.

Our sales and costs of product revenues are primarily denominated in U.S. Dollars. Our cost of service revenue and operating expenses are denominated in U.S. Dollars as well as other foreign currencies including the British Pound, the Euro, the Indian Rupee, and the Japanese Yen. Approximately 73% of such costs and operating expenses are denominated in U.S. Dollars. Periodically, we use foreign currency forward and/or option contracts to hedge certain forecasted foreign currency transactions to reduce variability in cost of service revenue and operating expenses caused by non-U.S. Dollar denominated operating expense and costs. In designing a specific hedging approach, we consider several factors, including offsetting exposures, significance of exposures, costs associated with entering into a particular hedge instrument, and potential effectiveness of the hedge. These derivatives are designated as cash flow hedges and have maturities of eighteen months or less. The effective portion of the derivative's gain or loss is initially reported as a component of accumulated other comprehensive loss and, upon occurrence of the forecasted transaction, is subsequently reclassified into the line item in the Consolidated Statements of Operations to which the hedged transaction relates. We record the ineffectiveness of the hedging instruments, which was immaterial during the year ended December 31, 2016 in other (expense) income, net on our Consolidated Statements of Operations. The change in operating expenses including cost of service revenue, research and development, sales and marketing, and general and administrative expenses, due to foreign currency fluctuations was a reduction to operating expenses of 1.1% for the year ended December 31, 2016 .

We have performed a sensitivity analysis as of December 31, 2016 , using a modeling technique that measures the change in the amount of non-U.S. dollar cash, cash equivalents and marketable securities arising from a hypothetical 10% movement in the levels of foreign currency exchange rates relative to the U.S. dollar, with all other variables held constant. The foreign currency exchange rates we used were based on market rates in effect on December 31, 2016 . The sensitivity analysis indicated that a hypothetical 10% movement in foreign currency exchange rates would change the amount of cash, cash equivalents, and investments we would report in U.S. Dollars as of December 31, 2016 by less than 1%.

Equity Price Risk

Our portfolio of publicly-traded equity securities and our non-qualified deferred compensation ("NQDC") plan, which may also hold publicly-traded equity securities, are inherently exposed to equity price risk as the stock market fluctuates.

We do not purchase our publicly-traded equity securities, classified as available-for-sale securities on our Consolidated Balance Sheets, for speculative purposes. As of December 31, 2016 , our portfolio of publicly-traded equity securities had an estimated fair value of $4.6 million . A hypothetical 30% adverse change in the stock prices of our publicly traded equity securities would have no significant impact to the fair value of these investments.

Investments under the NQDC plan are considered trading securities and are also reported at fair value on our Consolidated Balance Sheets. As of December 31, 2016 , the total investments under our NQDC plan were $21.0 million . A hypothetical 30% adverse change on the total investments under our NQDC plan would have no significant impact to the fair value of these investments.

We have also invested in privately-held companies. Depending on the nature of these investments, some can be carried at cost and others can be carried at fair value. Impairment charges on our investments in privately-held companies were $11.2 million for the year ended December 31, 2016 . The aggregate cost of our investments in privately-held companies was $62.7 million as of December 31, 2016 . The privately-held companies in which we invest can still be considered in the startup or development stages. These investments are inherently risky because the markets for the technologies or products these companies are developing are typically in the early stages and may never materialize. We could lose our entire investment in these companies. Our evaluation of investments in privately-held companies is based on the fundamentals of the businesses invested in, including, among other factors, the nature of their technologies and potential for financial return.

ITEM 8. ***Financial Statements and Supplementary Data***

Juniper Network, Inc.
Index to Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of Juniper Networks, Inc.

We have audited the accompanying consolidated balance sheets of Juniper Networks, Inc. as of December 31, 2016 and 2015 , and the related consolidated statements of operations, comprehensive income, changes in stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2016 . Our audits also included the financial statement schedule listed in the Index at Item 15(a)2. These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above, present fairly, in all material respects, the consolidated financial position of Juniper Networks, Inc., at December 31, 2016 and 2015 , and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2016 , in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Juniper Networks, Inc.'s internal control over financial reporting as of December 31, 2016 , based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 24, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

San Jose, California
February 24, 2017

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of Juniper Networks, Inc.

We have audited Juniper Networks, Inc.'s internal control over financial reporting as of December 31, 2016 , based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). Juniper Networks, Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Juniper Networks, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016 based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Juniper Networks, Inc. as of December 31, 2016 , and 2015 and the related consolidated statements of operations, comprehensive income, changes in stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2016 , of Juniper Networks, Inc. and our report dated February 24, 2017 , expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

San Jose, California
February 24, 2017

Management's Report on Internal Control Over Financial Reporting

The management of Juniper Networks, Inc. (the “Company”) is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. The Company's internal control over financial reporting is a process designed under the supervision of the Company's principal executive and principal financial officers to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the Company's financial statements for external purposes in accordance with U.S. generally accepted accounting principles.

The Company's internal control over financial reporting includes those policies and procedures that: (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the Consolidated Financial Statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2016 , based on the framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) in *Internal Control - Integrated Framework* as published in 2013 . Based on that assessment, management concluded that, as of December 31, 2016 , the Company's internal control over financial reporting was effective.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2016 has been audited by Ernst & Young LLP, the independent registered public accounting firm that audits the Company's Consolidated Financial Statements, as stated in their report preceding this report, which expresses an unqualified opinion on the effectiveness of the Company's internal control over financial reporting as of December 31, 2016 .

Juniper Networks, Inc.

Consolidated Statements of Operations
(In millions, except per share amounts)

	Years Ended December 31,		
	2016	2015	2014
Net revenues:			
Product	$ 3,528.9	$ 3,563.1	$ 3,408.7
Service	1,461.2	1,294.7	1,218.4
Total net revenues	4,990.1	4,857.8	4,627.1
Cost of revenues:			
Product	1,326.2	1,269.6	1,286.8
Service	559.4	509.6	482.1
Total cost of revenues	1,885.6	1,779.2	1,768.9
Gross margin	3,104.5	3,078.6	2,858.2
Operating expenses:			
Research and development	1,013.7	994.5	1,006.2
Sales and marketing	972.9	943.8	1,023.6
General and administrative	224.9	228.9	231.1
Restructuring and other charges (benefits)	3.3	(0.6)	167.0
Impairment of goodwill	—	—	850.0
Total operating expenses	2,214.8	2,166.6	3,277.9
Operating income (loss)	889.7	912.0	(419.7)
Other (expense) income, net	(62.3)	(59.8)	333.4
Income (loss) before income taxes	827.4	852.2	(86.3)
Income tax provision	234.7	218.5	248.0
Net income (loss)	$ 592.7	$ 633.7	$ (334.3)
Net income (loss) per share:			
Basic	$ 1.55	$ 1.62	$ (0.73)
Diluted	$ 1.53	$ 1.59	$ (0.73)
Shares used in computing net income (loss) per share:			
Basic	381.7	390.6	457.4
Diluted	387.8	399.4	457.4
Cash dividends declared per common stock	$ 0.40	$ 0.40	$ 0.20

See accompanying Notes to Consolidated Financial Statements

Juniper Networks, Inc.

Consolidated Statements of Comprehensive Income
(In millions)

	Years Ended December 31,		
	2016	**2015**	**2014**
Net income (loss)	$ 592.7	$ 633.7	$ (334.3)
Other comprehensive loss, net of tax:			
Available-for-sale securities:			
Unrealized gains net of tax benefit of $0.7, and provision of $6.5 and $29.5 for 2016, 2015, and 2014, respectively	0.8	9.1	48.7
Reclassification adjustment for realized net gains included in net income (loss), net of tax provision of $0.5, zero, and $61.8 for 2016, 2015, and 2014, respectively	(1.2)	(0.5)	(106.5)
Net change on available-for-sale securities, net of taxes	(0.4)	8.6	(57.8)
Cash flow hedges:			
Unrealized loss net of tax provision of $0.8, $0.4, and $0.7 for 2016, 2015, and 2014, respectively	(2.1)	(6.7)	(4.1)
Reclassification adjustment for realized (gains) loss included in net income (loss), net of tax provision of $0.7, zero, and $1.1 for 2016, 2015, and 2014, respectively	(1.1)	9.6	(2.3)
Net change on cash flow hedges, net of taxes	(3.2)	2.9	(6.4)
Change in foreign currency translation adjustments	(14.5)	(16.9)	(14.2)
Other comprehensive loss, net of tax	(18.1)	(5.4)	(78.4)
Comprehensive income (loss)	$ 574.6	$ 628.3	$ (412.7)

See accompanying Notes to Consolidated Financial Statements

Juniper Networks, Inc.

Consolidated Balance Sheets
(In millions, except par values)

	December 31, 2016	December 31, 2015
ASSETS		
Current assets:		
Cash and cash equivalents	$ 1,833.2	$ 1,420.9
Short-term investments	752.3	527.1
Accounts receivable, net of allowance for doubtful accounts of $7.6 and $9.3 as of December 31, 2016 and 2015, respectively	1,054.1	780.7
Prepaid expenses and other current assets	332.3	183.7
Total current assets	3,971.9	2,912.4
Property and equipment, net	1,063.8	1,021.0
Long-term investments	1,071.8	1,244.2
Restricted cash and investments	99.9	36.2
Purchased intangible assets, net	130.2	33.9
Goodwill	3,081.7	2,981.3
Other long-term assets	237.2	378.9
Total assets	$ 9,656.5	$ 8,607.9
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Short-term debt	$ —	$ 299.9
Accounts payable	221.0	159.3
Accrued compensation	233.6	269.5
Deferred revenue	1,032.0	822.9
Other accrued liabilities	249.3	250.3
Total current liabilities	1,735.9	1,801.9
Long-term debt	2,133.7	1,637.5
Long-term deferred revenue	449.1	345.2
Long-term income taxes payable	209.2	187.3
Other long-term liabilities	166.1	61.6
Total liabilities	4,694.0	4,033.5
Commitments and contingencies (Note 16)		
Stockholders' equity:		
Convertible preferred stock, $0.00001 par value; 10.0 shares authorized; none issued and outstanding	—	—
Common stock, $0.00001 par value; 1,000.0 shares authorized; 381.1 shares and 384.0 shares issued and outstanding as of December 31, 2016 and 2015, respectively	—	—
Additional paid-in capital	8,281.6	8,334.8
Accumulated other comprehensive loss	(37.3)	(19.2)
Accumulated deficit	(3,281.8)	(3,741.2)
Total stockholders' equity	4,962.5	4,574.4
Total liabilities and stockholders' equity	$ 9,656.5	$ 8,607.9

See accompanying Notes to Consolidated Financial Statements

Juniper Networks, Inc.
Consolidated Statements of Cash Flows
(In millions)

	Years Ended December 31,		
	2016	2015	2014
Cash flows from operating activities:			
Net income (loss)	$ 592.7	$ 633.7	$ (334.3)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Share-based compensation expense	224.6	217.3	240.0
Depreciation, amortization, and accretion	206.7	176.5	186.1
Non-cash restructuring and other (benefits) charges	—	(3.5)	139.2
Deferred income taxes	55.9	(14.6)	(16.9)
Impairment of goodwill	—	—	850.0
Gain on sale of Junos Pulse	—	—	(19.6)
Loss (gain) on investments and fixed assets, net	3.5	(6.4)	(166.2)
Gain on legal settlement, net	—	—	(121.1)
Excess tax benefits from share-based compensation	(6.7)	(12.3)	(9.4)
Changes in operating assets and liabilities, net of effects from acquisitions:			
Accounts receivable, net	(263.5)	(218.9)	(16.8)
Prepaid expenses and other assets	(43.6)	(43.5)	(10.1)
Accounts payable	66.6	(80.2)	38.3
Accrued compensation	(18.1)	46.6	(46.0)
Income taxes payable	3.1	104.3	51.0
Other accrued liabilities	(16.9)	1.2	(45.9)
Deferred revenue	301.7	92.3	45.1
Net cash provided by operating activities	1,106.0	892.5	763.4
Cash flows from investing activities:			
Purchases of property and equipment	(214.7)	(210.3)	(192.9)
Proceeds from sale of Junos Pulse	—	—	105.7
Purchases of available-for-sale investments	(1,598.0)	(1,486.4)	(2,440.7)
Proceeds from sales of available-for-sale investments	1,182.1	861.6	2,627.7
Proceeds from maturities and redemptions of available-for-sale investments	342.3	319.8	337.6
Purchases of trading investments	(4.9)	(4.4)	(4.1)
Proceeds from sales of privately-held investments	9.5	10.6	4.9
Purchases of privately-held investments	(20.3)	(5.4)	(21.7)
Payments for business acquisitions, net of cash and cash equivalents acquired	(144.6)	(3.5)	(27.1)
Changes in restricted cash	(1.5)	9.3	44.6
Net cash (used in) provided by investing activities	(450.1)	(508.7)	434.0
Cash flows from financing activities:			
Proceeds from issuance of common stock	62.3	121.2	159.8
Purchases and retirement of common stock	(324.6)	(1,152.8)	(2,262.5)
Issuance of long-term debt, net	494.0	594.6	346.5
Payment of long-term debt	(300.0)	—	—
Payment of financing obligations	(15.5)	(0.4)	(0.4)
Customer financing arrangements	—	—	9.0
Excess tax benefits from share-based compensation	6.7	12.3	9.4
Payment of dividends	(152.5)	(156.3)	(86.0)
Net cash used in financing activities	(229.6)	(581.4)	(1,824.2)
Effect of foreign currency exchange rates on cash and cash equivalents	(14.0)	(21.1)	(17.6)
Net increase (decrease) in cash and cash equivalents	412.3	(218.7)	(644.4)
Cash and cash equivalents at beginning of period	1,420.9	1,639.6	2,284.0
Cash and cash equivalents at end of period	$ 1,833.2	$ 1,420.9	$ 1,639.6
Supplemental disclosures of cash flow information:			

Cash paid for interest, net of amounts capitalized	$	92.8	$	80.6	$	44.9
Cash paid for income taxes, net	$	173.9	$	128.3	$	206.0
Non-cash investing and financing activities:						
Construction costs for building with financing obligation	$	15.3	$	45.6	$	—
Receipt of a promissory note in connection with the sale of Junos Pulse	$	—	$	—	$	125.0

See accompanying Notes to Consolidated Financial Statements

Juniper Networks, Inc.

Consolidated Statements of Changes in Stockholders' Equity
(In millions)

	Shares	Amount	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
Balance at December 31, 2013	495.2	$ —	$ 9,868.9	$ 64.6	$ (2,631.3)	$ 7,302.2
Consolidated net loss	—	—	—	—	(334.3)	(334.3)
Other comprehensive loss, net	—	—	—	(78.4)	—	(78.4)
Issuance of common stock	17.7	—	159.1	—	—	159.1
Repurchase and retirement of common stock	(96.7)	—	(1,367.0)	—	(895.5)	(2,262.5)
Share-based compensation expense	—	—	240.0	—	—	240.0
Tax effects from employee stock option plans	—	—	(21.0)	—	—	(21.0)
Payment of cash dividends	—	—	(86.0)	—	—	(86.0)
Balance at December 31, 2014	416.2	—	8,794.0	(13.8)	(3,861.1)	4,919.1
Consolidated net income	—	—	—	—	633.7	633.7
Other comprehensive loss, net	—	—	—	(5.4)	—	(5.4)
Issuance of common stock	13.6	—	121.2	—	—	121.2
Repurchase and retirement of common stock	(45.8)	—	(639.8)	—	(513.8)	(1,153.6)
Share-based compensation expense	—	—	217.3	—	—	217.3
Tax effects from employee stock option plans	—	—	(1.6)	—	—	(1.6)
Payment of cash dividends	—	—	(156.3)	—	—	(156.3)
Balance at December 31, 2015	384.0	—	8,334.8	(19.2)	(3,741.2)	4,574.4
Consolidated net income	—	—	—	—	592.7	592.7
Other comprehensive loss, net	—	—	—	(18.1)	—	(18.1)
Issuance of common stock	11.1	—	62.3	—	—	62.3
Repurchase and retirement of common stock	(14.0)	—	(191.3)	—	(133.3)	(324.6)
Share-based compensation expense	—	—	222.4	—	—	222.4
Tax effects from employee stock option plans	—	—	5.9	—	—	5.9
Payment of cash dividends	—	—	(152.5)	—	—	(152.5)
Balance at December 31, 2016	381.1	$ —	$ 8,281.6	$ (37.3)	$ (3,281.8)	$ 4,962.5

See accompanying Notes to Consolidated Financial Statements

Juniper Networks, Inc.
Notes to Consolidated Financial Statements

Note 1. Description of Business and Basis of Presentation

Description of Business

Juniper Networks, Inc. (the "Company" or "Juniper") designs, develops, and sells products and services for high-performance networks, to enable customers to build scalable, reliable, secure and cost-effective networks for their businesses, while achieving agility, efficiency and value through automation. The Company sells high-performance routing, switching, and security networking products and service offerings to global service providers, cloud providers, national governments, research and public sector organizations and other enterprises who view the network as critical to their success. In addition to the Company's products, the Company offers worldwide services, including technical support, professional services, and education and training programs to its customers. Together, the high-performance product and service offerings help the Company's customers convert legacy networks that provide commoditized services into more valuable assets that provide differentiation, value, and increased performance, reliability, and security to end-users.

Basis of Presentation

The Consolidated Financial Statements, which include the Company and its wholly-owned subsidiaries, are prepared in accordance with U.S. generally accepted accounting principles ("U.S. GAAP"). All intercompany balances and transactions have been eliminated. Certain amounts in the prior-years Consolidated Financial Statements have been reclassified to conform to the current-year presentation, including the adoption of Accounting Standards Update ("ASU") No. 2015-03 (Subtopic 835-30) - Simplifying the Presentation of Debt Issuance Costs ("ASU 2015-03"), which requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. The Company decreased both other long-term assets and long-term debt as of December 31, 2015 on the Consolidated Balance Sheets by $11.3 million .

Note 2. Significant Accounting Policies

Use of Estimates

The preparation of the financial statements and related disclosures in accordance with U.S. GAAP requires the Company to make judgments, assumptions, and estimates that affect the amounts reported in the Consolidated Financial Statements and the accompanying notes. The Company bases its estimates and assumptions on current facts, historical experience, and various other factors that it believes are reasonable under the circumstances, to determine the carrying values of assets and liabilities that are not readily apparent from other sources. To the extent there are material differences between the Company's estimates and the actual results, the Company's future consolidated results of operation may be affected.

Cash, Cash Equivalents and Investments

Cash and Cash Equivalents

Cash and cash equivalents consist of cash on hand, demand deposits with banks, highly liquid investments in money market funds, commercial paper, government securities, certificates of deposits, time deposits, and corporate debt securities, which are readily convertible into cash. All highly liquid investments purchased with original maturities of three months or less are classified as cash equivalents.

Investments in Available-for-Sale and Trading Securities

The Company's investments in publicly-traded debt and equity securities are classified as available-for-sale. Available-for-sale investments are initially recorded at cost and periodically adjusted to fair value in the Consolidated Balance Sheets. Unrealized gains and losses on these investments are reported as a separate component of accumulated other comprehensive loss in the Consolidated Balance Sheets. Realized gains and losses are determined based on the specific identification method and are reported in the Consolidated Statements of Operations.

The Company periodically evaluates its investments to determine if impairment charges are required. The Company considers various factors in determining whether to recognize an impairment charge, including the length of time the investment has been in a loss position, the extent to which the fair value has been less than the Company's cost basis, the investment's financial condition, and near-term prospects of the investee. If the Company determines that the decline in an investment's value is other than temporary, the difference is recognized as an impairment loss in its Consolidated Statements of Operations.

The Company's non-qualified compensation plan is invested in mutual funds, which are classified as trading securities and reported at fair value in the Consolidated Balance Sheets. The realized and unrealized holding gains and losses are reported in the Consolidated Statements of Operations.

Investments in Privately-Held Companies

The Company has privately-held investments included in other long-term assets in the Consolidated Balance Sheets. These investments include debt and redeemable preferred stock securities that are carried at fair value, and non-redeemable preferred stock securities that are carried at cost. The investments carried at cost are adjusted for any impairment, as the Company does not have a controlling interest and does not have the ability to exercise significant influence over these companies. These investments inherently carry higher risk as the market for technologies or products manufactured by these companies are usually in their early stages at the time of the investment by the Company and such markets may never be significant. The Company measures the fair value of privately-held investments using an analysis of the financial conditions and near term prospects of the investees, including recent financing activities and their capital structure. Realized gains and losses, if any, are reported in the Consolidated Statements of Operations.

Fair Value

Fair value is defined as the price that would be received upon sale of an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining fair value, the Company considers the principal or most advantageous market in which it transacts, and considers assumptions that market participants would use when pricing the asset or liability. The Company applies the following fair value hierarchy, which prioritizes the inputs used to measure fair value into three levels and bases the categorization within the hierarchy upon the lowest level of input that is available and significant to the fair value measurement:

Level 1 – Quoted prices in active markets for identical assets or liabilities.

Level 2 – Quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument. These inputs are valued using market based approaches.

Level 3 – Inputs are unobservable inputs based on the Company’s assumptions. These inputs, if any, are valued using internal financial models.

Derivatives

The Company uses derivatives to partially offset its market exposure to fluctuations in certain foreign currencies. The Company does not enter into derivatives for speculative or trading purposes.

The Company uses foreign currency forward contracts to hedge certain forecasted foreign currency transactions relating to operating expenses. These derivatives are designated as cash flow hedges. Execution of these cash flow hedge derivatives typically occurs every month with maturities of eighteen months or less. These derivatives are carried at fair value and the effective portion of the derivative's gain or loss is initially reported as a component of accumulated other comprehensive loss, and upon occurrence of the forecasted transaction, is subsequently reclassified into the costs of services or operating expense line item to which the hedged transaction relates. The Company records any ineffectiveness of the hedging instruments in other (expense) income, net, on its Consolidated Statements of Operations. Cash flows from such hedges are classified as operating activities. All amounts within other comprehensive loss are expected to be reclassified into earnings within the next eighteen months .

The Company also uses foreign currency forward contracts to mitigate variability in gains and losses generated from the re-measurement of certain monetary assets and liabilities denominated in non-functional currencies. These derivatives are carried at fair value with changes recorded in other (expense) income, net in the Consolidated Statements of Operations in the same period as the changes in the fair value from the re-measurement of the underlying assets and liabilities. Cash flows from such derivatives are classified as operating activities. These foreign exchange forward contracts have maturities of eighteen months or less.

Inventory

Inventory consists primarily of component parts to be used in the manufacturing process and finished goods in-transit, and is stated at the lower of cost or market. Cost is computed using standard cost, which approximates actual cost, on a first-in, first-out basis. A charge is recorded to cost of product when inventory is determined to be in excess of anticipated demand or considered obsolete. At the point of loss recognition, a new, lower-cost basis for that inventory is established, and subsequent changes in facts and circumstances do not result in the restoration or increase in the newly established cost basis.

Property and Equipment

Property and equipment are recorded at cost less accumulated depreciation. Depreciation is calculated using the straight-line method, over the estimated useful lives of the following assets:

	Estimated Useful Life (years)
Computers, equipment, and software	1.5 to 7
Furniture and fixtures	5 to 7
Building and building improvements	7 to 40
Land improvements	5 to 40
Leasehold improvements	Lease term, not to exceed 10 years

Construction in progress is related to the construction or development of property and equipment that have not yet been placed in service for their intended use.

Goodwill and Other Long-Lived Assets

Goodwill represents the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recorded. The excess of the purchase price over the estimated fair value of net assets of businesses acquired in a business combination is recognized as goodwill. Goodwill is tested for impairment annually during the fourth quarter or more frequently if certain circumstances indicate the carrying value of goodwill is impaired. A qualitative assessment is first made to determine whether it is necessary to quantitatively test goodwill for impairment. This initial assessment includes, among others, consideration of macroeconomic conditions and financial performance. If the qualitative assessment indicates that it is more likely than not that an impairment exists, a quantitative analysis is performed by comparing the estimated fair values of our reporting units with their respective carrying values, including goodwill. An impairment loss is recognized to the extent that the carrying amount of goodwill exceeds the asset's implied fair value.

Other intangible assets acquired in a business combination related to in-process research and development ("IPR&D") projects are considered to be indefinite-lived until the completion or abandonment of the associated research and development efforts. Indefinite-lived intangibles are not amortized into the results of operations but instead are evaluated for impairment. If and when development is complete, the associated assets would be deemed finite-lived and would then be amortized as cost of revenues over their respective estimated useful lives at that point in time. If the research and development project is abandoned, the acquired IPR&D assets are written off and charged to expense in the period of abandonment.

Long-lived assets, such as property, plant, and equipment, and purchased intangible assets subject to amortization, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset, or asset group, to estimated undiscounted future cash flows expected to be generated by the asset, or asset group. An impairment charge is recognized by the amount by which the carrying amount of the asset, or asset group, exceeds its fair value.

The Company amortizes intangible assets with estimable useful lives on a straight-line basis over their useful lives.

Revenue Recognition

Revenue is recognized when all of the following criteria have been met:

- Persuasive evidence of an arrangement exists. The Company generally relies upon sales contracts or agreements, and customer purchase orders to determine the existence of an arrangement.

- Delivery has occurred. The Company uses shipping terms and related documents, or written evidence of customer acceptance, when applicable, to verify delivery of product obligations.

- Sales price is fixed or determinable. The Company assesses whether the sales price is fixed or determinable based on the payment terms and whether the sales price is subject to refund or adjustment.

- Collectability is reasonably assured. The Company assesses collectability based on creditworthiness of customers as determined by its credit checks, their payment histories, or changes in circumstances that indicate that collectability is not reasonably assured.

When sales arrangements contain multiple elements, the Company allocates revenue to each element based on a selling price hierarchy. The selling price for a deliverable is based on either vendor-specific objective evidence (“VSOE”) if available, third-party evidence (“TPE”) if VSOE is not available, or estimated selling price (“ESP”) if neither VSOE nor TPE is available. The Company then recognizes revenue on each deliverable in accordance with its policies for product and service revenue recognition. VSOE of selling price is based on the price charged when the element is sold separately. In determining VSOE, the Company requires that a substantial majority of the selling prices fall within a reasonable range based on historical discounting trends for specific products and services. TPE of selling price is established by evaluating largely interchangeable competitor products or services in stand-alone sales to similar situated customers. However, as the Company's products contain a significant element of proprietary technology and its solutions offer substantially different features and functionality, the comparable pricing of third-party products with similar functionality typically cannot be obtained and therefore TPE is not used. ESP is established considering multiple factors including, but not limited to pricing practices in different geographies and through different sales channels, gross margin objectives, internal costs, competitor pricing strategies, and industry technology lifecycles.

In multiple element arrangements where software deliverables are included, revenue is allocated to each separate unit of accounting for each of the non-software deliverables and to the software deliverables as a group using the relative selling prices of each of the deliverables in the arrangement based on the aforementioned selling price hierarchy. If the arrangement contains more than one software deliverable, the arrangement consideration allocated to the software deliverables as a group is then allocated to each software deliverable using the residual method when VSOE of fair value of the undelivered items exists. Under the residual method, the amount of revenue allocated to delivered elements equals the total arrangement consideration less the aggregate fair value of any undelivered elements. If VSOE of one or more undelivered items does not exist, revenue from the entire arrangement is deferred and recognized at the earlier of: (i) delivery of those elements or (ii) when VSOE can be established, and where maintenance service is the only undelivered element, the entire arrangement fee is recognized ratably over the maintenance service period.

The Company limits the amount of revenue recognition for delivered elements to the amount that is not contingent on the future delivery of products or services or subject to customer-specific return or refund privileges.

The Company records reductions to revenue for estimated product returns and pricing adjustments, such as rebates and price protection, in the same period that the related revenue is recorded. The amount of these reductions is based on historical sales returns and price protection credits, specific criteria outlined in rebate agreements, and other factors known at the time.

A portion of the Company's sales is made through distributors under agreements allowing for pricing credits or rights of return. As reliable estimates of these credits or returns cannot be made, product revenue on sales made through these distributors is recognized upon sell-through as reported by the distributors to the Company. Deferred revenue on shipments to distributors reflects the effects of distributor pricing credits given and the amount of gross margin expected to be realized upon sell-through. Deferred revenue is recorded net of the related product costs of revenue.

Service revenues include revenue from maintenance, training, professional services, and software post-contract support ("PCS"). Maintenance is offered under renewable contracts. Revenue from maintenance service contracts is deferred and recognized ratably over the contractual support period, which is generally one to three years . Revenue from training and professional services is recognized as services are completed or ratably over the contractual period, which is generally one year or less. Software PCS includes technical support and provide software license updates. Software license updates provide customers with rights to unspecified software product upgrades, maintenance releases and patches released during the term of the support period. Revenue related to software PCS is recognized over the term of the PCS arrangement.

Allowance for Doubtful Accounts

The allowance for doubtful accounts is based on the Company's assessment of the collectability of customer accounts. The Company regularly reviews its receivables that remain outstanding past their applicable payment terms and establishes an allowance by considering factors such as historical experience, credit quality, and age of the accounts receivable balances, and current economic conditions that may affect a customer's ability to pay.

Warranty Reserves

The Company generally offers a one -year warranty on most of its hardware products, and a 90 -day warranty on the media that contains the software embedded in the products. Warranty costs are recognized as part of the Company's cost of sales based on associated material costs, logistics costs, labor costs, and overhead at the time revenue is recognized. Material costs are estimated primarily based upon the historical costs to repair or replace product returns within the warranty period. Labor, logistics and overhead costs are estimated primarily based upon historical trends in the cost to support customer cases within the warranty period.

Contract Manufacturer Liabilities

The Company establishes a liability for non-cancelable, non-returnable purchase commitments with its contract manufacturers for carrying charges, quantities in excess of its demand forecasts, or obsolete material charges for components purchased by the contract manufacturers to meet the Company's demand forecast or customer orders. The demand forecasts are based upon historical trends and analysis from the Company's sales and marketing organizations, adjusted for overall market conditions.

Research and Development

Costs to research, design, and develop the Company's products are expensed as incurred.

Software Development Costs

Capitalization of software development costs for software to be sold, leased, or otherwise marketed begins when a product's technological feasibility has been established and ends when a product is available for general release to customers. Generally, the Company's products are released soon after technological feasibility has been established. As a result, costs incurred between achieving technological feasibility and product general availability have not been significant.

The Company capitalizes costs associated with internal-use software systems during the application development stage. Such capitalized costs include external direct costs utilized in developing or obtaining the applications and payroll and payroll-related costs for employees, who are directly associated with the development of the applications.

Advertising

Advertising costs are charged to sales and marketing expense as incurred. Advertising expense was $15.8 million , $20.2 million , and $19.2 million , for 2016 , 2015 , and 2014 , respectively.

Foreign Currency

Assets and liabilities of foreign operations with non-U.S. Dollar functional currency are translated to U.S. Dollars using exchange rates in effect at the end of the period. Revenue and expenses are translated to U.S. Dollars using average exchange rates for the period. The resulting translation adjustments are included in the Company's Consolidated Balance Sheets in the stockholders' equity section as a component of accumulated other comprehensive loss. The Company records foreign exchange transaction gains and losses for assets and liabilities denominated in non-functional currencies. These remeasurement adjustments are recorded in other (expense) income, net in the Consolidated Statements of Operations.

Loss Contingencies

The Company is subject to the possibility of various loss contingencies arising in the ordinary course of business. Management considers the likelihood of loss related to an asset, or the incurrence of a liability, as well as its ability to reasonably estimate the amount of loss, in determining loss contingencies. An estimated loss contingency is accrued when it is probable that an asset has been impaired or a liability has been incurred and the amount of loss can be reasonably estimated. The Company regularly evaluates current information available to determine whether such accruals should be adjusted and whether new accruals are required.

Share-Based Compensation

The Company measures and recognizes compensation cost for all share-based awards made to employees and directors, including employee stock options, stock awards, restricted stock units, performance share awards and employee stock purchases related to the Employee Stock Purchase Plan ("ESPP"). Share-based compensation expense is based on the fair value of the underlying awards and amortized on a straight-line basis, net of estimated forfeitures.

The Company utilizes the Black-Scholes-Merton (“BSM”) option-pricing model to estimate the fair value of its stock options and ESPP shares. The BSM model requires various highly subjective assumptions that represent management's best estimates of volatility, risk-free interest rate, expected life, and dividend yield. The Company estimates expected volatility based on the implied volatility of market-traded options, on the Company's common stock, adjusted for other relevant factors including historical volatility of the Company’s common stock over the most recent period commensurate with the estimated expected life of the Company’s stock options and ESPP. The expected life of a stock option is based on historical experience of employee exercises and post-vesting termination behavior as well as the potential effect from options that have not been exercised. The expected life of ESPP approximates the offering period.

The Company determines the fair value of its restricted stock units ("RSUs"), restricted stock awards ("RSAs"), and performance share awards ("PSAs") based on the closing market price of the Company’s common stock on the date of grant, adjusted by the present value of the expected dividend.

For market-based RSUs, the Company estimates the fair value and derived service period using the Monte Carlo simulation option pricing model ("Monte Carlo model"). The determination of the grant date fair value and derived service periods using the Monte Carlo model is affected by the Company's stock price as well as various highly subjective assumptions that represent management's best estimates of volatility, risk-free interest rate, and dividend yield. The Company estimates expected volatility based on the implied volatility of market-traded options, on the Company's common stock, adjusted for other relevant factors including historical volatility of the Company’s common stock over the contractual life of the Company's market-based RSUs.

Provision for Income Taxes

Deferred tax assets and liabilities are recognized for the expected tax consequences of temporary differences between the tax bases of assets and liabilities and their reported amounts. Valuation allowances are recorded to reduce deferred tax assets to the amount that will more likely than not be realized.

The Company accounts for uncertainty in income taxes using a two-step approach to recognize and measure uncertain tax positions. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount that is more than 50% likely of being realized upon settlement. The Company classifies the liability for unrecognized tax benefits as current to the extent that the Company anticipates payment (or receipt) of cash within one year . Interest and penalties related to uncertain tax positions are recognized in the provision for income taxes.

Concentrations of Risk

Financial instruments that subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents, investments, and accounts receivable. The Company invests only in high-quality credit instruments and maintains its cash, cash equivalents and available-for-sale investments in fixed income securities with several high-quality institutions. Deposits held with banks, including those held in foreign branches of global banks, may exceed the amount of insurance provided on such deposits. We mitigate the concentration of credit risk in our investment portfolio through diversification of the investments in various industries and limit to the amount of credit exposure to any single issuer.

The Company’s derivatives expose it to credit risk to the extent that counterparties may be unable to meet the terms of the agreement. To mitigate concentration of risk related to its derivatives, the Company establishes counterparty limits to major credit-worthy financial institutions. In addition, the potential risk of loss with any one counterparty resulting from this type of credit risk is monitored and the derivatives transacted with these entities are relatively short in duration. Therefore, the Company does not expect material losses as a result of defaults by counterparties.

Generally, credit risk with respect to accounts receivable is diversified due to the number of entities comprising the Company's customer base and their dispersion across different geographic locations throughout the world. The Company performs ongoing credit evaluations of its customers and generally does not require collateral on accounts receivable. During the years ended December 31, 2016 , 2015 , and 2014 , no single customer accounted for 10% or more of net revenues.

The Company relies on sole suppliers for certain of its components such as application-specific integrated circuits ("ASICs") and custom sheet metal. Additionally, the Company relies primarily on a limited number of significant independent contract manufacturers and outside design manufacturers for the production of its products. The inability of any supplier or manufacturer to fulfill supply requirements of the Company could negatively impact future operating results.

Recent Accounting Pronouncements

In November 2016, the Financial Accounting Standards Board ("FASB") issued ASU No. 2016-18 (Topic 230) *Statement of Cash Flow: Restricted Cash* . The pronouncement requires that the statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. The amendments of this ASU are effective for reporting periods beginning after December 15, 2017, with early adoption permitted. The standard must be applied retrospectively to all periods presented. The Company is currently evaluating the impact of adoption on the Consolidated Financial Statements.

In October 2016, the FASB issued ASU No. 2016-17 (Topic 810) *Interests held through Related Parties that are under Common Control.* The pronouncement amends the consolidation guidance on how a reporting entity that is the single decision maker of a VIE should treat indirect interests in the entity held through related parties that are under common control with the reporting entity when determining whether it is the primary beneficiary of that VIE. The amendments of this ASU are effective for reporting periods beginning after December 15, 2016, with early adoption permitted. The standard must be applied retrospectively to all periods presented. The Company adopted the standard on January 1, 2017 and the adoption of this standard did not have a significant impact on the Company's Consolidated Financial Statements.

In October 2016, the FASB issued ASU No. 2016-16 (Topic 740) *Income Taxes: Intra-Entity Transfers of Assets Other Than Inventory,* which will require companies to recognize, as opposed to defer, the tax effects from intercompany transfer of an asset, other than inventory, when the transfer occurs. Prior to the issuance of this ASU, companies were required to defer the income tax effects of intercompany transfers of assets until the asset has been sold to an outside party or otherwise recognized. ASU 2016-16 will still require companies to defer the income tax effects of intercompany inventory transactions. ASU 2016-16 will be effective for annual and interim reporting periods beginning after December 15, 2017 and is to be applied on a modified retrospective basis. Early adoption is permitted. The Company is currently evaluating the impact of adoption on the Consolidated Financial Statements.

In August 2016, the FASB issued ASU No. 2016-15 (Topic 230) *Statement of Cash Flow: Classification of Certain Cash Receipts and Cash Payments* . The pronouncement provides clarification guidance on certain cash flow presentation issues such as debt prepayment or debt extinguishment costs and contingent consideration payments made after a business combination and should be applied using a retrospective transition method for each period presented. For the provisions that are impracticable to apply retrospectively, those provisions may be applied prospectively as of the earliest date practicable. This pronouncement is effective for interim and annual reporting periods beginning after December 15, 2017. Early adoption is permitted. The Company is currently evaluating the impact that this standard will have on its Consolidated Statements of Cash Flows.

In June 2016, the FASB issued ASU No. 2016-13 (Topic 326) *Financial Instruments - Credit Losses* . The pronouncement was issued to provide more decision-useful information about the expected credit losses on financial instruments and changes the loss impairment methodology. This pronouncement is effective for reporting periods beginning after December 15, 2019, and interim periods within those fiscal years, using a modified retrospective adoption method. A prospective transition approach is required for debt securities for which an other-than-temporary impairment had been recognized. Early adoption is permitted. The Company is currently evaluating the impact that this standard will have on its Consolidated Financial Statements and disclosures.

In March 2016, the FASB issued ASU No. 2016-09 (Topic 718) *Compensation—Stock Compensation: Improvements to Employee Share-Based Payment Accounting* ("ASU 2016-09"), which simplifies several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, forfeiture, statutory tax withholding requirements, and classification on the statement of cash flows. ASU-2016-09 is effective for interim and annual reporting periods beginning after December 15, 2016. The Company adopted the standard on January 1, 2017 and elected to account for forfeitures as they occur using a modified retrospective transition method, rather than the current method of estimating forfeitures, resulting in a cumulative-effect adjustment of approximately $9.0 million , which increased the January 1, 2017 opening accumulated deficit balance. The Company is also required to record excess tax benefits and tax deficiencies as income tax benefit or expense in the statement of operations prospectively when share-based awards vest or are settled. Upon adoption, the Company recognized the previously unrecognized excess tax benefits using the modified retrospective transition method, which resulted in no impact to the January 1, 2017 opening accumulated deficit balance. The previously unrecognized excess tax effects were recorded as a deferred tax asset, which was fully offset by a valuation allowance. Without the valuation allowance, the Company's deferred tax asset would have increased by $20.8 million . The Company also elected to apply the change in presentation to the statements of cash flows retrospectively and no longer classify the excess tax benefits from share-based compensation as a reduction from operating cash flows.

In March 2016, the FASB issued ASU No. 2016-06 (Topic 815) *Derivatives and Hedging: Contingent Put and Call Options in Debt Instruments* ("ASU 2016-06"), which requires that embedded derivatives be separated from the host contract and accounted for separately as derivatives if certain criteria are met. One of those criteria is that the economic characteristics and risks of the embedded derivatives are not clearly and closely related to the economic characteristics and risks of the host contract (the "clearly and closely related" criterion). In addition, in March 2016, the FASB issued ASU No. 2016-05 (Topic 815), Derivatives and Hedging: Effect of Derivative Contract Novations on Existing Hedge Accounting Relationships, ("ASU 2016-05"), which clarifies that a change in the counterparty to a derivative instrument that has been designated as the hedging instrument under Topic 815 does not, in and of itself, require dedesignation of that hedging relationship provided that all other hedge accounting criteria continue to be met. ASU 2016-06 and ASU 2016-05 are effective for financial statements issued for fiscal years beginning after December 15, 2016, and interim periods within those fiscal years. Early adoption is permitted. The Company adopted the standard on January 1, 2017, and the adoption of this standard did not have a significant impact on the Company's Consolidated Financial Statements.

In February 2016, the FASB issued ASU No. 2016-02 (Topic 842), *Leases* ("ASU 2016-02"), which requires recognition of lease assets and lease liabilities on the balance sheet by the lessees for lease contracts with a lease term of more than twelve months. ASU 2016-02 should be applied on a modified retrospective basis and is effective for financial statements issued for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption is permitted. The Company is currently evaluating the impact of adoption of this standard, however it is expected to have a material impact on the Company's Consolidated Financial Statements and disclosures.

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments-Overall: Recognition and Measurement of Financial Assets and Financial Liabilities* ("ASU 2016-01"), which requires equity investments to be measured at fair value with changes in fair value recognized in net income and simplifies the impairment assessment of equity investments without readily determinable fair values by requiring a qualitative assessment to identify impairment. Entities may choose a practical expedient, to estimate the fair value of certain equity securities that do not have readily determinable fair value. If the practical expedient is elected, these investments would be recorded at cost, less impairment and subsequently adjusted for observable price changes. The guidance also updates certain presentation and disclosure requirements. ASU 2016-01 is effective for financial statements issued for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. The Company is currently evaluating the impact that ASU 2016-01will have on its Consolidated Financial Statements and disclosures.

In July 2015, the FASB issued ASU No. 2015-11 (Subtopic 330) - *Simplifying the Measurement of Inventory* ("ASU 2015-11"), which provides guidance to companies who account for inventory using either the first-in, first-out ("FIFO") or average cost methods. The guidance states that companies should measure inventory at the lower of cost and net realizable value. Net realizable value is defined as the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation. ASU 2015-11 is effective for fiscal years beginning after December 15, 2016. Early adoption is permitted. The Company adopted the standard on January 1, 2017, and the adoption of this standard did not have a significant impact on the Company's Consolidated Financial Statements.

In May 2014, the FASB issued ASU No. 2014-09 (Topic 606) - *Revenue from Contracts with Customers* ("ASU 2014-09"), which provides guidance for revenue recognition. The FASB has also issued several amendments to the standard since the initial issuance. This ASU will supersede the revenue recognition requirements in Topic 605, and most industry specific guidance. The standard's core principle is that revenue is recognized when promised goods or services are transferred to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods or services. In doing so, the Company will need to use additional judgment and estimates than under the existing guidance. This ASU also requires more extensive disclosures regarding the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. In August 2015, the FASB issued ASU 2015-14, which deferred the effective date of the new revenue standard from December 15, 2016 to December 15, 2017, with early adoption permitted as of annual reporting periods beginning after December 15, 2016. Accordingly, the ASU and the amendments will be effective for the Company beginning fiscal year 2018.

The Company intends to adopt the standard on January 1, 2018 retrospectively, applying the amendments to each prior reporting period presented. The Company's ability to adopt retrospectively is dependent on the completion of scoping and analysis of the necessary information, and being able to report each prior period within the date of adoption (or January 1, 2018).

The Company has completed a review of the accounting systems and processes required to apply the full retrospective method. Additionally, the Company has completed the majority of the assessment phase and documentation of new policies and is currently in the process of preparing prior-period financial statements, gathering data for the new disclosure requirements and evaluating its controls framework. The Company does not expect a significant change in its control environment due to the adoption of the new standard, however, we will continue to assess until date of adoption.

Upon adoption, the Company expects a material impact to the opening balance sheet as of January 1, 2016 related to the cumulative effect of adopting the standard, primarily as a result of the items discussed below. The Company will continue to assess all potential impacts of the standard, and currently believes the most significantly impacted areas are the following:

- Distributor sales: Under Topic 606, the Company will recognize revenue from sales to distributors upon delivery of the product to the distributor, rather than upon delivery of the product to the end customer. Rebates and incentives offered to distributors, which are earned when sales to end customers are completed, will be estimated at the point of revenue recognition and may require significant judgment and additional assumptions. At December 31, 2015, the deferred revenue under Topic 605 related to shipments to distributors that had not sold through to end-users was $81.8 million . Since the Company will be required to recognize revenue when control of the products transfer to the distributor Under Topic 606, the Company expects the majority of deferred revenue at December 31, 2015 will be eliminated as a cumulative effect adjustment of implementing Topic 606 as of January 1, 2016. The full impact of the adjustment is still being analyzed by the Company.

- Software Revenue: The Company currently defers revenue for perpetual licenses where VSOE of fair value has not been established for undelivered items. Under Topic 606, revenue for perpetual licenses will be recognized at the time of delivery as the VSOE requirement no longer applies and the Company can estimate stand-alone selling price for services. Currently, all term license revenue is deferred and recognized over the license term due to a lack of VSOE for services. Under Topic 606, term license revenue will be recognized at the time of delivery rather than ratably over the term period unless the ongoing services provide frequent, critical updates to the software, without which the software functionality would be rapidly diminished. At December 31, 2015, deferred revenue under Topic 605 due to lack of VSOE and ratably recognized term licenses was $79.5 million . The Company expects a significant proportion of such deferred revenue will be eliminated as a cumulative effect adjustment of implementing Topic 606 as of January 1, 2016. The full impact of the adjustment is still being analyzed by the Company.

- Contract Acquisition costs: Topic 606 requires the deferral and amortization of "incremental" costs incurred to obtain a contract where the associated contract duration is greater than one year. The primary contract acquisition cost for the Company are sales commissions. Under current U.S. GAAP, the Company expenses sales commissions. The change required by Topic 606 will result in the creation of an asset on the opening balance sheet at January 1, 2016. In each subsequent financial period, it is expected that this asset will increase or decrease proportionally with deferred revenues and will not have a material impact to the income statement.

- Variable Consideration: Some of the Company's contracts include penalties and acceptance provisions that preclude revenue recognition because of the requirement for amounts to be fixed or determinable under Topic 605. Topic 606 requires the Company to estimate and account for variable consideration associated with penalty provisions and requires evaluation of acceptance provisions to determine if control has transferred to the customer. At December 31, 2015, deferred revenue under Topic 605 due to penalties and acceptance provisions was $40.3 million . The Company expects the majority of such deferred revenue will be eliminated as a cumulative effect adjustment of implementing Topic 606 as of January 1, 2016. The full impact of the adjustment is still being analyzed by the Company.

- Revenue Allocation: Similar to Topic 605, Topic 606 requires an allocation of revenue between deliverables within a transaction. Topic 605 restricts the allocation of revenue that is contingent on future deliverables to current deliverables, however Topic 606 removes this restriction. Impact of allocation of transaction price is still being assessed, however we do not expect this to have a material impact to the income statement.

The Company will continue to assess the impact of 606 as it works through the adoption in 2017, and there remain areas still to be fully concluded upon. Further, there remain ongoing interpretive reviews, which may alter the Company's conclusions and the financial impact of Topic 606.

Note 3. Business Combinations

The Company's Consolidated Financial Statements include the operating results of acquired businesses from the date of each acquisition. Pro forma results of operations for these acquisitions have not been presented as the financial impact to the Company's consolidated results of operations, both individually and in aggregate, is not material. The primary areas of the preliminary purchase price allocation that are subject to change relate to certain legal and income tax matters and residual goodwill.

The Company completed four acquisitions during the three years ended December 31, 2016. The Company acquired BTI Systems Inc. (“BTI”), Aurrion, Inc. ("Aurrion") and AppFormix, Inc. ("AppFormix") in 2016 and WANDL, Inc. ("WANDL") in 2014. The following table summarizes the estimated fair values of the assets acquired and liabilities assumed at the acquisition dates (in millions):

	2016				2014
	AppFormix	**Aurrion**	**BTI**	**Total**	**WANDL**
Net tangible assets acquired/(liabilities) assumed	$ (5.3)	$ 6.0	$ (19.7)	$ (19.0)	$ (2.7)
Intangible assets acquired	20.3	49.0	43.3	112.6	17.8
Goodwill (*)	32.9	46.9	20.2	100.0	13.6
Total	$ 47.9	$ 101.9	$ 43.8	$ 193.6	$ 28.7

(*) The goodwill recognized for these acquisitions was primarily attributable to expected synergies and is not deductible for U.S. federal income tax purposes.

Juniper Networks, Inc.
Notes to Consolidated Financial Statements (Continued)

The following table summarizes the fair value of the separately identifiable intangible assets at the time of acquisition and the period over which each intangible asset will be amortized (in millions, except years):

	2016						2014	
	AppFormix		Aurrion		BTI		WANDL	
	Weighted Average Estimated Useful Life (In Years)	Amount	Weighted Average Estimated Useful Life (In Years)	Amount	Weighted Average Estimated Useful Life (In Years)	Amount	Weighted Average Estimated Useful Life (In Years)	Amount
Finite-lived intangible assets:								
Existing technology	5	$ 20.1	—	$—	8	$ 37.1	7	$ 10.7
Customer relationships	1	0.2	—	—	8	5.3	7	6.0
Other	—	—	—	—	1	0.9	3	1.1
Total intangible assets with finite lives		20.3		—		43.3		17.8
Indefinite-lived intangible assets:								
IPR&D		—		49.0		—		—
Total intangible assets acquired		$ 20.3		$ 49.0		$ 43.3		$ 17.8

2016 Acquisitions

AppFormix

On December 6, 2016, the Company acquired AppFormix for $47.9 million of cash. The acquisition of AppFormix, a company focused on cloud infrastructure optimization software, is expected to complement the analytics and capabilities of Contrail and to help customers enhance their cloud operations.

Under the terms of the acquisition agreement, the Company assumed share-based awards for continuing employees from the acquisition of AppFormix, which were granted in contemplation of future services. The fair value of these share-based awards was $23.9 million , which will be expensed as share-based compensation over the remaining service period.

Aurrion

On August 9, 2016, the Company acquired the remaining ownership interest in Aurrion, increasing its ownership from 18% to 100% , for $74.3 million of cash. The acquisition of Aurrion, a privately-held provider of fabless silicon photonic technology, is expected to strengthen the Company's long-term competitive advantage in cost-effective, high-density, high-speed networks.

Prior to the acquisition, the Company had a pre-existing investment in Aurrion's equity and also held convertible debt that were remeasured to fair value of $17.2 million and $10.4 million , respectively, based upon the perspective of a market participant when estimating the fair value.

Under the terms of the acquisition agreement, the Company assumed share-based awards for continuing employees from the acquisition of Aurrion, which were granted in contemplation of future services. The fair value of these share-based awards was $55.0 million , which will be expensed as share-based compensation over the remaining service period.

Additionally, the Company acquired IPR&D consisting of existing research and development projects that have not yet reached technological feasibility at the time of the acquisition. The acquired IPR&D involves technology for cost-effective, high-speed networks. The IPR&D was valued using the multi-period excess earnings method under the income approach by discounting forecasted cash flows directly related to the products expected to result from the associated project.

BTI

On April 1, 2016, the Company acquired the remaining ownership interest in BTI, increasing its ownership from 12% to 100% , for $25.8 million of cash. BTI is a privately-held provider of cloud and metro networking systems and software to content, cloud, and service providers. The Company acquired BTI on the expectation that this would help to accelerate the Company's ability to deliver open and automated packet optical transport solutions.

Prior to the acquisition, the Company had a pre-existing investment in BTI's equity and remeasured the investment to its fair value of $17.1 million , which was based upon the perspective of a market participant when estimating the fair value. The Company also held $0.9 million of convertible debt measured at fair value and settled upon acquisition. The Company also repaid upon acquisition $18.6 million of certain outstanding BTI liabilities assumed.

Additionally, under the terms of the acquisition agreement, the Company assumed share-based awards for continuing employees from the acquisition of BTI, which were granted in contemplation of future services. The fair value of these share-based awards was $8.6 million , which will be expensed as share-based compensation over the remaining service period.

2014 Acquisition

WANDL

On January 7, 2014, the Company acquired 100% of the equity securities of WANDL, for $28.7 million of cash and stock consideration. WANDL, a provider of software solutions for advanced planning, management, design and optimization of next-generation multi-layer networks, provides the Company with technology and experience in traffic engineering, multi-layer optimization and path computation to help service provider customers optimize the performance and cost of their networks.

Under the terms of the purchase agreement, the Company assumed unvested share-based awards for employees with a fair value of $34.9 million , which were granted in contemplation of future services and are being expensed as share-based compensation over the remaining service period **.**

Acquisition Costs

The Company recognized $11.8 million and $0.5 million of acquisition-related costs during the years ended December 31, 2016 and 2014, respectively. These acquisition-related costs were expensed in the period incurred within general and administrative expense in the Company's Consolidated Statements of Operations. There were no such costs during the year ended December 31, 2015.

Note 4. Cash Equivalents and Investments

Investments in Available-for-Sale and Trading Securities

The following tables summarize the Company's unrealized gains and losses and fair value of investments designated as available-for-sale and trading securities as of December 31, 2016 and December 31, 2015 (in millions):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
As of December 31, 2016				
Fixed income securities:				
Asset-backed securities	$ 303.0	$ 0.2	$ (0.2)	$ 303.0
Certificates of deposit	66.1	—	—	66.1
Commercial paper	147.7	—	—	147.7
Corporate debt securities	846.5	0.4	(2.0)	844.9
Foreign government debt securities	34.0	—	(0.1)	33.9
Time deposits	264.6	—	—	264.6
U.S. government agency securities	127.0	—	(0.3)	126.7
U.S. government securities	390.7	0.1	(0.4)	390.4
Total fixed income securities	2,179.6	0.7	(3.0)	2,177.3
Money market funds	592.2	—	—	592.2
Mutual funds	8.0	—	—	8.0
Publicly-traded equity securities	5.3	—	(0.7)	4.6
Total available-for-sale securities	2,785.1	0.7	(3.7)	2,782.1
Trading securities in mutual funds (1)	21.0	—	—	21.0
Total	$ 2,806.1	$ 0.7	$ (3.7)	$ 2,803.1
Reported as:				
Cash equivalents	$ 907.1	$ —	$ —	$ 907.1
Restricted investments (2)	71.9	—	—	71.9
Short-term investments	753.4	0.1	(1.2)	752.3
Long-term investments	1,073.7	0.6	(2.5)	1,071.8
Total	$ 2,806.1	$ 0.7	$ (3.7)	$ 2,803.1

(1) Balance includes the Company's non-qualified deferred compensation plan assets.
(2) Includes $4.0 million of short-term restricted investments classified as prepaid expenses and other current assets on the Consolidated Balance Sheets.

Juniper Networks, Inc.
Notes to Consolidated Financial Statements (Continued)

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
As of December 31, 2015				
Fixed income securities:				
Asset-backed securities	$ 312.2	$ —	$ (0.5)	$ 311.7
Certificates of deposit	9.6	—	—	9.6
Commercial paper	17.7	—	—	17.7
Corporate debt securities	913.8	0.2	(2.6)	911.4
Foreign government debt securities	16.5	—	—	16.5
Time deposits	140.0	—	—	140.0
U.S. government agency securities	204.1	—	(0.4)	203.7
U.S. government securities	278.0	—	(0.4)	277.6
Total fixed income securities	1,891.9	0.2	(3.9)	1,888.2
Money market funds	29.7	—	—	29.7
Mutual funds	6.1	0.1	—	6.2
Publicly-traded equity securities	8.7	0.8	(0.7)	8.8
Total available-for-sale securities	1,936.4	1.1	(4.6)	1,932.9
Trading securities in mutual funds [1]	17.7	—	—	17.7
Total	$ 1,954.1	$ 1.1	$ (4.6)	$ 1,950.6
Reported as:				
Cash equivalents	$ 143.4	$ —	$ —	$ 143.4
Restricted investments	35.8	0.1	—	35.9
Short-term investments	527.2	0.9	(1.0)	527.1
Long-term investments	1,247.7	0.1	(3.6)	1,244.2
Total	$ 1,954.1	$ 1.1	$ (4.6)	$ 1,950.6

(1) Balance includes the Company's non-qualified deferred compensation plan assets.

The following table presents the contractual maturities of the Company's total fixed income securities as of December 31, 2016 (in millions):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Due in less than one year	$ 1,105.9	$ 0.1	$ (0.5)	$ 1,105.5
Due between one and five years	1,073.7	0.6	(2.5)	1,071.8
Total	$ 2,179.6	$ 0.7	$ (3.0)	$ 2,177.3

The following tables present the Company's available-for-sale securities that were in an unrealized loss position as of December 31, 2016 and December 31, 2015 (in millions):

	Less than 12 Months		12 Months or Greater		Total	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
As of December 31, 2016						
Fixed income securities:						
Asset-backed securities	$ 122.2	$ (0.2)	$ —	$ —	$ 122.2	$ (0.2)
Corporate debt securities	470.8	(1.9)	76.7	(0.1)	547.5	(2.0)
Foreign government debt securities	20.3	(0.1)	—	—	20.3	(0.1)
U.S. government agency securities	106.7	(0.3)	—	—	106.7	(0.3)
U.S. government securities	254.1	(0.4)	—	—	254.1	(0.4)
Total fixed income securities	974.1	(2.9)	76.7	(0.1)	1,050.8	(3.0)
Publicly-traded equity securities	4.6	(0.7)	—	—	4.6	(0.7)
Total available-for sale securities	$ 978.7	$ (3.6)	$ 76.7	$ (0.1)	$ 1,055.4	$ (3.7)

	Less than 12 Months		12 Months or Greater		Total	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
As of December 31, 2015						
Fixed income securities:						
Asset-backed securities	$ 274.2	$ (0.4)	$ 30.8	$ (0.1)	$ 305.0	$ (0.5)
Certificates of deposit (*)	3.3	—	—	—	3.3	—
Corporate debt securities	687.9	(2.3)	58.9	(0.3)	746.8	(2.6)
Foreign government debt securities (*)	9.5	—	—	—	9.5	—
U.S. government agency securities	185.3	(0.4)	—	—	185.3	(0.4)
U.S. government securities	259.3	(0.4)	—	—	259.3	(0.4)
Total fixed income securities	1,419.5	(3.5)	89.7	(0.4)	1,509.2	(3.9)
Publicly-traded equity securities	2.1	(0.7)	—	—	2.1	(0.7)
Total available-for sale securities	$ 1,421.6	$ (4.2)	$ 89.7	$ (0.4)	$ 1,511.3	$ (4.6)

(*) Balances less than 12 months include investments that were in an immaterial unrealized loss position as of December 31, 2015 .

The Company had 494 and 682 investments in unrealized loss positions as of December 31, 2016 and December 31, 2015 , respectively. The gross unrealized losses related to these investments were primarily due to changes in market interest rates and stock prices. The Company periodically reviews its investments to identify and evaluate investments that have an indication of possible impairment. The Company aggregates its investments by category and length of time the securities have been in a continuous unrealized loss position to facilitate its evaluation.

For available-for-sale debt securities that have unrealized losses, the Company evaluates whether (i) it has the intention to sell any of these investments and (ii) whether it is more likely than not that it will be required to sell any of these investments before recovery of the entire amortized cost basis. As of December 31, 2016 , the Company anticipates that it will recover the entire amortized cost basis of such available-for-sale debt securities and has determined that no other-than-temporary impairments associated with credit losses were required to be recognized during the years ended December 31, 2016 , 2015 , and 2014 .

For available-for-sale equity securities that have unrealized losses, the Company evaluates whether there is an indication of other-than-temporary impairments. This determination is based on several factors, including the financial condition and near-term prospects of the issuer and the Company's intent and ability to hold the publicly-traded equity securities for a period of time sufficient to allow for any anticipated recovery in market value. During the years ended December 31, 2016 and December 31, 2015 , the Company did not recognize other-than-temporary impairments associated with its available-for-sale equity securities. During the year ended December 31, 2014 , the Company determined that certain available-for-sale equity securities were other-than temporarily impaired, resulting in an impairment charge of $1.1 million that was recorded within other (expense) income, net, in the Consolidated Statement of Operations.

During the years ended December 31, 2016 and December 31, 2015 , there were no material gross realized gains or losses from available-for-sale securities and trading securities. During the year ended December 31, 2014 , gross realized gains from available-for-sale securities were $166.8 million and gross realized losses were not material.

Restricted Cash and Investments

The Company has restricted cash and investments for: (i) amounts held in escrow accounts, as required in connection with certain acquisitions completed primarily between 2014 and 2016; (ii) the India Gratuity Trust and Israel Retirement Trust, which cover statutory severance obligations in the event of termination of any of the Company's India and Israel employees, respectively; (iii) the Directors and Officers indemnification trust ("D&O Trust"); (iv) amounts held under the Company's short-term disability plan in California; and (v) amounts under the non-qualified deferred compensation ("NQDC") plan for officers and other senior-level employees. The restricted investments are designated as available-for-sale securities except relating to the NQDC plan which are designated as trading securities. As of December 31, 2016 , total restricted cash and investments was $ 119.2 million , of which $19.3 million was included in prepaid expenses and other current assets and $99.9 million was included in restricted cash and investments on the Consolidated Balance Sheets.

Investments in Privately-Held Companies

As of December 31, 2016 and December 31, 2015 , the carrying values of the Company's privately-held investments of $62.7 million and $102.4 million , respectively, were included in other long-term assets in the Consolidated Balance Sheets. As of December 31, 2016 and December 31, 2015 , the carrying value of the privately-held investments includes debt and redeemable preferred stock securities of $43.7 million and $60.2 million , respectively. During the year ended December 31, 2016 , the Company did not record any unrealized gains or unrealized losses associated with its privately-held debt and redeemable preferred stock securities. During the year ended December 31, 2015 , the Company recorded $11.4 million of unrealized gains in other comprehensive loss and no unrealized losses associated with privately-held securities and redeemable preferred stock securities. During the year ended December 31, 2014, there were $15.0 million of unrealized gains and no unrealized losses associated with privately-held securities and no unrealized gains or losses on redeemable preferred stock in other comprehensive loss.

The Company reviews its investments to identify and evaluate investments that have an indication of possible impairment. The Company adjusts the carrying value for its privately-held investments for any impairment if the fair value is less than the carrying value of the respective assets on an other-than-temporary basis. During the years ended December 31, 2016 and December 31, 2014 , the Company determined that certain privately-held investments were other than-temporarily impaired, resulting in impairment charges of $11.2 million and $1.1 million , respectively, that were recorded within other expense (income), net in the Consolidated Statement of Operations. During the year ended December 31, 2015 , the Company determined that no privately-held investments were other-than-temporarily impaired.

Juniper Networks, Inc.
Notes to Consolidated Financial Statements (Continued)

Note 5. Fair Value Measurements

Assets and Liabilities Measured at Fair Value on a Recurring Basis

The following tables provide a summary of assets and liabilities measured at fair value on a recurring basis and as reported in the Consolidated Balance Sheets (in millions):

	Fair Value Measurements at December 31, 2016 Using:			
	Quoted Prices in Active Markets For Identical Assets (Level 1)	Significant Other Observable Remaining Inputs (Level 2)	Significant Other Unobservable Remaining Inputs (Level 3)	Total
Assets measured at fair value:				
Available-for-sale securities:				
Asset-backed securities	$ —	$ 303.0	$ —	$ 303.0
Certificates of deposit	—	66.1	—	66.1
Commercial paper	—	147.7	—	147.7
Corporate debt securities	—	844.9	—	844.9
Foreign government debt securities	—	33.9	—	33.9
Money market funds [(1)]	592.2	—	—	592.2
Mutual funds [(2)]	8.0	—	—	8.0
Publicly-traded equity securities	4.6	—	—	4.6
Time deposits	—	264.6	—	264.6
U.S. government agency securities	—	126.7	—	126.7
U.S. government securities	345.0	45.4	—	390.4
Total available-for-sale securities	949.8	1,832.3	—	2,782.1
Trading securities in mutual funds [(3)]	21.0	—	—	21.0
Privately-held debt and redeemable preferred stock securities	—	—	43.7	43.7
Derivative assets:				
Foreign exchange contracts	—	0.9	—	0.9
Total assets measured at fair value	$ 970.8	$ 1,833.2	$ 43.7	$ 2,847.7
Liabilities measured at fair value:				
Derivative liabilities:				
Foreign exchange contracts	$ —	$ (4.9)	$ —	$ (4.9)
Total liabilities measured at fair value	$ —	$ (4.9)	$ —	$ (4.9)
Total assets measured at fair value, reported as:				
Cash equivalents	$ 549.3	$ 357.7	$ —	$ 907.0
Restricted investments	71.9	—	—	71.9
Short-term investments	178.1	574.3	—	752.4
Long-term investments	171.5	900.3	—	1,071.8
Prepaid expenses and other current assets	—	0.9	—	0.9
Other long-term assets	—	—	43.7	43.7
Total assets measured at fair value	$ 970.8	$ 1,833.2	$ 43.7	$ 2,847.7
Total liabilities measured at fair value, reported as:				
Other accrued liabilities	$ —	$ (4.9)	$ —	$ (4.9)
Total liabilities measured at fair value	$ —	$ (4.9)	$ —	$ (4.9)

(1) Balance includes $42.9 million of restricted investments measured at fair value, related to the Company's D&O Trust and acquisition-related escrows.
(2) Balance relates to restricted investments measured at fair value related to the Company's India Gratuity Trust.
(3) Balance relates to restricted investments measured at fair value related to the Company's non-qualified deferred compensation plan assets.

Juniper Networks, Inc.
Notes to Consolidated Financial Statements (Continued)

	Fair Value Measurements at December 31, 2015 Using:			
	Quoted Prices in Active Markets For Identical Assets (Level 1)	Significant Other Observable Remaining Inputs (Level 2)	Significant Other Unobservable Remaining Inputs (Level 3)	Total
Assets measured at fair value:				
Available-for-sale securities:				
Asset-backed securities	$ —	$ 311.7	$ —	$ 311.7
Certificates of deposit	—	9.6	—	9.6
Commercial paper	—	17.7	—	17.7
Corporate debt securities	—	911.4	—	911.4
Foreign government debt securities	—	16.5	—	16.5
Money market funds [(1)]	29.7	—	—	29.7
Mutual funds [(2)]	6.2	—	—	6.2
Publicly-traded equity securities	8.8	—	—	8.8
Time deposits	—	140.0	—	140.0
U.S. government agency securities	—	203.7	—	203.7
U.S. government securities	247.3	30.3	—	277.6
Total available-for-sale securities	292.0	1,640.9	—	1,932.9
Trading securities in mutual funds [(3)]	17.7	—	—	17.7
Privately-held debt and redeemable preferred stock securities	—	—	60.2	60.2
Derivative assets:				
Foreign exchange contracts	—	0.4	—	0.4
Total assets measured at fair value	$ 309.7	$ 1,641.3	$ 60.2	$ 2,011.2
Liabilities measured at fair value:				
Derivative liabilities:				
Foreign exchange contracts	$ —	$ (1.3)	$ —	$ (1.3)
Total liabilities measured at fair value	$ —	$ (1.3)	$ —	$ (1.3)
Total assets measured at fair value, reported as:				
Cash equivalents	$ —	$ 143.4	$ —	$ 143.4
Restricted investments	35.9	—	—	35.9
Short-term investments	108.2	418.9	—	527.1
Long-term investments	165.6	1,078.6	—	1,244.2
Prepaid expenses and other current assets	—	0.4	—	0.4
Other long-term assets	—	—	60.2	60.2
Total assets measured at fair value	$ 309.7	$ 1,641.3	$ 60.2	$ 2,011.2
Total liabilities measured at fair value, reported as:				
Other accrued liabilities	$ —	$ (1.3)	$ —	$ (1.3)
Total liabilities measured at fair value	$ —	$ (1.3)	$ —	$ (1.3)

(1) Balance includes $29.7 million of restricted investments measured at fair value, related to the Company's D&O Trust and acquisition-related escrows.
(2) Balance relates to restricted investments measured at fair value related to the Company's India Gratuity Trust.
(3) Balance relates to investments measured at fair value related to the Company's non-qualified deferred compensation plan assets.

The Company's Level 2 available-for-sale fixed income securities are priced using quoted market prices for similar instruments or non-binding market prices that are corroborated by observable market data. The Company uses inputs such as actual trade data, benchmark yields, broker/dealer quotes, or alternative pricing sources with reasonable levels of price transparency which are obtained from quoted market prices, independent pricing vendors, or other sources, to determine the ultimate fair value of these assets. The Company's derivative instruments are classified as Level 2, as they are not actively traded and are valued using pricing models that use observable market inputs. The Company's policy is to recognize asset or liability transfers among Level 1, Level 2, and Level 3 at the beginning of the quarter in which a change in circumstances resulted in a transfer. During the years ended December 31, 2016 and December 31, 2015 , the Company had no transfers between levels of the fair value hierarchy of its assets or liabilities measured at fair value.

All of the Company's privately-held debt and redeemable preferred stock securities, are classified as Level 3 assets due to the lack of observable inputs to determine fair value. The Company estimates the fair value of its privately-held debt investments on a recurring basis using an analysis of the financial condition and near-term prospects of the investee, including recent financing activities and the investee's capital structure. During the year ended December 31, 2016 , there were $12.9 million purchases related to privately-held debt securities.

Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis

Certain of the Company's assets, including intangible assets, goodwill, and investments in privately-held companies (non-redeemable preferred stock securities and common stock), are measured at fair value on a nonrecurring basis, when they are deemed to be other-than-temporarily impaired. Investments in privately-held companies, which are normally carried at cost, are measured at fair value on a nonrecurring basis due to events and circumstances that the Company identifies as significantly impacting the fair value of investments. The Company estimates the fair value of its investments in privately-held companies using an analysis of the financial condition and near-term prospects of the investee, including recent financing activities and the investee's capital structure. Purchased intangible assets are measured at fair value primarily using discounted cash flow projections. These assets are classified as Level 3 due to the lack of observable inputs to determine fair value.

As of December 31, 2016 , certain investments in privately-held companies with a carrying value of $1.6 million were impaired and were written-down to their fair value of zero . The impairment charges of $1.6 million were recorded to other expense (income), net in the Consolidated Statements of Operations. As of December 31, 2015 , the Company had no privately-held equity investments measured at fair value on a nonrecurring basis.

As of December 31, 2016 and 2015 , the Company had no liabilities measured at fair value on a nonrecurring basis.

Assets and Liabilities Not Measured at Fair Value

The carrying amounts of the Company's accounts receivable, financing receivables, accounts payable, and other accrued liabilities approximate fair value due to their short maturities. As of December 31, 2016 and December 31, 2015 , the estimated fair value of the Company's long-term debt in the Consolidated Balance Sheets was approximately $2,215.7 million and $1,946.7 million , respectively, based on observable market inputs (Level 2). The carrying value of the promissory note, issued to the Company in connection with the previously-completed sale of Junos Pulse, of $132.9 million approximates its fair value, of which $75.0 million is recorded in prepaid expenses and other current assets and the remaining balance is recorded within other long-term assets in the Consolidated Balance Sheets as of December 31, 2016 . As of December 31, 2015 , the carrying value of the promissory note of $132.9 million was recorded in other long-term assets in the Consolidated Balance Sheets. The promissory note is classified as a Level 3 asset due to the lack of observable inputs to determine fair value. See Note 8, *Other Financial Information,* for further information on the promissory note.

Note 6. Derivative Instruments

The Company uses derivatives to partially offset its market exposure to fluctuations in certain foreign currencies and does not enter into derivatives for speculative or trading purposes.

The notional amount of the Company's foreign currency derivatives are summarized as follows (in millions):

	As of December 31,	
	2016	2015
Cash flow hedges	$ 172.0	$ 116.8
Non-designated derivatives	—	71.8
Total	$ 172.0	$ 188.6

Cash Flow Hedges

The Company uses foreign currency forward or option contracts to hedge the Company's planned cost of services and operating expenses denominated in foreign currencies. These derivatives are designated as cash flow hedges. Execution of these cash flow hedge derivatives typically occurs every month with maturities of eighteen months or less.

See Note 5, *Fair Value Measurements,* for the fair values of the Company's derivative instruments in the Consolidated Balance Sheets.

As of December 31, 2016 , the Company recognized a loss of $1.3 million in accumulated other comprehensive loss for the effective portion of its derivative instruments and reclassified a gain of $1.8 million during the year ended December 31, 2016 from other comprehensive loss to operating expense in the Consolidated Statements of Operations. As of December 31, 2015 , the Company recognized a loss of $6.3 million in accumulated other comprehensive loss for the effective portion of its derivative instruments and reclassified a loss of $9.6 million during the year ended December 31, 2015 from other comprehensive loss to operating expense in the Consolidated Statements of Operations. As of December 31, 2014 , the Company recognized a loss of $3.4 million in accumulated other comprehensive loss for the effective portion of its derivative instruments and reclassified a gain of $3.4 million during the year ended December 31, 2014 from other comprehensive loss to operating expense in the Consolidated Statements of Operations.

The ineffective portion of the Company's derivative instruments recognized in its Consolidated Statements of Operations was not material during the years ended December 31, 2016 , 2015 , and 2014 .

Non-Designated Derivatives

During the years ended December 31, 2016 , 2015 , and 2014 , the Company recognized a net loss of $0.5 million , a net loss of $0.6 million , and a net loss of $2.4 million , respectively, on non-designated derivative instruments within other (expense) income, net, in its Consolidated Statements of Operations.

Offsetting of Derivatives

The Company presents its derivative assets and derivative liabilities on a gross basis in the Consolidated Balance Sheets. However, under agreements containing provisions on netting with certain counterparties of foreign exchange contracts, subject to applicable requirements, the Company is allowed to net-settle transactions on the same date in the same currency, with a single net amount payable by one party to the other. As of December 31, 2016 and 2015 , respectively, the potential effect of rights of offset associated with derivative instruments was not material. The Company is neither required to pledge nor entitled to receive cash collateral related to these derivative transactions.

Note 7. Goodwill and Purchased Intangible Assets

Goodwill

The following table presents the goodwill activity (in millions):

		Total
December 31, 2014	$	2,981.5
Other		(0.2)
December 31, 2015		2,981.3
Additions due to business combinations		100.4
December 31, 2016	$	3,081.7

In the fourth quarter, the Company performed its annual goodwill impairment test for the Company's three reporting units: Routing, Switching, and Security for the years ended December 31, 2016 , 2015 , and 2014 , respectively. During the year ended December 31, 2016, the Company performed a quantitative assessment for each of the Company's three reporting units. This quantitative assessment was performed by determining the fair value of each reporting unit using a combination of the income approach and the market approach. Based on the outcome of the quantitative assessments, the Company determined that the fair value of each reporting unit exceeded its respective carrying value, resulting in no goodwill impairment. There was no goodwill impairment during the year ended December 31, 2015.

In 2014, the Company re-aligned its go-to-market and research and development ("R&D") resources on projects with the highest potential for growth and continued to leverage its engineering efforts across its Routing, Switching, and Security products. In the fourth quarter of 2014, the Company began to implement a new Security strategy focused on network resiliency and performance based on the SRX platform. As a result, the Company rationalized its Security product portfolio including developing a new product roadmap and exiting certain point products, including the divestiture of Junos Pulse. These factors decreased the Company's short term and near term revenue and profitability forecasts of the Security reporting unit and the Company determined that the Security reporting unit's carrying value of goodwill exceeded the implied fair value of goodwill, resulting in a goodwill impairment charge of $850.0 million , which was recorded in the Consolidated Statement of Operations. The fair value was determined by using a combination of the income approach and the market approach. In determining the impairment amount, the fair value of the Security reporting unit was allocated to its assets and liabilities, including any unrecognized intangible assets, based on their respective fair values. Assumptions used in measuring the value of these assets and liabilities included the discount rates, customer renewal rates, and technology obsolescence rates used in valuing the intangible assets, and pricing of comparable transactions in the market in valuing the tangible assets.

Purchased Intangible Assets

The Company's purchased intangible assets were as follows (in millions):

	Gross	Accumulated Amortization	Accumulated Impairments and Other Charges	Net
As of December 31, 2016				
Finite-lived intangible assets:				
Technologies and patents	$ 624.9	$ (504.2)	$ (49.9)	$ 70.8
Customer contracts, support agreements, and related relationships	83.6	(70.8)	(2.8)	10.0
Other	2.0	(1.6)	—	0.4
Total intangible assets with finite lives	710.5	(576.6)	(52.7)	81.2
Indefinite-lived intangible assets:				
IPR&D	49.0	—	—	49.0
Total purchased intangible assets	$ 759.5	$ (576.6)	$ (52.7)	$ 130.2
As of December 31, 2015				
Finite-lived intangible assets:				
Technologies and patents	$ 567.7	$ (491.8)	$ (49.9)	$ 26.0
Customer contracts, support agreements, and related relationships	78.1	(67.8)	(2.8)	7.5
Other	1.1	(0.7)	—	0.4
Total purchased intangible assets	$ 646.9	$ (560.3)	$ (52.7)	$ 33.9

The following table presents the amortization of intangible assets included in the Consolidated Statements of Operations (in millions):

	Years Ended December 31,		
	2016	2015	2014
Cost of revenues	$ 11.7	$ 24.6	$ 30.9
Operating expenses:			
Sales and marketing	2.8	2.8	4.2
General and administrative	1.8	1.1	1.2
Total operating expenses	4.6	3.9	5.4
Total	$ 16.3	$ 28.5	$ 36.3

There were no impairment charges to purchased intangible assets during the year ended December 31, 2016 . During the year ended December 31, 2015 , the Company recorded $5.6 million to cost of revenues in the Consolidated Statements of Operations, related to the acceleration of the end-of-life of certain intangible assets. In connection with the restructuring plan in 2014 in Note 9, *Restructuring and Other Charges (Benefits)* , the Company determined certain intangible assets of $20.0 million were no longer utilized and recorded charges of $19.3 million in cost of revenues and $0.7 million in restructuring and other charges (benefits) in the Consolidated Statements of Operations during the year ended December 31, 2014.

As of December 31, 2016 , the estimated future amortization expense of purchased intangible assets with finite lives is as follows (in millions):

Years Ending December 31,		Amount
2017	$	16.7
2018		14.4
2019		14.2
2020		14.1
2021		9.8
Thereafter		12.0
Total	$	81.2

Note 8. Other Financial Information

Inventory

The Company purchases and holds inventory to provide adequate component supplies over the life of the underlying products. The majority of the Company's inventory is production components to be used in the manufacturing process, and finished goods inventory in transit. Total inventory consisted of the following (in millions):

	As of December 31,			
	2016		2015	
Production materials	$	75.6	$	61.9
Finished goods		19.9		13.1
Inventory	$	95.5	$	75.0
Reported as:				
Prepaid expenses and other current assets	$	91.4	$	66.6
Other long-term assets		4.1		8.4
Total	$	95.5	$	75.0

Property and Equipment, Net

Property and equipment, net, consisted of the following (in millions):

	As of December 31,			
	2016		2015	
Computers and equipment	$	1,070.1	$	915.1
Software		285.4		169.1
Leasehold improvements		235.6		203.4
Furniture and fixtures		47.0		43.2
Building and building improvements		251.8		246.1
Land and land improvements		241.0		241.1
Construction-in-process (*)		26.2		158.2
Property and equipment, gross		2,157.1		1,976.2
Accumulated depreciation		(1,093.3)		(955.2)
Property and equipment, net	$	1,063.8	$	1,021.0

(*) Includes capitalized construction costs for a lease arrangement entered into in July 2015. Refer to Note 16. *Commitments and Contingencies* for further details.

Depreciation expense was $184.5 million , $141.5 million , and $141.9 million in 2016 , 2015 , and 2014 , respectively.

Other Long-Term Assets

Other long-term assets consisted of the following (in millions):

	As of December 31,	
	2016	2015
Investments in privately-held companies	$ 62.7	$ 102.4
Promissory note in connection with the sale of Junos Pulse	57.9	132.9
Federal income tax receivable	43.8	28.9
Deferred tax asset	19.5	55.9
Inventory	4.1	8.4
Prepaid costs, deposits, and other (*)	49.2	50.4
Other long-term assets	$ 237.2	$ 378.9

(*) On January 1, 2016, the Company adopted ASU 2015-03. As a result, debt issuance costs included in prepaid costs, deposits, and other were reclassified to long-term debt as of December 31, 2015 to conform to the current-year presentation.

On October 1, 2014, the Company completed the sale of its Junos Pulse product portfolio. The Company received total consideration of $230.7 million , of which $105.7 million was in cash, net of a $19.3 million working capital adjustment, and $125.0 million was in the form of a non-contingent interest-bearing promissory note due to the Company on April 1, 2016 (the "Pulse Note"). On October 2, 2015, the Company and the issuer of the Pulse Note mutually agreed to amend the original terms of the Pulse Note to, among other things, extend the maturity date from April 1, 2016 to December 31, 2018, provide that interest due on the Pulse Note through December 31, 2015 shall be paid-in-kind by increasing the outstanding principal amount of the note and increase the interest rate on the Pulse Note. In addition, under the amended terms of the Pulse Note, the issuer is required to make a minimum payment of $75.0 million on or prior to April 1, 2017, less any principal amount previously pre-paid to the Company. The $75.0 million portion of the note receivable is classified within prepaid expenses and other current assets in the Consolidated Balance Sheets. The remaining balance, along with interest paid-in-kind, is classified as a long-term asset based on expected collection beyond twelve months from the Consolidated Balance Sheet date.

The Company considers notes receivable to be impaired when, based on current information and events, it is probable that the Company will not be able to collect the scheduled payments of principal or interest when due. Further, the Company measures any impairment to the Pulse Note based on the present value of expected cash flows, which are discounted at the note's effective interest rate, compared to the recorded investment of the note, including principal and accrued interest. Based on the impairment assessment, no impairment charge was required to the Pulse Note as of December 31, 2016. Interest income on the Pulse Note is accrued and credited to interest income as it is earned, unless it is not probable the Company will collect the amounts due or if the present value of expected cash flows is less than the recorded investment. During the years ended December 31, 2016 and December 31, 2015 , the related amount of interest income recognized was $10.6 million and $6.3 million , respectively.

Warranties

The Company accrues for warranty costs based on associated material, labor for customer support, and overhead at the time revenue is recognized. This accrual is reported within other accrued liabilities in the Consolidated Balance Sheets. Changes in the Company's warranty reserve were as follows (in millions):

	As of December 31,	
	2016	2015
Beginning balance	$ 28.4	$ 28.7
Provisions made during the period, net	43.0	27.9
Actual costs incurred during the period	(30.1)	(28.2)
Ending balance	$ 41.3	$ 28.4

Deferred Revenue

Details of the Company's deferred revenue, as reported in the Consolidated Balance Sheets, were as follows (in millions):

	As of December 31,	
	2016	2015
Deferred product revenue:		
Undelivered product commitments and other product deferrals	$ 302.4	$ 210.1
Distributor inventory and other sell-through items	74.2	81.8
Deferred gross product revenue	376.6	291.9
Deferred cost of product revenue	(53.7)	(51.6)
Deferred product revenue, net	322.9	240.3
Deferred service revenue	1,158.2	927.8
Total	$ 1,481.1	$ 1,168.1
Reported as:		
Current	$ 1,032.0	$ 822.9
Long-term	449.1	345.2
Total	$ 1,481.1	$ 1,168.1

Deferred product revenue represents unrecognized revenue related to shipments to distributors that have not sold through to end-users, undelivered product commitments, and other shipments that have not met all revenue recognition criteria. In circumstances when costs are deferred, deferred product revenue is recorded net of the related costs of product revenue. Deferred service revenue represents billed amounts for service contracts, which include technical support, hardware and software maintenance, professional services, and training, for which services have not been rendered.

Other (Expense) Income, Net

Other (expense) income, net consisted of the following (in millions):

	Years Ended December 31,		
	2016	2015	2014
Interest income	$ 35.4	$ 21.8	$ 10.0
Interest expense	(97.7)	(83.3)	(66.9)
Gain on legal settlement, net	—	—	196.1
(Loss) gain on investments, net	(1.8)	6.8	167.9
Gain on sale of Junos Pulse	—	—	19.6
Other	1.8	(5.1)	6.7
Other (expense) income, net	$ (62.3)	$ (59.8)	$ 333.4

Interest income primarily includes interest earned on the Company’s cash, cash equivalents, investments, and promissory note issued to the Company in connection with the sale of Junos Pulse. Interest expense primarily includes interest, net of capitalized interest expense, from short-term debt, long-term debt, and customer financing arrangements. (Loss) gain on investments, net, primarily includes gains and losses from the sale of investments in privately-held companies, including any impairment charges recorded on these investments. Other typically consists of investment and foreign exchange gains and losses and other non-operational income and expense items.

Interest Expense

For the years ended December 31, 2016 , 2015 and 2014 , interest expense included $93.0 million , net of $0.4 million capitalized, $79.8 million , net of $2.2 million capitalized, and $57.5 million , net of $2.7 million capitalized, respectively, related to the Company's outstanding long-term debt issued in March 2011, March 2014, March 2015, and March 2016 discussed in Note 10, *Debt and Financing* .

Gain on Legal Settlement, Net

During the year ended December 31, 2014, the Company entered into a settlement agreement with Palo Alto Networks, Inc., or Palo Alto Networks, resolving a patent litigation between the two companies, which resulted in a realized gain on legal settlement and subsequent sale of related securities of $196.1 million , net of legal fees.

(Loss) Gain on Investments, Net

During the years ended December 31, 2016 and December 31, 2015 , the Company recorded a loss of $1.8 million and a gain of $6.8 million , respectively, primarily related to the sale of its privately-held investments. During the year ended December 31, 2014 , the Company recorded a gain of $163.0 million related to the sale of investments, which were converted from privately-held investments to publicly-traded equity upon initial public offering and subsequently sold.

Gain on Sale of Junos Pulse

On October 1, 2014, the Company completed the sale of its Junos Pulse product portfolio. The Company received total consideration of $230.7 million , of which $105.7 million was in cash, net of a $19.3 million working capital adjustment, and $125.0 million was in the form of a non-contingent interest bearing promissory note issued to the Company. As a result of the sale, the Company recorded a gain of $19.6 million in other (expense) income, net in the Consolidated Statement of Operations. The Company's sale of Junos Pulse was driven by product rationalization in connection with the Company's initiative to focus on projects with the highest potential for growth.

Note 9. Restructuring and Other Charges (Benefits)

The following table presents restructuring and other charges (benefits) included in cost of revenues and restructuring and other charges (benefits) in the Consolidated Statements of Operations (in millions):

	Years Ended December 31,		
	2016	2015	2014
Severance	$ 2.8	$ 0.4	$ 52.6
Facilities	0.5	(1.0)	14.4
Contract terminations and other	—	—	2.3
Asset impairments and write-downs	—	(3.5)	139.2
Total	$ 3.3	$ (4.1)	$ 208.5
Reported as:			
Cost of revenues	$ —	$ (3.5)	$ 41.5
Restructuring and other charges (benefits)	3.3	(0.6)	167.0
Total	$ 3.3	$ (4.1)	$ 208.5

During the year ended December 31, 2016 , the Company recorded $2.8 million of restructuring charges related to severance costs for certain former BTI employees, as well as $0.5 million of restructuring costs related to facilities, to restructuring and other charges (benefits) in the Consolidated Statements of Operations. As of December 31, 2016 , the Company's restructuring liability was not material.

2014 Restructuring Plan

In the first quarter of 2014, the Company initiated a restructuring plan (the "2014 Restructuring Plan") designed to refocus the Company's strategy, optimize its structure, and improve operational efficiencies. The 2014 Restructuring Plan consisted of workforce reductions, facility consolidations and closures, asset write-downs, contract terminations and other charges. The 2014 Restructuring Plan was substantially completed as of December 31, 2014, and the Company does not expect to record any significant future charges.

During the year ended December 31, 2015, the Company recorded a benefit of $3.5 million for a previously recorded charge related to certain products with contract manufacturers for acceleration of the end-of-service life of such products to cost of revenues in the Consolidated Statements of Operations. Additionally, the Company recorded $0.4 million of severance costs and a benefit of $1.0 million for facilities that were recorded in restructuring and other charges (benefits) in the Consolidated Statements of Operations, in connection with the 2014 Restructuring Plan.

During the year ended December 31, 2014, the Company recorded $52.0 million of severance costs, $14.2 million of facility consolidation and closures costs, $85.4 million of impairment charges related to licensed software, $12.3 million of asset write-downs, and $2.3 million of charges related to contract terminations, which were recorded to restructuring and other charges (benefits) in the Consolidated Statements of Operations. In connection with the facility consolidation and closures charge of $14.2 million , the Company, with the consent of its landlord and the administrative agent for the holder of certain liens secured upon the buildings on the leased premises, assigned certain of its real property leases, totaling approximately 0.4 million square feet, to a third party. Concurrently with the assignments, the Company executed a sublease with the assignee for one of the properties of approximately 0.1 million square feet, for a period of two years , with one -time right to extend the term for up to six months . Under these arrangements, the Company paid $12.3 million to the landlord and was released from all future lease obligations following the date of the assignments. The Company also incurred $5.3 million of transaction fees, which were recorded to restructuring and other charges (benefits) in the Consolidated Statements of Operations. Offsetting these charges was an adjustment relating to deferred rent liability relating to these premises of $9.8 million .

The Company also recorded inventory write-downs of $15.5 million , intangibles write-downs of $19.3 million , and a charge related to products with contract manufacturers of $6.7 million for acceleration of the end-of-service life of certain products to cost of revenues in the Consolidated Statements of Operations during the year ended December 31, 2014.

Note 10. Debt and Financing

Debt

The following table summarizes the Company's long-term debt (in millions, except percentages):

	As of December 31, 2016	
	Amount	Effective Interest Rates
Senior Notes:		
3.125% fixed-rate notes, due February 2019	$ 350.0	3.36%
3.300% fixed-rate notes, due June 2020	300.0	3.47%
4.600% fixed-rate notes, due March 2021	300.0	4.69%
4.500% fixed-rate notes, due March 2024, issued March 2014	350.0	4.63%
4.500% fixed-rate notes, due March 2024, issued February 2016	150.0	4.87%
4.350% fixed-rate notes, due June 2025	300.0	4.47%
5.950% fixed-rate notes, due March 2041	400.0	6.03%
Total senior notes	2,150.0	
Unaccreted discount and debt issuance costs	(16.3)	
Total	$ 2,133.7	

In February 2016, the Company issued $350 million aggregate principal amount of 3.125% senior notes due 2019 ("2019 Notes") and $150 million aggregate principal amount of 4.50% senior notes due 2024 ("2024 Notes"). In March 2015, the Company issued $300.0 million aggregate principal amount of 3.30% senior notes due 2020 ("2020 Notes") and $300.0 million aggregate principal amount of 4.35% senior notes due 2025 ("2025 Notes"). In March 2014, the Company issued $350.0 million aggregate principal amount of the 2024 Notes, which form a single series and are fully fungible with the 2024 Notes issued in February 2016. In March 2011, the Company issued $300.0 million aggregate principal amount of 4.60% senior notes due 2021 ("2021 Notes") and $400.0 million aggregate principal amount of 5.95% senior notes due 2041 ("2041 Notes").

As of December 31, 2016 , the Company's aggregate debt maturities based on outstanding principle were as follows (in millions):

Years Ending December 31,	Amount
2017	$ —
2018	—
2019	350.0
2020	300.0
2021	300.0
Thereafter	1,200.0
Total	$ 2,150.0

The "2019 Notes", "2020 Notes", "2021 Notes", "2024 Notes", "2025 Notes" and "2041 Notes" collectively the "Notes" are the Company’s senior unsecured and unsubordinated obligations, ranking equally in right of payment to all of the Company’s existing and future senior unsecured and unsubordinated indebtedness and senior in right of payment to any of the Company’s future indebtedness that is expressly subordinated to the Notes.

The Company may redeem the 2020 Notes and 2025 Notes, either in whole or in part, at any time one month prior to the maturity date of the 2020 Notes, and three months prior to the maturity date of the 2025 Notes, at a redemption price equal to the greater of (i) 100% of the aggregate principal amount of the 2020 Notes and 2025 Notes to be redeemed or (ii) the sum of the present values of the remaining scheduled payments discounted at the Treasury rate plus 30 basis points for the 2020 Notes, or the Treasury rate plus 37.5 basis points for the 2025 Notes, plus, in the case of each of the clauses (i) and (ii) above, accrued and unpaid interest, if any. At any time on or after May 15, 2020, in the case of the 2020 Notes, and at any time on or after March 15, 2025, in the case of the 2025 Notes, the Company may redeem Notes of such series, in whole or in part, at a redemption price equal to 100% of the principal amount of the 2020 Notes and the 2025 Notes to be redeemed, plus accrued and unpaid interest, if any. The Company may redeem the other Notes, either in whole or in part, at any time at a redemption price equal to the greater of (i) 100% of the aggregate principal amount of the Notes to be redeemed or (ii) the sum of the present values of the remaining scheduled payments discounted to the redemption date, plus, in either case, accrued and unpaid interest, if any.

In the event of a change of control repurchase event, the holders of the Notes may require the Company to repurchase for cash all or part of the Notes at a purchase price equal to 101% of the aggregate principal amount, plus accrued and unpaid interest, if any.

Interest on the Notes is payable in cash semiannually. The effective interest rates for the Notes include the interest on the Notes, accretion of the discount, and amortization of issuance costs. The indentures that govern the Notes also contain various covenants, including limitations on the Company's ability to incur liens or enter into sale-leaseback transactions over certain dollar thresholds.

As of December 31, 2016 , the Company was in compliance with all covenants in the indentures governing the Notes.

Revolving Credit Facility

On June 27, 2014, the Company entered into a Credit Agreement ("Credit Agreement") with certain institutional lenders and Citibank, N.A., as administrative agent, that provides for a $500.0 million unsecured revolving credit facility, with an option of the Company to increase the amount of the credit facility by up to an additional $200.0 million , subject to certain conditions. Proceeds of loans made under the Credit Agreement may be used by the Company for working capital and general corporate purposes. Revolving loans may be borrowed, repaid and reborrowed until June 27, 2019, at which time all amounts borrowed must be repaid. Borrowing may be denominated, at the Company's option in U.S. dollars, Pounds Sterling or Euro.

Borrowings under the Credit Agreement will bear interest, at either i) a floating rate per annum equal to the base rate plus a margin of between 0.00% and 0.50% , depending on the Company's public debt rating or ii) a per annum rate equal to the reserve adjusted Eurocurrency rate , plus a margin of between 0.90% and 1.50% , depending on the Company's public debt rating. Base rate is defined as the greatest of (A) Citibank's base rate , (B) the Federal Funds rate plus 0.50% or (C) the ICE Benchmark Administration Settlement Rate applicable to dollars for a period of one month plus 1.00% . The Eurocurrency rate is determined for U.S. dollars and Pounds Sterling as the rate at which deposits in such currency are offered in the London interbank market for the applicable interest period and for Euro as the rate specified for deposits in Euro with a maturity comparable to the applicable interest period.

As of December 31, 2016 , the Company was in compliance with all covenants in the Credit Agreement, and no amounts were outstanding.

Financing Arrangements

The Company provides certain channel partners access to extended financing arrangements that require longer payment terms than those typically provided by the Company by factoring accounts receivable to third-party financing providers ("financing providers"). The program does not and is not intended to affect the timing of the Company's revenue recognition. Under the financing arrangements, proceeds from the financing provider are due to the Company within 30 to 90 days from the sale of the receivable. In these transactions with the financing provider, the Company surrenders control over the transferred assets.

Pursuant to the financing arrangements for the sale of receivables, the Company sold receivables of $95.6 million , $72.5 million and $440.3 million during the years ended December 31, 2016 , 2015 , and 2014 , respectively. The Company received cash proceeds from financing providers of $83.2 million , $99.3 million , and $602.1 million during the years ended December 31, 2016 , 2015 , and 2014 , respectively. As of December 31, 2016 and December 31, 2015 , the amounts owed by the financing provider were $13.6 million and $1.2 million , respectively, which were recorded in accounts receivable on the Company’s Consolidated Balance Sheets.

Juniper Networks, Inc.
Notes to Consolidated Financial Statements (Continued)

Note 11. Equity

Cash Dividends on Shares of Common Stock

During 2016 , the Company declared four quarterly cash dividends of $0.10 per share on its common stock on January 27, 2016, April 28, 2016, July 26, 2016 and October 25, 2016, which were paid on March 22, 2016, June 22, 2016, September 22, 2016 and December 22, 2016, respectively, to stockholders of record as of the close of business on March 1, 2016, June 1, 2016, September 1, 2016, and December 1, 2016, respectively, in the aggregate amount of $152.5 million . Any future dividends, and the establishment of record and payment dates, are subject to approval by the Board of Directors (the "Board") of Juniper Networks or authorized committee thereof. See Note 18, *Subsequent Events,* for discussion of the Company's dividend declaration subsequent to December 31, 2016 .

Stock Repurchase Activities

In February 2014, the Board approved a stock repurchase program that authorized the Company to repurchase up to $2.1 billion of its common stock, including $1.2 billion pursuant to an accelerated share repurchase program ("Stock Repurchase Program"). In October 2014 and July 2015, the Board authorized a $1.3 billion and $500.0 million increase, respectively, to the Stock Repurchase Program for a total of $3.9 billion . As of December 31, 2016 , there was $219.7 million of authorized funds remaining under the Stock Repurchase Program. In February 2017, the Board approved an incremental $500.0 million stock repurchase authorization under the Stock Repurchase Program. In addition to repurchases under the Company’s stock repurchase program, the Company also repurchases common stock from certain employees in connection with the net issuance of shares to satisfy minimum tax withholding obligations upon the vesting of certain stock awards issued to such employees.

The following table summarizes the Company's repurchases and retirements of its common stock under its stock repurchase programs and accelerated share repurchase, and repurchases associated with minimum tax withholdings (in millions, except per share amounts):

	Shares Repurchased	Average Price Per Share	Amount Repurchased
2016			
Repurchases under stock repurchase program	13.5	$ 23.25	$ 312.9
Repurchases for tax withholding	0.5	$ 24.51	$ 11.7
2015			
Repurchases under stock repurchase program	45.4	$ 25.16	$ 1,142.5
Repurchases for tax withholding	0.4	$ 26.70	$ 11.1
2014			
Repurchases under stock repurchase program	46.8	$ 22.42	$ 1,050.0
Accelerated share repurchase (*)	49.3	$ 24.35	1,200.0
Repurchases for tax withholding	0.6	$ 19.69	$ 12.5

(*) As part of the Stock Repurchase Program, the Company entered into two separate accelerated share repurchase agreements (collectively, the "ASR") with two financial institutions to repurchase $1.2 billion of the Company's common stock. The Company made an up-front payment of $1.2 billion pursuant to the ASR to repurchase the Company's common stock. The aggregate number of shares ultimately purchased was determined based on a volume weighted average repurchase price, less an agreed upon discount. The shares received with respect to the ASR have been retired. Retired shares return to authorized but unissued shares of common stock.

Future share repurchases under the Company’s stock repurchase programs will be subject to a review of the circumstances at that time and will be made from time to time in private transactions or open market purchases as permitted by securities laws and other legal requirements. The Company's stock repurchase programs may be discontinued at any time. See Note 18, *Subsequent Events,* for discussion of the Company's stock repurchase activity subsequent to December 31, 2016 .

Accumulated Other Comprehensive Loss, Net of Tax

The components of accumulated other comprehensive loss, net of related taxes, for the years ended December 31, 2016 and December 31, 2015 were as follows (in millions):

	Unrealized Gains on Available-for-Sale Securities (1)	Unrealized Losses on Cash Flow Hedges (2)	Foreign Currency Translation Adjustments	Total
Balance as of December 31, 2014	$ 8.4	$ (4.2)	$ (18.0)	$ (13.8)
Other comprehensive gain (loss) before reclassifications	9.1	(6.7)	(16.9)	(14.5)
Amount reclassified from accumulated other comprehensive loss	(0.5)	9.6	—	9.1
Other comprehensive gain (loss), net	8.6	2.9	(16.9)	(5.4)
Balance as of December 31, 2015	$ 17.0	$ (1.3)	$ (34.9)	$ (19.2)
Other comprehensive gain (loss) before reclassifications	0.8	(2.1)	(14.5)	(15.8)
Amount reclassified from accumulated other comprehensive loss	(1.2)	(1.1)	—	(2.3)
Other comprehensive (loss), net	(0.4)	(3.2)	(14.5)	(18.1)
Balance as of December 31, 2016	$ 16.6	$ (4.5)	$ (49.4)	$ (37.3)

(1) The reclassifications out of accumulated other comprehensive loss during the years ended December 31, 2016 and December 31, 2015 for realized gains on available-for-sale securities were insignificant, and were included in other (expense) income, net, in the Consolidated Statements of Operations.

(2) The reclassifications out of accumulated other comprehensive loss for realized gains and losses on cash flow hedges are included within cost of revenues, research and development, sales and marketing, and general and administrative in the Consolidated Statements of Operations. These amounts were insignificant during the years ended December 31, 2016 and December 31, 2015 .

Note 12. Employee Benefit Plans

Equity Incentive Plans

The Company's equity incentive plans include the 2015 Equity Incentive Plan (the "2015 Plan"), the 2006 Equity Incentive Plan (the "2006 Plan"), and the 2008 Employee Stock Purchase Plan (the "ESPP"). Under these plans, the Company has granted stock options, restricted stock units ("RSUs"), and performance share awards ("PSAs"). In addition, in connection with certain past acquisitions, the Company has assumed stock options, RSUs, restricted stock awards ("RSAs"), and PSAs under the stock plans of the acquired companies and exchanged the assumed awards for the Company's stock options, RSUs, RSAs, and PSAs, respectively.

The 2015 Plan was adopted and approved by the Company's stockholders in May 2015 and had an initial authorized share reserve of 38.0 million shares of common stock plus the addition of any shares subject to outstanding awards under the 2006 Plan and the Amended and Restated 1996 Stock Plan that were outstanding as of May 19, 2015, and that subsequently expire or otherwise terminate, up to a maximum of an additional 29.0 million shares. As of December 31, 2016 , an aggregate of 19.3 million shares were subject to outstanding equity awards under the 2015 Plan and the 2006 Plan. As of December 31, 2016 , 22.5 million shares were available for future issuance under the 2015 Plan and no shares were available for future issuance under the 2006 Plan or the 1996 Plan.

As of December 31, 2016 , a total of approximately 40.7 million shares of common stock were reserved for future issuance upon exercise of stock options and vesting of RSUs, RSAs, and PSAs, and for the future grant of share-based compensation awards under the Company's equity incentive plans.

The ESPP was adopted and approved by the Company's stockholders in May 2008. To date, the Company's stockholders have approved a share reserve of 26.0 million shares of the Company's common stock for issuance under the ESPP, which includes an additional 7.0 million shares approved by the Company's stockholders in May 2015. The ESPP permits eligible employees to acquire shares of the Company's common stock at a 15% discount to the offering price (as determined in the ESPP) through periodic payroll deductions of up to 10% of base compensation, subject to individual purchase limits of 6,000 shares in any twelve -month period or $25,000 worth of stock, determined at the fair market value of the shares at the time the stock purchase option is granted, in one calendar year. As of December 31, 2016 , approximately 21.1 million shares have been issued and 4.9 million shares remain available for future issuance under the ESPP.

On December 6, 2016, the Company completed the acquisition of AppFormix. In connection with the acquisition, the Company assumed stock options, RSUs, RSAs, and PSAs that had been granted under the AppFormix, Inc. Amended and Restated 2013 Stock Plan (the "AppFormix Plan") and converted the awards for Juniper Networks' stock options, RSUs, RSAs, and PSAs, respectively, based on an exchange ratio set forth in the acquisition agreement. The Company assumed an aggregate of 0.9 million shares of stock options, RSUs, RSAs, and PSAs in connection with the acquisition of AppFormix. No additional awards can be granted under the AppFormix Plan.

On August 9, 2016, the Company completed the acquisition of Aurrion. In connection with the acquisition, the Company assumed stock options, RSUs, RSAs, and PSAs that had been granted under the Aurrion, Inc. Amended and Restated 2008 Equity Incentive Plan (the "Aurrion Plan") and converted the awards for Juniper Networks' stock options, RSUs, RSAs, and PSAs, respectively, based on an exchange ratio set forth in the acquisition agreement. The Company assumed an aggregate of 2.5 million shares of stock options, RSUs, RSAs, and PSAs in connection with the acquisition of Aurrion. No additional awards can be granted under the Aurrion Plan.

On April 1, 2016, the Company completed the acquisition of BTI. In connection with the acquisition, the Company assumed RSUs and PSAs that had been granted under the BTI Amended and Restated 2012 Stock Option Plan and Long-Term Incentive Plan (the "BTI Plan") and converted the awards for Juniper's RSUs and PSAs, respectively, based on an exchange ratio set forth in the acquisition agreement. The Company assumed an aggregate of 0.4 million shares of RSUs and PSAs in connection with the acquisition of BTI. No additional awards can be granted under the BTI Plan.

During 2014, the Company completed the acquisition of WANDL and assumed the WANDL Inc. 2013 Restricted Stock Unit Plan. In connection with this plan, the Company assumed RSUs, RSAs, and PSAs and exchanged the assumed awards for Juniper Networks' RSUs, RSAs, and PSAs, respectively. The Company assumed an aggregate of 1.5 million shares of RSUs, RSAs, and PSAs in connection with the acquisition of WANDL. No additional awards can be granted under this plan.

As of December 31, 2016 , stock options, RSUs, RSAs, and PSAs representing approximately 4.1 million shares of common stock were outstanding under all awards assumed through the Company's acquisitions.

Stock Option Activities

Since 2006, the Company has granted stock option awards that have a maximum contractual life of seven years from the date of grant. Prior to 2006, stock option awards generally had a ten -year contractual life from the date of grant.

The following table summarizes the Company’s stock option activity and related information as of and for the three years ended December 31, 2016 (in millions, except for per share amounts and years):

	Outstanding Options			
	Number of Shares	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term (In Years)	Aggregate Intrinsic Value
Balance as of December 31, 2013	23.1	$ 25.15	2.4	$ 44.6
Canceled	(0.6)	30.15		
Exercised	(5.4)	19.76		
Expired	(7.2)	29.11		
Balance as of December 31, 2014	9.9	$ 24.87	2.0	$ 24.7
Canceled	(0.1)	23.65		
Exercised	(3.5)	19.78		
Expired	(2.7)	27.99		
Balance as of December 31, 2015	3.6	$ 27.52	2.1	$ 16.6
Assumed in acquisitions	0.1	7.01		
Cancelled	(0.3)	36.57		
Exercised	(0.7)	14.47		
Expired	(0.3)	24.84		
Balance as of December 31, 2016	2.4	$ 29.20	1.6	$ 9.9
As of December 31, 2016:				
Vested and expected-to-vest options	2.4	$ 29.20	1.6	$ 9.9
Exercisable options	2.3	$ 29.95	1.3	$ 8.2

The aggregate intrinsic value represents the difference between the Company’s closing stock price on the last trading day of the period, which was $28.26 per share as of December 30, 2016 and the exercise price of the applicable options multiplied by the number of related options. The pre-tax intrinsic value of options exercised, representing the difference between the fair market value of the Company’s common stock on the date of the exercise and the exercise price of each option, was $7.1 million , $27.5 million , and $33.4 million for 2016 , 2015 , and 2014 , respectively. Total fair value of options vested during 2016 , 2015 , and 2014 was $3.9 million , $7.0 million , and $20.8 million , respectively.

The following table summarizes additional information regarding outstanding and exercisable options as of December 31, 2016 :

	Options Outstanding			Options Exercisable	
Range of Exercise Price (In dollars)	Number Outstanding (In millions)	Weighted Average Remaining Contractual Life (In years)	Weighted Average Exercise Price (In dollars)	Number Exercisable (In millions)	Weighted Average Exercise Price (In dollars)
$0.03 - $18.45	0.4	5.4	$ 4.60	0.3	$ 4.05
$19.73 - $27.44	0.3	0.9	25.58	0.3	25.58
$29.33 - $29.33	—	1.5	29.33	—	29.33
$29.89 - $29.89	0.6	0.2	29.89	0.6	29.89
$30.01 - $31.94	0.2	0.9	30.60	0.2	30.60
$34.73 - $34.73	0.1	0.9	34.73	0.1	34.73
$36.49 - $36.49	—	1.0	36.49	—	36.49
$38.93 - $38.93	0.1	1.4	38.93	0.1	38.93
$40.26 - $40.26	0.5	1.2	40.26	0.5	40.26
$44.00	0.2	1.1	44.00	0.2	44.00
$0.03 - $44.00	2.4	1.6	$ 29.20	2.3	$ 29.95

Restricted Stock Unit, Restricted Stock Award, and Performance Share Award Activities

RSUs and RSAs generally vest over a period of three to four years from the date of grant and PSAs generally vest over a period of two to three years provided that certain annual performance targets and other vesting criteria are met. Until vested, RSUs and PSAs do not have the voting and dividend participation rights of common stock and the shares underlying the awards are not considered issued and outstanding.

Juniper Networks, Inc.
Notes to Consolidated Financial Statements (Continued)

The following table summarizes the Company's RSU, RSA, and PSA activity and related information as of and for the three years ended December 31, 2016 (in millions, except per share amounts and years):

	Outstanding RSUs, RSAs, and PSAs			
	Number of Shares	Weighted Average Grant-Date Fair Value per Share	Weighted Average Remaining Contractual Term (In Years)	Aggregate Intrinsic Value
Balance as of December 31, 2013	25.4	$ 23.44	1.1	$ 573.5
RSUs granted [1][4]	10.0	22.52		
RSUs assumed [2]	0.4	22.66		
RSAs assumed [2]	0.9	22.66		
PSAs granted [3][4]	1.4	24.25		
PSAs assumed [2]	0.2	22.66		
RSUs vested [5]	(7.3)	22.98		
RSAs vested [5]	(1.4)	19.59		
PSAs vested [5]	(1.1)	36.19		
RSUs canceled	(4.0)	21.63		
PSAs canceled	(3.2)	30.43		
Balance as of December 31, 2014	21.3	$ 22.05	1.1	$ 475.0
RSUs granted [1][4]	8.9	23.41		
PSAs granted [4][6]	1.0	23.76		
RSUs vested [5]	(7.2)	22.58		
RSAs vested [5]	(1.8)	20.13		
PSAs vested [5]	(0.3)	22.52		
RSUs canceled	(2.3)	22.18		
PSAs canceled	(1.0)	22.27		
Balance at December 31, 2015	18.6	$ 22.71	1.1	$ 514.1
RSUs granted [1][4]	8.1	24.75		
RSUs assumed in acquisitions [8]	0.3	24.50		
RSAs assumed in acquisitions [8]	0.7	25.51		
PSAs granted [4][7]	1.2	25.39		
PSAs assumed in acquisitions [8]	2.6	23.83		
RSUs vested [5]	(6.7)	22.55		
RSAs vested [5]	(0.9)	20.64		
PSAs vested [5]	(0.7)	21.83		
RSUs canceled	(1.6)	23.20		
PSAs canceled	(0.7)	22.71		
Balance at December 31, 2016	20.9	$ 24.05	1.1	$ 590.6
As of December 31, 2016				
Vested and expected-to-vest RSUs, RSAs, and PSAs	17.9	$ 24.06	1.0	$ 505.3

(1) Includes service-based and market-based RSUs granted under the 2006 Plan and 2015 Plan according to their terms.

(2) RSUs, RSAs, and PSAs assumed in connection with the acquisition of WANDL.

(3) The number of shares subject to PSAs granted represents the aggregate maximum number of shares that may be issued pursuant to the award over its full term. The aggregate number of shares subject to these PSAs that would be issued if performance goals determined by the Compensation Committee (or an authorized subcommittee) are achieved at target is 0.7 million shares. Depending on achievement of such performance goals, the range of shares that could be issued under these awards is 0 to 1.4 million shares.

(4) On February 20, 2014, the Company announced its intention to initiate a quarterly cash dividend of $0.10 per share of common stock in the third quarter of 2014. As a result of the Company's announcement, the grant date fair value of RSUs and PSAs granted after the announcement date were reduced by the present value of the dividends expected to be paid on the underlying shares of common stock during the requisite and derived service period as these awards are not entitled to receive dividends until vested.

(5) Total fair value of RSUs, RSAs, and PSAs vested during 2016 , 2015 , and 2014 was $185.7 million , $202.7 million , and $238.5 million , respectively.

(6) The number of shares subject to PSAs granted represents the aggregate maximum number of shares that may be issued pursuant to the award over its full term. The aggregate number of shares subject to these PSAs that would be issued if performance goals determined by the Compensation Committee (or an authorized subcommittee) are achieved at target is 0.7 million shares. Depending on achievement of such performance goals, the range of shares that could be issued under these awards is 0 to 1.0 million shares.

(7) The number of shares subject to PSAs granted represents the aggregate maximum number of shares that may be issued pursuant to the award over its full term. The aggregate number of shares subject to these PSAs that would be issued if performance goals determined by the Compensation Committee are achieved at target is 0.9 million shares. Depending on achievement of such performance goals, the range of shares that could be issued under these awards is 0 to 1.2 million shares.

(8) RSUs, RSAs, and PSAs assumed in connection with the acquisition of BTI, Aurrion and AppFormix.

Shares Available for Grant

The following table presents the stock activity and the total number of shares available for grant under the 2015 Plan:

	Number of Shares
Balance as of December 31, 2015	36.7
RSUs and PSAs granted (1)	(19.6)
RSUs and PSAs canceled (1)(2)	4.8
Options canceled (2)	0.3
Options expired (2)	0.3
Balance as of December 31, 2016	22.5

(1) RSUs and PSAs with a per share or unit purchase price lower than 100% of the fair market value of the Company's common stock on the day of the grant under the 2015 Plan are counted against shares authorized under the plan as two and one-tenth shares of common stock for each share subject to such award. The number of shares subject to PSAs granted represents the maximum number of shares that may be issued pursuant to the award over its full term.

(2) Cancelled or expired options under the 2006 Plan and the 1996 Plan and cancelled RSUs and PSAs under the 2006 Plan are no longer available for future grant under such plans; however, the number of shares available for grant under the 2015 Plan will be increased by the amount of such cancelled or expired options, RSUs or PSAs, as applicable, up to a maximum of 29.0 million additional shares of common stock, pursuant to the terms of the 2015 Plan.

Employee Stock Purchase Plan

The Company's ESPP is implemented in a series of offering periods, each six months in duration, or a shorter period as determined by the Board. Employees purchased approximately 2.7 million , 2.7 million , and 2.9 million shares of common stock through the ESPP at an average exercise price of $19.66 , $19.25 , and $19.30 per share during 2016 , 2015 , and 2014 , respectively.

Valuation Assumptions

The weighted-average assumptions used and the resulting estimates of fair value for stock options, ESPP, and market-based RSUs were as follows:

	Years Ended December 31,		
	2016	2015	2014
ESPP:			
Volatility	32%	29%	30%
Risk-free interest rate	0.4%	0.1%	0.1%
Expected life (years)	0.5	0.5	0.5
Dividend yield	1.8%	1.7%	0% - 1.8%
Weighted-average fair value per share	$5.56	$5.63	$5.72
Market-based RSUs			
Volatility	36%	34%	36%
Risk-free interest rate	1.2%	1.4%	1.6%
Dividend yield	1.7%	1.8%	0% - 2.0%
Weighted-average fair value per share	$14.71	$14.97	$16.89
Stock Options Assumed			
Volatility	31%	—	—
Risk-free interest rate	0.7%	—	—
Expected life (years)	1.3	—	—
Dividend yield	1.7%	—	—
Weighted-average fair value per share	$16.17	—	—

Share-Based Compensation Expense

Share-based compensation expense associated with stock options, RSUs, RSAs, PSAs, and ESPP was recorded in the following cost and expense categories in the Company's Consolidated Statements of Operations (in millions):

	Years Ended December 31,		
	2016	2015	2014
Cost of revenues - Product	$ 6.4	$ 5.6	$ 5.0
Cost of revenues - Service	15.3	13.8	14.2
Research and development	126.5	125.4	134.5
Sales and marketing	55.2	45.6	60.2
General and administrative	23.4	26.9	26.1
Total	$ 226.8	$ 217.3	$ 240.0

The following table summarizes share-based compensation expense by award type (in millions):

	Years Ended December 31,		
	2016	2015	2014
Stock options	$ 4.4	$ 6.6	$ 14.9
RSUs, RSAs, and PSAs	206.9	197.3	209.7
ESPP	15.5	13.4	15.4
Total	$ 226.8	$ 217.3	$ 240.0

The following table presents unrecognized compensation cost, adjusted for estimated forfeitures, recognized over a weighted-average period related to unvested stock options, RSUs, RSAs, and PSAs as of December 31, 2016 (in millions, except years):

	Unrecognized Compensation Cost	Weighted Average Period (In Years)
Stock options	$ 1.2	2.3
RSUs, RSAs, and PSAs	$ 269.3	1.6

401(k) Plan

The Company maintains a savings and retirement plan qualified under Section 401(k) of the Internal Revenue Code of 1986, as amended (the "IRC"). Employees meeting the eligibility requirements, as defined under the IRC, may contribute up to the statutory limits each year. The Company currently matches 30% of all eligible employee contributions which vest immediately. The Company's matching contributions to the plan totaled $20.7 million , $19.6 million , and $20.2 million during the years ended December 31, 2016 , 2015 , and 2014 , respectively.

Deferred Compensation Plan

The Company's non-qualified deferred compensation ("NQDC") plan is an unfunded and unsecured deferred compensation arrangement. Under the NQDC plan, officers and other senior employees may elect to defer a portion of their compensation and contribute such amounts to one or more investment funds. The NQDC plan assets are included within restricted cash and investments and offsetting obligations are included within other long-term liabilities in the Consolidated Balance Sheets as of December 31, 2016. The NQDC plan assets are included within short-term investments and offsetting obligations are included within accrued compensation in the Consolidated Balance Sheets as of December 31, 2015. The investments are considered trading securities and are reported at fair value. The realized and unrealized holding gains and losses related to these investments are recorded in other (expense) income, net, and the offsetting compensation expense is recorded as operating expenses in the Consolidated Statements of Operations. The deferred compensation liability under the NQDC plan was approximately $21.0 million and $17.7 million as of December 31, 2016 and December 31, 2015 , respectively.

Note 13. Segments

The Company conducts business globally and is managed, operated and organized by major functional departments that operate on a consolidated basis. Each major functional leader reports directly to the Company's chief executive officer, who is the chief operating decision maker ("CODM"). The Company's CODM views the business, allocates resources and assesses the performance of the Company primarily based on consolidated financial information for the entire business, accompanied by disaggregated information about net revenues by product and service and geographic region as presented below. As a result, the Company operates in one reportable segment.

The following table presents net revenues by product and service (in millions):

	Years Ended December 31,		
	2016	2015	2014
Routing	$ 2,352.9	$ 2,359.2	$ 2,223.9
Switching	858.0	768.3	721.2
Security	318.0	435.6	463.6
Total product	3,528.9	3,563.1	3,408.7
Total service	1,461.2	1,294.7	1,218.4
Total	$ 4,990.1	$ 4,857.8	$ 4,627.1

The Company attributes revenues to geographic region based on the customer's shipping address. The following table presents net revenues by geographic region (in millions):

	Years Ended December 31,		
	2016	2015	2014
Americas:			
United States	$ 2,737.0	$ 2,568.6	$ 2,410.6
Other	231.8	223.6	219.7
Total Americas	2,968.8	2,792.2	2,630.3
Europe, Middle East, and Africa	1,238.1	1,320.3	1,263.3
Asia Pacific	783.2	745.3	733.5
Total	$ 4,990.1	$ 4,857.8	$ 4,627.1

During the years ended December 31, 2016 , 2015 , and 2014 , no customer accounted for greater than 10% of the Company's net revenues.

The following table presents geographic information for property and equipment, net and purchased intangible assets, net (in millions):

	As of December 31,	
	2016	2015
United States	$ 1,046.6	$ 925.5
International	147.4	129.4
Property and equipment, net and purchased intangible assets, net	$ 1,194.0	$ 1,054.9

The Company tracks assets by physical location. The majority of the Company's assets, excluding cash and cash equivalents and investments, as of December 31, 2016 and December 31, 2015 , were attributable to U.S. operations.

Note 14. Income Taxes

The components of pretax income (loss) and noncontrolling interest are summarized as follows (in millions):

	Years Ended December 31,		
	2016	2015	2014
Domestic	$ 466.2	$ 456.3	$ (509.7)
Foreign	361.2	395.9	423.4
Total pretax income (loss)	$ 827.4	$ 852.2	$ (86.3)

The provision for income taxes is summarized as follows (in millions):

	Years Ended December 31,		
	2016	2015	2014
Current provision:			
Federal	$ 121.4	$ 181.4	$ 180.1
States	10.3	15.9	15.2
Foreign	46.0	43.3	33.7
Total current provision	177.7	240.6	229.0
Deferred provision (benefit):			
Federal	57.2	(16.7)	17.3
States	4.3	(0.4)	1.2
Foreign	(4.5)	(5.0)	0.5
Total deferred provision (benefit)	57.0	(22.1)	19.0
Total provision for income taxes	$ 234.7	$ 218.5	$ 248.0

The provision for income taxes differs from the amount computed by applying the federal statutory rate to pretax income (loss) as follows (in millions):

	Years Ended December 31,		
	2016	2015	2014
Expected provision (benefit) at 35% rate	$ 289.6	$ 298.3	$ (30.2)
State taxes, net of federal benefit	8.9	8.9	9.5
Foreign income at different tax rates	(53.4)	(68.9)	(90.2)
R&D tax credits	(16.8)	(12.7)	(17.1)
Share-based compensation	10.5	13.2	25.3
Non-deductible goodwill impairment	—	—	297.5
Gain on sale of Junos Pulse	—	—	75.6
Release of valuation allowance	(0.7)	—	(22.8)
Domestic production activities	(9.5)	(15.1)	(6.8)
Non-deductible compensation	2.4	3.7	3.2
Cost sharing adjustment (*)	—	(13.2)	—
Other	3.7	4.3	4.0
Total provision for income taxes	$ 234.7	$ 218.5	$ 248.0

(*) Represents cumulative impact through fiscal year 2014 for the change in treatment of share-based compensation as a result of the U.S. Tax Court decision in Altera Corp. v. Commissioner, 145 T.C. No. 3 (2015).

In 2015, the United States Tax Court (the "Court") issued an opinion favorable to Altera Corporation ("Altera") with respect to Altera's litigation with the Internal Revenue Service ("IRS"). The litigation relates to the treatment of share-based compensation expense in an inter-company cost-sharing arrangement with Altera's foreign subsidiary. In its opinion, the Court accepted Altera's position of excluding share-based compensation from its inter-company cost-sharing arrangement. As a result, the Company has reversed the inclusion of share-based compensation in its cost-sharing arrangement as a cumulative adjustment in the quarter ended September 30, 2015. Because this change to cost sharing increases the Company's cumulative foreign earnings, approximately $70.3 million of the gross income tax benefit associated with this change has been offset by an increase in income tax expense accrued upon the company's foreign earnings. In 2016, the IRS filed an appeal to the Altera decision rendered by the Court, which appeal is currently pending. The Company will continue to monitor ongoing developments and potential impacts to its financial statements.

Juniper Networks, Inc.
Notes to Consolidated Financial Statements (Continued)

Deferred income taxes reflect the net tax effects of tax carry-forward items and temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's long-term deferred tax assets and deferred tax liabilities are as follows (in millions):

	As of December 31,	
	2016	2015
Deferred tax assets:		
Net operating loss carry-forwards	$ 23.8	$ 1.0
Research and other credit carry-forwards	137.5	128.7
Deferred revenue	125.6	109.3
Stock-based compensation	52.3	49.1
Cost sharing adjustment	69.9	70.1
Reserves and accruals not currently deductible	141.3	173.9
Other	12.8	19.2
Total deferred tax assets	563.2	551.3
Valuation allowance	(154.4)	(146.2)
Deferred tax assets, net of valuation allowance	408.8	405.1
Deferred tax liabilities:		
Property and equipment basis differences	(58.1)	(44.1)
Purchased intangibles	(28.8)	(3.1)
Unremitted foreign earnings	(311.4)	(290)
Deferred compensation and other	(11.0)	(12.0)
Total deferred tax liabilities	(409.3)	(349.2)
Net deferred tax (liabilities) assets	$ (0.5)	$ 55.9

As of December 31, 2016 and 2015 , the Company had a valuation allowance on its U.S. domestic deferred tax assets of approximately $154.4 million and $146.2 million , respectively. The balance at December 31, 2016 consisted of approximately $134.8 million and $11.9 million against the Company's California and Massachusetts deferred tax assets, respectively, which the Company believes are not more likely than not to be utilized in future years. The remaining deferred tax assets on which the Company recorded a valuation allowance of approximately $7.7 million related to losses that are capital in nature and may carry forward to offset future capital gains only. The valuation allowance increased in 2016 and 2015 by $8.2 million and $1.7 million , respectively, primarily related to the change in California and Massachusetts R&D tax credits.

As of December 31, 2016 , the Company had federal and California net operating loss carry-forwards of approximately $55.9 million and $111.4 million , respectively. The California net operating loss carry-forwards of $111.4 million are expected to expire unused. The Company also had federal and California tax credit carry-forwards of approximately $2.7 million and $246.5 million , respectively. Approximately $20.8 million of the benefit from the California tax credit carry-forwards will be credited to additional paid-in capital when realized on the Company's income tax returns. Unused net operating loss carry-forwards will expire at various dates beginning in the year 2017. The California tax credit carry-forwards will carry forward indefinitely.

The Company provides U.S. income taxes on the earnings of foreign subsidiaries unless the subsidiaries' earnings are considered indefinitely reinvested outside of the United States. The Company has made no provision for U.S. income taxes on approximately $2.4 billion of cumulative undistributed earnings of certain foreign subsidiaries through December 31, 2016 . These earnings are considered indefinitely invested in operations outside of the U.S., as the Company intends to utilize these amounts to fund future expansion of its international operations. If these earnings were distributed to the United States in the form of dividends or otherwise, or if the shares of the relevant foreign subsidiaries were sold or otherwise transferred, the Company would be subject to additional U.S. income taxes (subject to an adjustment for foreign tax credits) and foreign withholding taxes. Determination of the amount of unrecognized deferred income tax liability related to these earnings is not practicable.

As of December 31, 2016 , 2015 , and 2014 , the total amount of gross unrecognized tax benefits was $223.1 million , $216.1 million , and $199.2 million , respectively. As of December 31, 2016 , approximately $194.7 million of the $223.1 million gross unrecognized tax benefits, if recognized, would affect the effective tax rate.

A reconciliation of the beginning and ending amount of the Company's total gross unrecognized tax benefits was as follows (in millions):

	Years Ended December 31,		
	2016	2015	2014
Balance at beginning of year	$ 216.1	$ 199.2	$ 137.6
Tax positions related to current year:			
Additions	27.2	18.1	62.5
Tax positions related to prior years:			
Additions	1.0	5.3	0.6
Reductions	(4.1)	(2.9)	—
Settlements	(14.3)	—	—
Lapses in statutes of limitations	(2.8)	(3.6)	(1.5)
Balance at end of year	$ 223.1	$ 216.1	$ 199.2

As of December 31, 2016 , 2015 , and 2014 , the Company had accrued interest and penalties related to unrecognized tax benefits of $31.3 million , $24.1 million , and $22.3 million , respectively, to other long-term liabilities in the Consolidated Balance Sheets. The Company recognized an expense for net interest and penalties of $6.0 million , $2.5 million , and $2.8 million in its Consolidated Statements of Operations during the years ended December 31, 2016 , 2015 , and 2014 , respectively.

The Company engages in continuous discussions and negotiations with tax authorities regarding tax matters in various jurisdictions. There is a greater than remote likelihood that the balance of the gross unrecognized tax benefits will decrease by approximately $3.7 million within the next twelve months due to lapses of applicable statutes of limitation and the completion of tax review cycles in various tax jurisdictions.

The Company conducts business globally and, as a result, Juniper Networks or one or more of its subsidiaries files income tax returns in the U.S. federal jurisdiction and various state and foreign jurisdictions. In the normal course of business the Company is subject to examination by taxing authorities throughout the world, including such major jurisdictions as the Netherlands, U.K., France, Germany, Japan, China, Australia, India, and the U.S. With few exceptions, the Company is no longer subject to U.S. federal, state and local, and non-U.S. income tax examinations for years before 2007.

The Company is currently under examination by the IRS for the 2007 through 2009 tax years. In March 2016, the IRS concluded its field audit and issued a final assessment. The Company is appealing this assessment. The Company regularly assesses the likelihood of an adverse outcome resulting from such examinations. As of December 31, 2016, the Company believes the resolution of the audits is unlikely to have a material effect on its consolidated financial condition or results of operations.

In June 2016, the California Franchise Tax Board (“FTB”) concluded its audit of the 2004 through 2006 tax years. As a result of the closure of the California FTB audit, the gross unrecognized tax benefits was reduced by approximately $14.3 million , which did not affect the Company’s effective tax rate. The Company is no longer subject to an audit of its California income taxes through the 2006 tax year.

The Company is also subject to separate ongoing examinations by the UK tax authorities for the 2013 through 2014 tax years, the French tax authorities for the 2014 through 2015 tax years, the German tax authorities for the 2010 through 2013 tax years, the Australia tax authorities for the 2016 tax year, and the India tax authorities for the 2003 tax year, the 2004 through 2008 tax years, and the 2009 through 2012 tax years. As of December 31, 2016, the Company is not aware of any other examinations by tax authorities in any other major jurisdictions in which it files income tax returns.

In 2008, the Company received a proposed adjustment from the India tax authorities related to the 2004 tax year. In 2009, the India tax authorities commenced a separate investigation of the Company's 2004 through 2008 tax returns and are disputing the Company's determination of taxable income due to the cost basis of certain fixed assets. The Company accrued $4.6 million in penalties and interest in 2009 related to this matter. The Company understands that in accordance with the administrative and judicial process in India, the Company may be required to make payments that are substantially higher than the amount accrued in order to ultimately settle this issue. The Company strongly believes that any assessment it may receive in excess of the amount accrued would be inconsistent with applicable India tax laws and intends to defend this position vigorously.

The Company is pursuing all available administrative remedies relative to these matters. The Company believes that it has adequately provided for any reasonably foreseeable outcomes related to these proposed adjustments and the ultimate resolution of these matters is unlikely to have a material effect on its consolidated financial condition or results of operations; however, there is still a possibility that an adverse outcome of these matters could have a material effect on its consolidated financial condition and results of operations.

Note 15. Net Income per Share

The Company computed basic and diluted net income (loss) per share as follows (in millions, except per share amounts):

	Years Ended December 31,		
	2016	2015	2014
Numerator:			
Net income (loss)	$ 592.7	$ 633.7	$ (334.3)
Denominator:			
Weighted-average shares used to compute basic net income (loss) per share	381.7	390.6	457.4
Dilutive effect of employee stock awards	6.1	8.8	—
Weighted-average shares used to compute diluted net income (loss) per share	387.8	399.4	457.4
Net income (loss) per share:			
Basic	$ 1.55	$ 1.62	$ (0.73)
Diluted	$ 1.53	$ 1.59	$ (0.73)
Anti-dilutive:			
Potential anti-dilutive shares	2.5	3.4	20.8

Basic net income per share is computed using net income (loss) available to common stockholders and the weighted-average number of common shares outstanding for the period. Diluted net income per share is computed using net income (loss) available to common stockholders and the weighted-average number of common shares outstanding plus potentially dilutive common shares outstanding during the period. Dilutive potential common shares consist of common shares issuable upon exercise of stock options, issuances of ESPP, and vesting of RSUs, RSAs, and PSAs. The Company includes the common shares underlying PSAs in the calculation of diluted net income per share only when they become contingently issuable. Anti-dilutive shares are excluded from the computation of diluted net income per share.

Note 16. Commitments and Contingencies

Commitments

Operating and Other Lease Arrangements

The following table summarizes the Company's future minimum payments under non-cancelable operating and other lease arrangements for each of the next five years and thereafter as of December 31, 2016 (in millions):

Years Ending December 31,	Operating Leases	Other Lease Arrangement
2017	$ 33.1	$ 3.5
2018	26.3	9.8
2019	17.2	13.2
2020	12.6	13.5
2021	8.4	13.8
Thereafter	17.3	61.7
Total	$ 114.9	$ 115.5

Operating Leases

The Company leases its facilities and certain equipment under non-cancelable operating leases that expire at various dates through March 2026 . Certain leases require the Company to pay variable costs such as taxes, maintenance, and insurance and include renewal options and escalation clauses. Rent expense for 2016 , 2015 , and 2014 was approximately $37.9 million , $43.2 million , and $46.0 million , respectively.

Other Lease Arrangement

On July 10, 2015, the Company entered into a lease arrangement through March 2026 in which the Company has the option to extend the term of the lease for up to an additional twenty years in increments of either five years or ten years, for approximately 63,000 square feet of space in the State of Washington. As of December 31, 2016 , the total payment under the lease agreement over the ten -year term is approximately $115.5 million of which $61.6 million is included in other-long term liabilities on the Consolidated Balance Sheets. The lease agreement provides the Company with a tenant allowance of $6.0 million to be used for tenant leasehold improvements. Any unused tenant allowance may be applied as a credit to the rent payment. During the year ended December 31, 2016 , the Company received reimbursement for tenant allowances of $4.4 million . The space is used, among other things, to consolidate certain of the Company's laboratory operations currently located in Sunnyvale, California.

Due to certain contractual obligations during the construction period, the Company was deemed the owner of the property during that period. As of December 31, 2015, the Company capitalized the construction costs by recording a build-to-suit lease asset under construction in progress of $45.6 million , which is a component of property and equipment, net, and a corresponding build-to-suit financing liability, which is a component of other long-term liabilities, in the Consolidated Balance Sheets. Through the date of construction completion, the Company recorded additional construction costs and a corresponding build-to-suit financing liability of $15.3 million .

Upon the completion of construction in April 2016, the Company assessed whether the arrangement qualified under the sale-leaseback accounting guidance. The Company concluded that it had a certain form of continuing economic involvement in the facility, which precluded sale-leaseback accounting treatment. As a result, a total of $60.9 million of costs capitalized were placed in service and are being depreciated over the lease term.

Purchase Commitments with Contract Manufacturers and Suppliers

In order to reduce manufacturing lead times and in the interest of having access to adequate component supply, the Company enters into agreements with contract manufacturers and certain suppliers to procure inventory based on the Company's requirements. A significant portion of the Company's purchase commitments arising from these agreements consists of firm and non-cancelable commitments. These purchase commitments totaled $686.2 million as of December 31, 2016 .

The Company establishes a liability in connection with purchase commitments related to quantities in excess of its demand forecasts or obsolete materials charges for components purchased by the contract manufacturers based on the Company's demand forecast or customer orders. As of December 31, 2016 , the Company had accrued $14.0 million based on its estimate of such charges.

Clock-Signal, Supplier Component Remediation Liability

As of December 31, 2016, the Company recorded approximately $10.8 million in other accrued liabilities on the Consolidated Balance Sheets for the expected remediation costs for certain products containing a defect in a clock-signal component manufactured by a third-party supplier. The Company has been advised by the component supplier that components may begin to fail after the product has been in operation for 18 months . The Company is in the process of working with its customers and the component supplier to implement a remediation.

Debt and Interest Payment on Debt

As of December 31, 2016 , the Company held long-term debt consisting of the Notes with a carrying value of $2,133.7 million . See Note 10, *Debt and Financing* , for further discussion of the Company's long-term debt and expected future principal maturities.

Other Contractual Obligations

As of December 31, 2016 , other contractual obligations primarily consisted of $46.2 million of agreements that include firm and non-cancelable terms to transfer funds in the future for fixed or minimum amounts or quantities to be purchased at fixed or minimum prices.

Tax Liabilities

As of December 31, 2016 , the Company had $209.2 million included in long-term income taxes payable in the Consolidated Balance Sheets for unrecognized tax positions. At this time, the Company is unable to make a reasonably reliable estimate of the timing of payments related to this amount due to uncertainties in the timing of tax audit outcomes.

Guarantees

The Company enters into agreements with customers that contain indemnification provisions relating to potential situations where claims could be alleged that the Company's products solely, or in combination with other third party products, infringe the intellectual property rights of a third-party. As of December 31, 2016 , the Company recorded $28.9 million for such indemnification obligations in other accrued liabilities and other long-term liabilities on the Consolidated Balance Sheets. The Company also has financial guarantees consisting of guarantees of product and service performance, standby letters of credit for certain lease facilities and insurance programs, and guarantees related to third-party customer-financing arrangements of $6.0 million and $15.8 million , as of December 31, 2016 and December 31, 2015 , respectively.

Legal Proceedings

Investigations

The U.S. Securities and Exchange Commission ("SEC") and the U.S. Department of Justice ("DOJ") are conducting investigations into possible violations by the Company of the U.S. Foreign Corrupt Practices Act ("FCPA"). The Company is cooperating with these agencies regarding these matters. The Company's Audit Committee, with the assistance of independent advisors, has been investigating and conducting a thorough review of possible violations of the FCPA, and has made recommendations for remedial measures, including employee disciplinary actions in foreign jurisdictions, which the Company has implemented and continues to implement. The Company is unable to predict the duration, scope or outcome of the SEC and DOJ investigations, but believes that an adverse outcome is reasonably possible. However, the Company is not able to estimate a reasonable range of possible loss. The SEC and/or DOJ could take action against the Company or the Company could agree to settle. In such event, the Company could be required to pay substantial fines and sanctions and/or implement additional remedial measures; in addition, it may be determined that the Company violated the FCPA.

Other Litigations and Investigations

In addition to the investigations discussed above, the Company is involved in other investigations, disputes, litigations, and legal proceedings. The Company intends to aggressively defend itself in these matters, and while there can be no assurances and the outcome of these matters is currently not determinable, the Company currently believes that none of these existing claims or proceedings are likely to have a material adverse effect on its financial position. Notwithstanding the foregoing, there are many uncertainties associated with any litigation and these matters or other third-party claims against the Company may cause the Company to incur costly litigation and/or substantial settlement charges. In addition, the resolution of any intellectual property litigation may require the Company to make royalty payments, which could adversely affect gross margins in future periods. If any of those events were to occur, the Company's business, financial condition, results of operations, and cash flows could be adversely affected. The actual liability in any such matters may be materially different from the Company's estimates, if any, which could result in the need to adjust the liability and record additional expenses.

The Company records an accrual for loss contingencies for legal proceedings when it believes that an unfavorable outcome is both (a) probable and (b) the amount or range of any possible loss is reasonably estimable. The Company has not recorded any accrual for loss contingencies associated with such legal proceedings or the investigations discussed above.

Note 17. Selected Quarterly Financial Data (Unaudited)

The tables below set forth selected unaudited financial data for each quarter of the two years ended December 31, 2016 (in millions, except per share amounts):

Year Ended December 31, 2016	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Net revenues	$ 1,097.9	$ 1,221.3	$ 1,285.3	$ 1,385.6
Gross margin [1]	690.9	756.4	799.5	857.7
Income before income taxes	126.5	192.2	236.6	272.1
Net income	$ 91.4	$ 140.0	$ 172.4	$ 188.9
Net income per share: [2]				
Basic	$ 0.24	$ 0.37	$ 0.45	$ 0.50
Diluted	$ 0.23	$ 0.36	$ 0.45	$ 0.49

Year Ended December 31, 2015	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Net revenues	$ 1,067.4	$ 1,222.2	$ 1,248.6	$ 1,319.6
Gross margin	657.3	781.5	797.4	842.4
Income before income taxes	116.0	226.0	249.6	260.6
Net income	$ 80.2	$ 158.0	$ 197.7	$ 197.8
Net income per share: [2]				
Basic	$ 0.20	$ 0.41	$ 0.52	$ 0.52
Diluted	$ 0.19	$ 0.40	$ 0.51	$ 0.51

(1) Gross margin for the fourth quarter of 2016 includes a $10.8 million charge for expected remediation costs for certain products containing a defect in a clock-signal component manufactured by a third-party supplier.

(2) Net income per share is computed independently. Therefore, the sum of the quarterly net income per share may not equal the total computed for the year or any cumulative interim period.

Note 18. Subsequent Events

Dividend Declaration

On January 26, 2017, the Company announced that it had declared a quarterly cash dividend of $0.10 per share of common stock payable on March 22, 2017 to stockholders of record as of the close of business on March 1, 2017.

Stock Repurchase Activities

In February 2017, the Board approved an incremental $500.0 million stock repurchase authorization under the Stock Repurchase Program.

Subsequent to December 31, 2016, through the filing of this Annual Report on Form 10-K, the Company repurchased 4.5 million shares of its common stock, for an aggregate purchase price of $125.0 million at an average price of $28.03 per share, under the Stock Repurchase Program. Repurchases of 3.7 million shares were settled prior to the filing of this Report and the remaining shares will be settled after the filing date. Following the February 2017 increase to the Stock Repurchase Program, the Company has an aggregate of $594.7 million in authorized funds remaining as of the filing date. Purchases under the Company's stock repurchase program are subject to review of the circumstances in place at the time and will be made from time to time as permitted by securities law and other legal requirements. This program may be discontinued at any time.

ITEM 9. *Changes in and Disagreements with Accountants on Accounting and Financial Disclosure*

Not applicable.

Item 9A. *Controls and Procedures*

(a) *Management's Annual Report on Internal Control Over Financial Reporting:* See "Management's Annual Report on Internal Control over Financial Reporting" under Item 8 of Part II of this Report, which is incorporated herein by reference.

(b) For the “Report of Independent Registered Public Accounting Firm,” see the report under Item 8 of Part II of this Report, which is incorporated herein by reference.

Evaluation of Disclosure Controls and Procedures

Attached, as exhibits to this report are certifications of our principal executive officer and principal financial officer, which are required in accordance with Rule 13a-14 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). This “Controls and Procedures” section includes information concerning the controls and related evaluations referred to in the certifications and it should be read in conjunction with the certifications for a more complete understanding of the topics presented.

We carried out an evaluation, under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act. Based upon that evaluation, our principal executive officer and principal financial officer concluded that, as of the end of the period covered in this report, our disclosure controls and procedures were effective to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in Securities and Exchange Commission rules and forms and is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Controls Over Financial Reporting

During the first quarter of 2016, we completed the final phase of our multi-phase conversion to a new enterprise resource planning, or ERP, system by implementing the Customer Relationship Management, or CRM, and Financial Accounting & Reporting modules. As a result of this implementation, in the first quarter of 2016, internal controls were modified to align with the modified business processes and new system-based controls were implemented to adapt to the new ERP system functionalities. Certain interim controls put into operation in the first quarter of 2016 were phased out in part during the third and fourth quarters of 2016 as our new ERP system functionalities stabilized.

Except as described above, there were no changes in our internal control over financial reporting that occurred during the fourth quarter of 2016 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. ***Other Information***

Not applicable.

PART III

ITEM 10. ***Directors, Executive Officers and Corporate Governance***

For information with respect to our Executive Officers, see Part I, Item 1 of this Annual Report on Form 10-K, under “Executive Officers of the Registrant.”

Information concerning our directors, including director nominations, and our audit committee and audit committee financial expert, appearing in our definitive Proxy Statement to be filed with the SEC in connection with the 2017 Annual Meeting of Stockholders (the “Proxy Statement”) under “Corporate Governance Principles and Board Matters,” “Director Compensation” and “Election of Directors” is incorporated herein by reference.

Information concerning Section 16(a) beneficial ownership reporting compliance appearing in the Proxy Statement under “Section 16(a) Beneficial Ownership Reporting Compliance,” is incorporated herein by reference.

Information concerning our Worldwide Code of Business Conduct that applies to our principal executive officer and all other employees appearing in the Proxy Statement under “Corporate Governance Principles and Board Matters,” is incorporated herein by reference.

ITEM 11. ***Executive Compensation***

Information concerning executive compensation appearing in the Proxy Statement under “Executive Compensation” is incorporated herein by reference.

Information concerning compensation committee interlocks and insider participation appearing in the Proxy Statement under “Compensation Committee Interlocks and Insider Participation” is incorporated herein by reference.

Information concerning the compensation committee report appearing in the Proxy Statement under “Compensation Committee Report” is incorporated herein by reference.

ITEM 12. ***Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters***

Information concerning the security ownership of certain beneficial owners and management appearing in the Proxy Statement, under “Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters,” is incorporated herein by reference.

Information concerning our equity compensation plan information appearing in the Proxy Statement, under “Equity Compensation Plan Information,” is incorporated herein by reference.

ITEM 13. ***Certain Relationships and Related Transactions, and Director Independence***

The information appearing in the Proxy Statement under the heading “Certain Relationships and Related Transactions” is incorporated herein by reference.

The information appearing in the Proxy Statement under the heading “Board Independence” is incorporated herein by reference.

ITEM 14. ***Principal Accounting Fees and Services***

Information concerning principal accountant fees and services and the audit committee's pre-approval policies and procedures appearing in the Proxy Statement under the heading “Principal Accountant Fees and Services” is incorporated herein by reference.

PART IV

ITEM 15. ***Exhibits, Financial Statement Schedules***

(a) The following documents are filed as part of this Report:

1. Consolidated Financial Statements

See Index to Consolidated Financial Statements at Item 8 herein.

2. Financial Statement Schedules

The following financial statement schedule is included as part of this Report:

Schedule	Page
Schedule II - Valuation and Qualifying Account	122

All other schedules have been omitted as the required information is not applicable or the information is presented in the Consolidated Financial Statements or notes thereto under Item 8 herein.

3. Exhibits

See Exhibit Index in this Report.

(b) Exhibits

See Exhibit Index in this Report.

(c) None

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Juniper Networks, Inc.

February 24, 2017 By: /s/ Kenneth B. Miller

Kenneth B. Miller
Executive Vice President, Chief Financial Officer
(Duly Authorized Officer and Principal Financial Officer)

February 24, 2017 By: /s/ Terrance F. Spidell

Terrance F. Spidell
Vice President, Corporate Controller and Chief Accounting Officer
(Duly Authorized Officer and Principal Accounting Officer)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Rami Rahim, Brian Martin, and Kenneth Miller, and each of them individually, as his or her attorney-in-fact, each with full power of substitution, for him or her in any and all capacities to sign any and all amendments to this Annual Report on Form 10-K, and to file the same with, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that said attorney-in-fact, or his or her substitute, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Rami Rahim Rami Rahim	Chief Executive Officer and Director (Principal Executive Officer)	February 24, 2017
/s/ Kenneth B. Miller Kenneth B. Miller	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 24, 2017
/s/ Terrance F. Spidell Terrance F. Spidell	Vice President, Corporate Controller and Chief Accounting Officer (Principal Accounting Officer)	February 24, 2017
/s/ Scott Kriens Scott Kriens	Chairman of the Board	February 24, 2017
/s/ Pradeep Sindhu Pradeep Sindhu	Vice Chairman of the Board and Chief Technical Officer	February 24, 2017
/s/ Robert M. Calderoni Robert M. Calderoni	Director	February 24, 2017

Signature	Title	Date
/s/ Rahul Merchant Rahul Merchant	Director	February 24, 2017
/s/ James Dolce James Dolce	Director	February 24, 2017
/s/ Mercedes Johnson Mercedes Johnson	Director	February 24, 2017
/s/ Kevin DeNuccio Kevin DeNuccio	Director	February 24, 2017
/s/ Gary Daichendt Gary Daichendt	Director	February 24, 2017
/s/ William R. Stensrud William R. Stensrud	Director	February 24, 2017

Juniper Networks, Inc.

Schedule II - Valuation and Qualifying Accounts
Years Ended December 31, 2016 , 2015 , and 2014
(In millions)

Allowance for Doubtful Accounts	Balance at Beginning of Year	Charged to (Reversed from) Costs and Expenses	Write-offs, Net of Recoveries	Balance at End of Year
2016	$ 9.3	$ 1.0	$ (2.7)	$ 7.6
2015	$ 4.7	$ 6.5	$ (1.9)	$ 9.3
2014	$ 5.4	$ (0.7)	$ —	$ 4.7

		Additions			
Sales Return Reserve	Balance at Beginning of Year	Charged as a Reduction in Revenues	Charged to Other Accounts	Used	Balance at End of Year
2016	$ 71.2	$ 44.6	$ 89.6	$ (134.0)	$ 71.4
2015	$ 50.2	$ 65.4	$ 92.6	$ (137.0)	$ 71.2
2014	$ 49.0	$ 53.2	$ 80.9	$ (132.9)	$ 50.2

Exhibit Index

Exhibit No.	Exhibit	Incorporated by Reference			
		Filing	Exhibit No.	File No.	File Date
3.1	Restated Certificate of Incorporation of Juniper Networks, Inc.	10-K	3.1	001-34501	2/26/2014
3.2	Amended and Restated Bylaws of Juniper Networks, Inc.	8-K	3.1	001-34501	11/18/2016
4.1	Indenture, dated March 3, 2011, by and between Juniper Networks, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee	8-K	4.1	001-34501	3/4/2011
4.2	First Supplemental Indenture, dated March 3, 2011, by and between Juniper Networks, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee	8-K	4.8	001-34501	3/4/2011
4.3	Second Supplemental Indenture, dated March 4, 2014, by and between Juniper Networks, Inc. and The Bank of New York	8-K	4.1	001-34501	3/4/2014
4.4	Third Supplemental Indenture, dated March 4, 2015, by and between Juniper Networks, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee	8-K	4.1	001-34501	3/10/2015
4.5	Fourth Supplemental Indenture, dated February 26, 2016, by and between Juniper Networks, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee	8-K	4.1	001-34501	2/29/2016
4.6	Fifth Supplemental Indenture, dated February 26, 2016, by and between Juniper Networks, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee	8-K	4.2	001-34501	2/29/2016
4.7	Form of Note for Juniper Networks, Inc.'s 4.600% Senior Notes due 2021	8-K	4.10	001-34501	3/4/2011
4.8	Form of Note for Juniper Networks, Inc.'s 5.950% Senior Notes due 2041	8-K	4.11	001-34501	3/4/2011
4.9	Form of Note for Juniper Networks, Inc.'s 4.500% Senior Notes due 2024	8-K	4.1	001-34501	3/4/2014
4.10	Form of Note for Juniper Networks, Inc.'s 3.300% Senior Notes due 2020	8-K	4.2	001-34501	3/10/2015
4.11	Form of Note for Juniper Networks, Inc.'s 4.350% Senior Notes due 2025	8-K	4.3	001-34501	3/10/2015
4.12	Form of Note for Juniper Networks, Inc.'s 3.125% Senior Notes due 2019	8-K	4.2	001-34501	2/29/2016
10.1	Form of Indemnification Agreement entered into by the Registrant with each of its directors, officers and certain employees++	10-Q	10.1	000-26339	11/14/2003
10.2	Form of Indemnification Agreement entered into by the Registrant with each of its directors, officers and certain employees, approved for use on November 1, 2016*++				
10.3	Juniper Networks, Inc. 2006 Equity Incentive Plan, as amended October 2, 2014++	10-Q	10.9	001-34501	11/10/2014
10.4	Form of Stock Option Agreement for the Juniper Networks, Inc. 2006 Equity Incentive Plan++	8-K	10.2	000-26339	5/24/2006
10.5	Form of Non-Employee Director Stock Option Agreement for the Juniper Networks, Inc. 2006 Equity Incentive Plan++	8-K	10.3	000-26339	5/24/2006
10.6	Form of Notice of Grant and Restricted Stock Unit Agreement for the Juniper Networks, Inc. 2006 Equity Incentive Plan++	10-K	10.20	000-26339	2/29/2008
10.7	Form of Notice of Grant and Performance Share Agreement for the Juniper Networks, Inc. 2006 Equity Incentive Plan++	10-K	10.21	000-26339	2/29/2008
10.8	Form of India Stock Option Agreement under the Juniper Networks, Inc. 2006 Equity Incentive Plan++	10-Q	10.2	000-26339	5/9/2008
10.9	Form of India Restricted Stock Unit Agreement under the Juniper Networks, Inc. 2006 Equity Incentive Plan++	10-Q	10.3	000-26339	5/9/2008
10.10	Australian Addendum to the Juniper Networks, Inc. 2006 Equity Incentive Plan, as amended++	10-Q	10.2	000-34501	11/5/2010
10.11	Juniper Networks, Inc. 2008 Employee Stock Purchase Plan++	S-8	4.4	333.204297	5/19/2015
10.12	Australian Addendum to the Juniper Networks, Inc. 2008 Employee Stock Purchase Plan, as amended++	10-Q	10.3	000.34501	11/5/2010
10.13	Amended and Restated Juniper Networks, Inc. Performance Bonus Plan++, effective January 1, 2017	8-K	10.1	001-34501	5/27/2016

Exhibit No.	Exhibit	Incorporated by Reference			
		Filing	Exhibit No.	File No.	File Date
10.14	BTI Systems Inc. Amended and restated 2012 Stock Option Plan and Long-Term Incentive Plan++	S-8	4.3	333-211821	6/3/2016
10.15	Aurrion, Inc. Amended and Restated 2008 Equity Incentive Plan++	S-8	4.3	333-213490	9/2/2016
10.16	AppFormix Inc. Amended and Restated 2013 Stock Plan*++				
10.17	Juniper Networks, Inc. Deferred Compensation Plan++	S-8	4.4	333-151669	6/16/2008
10.18	WANDL, Inc. 2013 Restricted Stock Unit Plan++	S-8	4.4	333-193906	2/12/2014
10.19	Amended and Restated Contrail Systems Inc. 2012 Stock Plan, dated December 2, 2012++	10-K	10.56	001-34501	2/26/2013
10.20	Juniper Networks, Inc. 2015 Equity Incentive Plan++	S-8	4.3	333-204297	5/19/2015
10.21	Form of Restricted Stock Unit Agreement effective as of May 19, 2015++	8-K	10.2	001-34501	5/20/2015
10.22	Form of Performance Share Agreement effective as of May 19, 2015++	8-K	10.3	001-34501	5/20/2015
10.23	Form of Stock Option Agreement effective as of May 19, 2015++	8-K	10.4	001-34501	5/20/2015
10.24	Lease between Mathilda Associates LLC and the Registrant, dated June 18, 1999	S-1	10.10	333-76681	6/23/1999
10.25	Lease between Mathilda Associates LLC and the Registrant, dated February 1, 2000	10-K	10.9	000-26339	3/27/2001
10.26	Lease between Mathilda Associates II LLC and the Registrant, dated August 15, 2000	10-Q	10.15	000-26339	11/2/2004
10.27	First Amendment to Lease between Sunnyvale Office Park, L.P. and the Registrant, dated January 24, 2002	10-K	10.47	000-34501	2/26/2010
10.28	First Amendment to Lease between Sunnyvale Office Park, L.P. and the Registrant, dated February 28, 2000	10-K	10.48	000-34501	2/26/2010
10.29	First Amendment to Lease between Sunnyvale Office Park, L.P. and the Registrant, dated October 14, 2009	10-K	10.49	000-34501	2/26/2010
10.30	Second Amendment to Lease between Sunnyvale Office Park, L.P. and the Registrant, dated October 14, 2009	10-K	10.50	000-34501	2/26/2010
10.31	Amendment No. 2 to Lease between Sunnyvale Office Park, L.P. and the Registrant, dated October 14, 2009	10-K	10.51	000-34501	2/26/2010
10.32	Form of Severance Agreement for Certain Officers, approved for use on September 19, 2016++	8-K	10.1	001-34501	9/20/2016
10.33	Form of Change of Control Agreement for Certain Officers, approved for use on August 26, 2015++	8-K	10.1	001-34501	8/31/2015
10.34	Form of Change of Control Agreement for Certain Officers, approved for use on September 19, 2016++	8-K	10.2	001-34501	9/20/2016
10.35	Share Repurchase Transaction Agreement, dated February 27, 2014, between Juniper Networks, Inc. and Barclays Bank PLC, Inc., through its agent Barclays Capital, Inc.	10-Q	10.1	001-34501	5/8/2014
10.36	Share Repurchase Transaction Agreement, dated February 27, 2014, between Juniper Networks, Inc. and Goldman, Sachs & Co.	10-Q	10.2	001-34501	5/8/2014
10.37	Settlement, Release and Cross-License Agreement, dated May 27, 2014, by and between Juniper Networks, Inc. and Palo Alto Networks, Inc.	8-K	10.1	001-34501	5/29/2014
10.38	Credit Agreement, dated as of June 27, 2014, by and among Juniper Networks, Inc., the lenders from time to time party thereto and Citibank, N.A., as administrative agent	8-K	10.1	001-34501	6/27/2014
10.39	Assignment and Assumption of Lease by and between Juniper Networks, Inc., as Assignor, and Google Inc., as Assignee, dated August 18, 2014 -1194 N. Mathilda Avenue, Sunnyvale, California (Building 1)	10-Q	10.1	001-34501	11/10/2014
10.40	Assignment and Assumption of Lease by and between Juniper Networks, Inc., as Assignor, and Google Inc., as Assignee, dated August 18, 2014 -1184 N. Mathilda Avenue, Sunnyvale, California (Building 2)	10-Q	10.2	001-34501	11/10/2014

Exhibit No.	Exhibit	Incorporated by Reference			
		Filing	Exhibit No.	File No.	File Date
10.41	Assignment and Assumption of Lease by and between Juniper Networks, Inc., as Assignor, and Google Inc., as Assignee, dated August 18, 2014 -1220 N. Mathilda Avenue, Sunnyvale, California (Building 3)	10-Q	10.3	001-34501	11/10/2014
10.42	Consent to Assignment and Third Amendment to Lease by and between Juniper Networks, Inc., FSP-Sunnyvale Office Park, LLC and Google Inc., dated August 18, 2014 - 1194 N. Mathilda Avenue, Sunnyvale, California (Building 1)	10-Q	10.4	001-34501	11/10/2014
10.43	Consent to Assignment and Second Amendment to Lease by and between Juniper Networks, Inc., FSP-Sunnyvale Office Park, LLC and Google Inc., dated August 18, 2014 - 1184 N. Mathilda Avenue, Sunnyvale, California (Building 2)	10-Q	10.5	001-34501	11/10/2014
10.44	Consent to Assignment and Amendment No. 3 to Lease by and between Juniper Networks, Inc., FSP-Sunnyvale Office Park, LLC and Google Inc., dated August 18, 2014 - 1220 N. Mathilda Avenue, Sunnyvale, California (Building 3)	10-Q	10.6	001-34501	11/10/2014
10.45	Sublease by and between Juniper Networks, Inc., as Subtenant, and Google Inc., as Sublandlord, dated August 18, 2014 - 1194 N. Mathilda Avenue, Sunnyvale, California (Building 1)	10-Q	10.7	001-34501	11/10/2014
10.46	First Amendment to Sublease, dated June 30, 2015, by and between Juniper Networks, Inc., as Subtenant, and Google Inc., as Sublandlord - 1194 N. Mathilda Avenue, Sunnyvale, California (Building 1)	10-Q	10.3	001-34501	11/5/2015
10.47	Consent to Sublease by and between Juniper Networks, Inc., FSP-Sunnyvale Office Park, LLC and Google Inc., dated August 18, 2014 - 1194 N. Mathilda Avenue, Sunnyvale, California (Building 1)	10-Q	10.8	001-34501	11/10/2014
10.48	First Amendment to Consent to Sublease, dated August 28, 2015, by and between FSP-Sunnyvale Office Park, LLC, Juniper Networks, Inc., and Google Inc.	10-Q	10.4	001-34501	11/5/2015
10.49	Employment Offer Letter, dated November 18, 2014, between Juniper Networks, Inc. and Rami Rahim++	8-K	10.1	001-34501	11/24/2014
10.50	Employment Agreement, dated March 23, 2015, between Juniper Networks, Inc. and Mitchell Gaynor++	10-Q	10.1	001-34501	5/8/2015
10.51	Amendment, dated August 26, 2015, to Employment Agreement, dated March 23, 2015, between Juniper Networks, Inc. and Mitchell Gaynor++	10-Q	10.1	001-34501	11/5/2015
10.52	Employment Offer Letter between Juniper Networks, Inc. and Brian Martin++	10-Q	10.2	001-34501	11/5/2015
10.53	Agreement, dated April 7, 2015, between Juniper Networks, Inc. and Shaygan Kheradpir++	8-K/A	10.1	001-34501	4/10/2015
10.54	Severance Agreement, dated October 16, 2015, between Juniper Networks, Inc. and Brian Martin++	10-Q	10.6	001-34501	11/5/2015
10.55	Severance Agreement, dated February 20, 2015, between Juniper Networks, Inc. and Robyn Denholm++	10-K	10.67	001-34501	2/20/2015
10.56	Indemnification Trust Agreement, dated June 23, 2003, by and among Juniper Networks, Inc., BNY Mellon Trust of Delaware (formerly The Bank of New York (Delaware)) and Mitchell L. Gaynor, as the Beneficiaries' Representative++	10-K	10.58	001-34501	2/19/2016
10.57	Amendment No. 1 to Indemnification Trust Agreement by and among Juniper Networks, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee and Mitchell L. Gaynor, as the Beneficiaries' Representative, dated March 2014++	10-K	10.59	001-34501	2/19/2016
10.58	Amendment No. 2 to Indemnification Trust Agreement by and among Juniper Networks, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee and Mitchell L. Gaynor, as the Beneficiaries' Representative, dated November 1, 2016*++				
10.59	Form of Executive Compensation Recovery Agreement for Certain Officers, approved for use in November 2015++	10-K	10.60	001-34501	2/29/2016
12.1	Computation of Ratio of Earnings to Fixed Charges*				
21.1	Subsidiaries of the Company*				
23.1	Consent of Independent Registered Public Accounting Firm*				

Exhibit No.	Exhibit	Incorporated by Reference			
		Filing	Exhibit No.	File No.	File Date
24.1	Power of Attorney (included on the signature page to the Report)				
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934*				
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934*				
32.1	Certification of the Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**				
32.2	Certification of the Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**				
101	The following materials from Juniper Networks Inc.'s Annual Report on Form 10-K for the year ended December 31, 2016, formatted in XBRL (Extensible Business Reporting Language): (i) the Consolidated Statements of Operations, (ii) Consolidated Statements of Comprehensive Income, (iii) Consolidated Balance Sheets, (iv) the Consolidated Statements of Cash Flows, and (v) Consolidated Statements of Changes in Stockholders' Equity, and (iv) Notes to Consolidated Financial Statements, tagged as blocks of text				
101.INS	XBRL Instance Document				
101.SCH	XBRL Taxonomy Extension Schema Document				
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document				
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document				
101.LAB	XBRL Taxonomy Extension Label Linkbase Document				
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document				

* Filed herewith

** Furnished herewith

\+ Filed by NetScreen Technologies, Inc.

++ Indicates management contract or compensatory plan, contract or arrangement.

ITEM 16. ***Form 10-K Summary***

Not applicable.

JUNIPER NETWORKS, INC.
INDEMNIFICATION AGREEMENT

This Indemnification Agreement (the " Agreement ") is effective as of ___________, by and between Juniper Networks, Inc., a Delaware corporation (the " Company "), and ________________ (the " Indemnitee ").

WHEREAS, the Company desires to attract and retain the services of highly qualified individuals, such as Indemnitee, to serve the Company and its related entities;

WHEREAS, in order to induce Indemnitee to continue to provide services to the Company, the Company wishes to provide for the indemnification of, and advancement of expenses to, Indemnitee to the maximum extent permitted by law;

WHEREAS, Indemnitee does not regard the current protection available as adequate under the present circumstances, and the Indemnitee and certain other directors, officers, employees, agents and fiduciaries of the Company may not be willing to continue to serve in such capacities without additional protection;

WHEREAS, the Company and Indemnitee recognize the continued difficulty in obtaining liability insurance for the Company's directors, officers, employees, agents and fiduciaries, the significant and continual increases in the cost of such insurance and the general trend of insurance companies to reduce the scope of coverage of such insurance;

WHEREAS, the Company and Indemnitee further recognize the substantial increase in corporate litigation in general, subjecting directors, officers, employees, agents and fiduciaries to expensive litigation risks at the same time as the availability and scope of coverage of liability insurance provide increasing challenges for the Company; and

WHEREAS, in view of the considerations set forth above, the Company desires that Indemnitee shall be indemnified by the Company as set forth herein;

NOW, THEREFORE, the Company and Indemnitee hereby agree as set forth below.

A. Certain Definitions .

1. " Business Day " shall mean any day other than a Saturday, Sunday or other day on which banks in the State of Delaware are required or permitted to be closed.

2. " Change in Control " shall mean, and shall be deemed to have occurred if, on or after the date of this Agreement, (i) any "person" (as such term is used in Section 13(d) of the Securities Exchange Act of 1934, as amended (the " Exchange Act ")), other than a trustee or other fiduciary holding securities under an employee benefit plan of the Company acting in such capacity or a corporation owned directly or indirectly by the stockholders of the Company in substantially the same proportions as their ownership of stock of the Company, becomes the "beneficial owner" (as

defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing more than 50% of the total voting power represented by the Company's then outstanding Voting Securities, (ii) during any period of two consecutive years, individuals who at the beginning of such period constitute the Board of Directors of the Company and any new director whose election by the Board of Directors or nomination for election by the Company's stockholders was approved by a vote of at least two thirds (2/3) of the directors then still in office who either were directors at the beginning of the period or whose election or nomination for election was previously so approved, cease for any reason to constitute a majority thereof, or (iii) the stockholders of the Company approve a merger or consolidation of the Company with any other corporation other than a merger or consolidation which would result in the Voting Securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into Voting Securities of the surviving entity) at least 80% of the total voting power represented by the Voting Securities of the Company or such surviving entity outstanding immediately after such merger or consolidation, or the stockholders of the Company approve a plan of complete liquidation of the Company or an agreement for the sale or disposition by the Company of (in one transaction or a series of related transactions) all or substantially all of the Company's assets.

3. " Claim " shall mean any threatened, pending or completed action, suit, proceeding, arbitration or other alternative dispute resolution mechanism whether brought by or in the right of the Company or otherwise, or any hearing, inquiry or investigation that Indemnitee in good faith believes might lead to the institution of any such action, suit, proceeding, arbitration or other alternative dispute resolution mechanism, whether civil, criminal, administrative, investigative or other, or any appeal therefrom.

4. References to the " Company " shall include, in addition to Juniper Networks, Inc., any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger to which Juniper Networks, Inc. (or any of its wholly owned subsidiaries) is a party which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, employees, agents or fiduciaries, so that if Indemnitee is or was a director, officer, employee, agent or fiduciary of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee, agent or fiduciary of another corporation, partnership, joint venture, employee benefit plan, trust or other enterprise, Indemnitee shall stand in the same position under the provisions of this Agreement with respect to the resulting or surviving corporation as Indemnitee would have with respect to such constituent corporation if its separate existence had continued.

5. " Expenses " shall mean any expenses including, without limitation, fees, charges and disbursements of counsel and all other costs, expenses and obligations actually paid or reasonably incurred by Indemnitee in connection with investigating, defending, being a witness in or participating in (including on appeal), or preparing to defend, be a witness in or participate in any Claim relating to any Indemnifiable Event.

6. " Expense Advance " shall mean an advance payment of Expenses to Indemnitee pursuant to Section 3(a).

7. "Indemnifiable Event" shall mean any event or occurrence, whether occurring on, prior to, or after the date of this Agreement, related to (i) the fact that Indemnitee is or was a director, officer, employee, trustee, agent or fiduciary of the Company, or any subsidiary of the Company, or is or was serving at the request of or for the convenience of or to represent the interests of the Company as a director, officer, employee, trustee, agent or fiduciary of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise, or (ii) any action or inaction on the part of Indemnitee while serving in any capacity set forth in clause (i), including, without limitation, any breach of duty, neglect, error, misstatement, misleading statement, omission, or other act done or wrongfully attempted by the Indemnitee, or any of the foregoing alleged by any claimant, in any such capacity.

8. "Independent Legal Counsel" shall mean an attorney or firm of attorneys, selected in accordance with the provisions of Section 2(c), who shall not have otherwise performed services for the Company or Indemnitee within the last three years (other than with respect to matters concerning the rights of Indemnitee under this Agreement or the Trust Agreement, or of other indemnitees under similar indemnity agreements).

9. "Losses" shall mean (i) any amounts or sums which Indemnitee is legally obligated to pay as a result of a Claim or Claims made against Indemnitee for Indemnifiable Events including, without limitation, damages, judgments, fines, penalties and sums or amounts paid in settlement (if such settlement is approved in advance by the Company) of a Claim or Claims, and (ii) to the extent not paid in advance pursuant to the terms of this Agreement or the Trust Agreement for any reason, Expenses.

10. References to "other enterprises" shall include employee benefit plans; references to "fines" shall include any excise taxes assessed on Indemnitee with respect to an employee benefit plan; and references to "serving at the request or for the convenience or to represent the interests of the Company" shall include any service as a director, officer, employee, agent or fiduciary of the Company which imposes duties on, or involves services by, such director, officer, employee, agent or fiduciary with respect to an employee benefit plan, its participants or its beneficiaries; and if Indemnitee acted in good faith and in a manner Indemnitee reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan, Indemnitee shall be deemed to have acted in a manner "not opposed to the best interests of the Company" as referred to in this Agreement.

11. "Reviewing Party" shall mean any appropriate person or body consisting of a member or members of the Company's Board of Directors or any other person or body appointed by the Board of Directors who is not a party to the particular Claim for which Indemnitee is seeking indemnification or Independent Legal Counsel as provided in Section 2(c).

12. "Trust" has the meaning set forth in Section 3(f).

13. "Trust Agreement" has the meaning set forth in Section 3(f).

14. " Voting Securities " shall mean any securities of the Company (or a surviving entity as described in the definition of a "Change in Control") that vote generally in the election of directors.

B. Indemnification .

1. Agreement to Indemnify . If Indemnitee is or becomes a party to or witness or other participant in, or is threatened to be made a party to or witness or other participant in, a Claim by reason of (or arising in part out of) an Indemnifiable Event, the Company will, to the maximum extent permitted by law, indemnify Indemnitee against, and will make Expense Advances from time to time any and all Expenses and Losses (including all interest, assessments and other charges paid or payable in connection with or in respect of such Expenses and Losses, but excluding amounts paid in settlement of any Claim if such settlement was not approved by the Company) arising from or relating to such Claim, whether or not such Claim proceeds to judgment or is settled or otherwise is brought to a disposition. If requested by Indemnitee, the Company agrees that it will not unreasonably withhold its consent to any proposed settlement of any such Claim. Such payment of Expenses and Losses shall be made by the Company as soon as practicable after written demand by Indemnitee therefor is presented to the Company, but in any event payment of a demand for an Expense Advance shall be made not later than five (5) Business Days after the receipt by the Company of written demand therefor, which is accompanied by an explanation in reasonable detail and copies of invoices received by Indemnitee in connection with such Expenses (but, in the case of invoices in connection with legal services, any reference to legal work performed or to expenditures made that would cause Indemnitee to waive any privilege accorded by applicable law shall not be included with the invoice).

2. Reviewing Party's Role . Notwithstanding the provisions of Section 2(a), (i) the obligations of the Company under Section 2(a) to make indemnification payments for Losses shall be subject to the condition that the Reviewing Party shall have determined (in a written opinion, in any case in which Independent Legal Counsel is the Reviewing Party) that Indemnitee would be permitted to be indemnified under this Agreement and applicable law, and (ii) the obligation of the Company to make an Expense Advance shall be unconditional with no need for approval by the Reviewing Party. If a court specified in Section 15 ultimately determines that Indemnitee was not entitled as a matter of law to retain any Expense Advance previously made by the Company or the Trust, Indemnitee hereby agrees to reimburse the Company (or, if such Expense Advance was made by the Trust, the Trust) for any such amount, provided that if Indemnitee contests such entitlement in a proceeding or has commenced or thereafter commences legal proceedings in such court to secure a determination that Indemnitee should be indemnified under applicable law, any determination made by the Reviewing Party that Indemnitee would not be permitted to be indemnified under this Agreement or applicable law shall not be binding and Indemnitee shall not be required to reimburse the Company for any Expense Advance until a final judicial determination is made with respect thereto (as to which all rights of appeal therefrom have been exhausted or lapsed). Indemnitee's obligation to reimburse the Company for any Expense Advance shall be unsecured and no interest shall be charged thereon. If there has been no determination by the Reviewing Party or if the Reviewing Party determines that Indemnitee substantively would not be permitted to be indemnified in whole or in part under this Agreement or applicable law, Indemnitee shall have the

right to commence litigation seeking an initial determination by the court or challenging any such determination by the Reviewing Party or any aspect thereof, including the legal or factual bases therefor, and the Company hereby consents to service of process and to appear in any such proceeding. Absent such litigation, any determination by the Reviewing Party shall be conclusive and binding on the Company and Indemnitee.

3. The Reviewing Party in Various Circumstances . For matters that require a determination by the Reviewing Party in respect of Losses, the Reviewing Party shall be the following:

a. If Indemnitee is a director or officer claiming a right to indemnity for Losses under this Agreement or under the Company's Certificate of Incorporation or Bylaws at the time a determination by the Reviewing Party is required (a " Current Director or Officer ") and if no Change in Control has occurred that was not approved by a majority of the Company's Board of directors who were directors immediately prior to such Change in Control (any such non-preapproved transaction, a " Triggering Change in Control "), then the Reviewing Party will be the members of the Company's Board of Directors who are not parties to the Claim for which indemnification is being sought, or a committee of such directors designated by majority vote of the directors who are not parties to the Claim for which indemnification is being sought, or if such directors or committee so decide, the Independent Legal Counsel.

b. If Indemnitee is not a Current Director or Officer and no Triggering Change in Control has occurred, then the Reviewing Party will be the Company's chief executive officer or chief financial officer, acting on behalf of the Company, unless the Indemnitee expressly demands in writing at the time that he or she makes a demand for indemnification of a Loss that Independent Legal Counsel be the Reviewing Party, in which event Independent Legal Counsel shall be the Reviewing Party.

c. If a Triggering Change in Control has occurred, then the Reviewing Party will be Independent Legal Counsel unless Indemnitee, in its sole discretion, waives the right to have Independent Legal Counsel be the Reviewing Party, in which case the Reviewing Party will be the members of the Company's Board of Directors who are not parties to the Claim.

d. If, notwithstanding clauses (i) or (ii) of this subsection 2(c), Indemnitee seeks indemnification for Losses under the Trust, rather than seeking indemnification directly from the Company, the Reviewing Party will be Independent Legal Counsel. In all circumstances where Independent Legal Counsel is the Reviewing Party, Grover Brown will serve as Independent Legal Counsel unless he is no longer meets the definition of Independent Legal Counsel in Section 1(h) or is no longer willing or able to serve as such. If the named Independent Legal Counsel resigns, is unable to perform his duties as Independent Legal Counsel or no longer meets the definition of Independent Legal Counsel in Section 1(h), another person or firm meeting the definition of Independent Legal Counsel in Section 1(h) shall be selected as successor Independent Legal Counsel in the manner contemplated by the Trust Agreement, in which event such successor Independent Legal Counsel shall be the Independent Legal Counsel for purposes of this Agreement.

4. Independent Legal Counsel Opinion. In any case in which Independent Legal Counsel is acting as the Reviewing Party, such counsel, among other things, shall render its written opinion to the Company and Indemnitee as to whether and to what extent Indemnitee would be permitted to be indemnified under this Agreement and applicable law and the Company agrees to abide by such opinion. The Company agrees to pay a reasonable retainer fee and the reasonable fees, charges and disbursements of any Independent Legal Counsel selected to act as the Reviewing Party and to indemnify fully such counsel against any and all expenses (including reasonable fees, charges and disbursements of counsel), claims, liabilities and damages arising out of or relating to this Agreement or its engagement pursuant hereto. Notwithstanding any other provision of this Agreement, the Company shall not be required to pay expenses of more than one Independent Legal Counsel in connection with all matters concerning the Indemnitee, and such Independent Legal Counsel shall be the Independent Legal Counsel for any or all other indemnitees making indemnification claims that relate to the same Claim as the Indemnitee's unless (i) the Company otherwise determines or (ii) any Indemnitee shall provide a written statement setting forth in detail a reasonable objection to such Independent Legal Counsel making any determination with respect to other indemnitees.

5. Mandatory Payment of Expenses. Notwithstanding any other provision of this Agreement other than Section 10, to the extent that Indemnitee has been successful on the merits or otherwise, including, without limitation, the dismissal of an action without prejudice, in defense of any Claim regarding any Indemnifiable Event, Indemnitee shall be indemnified against all Expenses incurred by Indemnitee in connection therewith.

6. Action to Compel Payment. If a claim for indemnification for Losses or any Expense Advance pursuant to this Agreement is not paid in full for any reason (including, but not limited to, a decision adverse to the Indemnitee by the Reviewing Party, or the failure of the Reviewing Party to render its determination) within five (5) Business Days of the date of demand, in the case of Expense Advance, or thirty (30) days of the date of demand in the case of any other claim for indemnification of Losses or Expenses, then Indemnitee may file suit to recover the unpaid amount of such claim in a court specified in Section 15. The provisions of Sections 3(c) and 13 shall be applicable to any such action.

C. Expenses; Indemnification Procedure.

1. Expense Advances. Expense Advances to be made hereunder shall be paid by the Company to Indemnitee as soon as practicable but in any event no later than five (5) Business Days after written demand by Indemnitee therefor to the Company. Nothing set forth herein shall prevent the Indemnitee from making a demand upon the Trust for payment of Expense Advances.

2. Notice/Cooperation by Indemnitee. Indemnitee shall, as a condition precedent to Indemnitee's right to receive Expense Advances and to be indemnified for Losses under this Agreement, give the Company notice in writing as soon as practicable of any Claim made against Indemnitee relating to an Indemnifiable Event for which a request for Expense Advance or for which indemnification for Losses will or could be sought under this Agreement. Notice to the Company shall be directed to the Chief Executive Officer of the Company at the address shown on the signature page of this Agreement (or such other address as the Company shall designate in writing to

Indemnitee). In addition, Indemnitee shall give the Company such information and cooperation as it may reasonably require and as shall be within Indemnitee's power.

3. Burden of Proof; No Presumption Against Indemnitee . Indemnitee's right to indemnification shall be enforceable by Indemnitee in the court specified in Section 15 and shall be enforceable notwithstanding any adverse determination by the Reviewing Party. In any action in which Indemnitee seeks to receive Expense Advances or indemnification for Losses, the Company shall be required to make the requested payment unless it satisfies the burden of proving that the Expense Advances or indemnification for Losses are not permitted by applicable law or are not required under this Agreement. For purposes of this Agreement, the termination of any Claim by judgment, order, settlement (whether with or without court approval) or conviction, or upon a plea of nolo contendere, or its equivalent, shall not create a presumption that Indemnitee did not meet any particular standard of conduct or have any particular belief or that a court has determined that Expense Advances or indemnification for Losses is not permitted by applicable law or hereunder. In addition, neither the failure of the Reviewing Party to have made a determination as to whether Indemnitee has met any particular standard of conduct or had any particular belief, nor an actual determination by the Reviewing Party that Indemnitee has not met such standard of conduct or did not have such belief, prior to the commencement of legal proceedings by Indemnitee to secure a judicial determination that Indemnitee should be entitled to receive Expense Advances or be indemnified for Losses under applicable law, shall be a defense to Indemnitee's claim or create a presumption that Indemnitee has not met any particular standard of conduct or did not have any particular belief.

4. Notice to Insurers . If, at the time of the receipt by the Company of a notice of a Claim relating to an Indemnifiable Event pursuant to Section 3(b), the Company has liability insurance in effect which may cover such Claim, the Company shall give prompt notice of the commencement of such Claim to the insurers in accordance with the procedures set forth in the respective policies. The Company shall thereafter take all commercially reasonable action to cause such insurers to pay, on behalf of the Indemnitee, all amounts payable as a result of such Claim in accordance with the terms of such policies.

5. Selection of Counsel . In any Claim made against Indemnitee relating to an Indemnifiable Event for which a request for Expense Advance or for which indemnification for Losses will or could be sought under this Agreement, the Company shall be entitled to assume the defense of such Claim with counsel approved by Indemnitee (not to be unreasonably withheld) upon the delivery to Indemnitee of written notice of the Company's election so to do. After delivery of such notice, approval of such counsel by Indemnitee and the retention of such counsel by the Company, the Company will not be liable to Indemnitee under this Agreement for any fees of counsel subsequently incurred by Indemnitee with respect to the same Claim; provided that, (i) Indemnitee shall have the right to employ Indemnitee's separate counsel in any such Claim at Indemnitee's expense and (ii) if (A) the employment of separate counsel by Indemnitee has been previously authorized by the Company, (B) Indemnitee shall have reasonably concluded that there may be a conflict of interest between the Company and Indemnitee in the conduct of any such defense, or (C) the Company shall not continue to retain such counsel to defend such Claim, then the fees and expenses of Indemnitee's separate counsel shall be at the expense of the Company.

6. The Trust.

a. The Company has established a trust for the benefit of the Indemnitee and certain other beneficiaries (the "Trust") pursuant to an Indemnification Trust Agreement dated June 23, 2003 (as amended, the "Trust Agreement"), among the Company, BNY Mellon Trust of Delaware (formerly known as The Bank of New York (Delaware)), as trustee, and the Beneficiaries' Representative (as defined therein). In addition to Indemnitee's other rights under this Agreement, the Company's Certificate of Incorporation and Bylaws and any insurance policies, Indemnitee shall have the right to receive payments in respect of Expense Advances and indemnification for Losses in the manner provided in this Agreement and the Trust Agreement. Indemnitee hereby confirms that the beneficiaries' representative acting from time to time under the Trust Agreement, including all replacement representatives (each, the "Beneficiaries' Representative"), shall be Indemnitee's agent and attorney-in-fact to pursue demands for payment of Expense Advances or indemnification for Losses as provided in the Trust Agreement.

b. Indemnitee may request payment of Expense Advances or indemnification for Losses either under the Trust Agreement out of the trust funds under the Trust (the "Trust Fund") or from the Company, or both, under this Agreement, in its discretion. Any such request by the Indemnitee shall be made to the Beneficiaries' Representative with a copy to the Company under the notice procedures specified in the Trust Agreement.

c. Upon receipt by the Company of a copy of notice from Indemnitee to the Beneficiaries' Representative requesting payment of any Expense Advance, the Company shall have the right promptly to make any such payment in its discretion in lieu of having such payment made out of the Trust Fund.

d. From and after receipt by the Company of a copy of notice from Indemnitee to the Beneficiaries' Representative requesting payment of indemnification for Losses out of the Trust Fund, the Company will cooperate reasonably to facilitate a determination by Independent Legal Counsel as Reviewing Party with respect thereto.

D. Additional Indemnification Rights; Nonexclusivity.

1. Scope. The Company hereby agrees to make Expense Advances to, and indemnify, the Indemnitee to the fullest extent permitted by law, notwithstanding that such Expense Advances and indemnification are not specifically authorized by the other provisions of this Agreement, the Company's Certificate of Incorporation, the Company's Bylaws or by statute. In the event of any change after the date of this Agreement in any applicable law, statute or rule which expands the right of a Delaware corporation to indemnify a member of its board of directors or an officer, employee, agent or fiduciary, it is the intent of the parties hereto that Indemnitee shall enjoy by this Agreement the greater benefits afforded by such change. In the event of any change in any applicable law, statute or rule which narrows the right of a Delaware corporation to indemnify a member of its board of directors or an officer, employee, agent or fiduciary, such change, to the extent not otherwise required by such law, statute or rule to be applied to this Agreement, shall have no effect on this Agreement or the parties' rights and obligations hereunder except as set forth in Section 9(a).

2. Nonexclusivity . The rights to Expense Advances and indemnification provided by this Agreement shall be in addition to any rights to which Indemnitee may be entitled under the Company's Certificate of Incorporation, its Bylaws, the Trust Agreement, any other agreement, any vote of stockholders or disinterested directors, the General Corporation Law of the State of Delaware, or otherwise. The indemnification provided under this Agreement shall continue as to Indemnitee for any action taken or not taken while serving in an indemnified capacity even though Indemnitee may have ceased to serve in such capacity.

E. No Duplication of Payments . The Company shall not be liable under this Agreement to make any payment in connection with any Claim made against Indemnitee to the extent Indemnitee has otherwise actually received payment of the amounts otherwise indemnifiable hereunder under the Trust, any insurance policy, provision of the Company's Certificate of Incorporation, Bylaw or otherwise.

F. Partial Indemnification . If Indemnitee is entitled under any provision of this Agreement to indemnification by the Company for some or a portion of Expenses or Losses incurred in connection with any Claim, but not, however, for all of the total amount thereof, the Company shall nevertheless indemnify Indemnitee for the portion of such Expenses or Losses to which Indemnitee is entitled.

G. Mutual Acknowledgment . Both the Company and Indemnitee acknowledge that in certain instances, federal law or applicable public policy may prohibit the Company from indemnifying its directors, officers, employees, agents or fiduciaries under this Agreement or otherwise. Indemnitee understands and acknowledges that the Company has undertaken or may be required in the future to undertake with the Securities and Exchange Commission to submit the question of indemnification to a court in certain circumstances for a determination of the Company's right under public policy to indemnify Indemnitee.

H. Liability Insurance . To the extent the Company maintains liability insurance applicable to directors, officers, employees, agents or fiduciaries, the Company shall use commercially reasonable efforts to ensure that Indemnitee shall be covered by such policies in such a manner as to provide Indemnitee the same rights and benefits as are provided to the most favorably insured of the Company's directors, if Indemnitee is a director; or of the Company's officers, if Indemnitee is not a director of the Company but is an officer; or of the Company's key employees, agents or fiduciaries, if Indemnitee is not an officer or director but is a key employee, agent or fiduciary.

I. Exceptions . Notwithstanding any other provision of this Agreement, the Company shall not be obligated pursuant to the terms of this Agreement:

1. Excluded Action or Omissions . To indemnify Indemnitee for acts, omissions or transactions from which Indemnitee may not be indemnified under applicable law.

2. Claims Initiated by Indemnitee . To indemnify for Losses or make Expense Advances to Indemnitee with respect to Claims or parts thereof initiated or brought voluntarily by Indemnitee and not by way of defense or by way of an appeal related to a Claim not initiated or

brought voluntarily by Indemnitee, except (i) with respect to actions or proceedings brought to establish or enforce a right to receive Expense Advances or indemnification for Losses under this Agreement, the Trust Agreement or any other agreement or insurance policy or under the Company's Certificate of Incorporation or Bylaws now or hereafter in effect relating to Claims for Indemnifiable Events, (ii) in specific cases if the Board of Directors has approved the initiation or bringing of such Claim, or (iii) as otherwise required under Delaware Law.

3. Lack of Good Faith . To indemnify Indemnitee for any Expenses incurred by the Indemnitee with respect to any proceeding instituted by Indemnitee to enforce or interpret this Agreement, if a court of competent jurisdiction determines that each of the material assertions made by the Indemnitee in such proceeding was not made in good faith or was frivolous.

4. Claims Under Section 16(b) . To indemnify Indemnitee for expenses and the payment of profits arising from the purchase and sale by Indemnitee of securities in violation of Section 16(b) of the Exchange Act, or any similar successor statute.

J. Period of Limitations . No legal action relating to the entitlement of Indemnitee to Expense Advances or indemnification for Losses shall be brought and no such cause of action shall be asserted by or in the right of the Company against Indemnitee, Indemnitee's estate, spouse, heirs, executors or personal or legal representatives after the expiration of two years from the date of accrual of such cause of action, and any claim or cause of action of the Company shall be extinguished and deemed released unless asserted by the timely filing of a legal action within such two-year period; provided, however, that if any shorter period of limitations is otherwise applicable to any such cause of action, such shorter period shall govern.

K. Counterparts . This Agreement may be executed in one or more counterparts, each of which shall constitute an original.

L. Binding Effect; Successors and Assigns . This Agreement shall be binding upon and inure to the benefit of and be enforceable by the parties hereto and their respective successors, assigns (including any direct or indirect successor by purchase, merger, consolidation or otherwise to all or substantially all of the business or assets of the Company), spouses, heirs and personal and legal representatives. The Company shall require and cause any successor (whether direct or indirect, and whether by purchase, merger, consolidation or otherwise) to all, substantially all, or a substantial part, of the business or assets of the Company, by written agreement in form and substance satisfactory to Indemnitee, expressly to assume and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform if no such succession had taken place, provided that if the Company continues to exist it shall remain jointly and severally liable with such successor for the obligations hereunder. This Agreement shall continue in effect regardless of whether Indemnitee continues to serve as a director, officer, employee, agent or fiduciary (as applicable) of the Company or of any other enterprise at the Company's request.

M. Attorneys' Fees . If any action is instituted by Indemnitee under this Agreement or under the Trust Agreement or under any liability insurance policies maintained by the Company to enforce or interpret any of the terms hereof or thereof, Indemnitee shall be entitled to be paid all Expenses incurred by Indemnitee with respect to such action, regardless of whether Indemnitee is ultimately successful in such action, and shall be entitled to the advancement of Expenses with respect to such action, unless as a part of such action a court of competent jurisdiction over such action determines that each of the material assertions made by Indemnitee as a basis for such action were not made in good faith or were frivolous. In the event of an action instituted by or in the right of the Company under this Agreement to enforce or interpret any of the terms of this Agreement, Indemnitee shall be entitled to be paid all Expenses incurred by Indemnitee in defense of such action (including costs and expenses incurred with respect to Indemnitee's counterclaims and cross-claims made in such action), and shall be entitled to the advancement of Expenses with respect to such action, unless as a part of such action a court having jurisdiction over such action determines that each of Indemnitee's material defenses to such action were made in bad faith or were frivolous.

N. Notice . All notices, requests, demands and other communications under this Agreement shall be in writing and shall be deemed duly given (i) if delivered by hand and signed for by the party addressed, on the date of such delivery, or (ii) if mailed by domestic certified or registered mail with postage prepaid, on the third Business Day after the date postmarked. Addresses for notice to either party are as shown on the signature page of this Agreement, or as subsequently modified by written notice. So long as this Agreement and the Trust Agreement remain in effect, the Company agrees to provide prompt written notice of the name and address of the Beneficiaries' Representative and each change of address or of the Beneficiaries' Representative from time to time under the Trust Agreement.

O. Consent to Jurisdiction . The Company and Indemnitee each hereby irrevocably consent to the jurisdiction of the courts of the State of Delaware for all purposes in connection with any action or proceeding which arises out of or relates to this Agreement, and agree that any action instituted under this Agreement shall be commenced, prosecuted and continued only in the Court of Chancery of the State of Delaware, which shall be the exclusive and only proper forum for adjudicating such a claim. The Company and Indemnitee irrevocably waive any right to object that any action brought in such court is in an inconvenient forum.

P. Severability . The provisions of this Agreement shall be severable in the event that any of the provisions hereof (including any provision within a single section, paragraph or sentence) are held by a court of competent jurisdiction to be invalid, void or otherwise unenforceable, and the remaining provisions shall remain enforceable to the fullest extent permitted by law. Furthermore, to the fullest extent possible, the provisions of this Agreement (including, without limitations, each portion of this Agreement containing any provision held to be invalid, void or otherwise unenforceable, that is not itself invalid, void or unenforceable) shall be construed so as to give effect to the intent manifested by the provision held invalid, illegal or unenforceable.

Q. Choice of Law . This Agreement shall be governed by and its provisions construed and enforced in accordance with the laws of the State of Delaware as applied to contracts between Delaware residents entered into and to be performed entirely within the State of Delaware.

R. Subrogation . In the event of payment under this Agreement, the Company shall be subrogated to the extent of such payment to all of the rights of recovery of Indemnitee, who shall execute all documents required and shall do all acts that may be necessary to secure such rights and to enable the Company effectively to bring suit to enforce such rights.

S. Amendment and Termination . No amendment, modification, termination or cancellation of this Agreement shall be effective unless it is in writing signed by both the parties hereto. No waiver of any of the provisions of this Agreement shall be deemed to be or shall constitute a waiver of any other provisions hereof (whether or not similar), nor shall such waiver constitute a continuing waiver.

T. Integration and Entire Agreement . This Agreement and the Trust Agreement set forth the entire understanding between the parties hereto and supersedes and merges all previous written and oral negotiations, commitments, understandings and agreements relating to the subject matter hereof between the parties hereto.

U. No Construction as Employment Agreement . Nothing contained in this Agreement shall be construed as giving Indemnitee any right to be retained in the employ of the Company or any of its subsidiaries or affiliated entities.

[Remainder of Page Intentionally Blank]

IN WITNESS WHEREOF, the parties hereto have executed this Indemnification Agreement as of the date first above written.

COMPANY

JUNIPER NETWORKS, INC.

By: ______________________________

Name: ______________________________

Title: ______________________________

Address: Juniper Networks, Inc.
1133 Innovation Way
Sunnyvale, CA 94089
Attention: General Counsel &
Secretary

INDEMNITEE

Address: ______________________________

Facsimile: ______________________________

APPFORMIX INC.

AMENDED AND RESTATED

2013 STOCK PLAN

APPFORMIX INC.

AMENDED AND RESTATED 2013 STOCK PLAN

1. **Purposes of the Plan** . The purposes of this Amended and Restated 2013 Stock Plan are to attract and retain the best available personnel for positions of substantial responsibility, to provide additional incentive to Employees and Consultants, and to promote the success of the Company's business. Options granted under the Plan may be Incentive Stock Options or Nonstatutory Stock Options, as determined by the Administrator at the time of grant of an Option and subject to the applicable provisions of Section 422 of the Code and the regulations promulgated thereunder. Restricted Stock and Restricted Stock Units may also be granted under the Plan.

2. **Definitions** . As used herein, the following definitions shall apply:

(a) " **Administrator** " means the Board or a Committee. Following any Change of Control, the Administrator means the Compensation Committee of the Company's successor (or parent or subsidiary thereof) or, if none, the board of directors of the successor entity (or parent or subsidiary thereof); provided that the Compensation Committee or board of directors, as applicable, may delegate certain responsibilities to a committee comprised of members of the board, officers or employees of the Company and/or Company's successor.

(b) " **Affiliate** " means (i) an entity other than a Subsidiary which, together with the Company, is under common control of a third person or entity and (ii) an entity other than a Subsidiary in which the Company and /or one or more Subsidiaries own a controlling interest.

(c) " **Applicable Laws** " means all applicable laws, rules, regulations and requirements, including, but not limited to, all applicable U.S. federal or state laws, any Stock Exchange rules or regulations, and the applicable laws, rules or regulations of any other country or jurisdiction where Options, Restricted Stock Units, or Restricted Stock are granted under the Plan or Participants reside or provide services, as such laws, rules, and regulations shall be in effect from time to time.

(d) " **Award** " means any award of an Option, Restricted Stock, or Restricted Stock Unit under the Plan.

(e) " **Board** " means the Board of Directors of the Company.

(f) " **California Participant** " means a Participant whose Award is issued in reliance on Section 25102(o) of the California Corporations Code.

(g) " **Cashless Exercise** " means a program approved by the Administrator in which payment of the Option exercise price or tax withholding obligations or other required deductions may be satisfied, in whole or in part, with Shares subject to the Option, including by delivery of an irrevocable direction to a securities broker (on a form prescribed by the Company) to sell Shares and to deliver all or part of the sale proceeds to the Company in payment of such amount.

(h) "**Cause**" for termination of a Participant's Continuous Service Status will exist (unless another definition is provided in an applicable Option Agreement, Restricted Stock Purchase Agreement, Restricted Stock Unit Award Agreement, employment agreement or other applicable written agreement) if the Participant's Continuous Service Status is terminated for any of the following reasons: (i) any material breach by Participant of any material written agreement between Participant and the Company and Participant's failure to cure such breach within 30 days after receiving written notice thereof; (ii) any failure by Participant to comply with the Company's material written policies or rules as they may be in effect from time to time; (iii) neglect or persistent unsatisfactory performance of Participant's duties and Participant's failure to cure such condition within 30 days after receiving written notice thereof; (iv) Participant's repeated failure to follow reasonable and lawful instructions from the Board or Chief Executive Officer and Participant's failure to cure such condition within 30 days after receiving written notice thereof; (v) Participant's conviction of, or plea of guilty or nolo contendre to, any crime that results in, or is reasonably expected to result in, material harm to the business or reputation of the Company; (vi) Participant's commission of or participation in an act of fraud against the Company; (vii) Participant's intentional material damage to the Company's business, property or reputation; or (viii) Participant's unauthorized use or disclosure of any proprietary information or trade secrets of the Company or any other party to whom the Participant owes an obligation of nondisclosure as a result of his or her relationship with the Company. For purposes of clarity, a termination without "Cause" does not include any termination that occurs as a result of Participant's death or disability. The determination as to whether a Participant's Continuous Service Status has been terminated for Cause shall be made in good faith by the Company and shall be final and binding on the Participant. The foregoing definition does not in any way limit the Company's ability to terminate a Participant's employment or consulting relationship at any time, and the term "Company" will be interpreted to include any Subsidiary, Parent, Affiliate, or any successor thereto, if appropriate.

(i) "**Change of Control**" means (i) a sale of all or substantially all of the Company's assets other than to an Excluded Entity (as defined below), (ii) a merger, consolidation or other capital reorganization or business combination transaction of the Company with or into another corporation, limited liability company or other entity other than an Excluded Entity, or (iii) the consummation of a transaction, or series of related transactions, in which any "person" (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of all of the Company's then outstanding voting securities.

Notwithstanding the foregoing, a transaction shall not constitute a Change of Control if its purpose is to (A) change the jurisdiction of the Company's incorporation, (B) create a holding company that will be owned in substantially the same proportions by the persons who hold the Company's securities immediately before such transaction, or (C) obtain funding for the Company in a financing that is approved by the Company's Board. An "Excluded Entity" means a corporation or other entity of which the holders of voting capital stock of the Company outstanding immediately prior to such transaction are the direct or indirect holders of voting securities representing at least a majority of the votes entitled to be cast by all of such corporation's or other entity's voting securities outstanding immediately after such transaction.

(j) " **Code** " means the Internal Revenue Code of 1986, as amended.

(k) " **Committee** " means one or more committees or subcommittees of the Board consisting of two (2) or more management personnel or Directors (or such lesser or greater number of management personnel or Directors as shall constitute the minimum number permitted by Applicable Laws to establish a committee or sub-committee of the Board) appointed by the Board to administer the Plan in accordance with Section 4 below.

(l) " **Common Stock** " means the Company's common stock, par value $0.00001 per share, as adjusted pursuant to Section 11 below.

(m) " **Company** " means AppFormix Inc., a Delaware corporation.

(n) " **Consultant** " means any person or entity, including an advisor but not an Employee, that renders, or has rendered, services to the Company, or any Parent, Subsidiary or Affiliate and is compensated for such services, and any Director whether compensated for such services or not.

(o) " **Continuous Service Status** " means the absence of any interruption or termination of service as an Employee or Consultant. Continuous Service Status as an Employee or Consultant shall not be considered interrupted or terminated in the case of: (i) Company approved sick leave; (ii) military leave; (iii) any other bona fide leave of absence approved by the Company, provided that, if an Employee is holding an Incentive Stock Option and such leave exceeds 3 months then, for purposes of Incentive Stock Option status only, such Employee's service as an Employee shall be deemed terminated on the 1st day following such 3-month period and the Incentive Stock Option shall thereafter automatically become a Nonstatutory Stock Option in accordance with Applicable Laws, unless reemployment upon the expiration of such leave is guaranteed by contract or statute, or unless provided otherwise pursuant to a written Company policy. Also, Continuous Service Status as an Employee or Consultant shall not be considered interrupted or terminated in the case of a transfer between locations of the Company or between the Company, its Parents, Subsidiaries or Affiliates, or their respective successors, or a change in status from an Employee to a Consultant or from a Consultant to an Employee.

(p) " **Director** " means a member of the Board.

(q) " **Disability** " means "disability" within the meaning of Section 22(e)(3) of the Code.

(r) " **Employee** " means any person employed by the Company, or any Parent, Subsidiary or Affiliate, with the status of employment determined pursuant to such factors as are deemed appropriate by the Company in its sole discretion, subject to any requirements of Applicable Laws, including the Code. The payment by the Company of a director's fee shall not be sufficient to constitute "employment" of such director by the Company or any Parent, Subsidiary or Affiliate.

(s) " **Exchange Act** " means the Securities Exchange Act of 1934, as amended.

(t) " **Fair Market Value** " means, as of any date, the per share fair market value of the Common Stock, as determined by the Administrator in good faith on such basis as it deems appropriate and applied consistently with respect to Participants. Whenever possible, the determination of Fair Market Value shall be based upon the per share closing price for the Shares as reported in The Wall Street Journal for the applicable date.

(u) " **Family Members** " means any child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law (including adoptive relationships) of the Participant, any person sharing the Participant's household (other than a tenant or employee), a trust in which these persons (or the Participant) have more than 50% of the beneficial interest, a foundation in which these persons (or the Participant) control the management of assets, and any other entity in which these persons (or the Participant) own more than 50% of the voting interests.

(v) " **Incentive Stock Option** " means an Option intended to, and which does, in fact, qualify as an incentive stock option within the meaning of Section 422 of the Code.

(w) " **Involuntary Termination** " means (unless another definition is provided in the applicable Option Agreement, Restricted Stock Purchase Agreement, Restricted Stock Unit Award Agreement, employment agreement or other applicable written agreement) the termination of a Participant's Continuous Service Status other than for (i) death, (ii) Disability or (iii) for Cause by the Company or a Parent, Subsidiary, Affiliate or successor thereto, as appropriate.

(x) " **Listed Security** " means any security of the Company that is listed or approved for listing on a national securities exchange or designated or approved for designation as a national market system security on an interdealer quotation system by the Financial Industry Regulatory Authority (or any successor thereto).

(y) " **Nonstatutory Stock Option** " means an Option that is not intended to, or does not, in fact, qualify as an Incentive Stock Option.

(z) " **Notice of Grant** " means the notice that sets forth the individual terms of an Award to which the Award agreement may be attached.

(aa) " **Option** " means a stock option granted pursuant to the Plan.

(bb) " **Option Agreement** " means a written document, the form(s) of which shall be approved from time to time by the Administrator, reflecting the terms of an Option granted under the Plan and includes any documents attached to or incorporated into such Option Agreement, including, but not limited to, a notice of stock option grant and a form of exercise notice.

(cc) " **Option Exchange Program** " means a program approved by the Administrator whereby outstanding Options (i) are exchanged for Options with a lower exercise price, Restricted Stock, cash or other property or (ii) are amended to decrease the exercise price as a result of a decline in the Fair Market Value.

(dd) " **Optioned Stock** " means Shares that are subject to an Option or that were issued pursuant to the exercise of an Option.

(ee) " **Optionee** " means an Employee or Consultant who receives an Option.

(ff) " **Parent** " means any corporation (other than the Company) in an unbroken chain of corporations ending with the Company if, at the time of grant of the Award, each of the corporations other than the Company owns stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other corporations in such chain. A corporation that attains the status of a Parent on a date after the adoption of the Plan shall be considered a Parent commencing as of such date.

(gg) " **Participant** " means any holder of one or more Awards or Shares issued pursuant to an Award.

(hh) " **Plan** " means this Amended and Restated 2013 Stock Plan, as amended, November 29 th , 2016.

(ii) " **Restricted Stock** " means Shares acquired pursuant to a right to purchase or receive Common Stock granted pursuant to Section 9 below.

(jj) " **Restricted Stock Unit** " means a bookkeeping entry representing an amount equal to the Fair Market Value of one share of Common Stock, granted pursuant to Section 8. Each Restricted Stock Unit represents an unfunded and unsecured obligation of the Company, subject to the terms and conditions of the applicable Restricted Stock Unit Award Agreement, and each holder of a Restricted Stock Unit shall have no rights other than those of a general creditor of the Company.

(kk) " **Restricted Stock Purchase Agreement** " means a written document, the form(s) of which shall be approved from time to time by the Administrator, reflecting the terms of Restricted Stock granted under the Plan and includes any documents attached to such agreement.

(ll) " **Restricted Stock Unit Award Agreement** " means the written agreement entered into between the Company and a Participant with respect to the purchase of Restricted Stock Units under the Plan.

(mm) " **Rule 16b-3** " means Rule 16b-3 promulgated under the Exchange Act, as amended from time to time, or any successor provision.

(nn) " **Share** " means a share of Common Stock, as adjusted in accordance with Section 11 below.

(oo) " **Stock Exchange** " means any stock exchange or consolidated stock price reporting system on which prices for the Common Stock are quoted at any given time.

(pp) " **Subsidiary** " means any corporation (other than the Company) in an unbroken chain of corporations beginning with the Company if, at the time of grant of the Award, each of the corporations other than the last corporation in the unbroken chain owns stock possessing

50% or more of the total combined voting power of all classes of stock in one of the other corporations in such chain. A corporation that attains the status of a Subsidiary on a date after the adoption of the Plan shall be considered a Subsidiary commencing as of such date.

(qq) "**Ten Percent Holder**" means a person who owns stock representing more than 10% of the voting power of all classes of stock of the Company or any Parent or Subsidiary measured as of an Award's date of grant.

3. **Stock Subject to the Plan**. Subject to the provisions of Section 11 below, the maximum aggregate number of Shares that may be issued under the Plan is 8,000,000 Shares, all of which Shares may be issued under the Plan pursuant to Incentive Stock Options. The Shares issued under the Plan may be authorized, but unissued, or reacquired Shares. If an Award should expire or become unexercisable for any reason without having been exercised in full, or is surrendered pursuant to an Option Exchange Program, the unissued Shares that were subject thereto shall, unless the Plan shall have been terminated, continue to be available under the Plan for issuance pursuant to future Awards. In addition, any Shares which are retained by the Company upon exercise of an Award in order to satisfy the exercise or purchase price for such Award or any withholding taxes due with respect to such Award shall be treated as not issued and shall continue to be available under the Plan for issuance pursuant to future Awards. Shares issued under the Plan and later forfeited to the Company due to the failure to vest or repurchased by the Company at the original purchase price paid to the Company for the Shares (including, without limitation, upon forfeiture to or repurchase by the Company in connection with the termination of a Participant's Continuous Service Status) shall again be available for future grant under the Plan. Notwithstanding the foregoing, subject to the provisions of Section 11 below, in no event shall the maximum aggregate number of Shares that may be issued under the Plan pursuant to Incentive Stock Options exceed the number set forth in the first sentence of this Section 3 plus, to the extent allowable under Section 422 of the Code and the Treasury Regulations promulgated there under, any Shares that again become available for issuance pursuant to the remaining provisions of this Section 3.

4. **Administration of the Plan**.

(a) **General**. The Plan shall be administered by the Board, a Committee appointed by the Board, or any combination thereof, as determined by the Board. The Plan may be administered by different administrative bodies with respect to different classes of Participants and, if permitted by Applicable Laws, the Board may authorize one or more officers of the Company to make Awards under the Plan to Employees and Consultants (who are not subject to Section 16 of the Exchange Act) within parameters specified by the Board.

(b) **Committee Composition**. If a Committee has been appointed pursuant to this Section 4, such Committee shall continue to serve in its designated capacity until otherwise directed by the Board. From time to time the Board may increase the size of any Committee and appoint additional members thereof, remove members (with or without cause) and appoint new members in substitution therefor, fill vacancies (however caused) and dissolve a Committee and thereafter directly administer the Plan, all to the extent permitted by Applicable Laws and, in the case of a Committee administering the Plan in accordance with the requirements of Rule 16b-3 or Section 162(m) of the Code, to the extent permitted or required by such provisions.

(c) **Powers of the Administrator**. Subject to the provisions of the Plan and, in the case of a Committee, the specific duties delegated by the Board to such Committee, the Administrator shall have the authority, in its sole discretion:

(i) to determine the Fair Market Value in accordance with Section 2(t) above, provided that such determination shall be applied consistently with respect to Participants under the Plan;

(ii) to select the Employees and Consultants to whom Awards may from time to time be granted;

(iii) to determine the number of Shares to be covered by each Award;

(iv) to approve the form(s) of agreement(s) and other related documents used under the Plan;

(v) to determine the terms and conditions, not inconsistent with the terms of the Plan, of any Award granted hereunder, which terms and conditions include but are not limited to the exercise or purchase price, the time or times when Awards may vest and/or be exercised (which may be based on performance criteria), the circumstances (if any) when vesting will be accelerated or forfeiture restrictions will be waived, and any restriction or limitation regarding any Award, Optioned Stock, Restricted Stock, or Restricted Stock Unit;

(vi) to amend any outstanding Award or agreement related to any Optioned Stock, Restricted Stock, or Restricted Stock Unit, including any amendment adjusting vesting (e.g., in connection with a change in the terms or conditions under which such person is providing services to the Company), provided that no amendment shall be made that would materially and adversely affect the rights of any Participant without his or her consent;

(vii) to determine whether and under what circumstances an Option may be settled in cash under Section 7(c)(iii) below instead of Common Stock;

(viii) subject to Applicable Laws, to implement an Option Exchange Program and establish the terms and conditions of such Option Exchange Program without consent of the holders of capital stock of the Company, provided that no amendment or adjustment to an Option that would materially and adversely affect the rights of any Participant shall be made without his or her consent;

(ix) to approve addenda pursuant to Section 19 below or to grant Awards to, or to modify the terms of, any outstanding Option Agreement, Restricted Stock Unit Award Agreement, or Restricted Stock Purchase Agreement or any agreement related to any Optioned Stock, Restricted Stock Unit, or Restricted Stock held by Participants who are foreign nationals or employed outside of the United States with such terms and conditions as the Administrator deems necessary or appropriate to accommodate differences in local law, tax policy or custom which deviate from the terms and conditions set forth in this Plan to the extent necessary or appropriate to accommodate such differences;

(x) to construe and interpret the terms of the Plan, any Option Agreement, Restricted Stock Unit Agreement, or Restricted Stock Purchase Agreement, and any agreement related to any Optioned Stock, Restricted Stock Unit, or Restricted Stock, which constructions, interpretations and decisions shall be final and binding on all Participants; and

(xi) to the extent permitted by applicable law, the Administrator may, in its discretion, delegate to a committee comprised of two or more management personnel the authority, without further approval of the Administrator, to exercise such powers under the Plan as the Administrator may determine.

(d) **Indemnification**. To the maximum extent permitted by Applicable Laws, each member of the Committee (including officers of the Company, if applicable), or of the Board, as applicable, shall be indemnified and held harmless by the Company against and from

(i) any loss, cost, liability, or expense that may be imposed upon or reasonably incurred by him or her in connection with or resulting from any claim, action, suit, or proceeding to which he or she may be a party or in which he or she may be involved by reason of any action taken or failure to act under the Plan or pursuant to the terms and conditions of any Award except for actions taken in bad faith or failures to act in bad faith, and (ii) any and all amounts paid by him or her in settlement thereof, with the Company's approval, or paid by him or her in satisfaction of any judgment in any such claim, action, suit, or proceeding against him or her, provided that such member shall give the Company an opportunity, at its own expense, to handle and defend any such claim, action, suit or proceeding before he or she undertakes to handle and defend it on his or her own behalf. The foregoing right of indemnification shall not be exclusive of any other rights of indemnification to which such persons may be entitled under the Company's Certificate of Incorporation or Bylaws, by contract, as a matter of law, or otherwise, or under any other power that the Company may have to indemnify or hold harmless each such person.

5. **Eligibility**.

(a) **Recipients of Grants**. Nonstatutory Stock Options, Restricted Stock Units, and Restricted Stock may be granted to Employees and Consultants. Incentive Stock Options may be granted only to Employees, provided that Employees of Affiliates shall not be eligible to receive Incentive Stock Options.

(b) **Type of Option**. Each Option shall be designated in the Option Agreement as either an Incentive Stock Option or a Nonstatutory Stock Option.

(c) **ISO $100,000 Limitation**. Notwithstanding any designation under Section 5(b) above, to the extent that the aggregate Fair Market Value of Shares with respect to which options designated as incentive stock options are exercisable for the first time by any Optionee during any calendar year (under all plans of the Company or any Parent or Subsidiary) exceeds $100,000, such excess options shall be treated as nonstatutory stock options. For purposes of this Section 5(c), incentive stock options shall be taken into account in the order in which they were granted, and the Fair Market Value of the Shares subject to an incentive stock option shall be determined as of the date of the grant of such option.

(d) **No Employment Rights**. Neither the Plan nor any Award shall confer upon any Employee or Consultant any right with respect to continuation of an employment or consulting relationship with the Company (any Parent, Subsidiary or Affiliate), nor shall it interfere in any way with such Employee's or Consultant's right or the Company's (Parent's, Subsidiary's or Affiliate's) right to terminate his or her employment or consulting relationship at any time, with or without cause.

6. **Term of Plan**. The Plan shall become effective upon its adoption by the Board and shall continue in effect for a term of 10 years unless sooner terminated under Section 15 below.

7. **Options**.

(a) **Term of Option**. The term of each Option shall be the term stated in the Option Agreement; provided that the term shall be no more than 10 years from the date of grant thereof or such shorter term as may be provided in the Option Agreement and provided further that, in the case of an Incentive Stock Option granted to a person who at the time of such grant is a Ten Percent Holder, the term of the Option shall be 5 years from the date of grant thereof or such shorter term as may be provided in the Option Agreement.

(b) **Option Exercise Price and Consideration**.

(i) **Exercise Price**. The per Share exercise price for the Shares to be issued pursuant to the exercise of an Option shall be such price as is determined by the Administrator and set forth in the Option Agreement, but shall be subject to the following:

(1) In the case of an Incentive Stock Option

a. granted to an Employee who at the time of grant is a Ten Percent Holder, the per Share exercise price shall be no less than 110% of the Fair Market Value on the date of grant;

b. granted to any other Employee, the per Share exercise price shall be no less than 100% of the Fair Market Value on the date of grant;

(2) Except as provided in subsection (3) below, in the case of a Nonstatutory Stock Option the per Share exercise price shall be such price as is determined by the Administrator, provided that, if the per Share exercise price is less than 100% of the Fair Market Value on the date of grant, it shall otherwise comply with all Applicable Laws, including Section 409A of the Code; and

(3) Notwithstanding the foregoing, Options may be granted with a per Share exercise price other than as required above pursuant to a merger or other corporate transaction.

(ii) **Permissible Consideration**. The consideration to be paid for the Shares to be issued upon exercise of an Option, including the method of payment, shall be determined by the Administrator (and, in the case of an Incentive Stock Option and to the extent required by

Applicable Laws, shall be determined at the time of grant) and may consist entirely of (1) cash; (2) check; (3) to the extent permitted under, and in accordance with, Applicable Laws, delivery of a promissory note with such recourse, interest, security and redemption provisions as the Administrator determines to be appropriate (subject to the provisions of Section 152 of the General Corporation Law); (4) cancellation of indebtedness; (5) other previously owned Shares that have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which the Option is exercised; (6) a Cashless Exercise; (7) such other consideration and method of payment permitted under Applicable Laws; or (8) any combination of the foregoing methods of payment. In making its determination as to the type of consideration to accept, the Administrator shall consider if acceptance of such consideration may be reasonably expected to benefit the Company and the Administrator may, in its sole discretion, refuse to accept a particular form of consideration at the time of any Option exercise.

(c) **Exercise of Option**.

(i) **General**.

(1) **Exercisability**. Any Option granted hereunder shall be exercisable at such times and under such conditions as determined by the Administrator, consistent with the terms of the Plan and reflected in the Option Agreement, including vesting requirements and/or performance criteria with respect to the Company, and Parent, Subsidiary or Affiliate, and/or the Optionee.

(2) **Leave of Absence**. The Administrator shall have the discretion to determine whether and to what extent the vesting of Options shall be tolled during any leave of absence; provided, however, that in the absence of such determination, vesting of Options shall continue during any paid leave and shall be tolled during any unpaid leave (unless otherwise required by Applicable Laws). Notwithstanding the foregoing, in the event of military leave, vesting shall toll during any unpaid portion of such leave, provided that, upon an Optionee's returning from military leave (under conditions that would entitle him or her to protection upon such return under the Uniform Services Employment and Reemployment Rights Act), he or she shall be given vesting credit with respect to Options to the same extent as would have applied had the Optionee continued to provide services to the Company (or any Parent, Subsidiary or Affiliate, if applicable) throughout the leave on the same terms as he or she was providing services immediately prior to such leave.

(3) **Minimum Exercise Requirements**. An Option may not be exercised for a fraction of a Share. The Administrator may require that an Option be exercised as to a minimum number of Shares, provided that such requirement shall not prevent an Optionee from exercising the full number of Shares as to which the Option is then exercisable.

(4) **Procedures for and Results of Exercise**. An Option shall be deemed exercised when written notice of such exercise has been received by the Company in accordance with the terms of the Option Agreement by the person entitled to exercise the Option and the Company has received full payment for the Shares with respect to which the Option is exercised and has paid, or made arrangements to satisfy, any applicable taxes, withholding, required deductions or other required payments in accordance with Section 10 below. The exercise of an

Option shall result in a decrease in the number of Shares that thereafter may be available, both for purposes of the Plan and for sale under the Option, by the number of Shares as to which the Option is exercised.

(5) **Rights as Holder of Capital Stock**. Until the issuance of the Shares (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a holder of capital stock shall exist with respect to the Optioned Stock, notwithstanding the exercise of the Option. No adjustment will be made for a dividend or other right for which the record date is prior to the date the stock is issued, except as provided in Section 11 below.

(ii) **Termination of Continuous Service Status**. The Administrator shall establish and set forth in the applicable Option Agreement the terms and conditions upon which an Option shall remain exercisable, if at all, following termination of an Optionee's Continuous Service Status, which provisions may be waived or modified by the Administrator at any time. To the extent that an Option Agreement does not specify the terms and conditions upon which an Option shall terminate upon termination of an Optionee's Continuous Service Status, the following provisions shall apply:

(1) **General Provisions**. If the Optionee (or other person entitled to exercise the Option) does not exercise the Option to the extent so entitled within the time specified below, the Option shall terminate and the Optioned Stock underlying the unexercised portion of the Option shall revert to the Plan. In no event may any Option be exercised after the expiration of the Option term as set forth in the Option Agreement (and subject to this Section 7).

(2) **Termination other than Upon Disability or Death or for Cause**. In the event of termination of an Optionee's Continuous Service Status other than under the circumstances set forth in the subsections (3) through (5) below, such Optionee may exercise any outstanding Option at any time within 3 months following such termination to the extent the Optionee is vested in the Optioned Stock.

(3) **Disability of Optionee**. In the event of termination of an Optionee's Continuous Service Status as a result of his or her Disability, such Optionee may exercise any outstanding Option at any time within 12 months following such termination to the extent the Optionee is vested in the Optioned Stock.

(4) **Death of Optionee**. In the event of the death of an Optionee during the period of Continuous Service Status since the date of grant of any outstanding Option, or within 3 months following termination of the Optionee's Continuous Service Status, the Option may be exercised by any beneficiaries designated in accordance with Section 17 below, or if there are no such beneficiaries, by the Optionee's estate, or by a person who acquired the right to exercise the Option by bequest or inheritance, at any time within 12 months following the date the Optionee's Continuous Service Status terminated, but only to the extent the Optionee is vested in the Optioned Stock.

(5) **Termination for Cause**. In the event of termination of an Optionee's Continuous Service Status for Cause, any outstanding Option (including any vested portion thereof) held by such Optionee shall immediately terminate in its entirety upon first notification to the Optionee of termination of the Optionee's Continuous Service Status for Cause. If an Optionee's Continuous Service Status is suspended pending an investigation of whether the Optionee's Continuous Service Status will be terminated for Cause, all the Optionee's rights under any Option, including the right to exercise the Option, shall be suspended during the investigation period. Nothing in this Section 7(c)(ii)(5) shall in any way limit the Company's right to purchase unvested Shares issued upon exercise of an Option as set forth in the applicable Option Agreement.

(iii) **Buyout Provisions**. The Administrator may at any time offer to buy out for a payment in cash or Shares an Option previously granted under the Plan based on such terms and conditions as the Administrator shall establish and communicate to the Optionee at the time that such offer is made.

8. **Restricted Stock Units.**

(a) **Grant of Restricted Stock Units.** Restricted Stock Units may be granted at any time and from time to time as determined by the Administrator. After the Administrator determines that it will grant Restricted Stock Units under the Plan, it shall advise the Participant in writing or electronically of the terms, conditions, and restrictions related to the grant, including the number of Restricted Stock Units and the form of payout, which may be left to the discretion of the Administrator. Until the shares of Common Stock are issued, no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to the Restricted Stock Unit to acquire Shares.

(b) **Vesting Criteria and Other Terms.** The Administrator shall set vesting criteria in its discretion, which, depending on the extent to which the criteria are met, will determine the number of Restricted Stock Units that will be paid out to the Participant. The Administrator may set vesting criteria based upon the achievement of Company-wide, business unit, or individual goals (including, but not limited to, continued employment), or any other basis determined by the Administrator in its discretion.

(c) **Earning Restricted Stock Units.** Upon meeting the applicable vesting criteria, the Participant shall be entitled to receive a payout as specified in his or her Restricted Stock Unit Award Agreement. Notwithstanding the foregoing, at any time after the grant of Restricted Stock Units, the Administrator, in its sole discretion, may reduce or waive any vesting criteria that must be met to receive a payout.

(d) **Form and Timing.** Payment of earned Restricted Stock Units shall be made as soon as practicable after the date(s) set forth in the Restricted Stock Unit Award Agreement. The Administrator, in its sole discretion, but only as specified in the Award Agreement, may pay earned Restricted Stock Units in cash, shares of Common Stock, or a combination thereof. If the Award Agreement is silent as to the form of payment, payment of the Restricted Stock Units may only be in shares of Common Stock; provided that any fractional share may be paid in cash.

(e) **Cancellation.** Any Restricted Stock Units that do not vest pursuant to the terms and conditions set forth in a Participant's Restricted Stock Unit Agreement shall immediately revert to the Plan.

(f) **Compliance with Code Section 409A.** Notwithstanding anything in this Section 8 to the contrary, all Restricted Stock Unit Awards are intended to be structured to satisfy the requirements of Code Section 409A, or an applicable exemption, as determined by the Administrator.

9. **Restricted Stock**.

(a) **Rights to Purchase**. When a right to purchase or receive Restricted Stock is granted under the Plan, the Company shall advise the recipient in writing of the terms, conditions and restrictions related to the offer, including the number of Shares that such person shall be entitled to purchase, the price to be paid, if any (which shall be as determined by the Administrator, subject to Applicable Laws, including any applicable securities laws), and the time within which such person must accept such offer. The permissible consideration for Restricted Stock shall be determined by the Administrator and shall be the same as is set forth in Section 7(b)(ii) above with respect to exercise of Options. The offer to purchase Shares shall be accepted by execution of a Restricted Stock Purchase Agreement in the form determined by the Administrator.

(b) **Repurchase Option**.

(i) **General**. Unless the Administrator determines otherwise, the Restricted Stock Purchase Agreement shall grant the Company a repurchase option exercisable upon the voluntary or involuntary termination of the Participant's Continuous Service Status for any reason (including death or Disability) at a purchase price for Shares equal to the original purchase price paid by the purchaser to the Company for such Shares and may be paid by cancellation of any indebtedness of the purchaser to the Company. The repurchase option shall lapse at such rate as the Administrator may determine.

(ii) **Leave of Absence**. The Administrator shall have the discretion to determine whether and to what extent the lapsing of Company repurchase rights shall continue during any paid leave and shall be tolled during any unpaid leave of absence; provided, however, that in the absence of such determination, such lapsing shall be tolled during any leave (unless otherwise required by Applicable Laws). Notwithstanding the foregoing, in the event of military leave, the lapsing of Company repurchase rights shall toll during any unpaid portion of such leave, provided that, upon a Participant's returning from military leave (under conditions that would entitle him or her to protection upon such return under the Uniform Services Employment and Reemployment Rights Act), he or she shall be given vesting credit with respect to Shares purchased pursuant to the Restricted Stock Purchase Agreement to the same extent as would have applied had the Participant continued to provide services to the Company (or any Parent, Subsidiary or Affiliate, if applicable) throughout the leave on the same terms as he or she was providing services immediately prior to such leave.

(c) **Other Provisions**. The Restricted Stock Purchase Agreement shall contain such other terms, provisions and conditions not inconsistent with the Plan as may be determined by the Administrator in its sole discretion. In addition, the provisions of Restricted Stock Purchase Agreements need not be the same with respect to each Participant.

(d) **Rights as a Holder of Capital Stock**. Once the Restricted Stock is purchased, the Participant shall have the rights equivalent to those of a holder of capital stock, and shall be a record holder when his or her purchase and the issuance of the Shares is entered upon the records of the duly authorized transfer agent of the Company. No adjustment will be made for a dividend or other right for which the record date is prior to the date the Restricted Stock is purchased, except as provided in Section 11 below.

10. **Taxes**.

(a) As a condition of the grant, vesting and exercise of an Award, the Participant (or in the case of the Participant's death or a permitted transferee, the person holding or exercising the Award) shall make such arrangements as the Administrator may require for the satisfaction of any applicable U.S. federal, state, local or foreign tax, withholding, and any other required deductions or payments that may arise in connection with such Award. The Company shall not be required to issue any Shares under the Plan until such obligations are satisfied.

(b) The Administrator may, to the extent permitted under Applicable Laws, permit a Participant (or in the case of the Participant's death or a permitted transferee, the person holding or exercising the Award) to satisfy all or part of his or her tax, withholding, or any other required deductions or payments by Cashless Exercise or by surrendering Shares (either directly or by stock attestation) that he or she previously acquired; provided that, unless specifically permitted by the Company, any such Cashless Exercise must be an approved broker-assisted Cashless Exercise or the Shares withheld in the Cashless Exercise must be limited to avoid financial accounting charges under applicable accounting guidance and any such surrendered Shares must have been previously held for any minimum duration required to avoid financial accounting charges under applicable accounting guidance. Any payment of taxes by surrendering Shares to the Company may be subject to restrictions, including, but not limited to, any restrictions required by rules of the Securities and Exchange Commission.

11. **Adjustments Upon Changes in Capitalization, Merger or Certain Other Transactions**.

(a) **Changes in Capitalization**. Subject to any action required under Applicable Laws by the holders of capital stock of the Company, (i) the numbers and class of Shares or other stock or securities: (x) available for future Awards under Section 3 above and (y) covered by each outstanding Award, (ii) the exercise price per Share of each such outstanding Option, and (iii) any repurchase price per Share applicable to Shares issued pursuant to any Award, shall be automatically proportionately adjusted in the event of a stock split, reverse stock split, stock dividend, combination, consolidation, reclassification of the Shares or subdivision of the Shares. In the event of any increase or decrease in the number of issued Shares effected without receipt of consideration by the Company, a declaration of an extraordinary dividend with respect to the Shares payable in a form other than

Shares in an amount that has a material effect on the Fair Market Value, a recapitalization (including a recapitalization through a large nonrecurring cash dividend), a rights offering, a reorganization, merger, a spin-off, split-up, change in corporate structure or a similar occurrence, the Administrator shall make appropriate adjustments, in its discretion, in one or more of (i) the numbers and class of Shares or other stock or securities: (x) available for future Awards under Section 3 above and (y) covered by each outstanding Award, (ii) the exercise price per Share of each outstanding Option and (iii) any repurchase price per Share applicable to Shares issued pursuant to any Award, and any such adjustment by the Administrator shall be made in the Administrator's sole and absolute discretion and shall be final, binding and conclusive. Except as expressly provided herein, no issuance by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall affect, and no adjustment by reason thereof shall be made with respect to, the number or price of Shares subject to an Award. If, by reason of a transaction described in this Section 11(a) or an adjustment pursuant to this Section 11(a), a Participant's Award agreement or agreement related to any Optioned Stock, Restricted Stock Unit, or Restricted Stock covers additional or different shares of stock or securities, then such additional or different shares, and the Award agreement or agreement related to the Optioned Stock, Restricted Stock Unit, or Restricted Stock in respect thereof, shall be subject to all of the terms, conditions and restrictions which were applicable to the Award, Optioned Stock, Restricted Stock Unit, and Restricted Stock prior to such adjustment.

(b) **Dissolution or Liquidation** . In the event of the dissolution or liquidation of the Company, each Award will terminate immediately prior to the consummation of such action, unless otherwise determined by the Administrator.

(c) **Corporate Transactions** . In the event of (i) a transfer of all or substantially all of the Company's assets, (ii) a merger, consolidation or other capital reorganization or business combination transaction of the Company with or into another corporation, entity or person, or (iii) the consummation of a transaction, or series of related transactions, in which any "person" (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of more than 50% of the Company's then outstanding capital stock (a " Corporate Transaction "), each outstanding Award (vested or unvested) will be treated as the Administrator determines, which determination may be made without the consent of any Participant and need not treat all outstanding Awards (or portion thereof) in an identical manner. Such determination, without the consent of any Participant, may provide (without limitation) for one or more of the following in the event of a Corporate Transaction: (A) the continuation of such outstanding Awards by the Company (if the Company is the surviving corporation); (B) the assumption of such outstanding Awards by the surviving corporation or its parent; (C) the substitution by the surviving corporation or its parent of new options or equity awards for such Awards; (D) the cancellation of such Awards in exchange for a payment to the Participants equal to the excess of (1) the Fair Market Value of the Shares subject to such Awards as of the closing date of such Corporate Transaction over (2) the exercise price or purchase price paid or to be paid for the Shares subject to the Awards; or (E) the cancellation of any outstanding Options, Restricted Stock Units, or an outstanding right to purchase Restricted Stock, in either case, for no consideration. For the avoidance of any doubt, outstanding Restricted Stock Units shall terminate and be cancelled for no consideration upon consummation of a Change of Control except to the extent that the Restricted Stock Units are assumed by the successor entity (or parent or subsidiary thereof) pursuant to the terms of the agreement governing the Change of Control transaction.

12. **Non-Transferability of Awards**.

(a) **General**. Except as set forth in this Section 12, Awards may not be sold, pledged, assigned, hypothecated, transferred or disposed of in any manner other than by will or by the laws of descent or distribution. The designation of a beneficiary by a Participant will not constitute a transfer. An Option may be exercised, during the lifetime of the holder of the Option, only by such holder or a transferee permitted by this Section 12.

(b) **Limited Transferability Rights**. Notwithstanding anything else in this Section 12, the Administrator may in its sole discretion provide that any Nonstatutory Stock Options may be transferred by instrument to an inter vivos or testamentary trust in which the Options are to be passed to beneficiaries upon the death of the trustor (settlor) or by gift to Family Members. Further, beginning with (i) the period when the Company begins to rely on the exemption described in Rule 12h-1(f)(1) promulgated under the Exchange Act, as determined by the Board in its sole discretion, and (ii) ending on the earlier of (A) the date when the Company ceases to rely on such exemption, as determined by the Board in its sole discretion, or (B) the date when the Company becomes subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act, an Option, or prior to exercise, the Shares subject to the Option, may not be pledged, hypothecated or otherwise transferred or disposed of, in any manner, including by entering into any short position, any “put equivalent position” or any “call equivalent position” (as defined in Rule 16a-1(h) and Rule 16a-1(b) of the Exchange Act, respectively), other than to (i) persons who are Family Members through gifts or domestic relations orders, or (ii) to an executor or guardian of the Participant upon the death or disability of the Participant. Notwithstanding the foregoing sentence, the Board, in its sole discretion, may permit transfers of Nonstatutory Stock Options to the Company or in connection with a Change of Control or other acquisition transactions involving the Company to the extent permitted by Rule 12h-1(f).

13. **Non-Transferability of Stock Underlying Awards**.

(a) **General**. Notwithstanding anything to the contrary, no stockholder shall transfer, whether by sale, gift or otherwise, any Shares acquired from any Award (including, without limitation, Shares acquired upon exercise of an Option) to any person or entity unless such transfer is approved by the Company prior to such transfer, which approval may be granted or withheld in the Company’s sole and absolute discretion. Any purported transfer effected in violation of this Section 13 shall be null and void and shall have no force or effect and the Company shall not be required (i) to transfer on its books any Shares that have been sold or otherwise transferred in violation of any of the provisions of the Plan or (ii) to treat as owner of such Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom such Shares shall have been so transferred.

(b) **Approval Process**. Any stockholder seeking the approval of the Board to transfer some or all of its Shares shall give written notice thereof to the Secretary of the Company and such request for transfer shall be subject to such right of first refusal, transfer provisions and any other terms and conditions as may be set forth in the applicable Option Agreement, Restricted Stock Unit Award Agreement, Restricted Stock Purchase Agreement or other applicable written agreement.

14. **Time of Granting Awards**. The date of grant of an Award shall, for all purposes, be the date on which the Administrator makes the determination granting such Award, or such other date as is determined by the Administrator.

15. **Amendment and Termination of the Plan**. The Board may at any time amend or terminate the Plan, but no amendment or termination shall be made that would materially and adversely affect the rights of any Participant under any outstanding Award, without his or her consent. In addition, to the extent necessary and desirable to comply with Applicable Laws, the Company shall obtain the approval of holders of capital stock with respect to any Plan amendment in such a manner and to such a degree as required.

16. **Conditions Upon Issuance of Shares**. Notwithstanding any other provision of the Plan or any agreement entered into by the Company pursuant to the Plan, the Company shall not be obligated, and shall have no liability for failure, to issue or deliver any Shares under the Plan unless such issuance or delivery would comply with Applicable Laws, with such compliance determined by the Company in consultation with its legal counsel. As a condition to the exercise of any Option, settlement of any Restricted Stock Unit award, or purchase of any Restricted Stock, the Company may require the person who would receive Shares upon settlement of his or her Restricted Stock Unit award, exercising the Option or purchasing the Restricted Stock to represent and warrant at the time of any such exercise or purchase that the Shares are being received or purchased only for investment and without any present intention to sell or distribute such Shares if, in the opinion of counsel for the Company, such a representation is advisable or required by Applicable Laws. Shares issued upon settlement of a Restricted Stock Unit award, exercise of Options, or purchase of Restricted Stock prior to the date, if ever, on which the Common Stock becomes a Listed Security shall be subject to a right of first refusal in favor of the Company pursuant to which the Participant will be required to offer Shares to the Company before selling or transferring them to any third party on such terms and subject to such conditions as is reflected in the applicable Option Agreement or Restricted Stock Purchase Agreement.

17. **Beneficiaries**. If permitted by the Company, a Participant may designate one or more beneficiaries with respect to an Award by timely filing the prescribed form with the Company. A beneficiary designation may be changed by filing the prescribed form with the Company at any time before the Participant's death. Except as otherwise provided in an Award Agreement, if no beneficiary was designated or if no designated beneficiary survives the Participant, then after a Participant's death any vested Award(s) shall be transferred or distributed to the Participant's estate or to any person who has the right to acquire the Award by bequest or inheritance.

18. **Approval of Holders of Capital Stock**. If required by Applicable Laws, continuance of the Plan shall be subject to approval by the holders of capital stock of the Company within 12 months before or after the date the Plan is adopted or, to the extent required by Applicable Laws, any date the Plan is amended. Such approval shall be obtained in the manner and to the degree required under Applicable Laws.

19. **Addenda**. The Administrator may approve such addenda to the Plan as it may consider necessary or appropriate for the purpose of granting Awards to Employees or Consultants, which Awards may contain such terms and conditions as the Administrator deems necessary or appropriate to accommodate differences in local law, tax policy or custom, which may deviate from the terms and conditions set forth in this Plan. The terms of any such addenda shall supersede the terms of the Plan to the extent necessary to accommodate such differences but shall not otherwise affect the terms of the Plan as in effect for any other purpose.

20. **Information to Holders of Options**. In the event the Company is relying on the exemption provided by Rule 12h-1(f) under the Exchange Act, the Company shall provide the information described in Rule 701(e)(3), (4) and (5) of the Securities Act of 1933, as amended, to all holders of Options in accordance with the requirements thereunder until such time as the Company becomes subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act. The Company may request that holders of Options agree to keep the information to be provided pursuant to this Section confidential. If the holder does not agree to keep the information to be provided pursuant to this Section confidential, then the Company will not be required to provide the information unless otherwise required pursuant to Rule 12h-1(f)(1) of the Exchange Act.

ADDENDUM A

Amended and Restated 2013 Stock Plan

(California Participants)

Prior to the date, if ever, on which the Common Stock becomes a Listed Security and/or the Company is subject to the reporting requirements of the Exchange Act, the terms set forth herein shall apply to Awards issued to California Participants. All capitalized terms used herein but not otherwise defined shall have the respective meanings set forth in the Plan.

1. The following rules shall apply to any Option in the event of termination of the Participant's Continuous Service Status:

(a) If such termination was for reasons other than death, "Permanent Disability" (as defined below), or Cause, the Participant shall have at least 30 days after the date of such termination to exercise his or her Option to the extent the Participant is entitled to exercise on his or her termination date, provided that in no event shall the Option be exercisable after the expiration of the term as set forth in the Option Agreement.

(b) If such termination was due to death or Permanent Disability, the Participant shall have at least 6 months after the date of such termination to exercise his or her Option to the extent the Participant is entitled to exercise on his or her termination date, provided that in no event shall the Option be exercisable after the expiration of the term as set forth in the Option Agreement.

" Permanent Disability " for purposes of this Addendum shall mean the inability of the Participant, in the opinion of a qualified physician acceptable to the Company, to perform the major duties of the Participant's position with the Company or any Parent or Subsidiary because of the sickness or injury of the Participant.

2. Notwithstanding anything to the contrary in Section 11(a) of the Plan, the Administrator shall in any event make such adjustments as may be required by Section 25102(o) of the California Corporations Code.

3. Notwithstanding anything stated herein to the contrary, no Option shall be exercisable on or after the 10th anniversary of the date of grant and any Award agreement shall terminate on or before the 10th anniversary of the date of grant.

4. The Company shall furnish summary financial information (audited or unaudited) of the Company's financial condition and results of operations, consistent with the requirements of Applicable Laws, at least annually to each California Participant during the period such Participant has one or more Awards outstanding, and in the case of an individual who acquired Shares pursuant to the Plan, during the period such Participant owns such Shares; provided, however, the Company shall not be required to provide such information if (i) the issuance is limited to key persons whose duties in connection with the Company assure their access to equivalent information or (ii) the Plan or any agreement complies with all conditions of Rule 701 of the Securities Act of 1933, as amended;

provided that for purposes of determining such compliance, any registered domestic partner shall be considered a “family member” as that term is defined in Rule 701.

AMENDMENT NO. 2
TO
INDEMNIFICATION TRUST AGREEMENT

This AMENDMENT NO. 2 (this " Amendment ") TO INDEMNIFICATION TRUST AGREEMENT, dated June 23, 2003, as amended (the " Agreement "), among JUNIPER NETWORKS, INC., a Delaware corporation (" Grantor "), and BNY MELLON TRUST OF DELAWARE (formerly The Bank of New York (Delaware)), as trustee (" Trustee "), and Mitchell L. Gaynor, as successor Beneficiaries' Representative to Lisa C. Berry, the initial Beneficiaries' Representative, is dated as of November 1, 2016 (the " Effective Date "). Capitalized terms used and not otherwise defined in this Amendment shall have the meanings ascribed thereto in the Agreement.

RECITALS

WHEREAS, pursuant to Section 6.3 of the Agreement, the Grantor, the Trustee and the Beneficiaries' Representative, acting upon the direction of two-thirds of the Voting Beneficiaries, wish to amend the Agreement to reflect the modifications set forth below.

NOW, THEREFORE, in consideration of the premises and of the mutual covenants herein contained and for other valuable considerations, the Grantor and the Beneficiaries' Representative hereby agree to amend the Agreement, as follows, effective as of the Effective Date:

A. From and after the Effective Date, Exhibit A of the Agreement is hereby amended and restated in its entirety with the Exhibit A attached to this Amendment.

B. The parties hereto acknowledge and agree that the terms and provisions of this Amendment amend, add to and constitute a part of the Agreement. Except as expressly modified and amended by the terms of this Amendment, all of the other terms and conditions of the Agreement and all documents executed in connection therewith or referred to or incorporated therein remain in full force and effect and are hereby ratified, reaffirmed, confirmed and approved.

C. If there is an express conflict between the terms of this Amendment and the terms of the Agreement, or any of the other agreements or documents executed in connection therewith or referred to or incorporated therein, the terms of this Amendment shall govern and control.

D. This Amendment shall be governed by and its provisions construed and enforced in accordance with the laws of the State of Delaware.

E. This Amendment may be executed in any number of counterparts, each of which will be deemed to be an original, but all of which together will one and the same agreement.

[Remainder of Page Intentionally Blank]

IN WITNESS WHEREOF , the parties have executed this Amendment as of the date first above written.

JUNIPER NETWORKS, INC.
AS GRANTOR

By: /s/ Meredith McKenzie

Name: Meredith McKenzie

Title: Vice President Deputy General Counsel

/s/ Mitchell L. Gaynor

Mitchell L. Gaynor,
as Beneficiaries' Representative

BNY MELLON TRUST OF DELAWARE,
AS TRUSTEE

By: /s/ Kristine K. Gullo

Name: Kristine K. Gullo

Title: Vice President

Exhibit A

JUNIPER NETWORKS, INC.
INDEMNIFICATION AGREEMENT

This Indemnification Agreement (the " Agreement ") is effective as of ___________, by and between Juniper Networks, Inc., a Delaware corporation (the " Company "), and ________________ (the " Indemnitee ").

WHEREAS, the Company desires to attract and retain the services of highly qualified individuals, such as Indemnitee, to serve the Company and its related entities;

WHEREAS, in order to induce Indemnitee to continue to provide services to the Company, the Company wishes to provide for the indemnification of, and advancement of expenses to, Indemnitee to the maximum extent permitted by law;

WHEREAS, Indemnitee does not regard the current protection available as adequate under the present circumstances, and the Indemnitee and certain other directors, officers, employees, agents and fiduciaries of the Company may not be willing to continue to serve in such capacities without additional protection;

WHEREAS, the Company and Indemnitee recognize the continued difficulty in obtaining liability insurance for the Company's directors, officers, employees, agents and fiduciaries, the significant and continual increases in the cost of such insurance and the general trend of insurance companies to reduce the scope of coverage of such insurance;

WHEREAS, the Company and Indemnitee further recognize the substantial increase in corporate litigation in general, subjecting directors, officers, employees, agents and fiduciaries to expensive litigation risks at the same time as the availability and scope of coverage of liability insurance provide increasing challenges for the Company; and

WHEREAS, in view of the considerations set forth above, the Company desires that Indemnitee shall be indemnified by the Company as set forth herein;

NOW, THEREFORE, the Company and Indemnitee hereby agree as set forth below.

A. Certain Definitions .

1. " Business Day " shall mean any day other than a Saturday, Sunday or other day on which banks in the State of Delaware are required or permitted to be closed.

2. " Change in Control " shall mean, and shall be deemed to have occurred if, on or after the date of this Agreement, (i) any "person" (as such term is used in Section 13(d) of the Securities Exchange Act of 1934, as amended (the " Exchange Act ")), other than a trustee or other fiduciary holding securities under an employee benefit plan of the Company acting in such capacity

or a corporation owned directly or indirectly by the stockholders of the Company in substantially the same proportions as their ownership of stock of the Company, becomes the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing more than 50% of the total voting power represented by the Company's then outstanding Voting Securities, (ii) during any period of two consecutive years, individuals who at the beginning of such period constitute the Board of Directors of the Company and any new director whose election by the Board of Directors or nomination for election by the Company's stockholders was approved by a vote of at least two thirds (2/3) of the directors then still in office who either were directors at the beginning of the period or whose election or nomination for election was previously so approved, cease for any reason to constitute a majority thereof, or (iii) the stockholders of the Company approve a merger or consolidation of the Company with any other corporation other than a merger or consolidation which would result in the Voting Securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into Voting Securities of the surviving entity) at least 80% of the total voting power represented by the Voting Securities of the Company or such surviving entity outstanding immediately after such merger or consolidation, or the stockholders of the Company approve a plan of complete liquidation of the Company or an agreement for the sale or disposition by the Company of (in one transaction or a series of related transactions) all or substantially all of the Company's assets.

3. " Claim " shall mean any threatened, pending or completed action, suit, proceeding, arbitration or other alternative dispute resolution mechanism whether brought by or in the right of the Company or otherwise, or any hearing, inquiry or investigation that Indemnitee in good faith believes might lead to the institution of any such action, suit, proceeding, arbitration or other alternative dispute resolution mechanism, whether civil, criminal, administrative, investigative or other, or any appeal therefrom.

4. References to the " Company " shall include, in addition to Juniper Networks, Inc., any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger to which Juniper Networks, Inc. (or any of its wholly owned subsidiaries) is a party which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, employees, agents or fiduciaries, so that if Indemnitee is or was a director, officer, employee, agent or fiduciary of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee, agent or fiduciary of another corporation, partnership, joint venture, employee benefit plan, trust or other enterprise, Indemnitee shall stand in the same position under the provisions of this Agreement with respect to the resulting or surviving corporation as Indemnitee would have with respect to such constituent corporation if its separate existence had continued.

5. " Expenses " shall mean any expenses including, without limitation, fees, charges and disbursements of counsel and all other costs, expenses and obligations actually paid or reasonably incurred by Indemnitee in connection with investigating, defending, being a witness in or participating in (including on appeal), or preparing to defend, be a witness in or participate in any Claim relating to any Indemnifiable Event.

6. " Expense Advance " shall mean an advance payment of Expenses to Indemnitee pursuant to Section 3(a).

7. " Indemnifiable Event " shall mean any event or occurrence, whether occurring on, prior to, or after the date of this Agreement, related to (i) the fact that Indemnitee is or was a director, officer, employee, trustee, agent or fiduciary of the Company, or any subsidiary of the Company, or is or was serving at the request of or for the convenience of or to represent the interests of the Company as a director, officer, employee, trustee, agent or fiduciary of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise, or (ii) any action or inaction on the part of Indemnitee while serving in any capacity set forth in clause (i), including, without limitation, any breach of duty, neglect, error, misstatement, misleading statement, omission, or other act done or wrongfully attempted by the Indemnitee, or any of the foregoing alleged by any claimant, in any such capacity.

8. " Independent Legal Counsel " shall mean an attorney or firm of attorneys, selected in accordance with the provisions of Section 2(c), who shall not have otherwise performed services for the Company or Indemnitee within the last three years (other than with respect to matters concerning the rights of Indemnitee under this Agreement or the Trust Agreement, or of other indemnitees under similar indemnity agreements).

9. " Losses " shall mean (i) any amounts or sums which Indemnitee is legally obligated to pay as a result of a Claim or Claims made against Indemnitee for Indemnifiable Events including, without limitation, damages, judgments, fines, penalties and sums or amounts paid in settlement (if such settlement is approved in advance by the Company) of a Claim or Claims, and (ii) to the extent not paid in advance pursuant to the terms of this Agreement or the Trust Agreement for any reason, Expenses.

10. References to " other enterprises " shall include employee benefit plans; references to "fines" shall include any excise taxes assessed on Indemnitee with respect to an employee benefit plan; and references to "serving at the request or for the convenience or to represent the interests of the Company" shall include any service as a director, officer, employee, agent or fiduciary of the Company which imposes duties on, or involves services by, such director, officer, employee, agent or fiduciary with respect to an employee benefit plan, its participants or its beneficiaries; and if Indemnitee acted in good faith and in a manner Indemnitee reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan, Indemnitee shall be deemed to have acted in a manner "not opposed to the best interests of the Company" as referred to in this Agreement.

11. " Reviewing Party " shall mean any appropriate person or body consisting of a member or members of the Company's Board of Directors or any other person or body appointed by the Board of Directors who is not a party to the particular Claim for which Indemnitee is seeking indemnification or Independent Legal Counsel as provided in Section 2(c).

12. " Trust " has the meaning set forth in Section 3(f).

13. " Trust Agreement " has the meaning set forth in Section 3(f).

14. " Voting Securities " shall mean any securities of the Company (or a surviving entity as described in the definition of a "Change in Control") that vote generally in the election of directors.

B. Indemnification .

1. Agreement to Indemnify . If Indemnitee is or becomes a party to or witness or other participant in, or is threatened to be made a party to or witness or other participant in, a Claim by reason of (or arising in part out of) an Indemnifiable Event, the Company will, to the maximum extent permitted by law, indemnify Indemnitee against, and will make Expense Advances from time to time any and all Expenses and Losses (including all interest, assessments and other charges paid or payable in connection with or in respect of such Expenses and Losses, but excluding amounts paid in settlement of any Claim if such settlement was not approved by the Company) arising from or relating to such Claim, whether or not such Claim proceeds to judgment or is settled or otherwise is brought to a disposition. If requested by Indemnitee, the Company agrees that it will not unreasonably withhold its consent to any proposed settlement of any such Claim. Such payment of Expenses and Losses shall be made by the Company as soon as practicable after written demand by Indemnitee therefor is presented to the Company, but in any event payment of a demand for an Expense Advance shall be made not later than five (5) Business Days after the receipt by the Company of written demand therefor, which is accompanied by an explanation in reasonable detail and copies of invoices received by Indemnitee in connection with such Expenses (but, in the case of invoices in connection with legal services, any reference to legal work performed or to expenditures made that would cause Indemnitee to waive any privilege accorded by applicable law shall not be included with the invoice).

2. Reviewing Party's Role . Notwithstanding the provisions of Section 2(a), (i) the obligations of the Company under Section 2(a) to make indemnification payments for Losses shall be subject to the condition that the Reviewing Party shall have determined (in a written opinion, in any case in which Independent Legal Counsel is the Reviewing Party) that Indemnitee would be permitted to be indemnified under this Agreement and applicable law, and (ii) the obligation of the Company to make an Expense Advance shall be unconditional with no need for approval by the Reviewing Party. If a court specified in Section 15 ultimately determines that Indemnitee was not entitled as a matter of law to retain any Expense Advance previously made by the Company or the Trust, Indemnitee hereby agrees to reimburse the Company (or, if such Expense Advance was made by the Trust, the Trust) for any such amount, provided that if Indemnitee contests such entitlement in a proceeding or has commenced or thereafter commences legal proceedings in such court to secure a determination that Indemnitee should be indemnified under applicable law, any determination made by the Reviewing Party that Indemnitee would not be permitted to be indemnified under this Agreement or applicable law shall not be binding and Indemnitee shall not be required to reimburse the Company for any Expense Advance until a final judicial determination is made with respect thereto (as to which all rights of appeal therefrom have been exhausted or lapsed). Indemnitee's obligation to reimburse the Company for any Expense Advance shall be unsecured and no interest shall be charged thereon. If there has been no determination by the Reviewing Party or if the Reviewing Party determines that Indemnitee substantively would not be permitted to be indemnified in whole or in part under this Agreement or applicable law, Indemnitee shall have the

right to commence litigation seeking an initial determination by the court or challenging any such determination by the Reviewing Party or any aspect thereof, including the legal or factual bases therefor, and the Company hereby consents to service of process and to appear in any such proceeding. Absent such litigation, any determination by the Reviewing Party shall be conclusive and binding on the Company and Indemnitee.

3. The Reviewing Party in Various Circumstances . For matters that require a determination by the Reviewing Party in respect of Losses, the Reviewing Party shall be the following:

a. If Indemnitee is a director or officer claiming a right to indemnity for Losses under this Agreement or under the Company's Certificate of Incorporation or Bylaws at the time a determination by the Reviewing Party is required (a " Current Director or Officer ") and if no Change in Control has occurred that was not approved by a majority of the Company's Board of directors who were directors immediately prior to such Change in Control (any such non-preapproved transaction, a " Triggering Change in Control "), then the Reviewing Party will be the members of the Company's Board of Directors who are not parties to the Claim for which indemnification is being sought, or a committee of such directors designated by majority vote of the directors who are not parties to the Claim for which indemnification is being sought, or if such directors or committee so decide, the Independent Legal Counsel.

b. If Indemnitee is not a Current Director or Officer and no Triggering Change in Control has occurred, then the Reviewing Party will be the Company's chief executive officer or chief financial officer, acting on behalf of the Company, unless the Indemnitee expressly demands in writing at the time that he or she makes a demand for indemnification of a Loss that Independent Legal Counsel be the Reviewing Party, in which event Independent Legal Counsel shall be the Reviewing Party.

c. If a Triggering Change in Control has occurred, then the Reviewing Party will be Independent Legal Counsel unless Indemnitee, in its sole discretion, waives the right to have Independent Legal Counsel be the Reviewing Party, in which case the Reviewing Party will be the members of the Company's Board of Directors who are not parties to the Claim.

d. If, notwithstanding clauses (i) or (ii) of this subsection 2(c), Indemnitee seeks indemnification for Losses under the Trust, rather than seeking indemnification directly from the Company, the Reviewing Party will be Independent Legal Counsel. In all circumstances where Independent Legal Counsel is the Reviewing Party, Grover Brown will serve as Independent Legal Counsel unless he is no longer meets the definition of Independent Legal Counsel in Section 1(h) or is no longer willing or able to serve as such. If the named Independent Legal Counsel resigns, is unable to perform his duties as Independent Legal Counsel or no longer meets the definition of Independent Legal Counsel in Section 1(h), another person or firm meeting the definition of Independent Legal Counsel in Section 1(h) shall be selected as successor Independent Legal Counsel in the manner contemplated by the Trust Agreement, in which event such successor Independent Legal Counsel shall be the Independent Legal Counsel for purposes of this Agreement.

4. Independent Legal Counsel Opinion . In any case in which Independent Legal Counsel is acting as the Reviewing Party, such counsel, among other things, shall render its written opinion to the Company and Indemnitee as to whether and to what extent Indemnitee would be permitted to be indemnified under this Agreement and applicable law and the Company agrees to abide by such opinion. The Company agrees to pay a reasonable retainer fee and the reasonable fees, charges and disbursements of any Independent Legal Counsel selected to act as the Reviewing Party and to indemnify fully such counsel against any and all expenses (including reasonable fees, charges and disbursements of counsel), claims, liabilities and damages arising out of or relating to this Agreement or its engagement pursuant hereto. Notwithstanding any other provision of this Agreement, the Company shall not be required to pay expenses of more than one Independent Legal Counsel in connection with all matters concerning the Indemnitee, and such Independent Legal Counsel shall be the Independent Legal Counsel for any or all other indemnitees making indemnification claims that relate to the same Claim as the Indemnitee's unless (i) the Company otherwise determines or (ii) any Indemnitee shall provide a written statement setting forth in detail a reasonable objection to such Independent Legal Counsel making any determination with respect to other indemnitees.

5. Mandatory Payment of Expenses . Notwithstanding any other provision of this Agreement other than Section 10, to the extent that Indemnitee has been successful on the merits or otherwise, including, without limitation, the dismissal of an action without prejudice, in defense of any Claim regarding any Indemnifiable Event, Indemnitee shall be indemnified against all Expenses incurred by Indemnitee in connection therewith.

6. Action to Compel Payment . If a claim for indemnification for Losses or any Expense Advance pursuant to this Agreement is not paid in full for any reason (including, but not limited to, a decision adverse to the Indemnitee by the Reviewing Party, or the failure of the Reviewing Party to render its determination) within five (5) Business Days of the date of demand, in the case of Expense Advance, or thirty (30) days of the date of demand in the case of any other claim for indemnification of Losses or Expenses, then Indemnitee may file suit to recover the unpaid amount of such claim in a court specified in Section 15. The provisions of Sections 3(c) and 13 shall be applicable to any such action.

C. Expenses; Indemnification Procedure .

1. Expense Advances . Expense Advances to be made hereunder shall be paid by the Company to Indemnitee as soon as practicable but in any event no later than five (5) Business Days after written demand by Indemnitee therefor to the Company. Nothing set forth herein shall prevent the Indemnitee from making a demand upon the Trust for payment of Expense Advances.

2. Notice/Cooperation by Indemnitee . Indemnitee shall, as a condition precedent to Indemnitee's right to receive Expense Advances and to be indemnified for Losses under this Agreement, give the Company notice in writing as soon as practicable of any Claim made against Indemnitee relating to an Indemnifiable Event for which a request for Expense Advance or for which indemnification for Losses will or could be sought under this Agreement. Notice to the Company shall be directed to the Chief Executive Officer of the Company at the address shown on the signature page of this Agreement (or such other address as the Company shall designate in writing to

Indemnitee). In addition, Indemnitee shall give the Company such information and cooperation as it may reasonably require and as shall be within Indemnitee's power.

3. Burden of Proof; No Presumption Against Indemnitee . Indemnitee's right to indemnification shall be enforceable by Indemnitee in the court specified in Section 15 and shall be enforceable notwithstanding any adverse determination by the Reviewing Party. In any action in which Indemnitee seeks to receive Expense Advances or indemnification for Losses, the Company shall be required to make the requested payment unless it satisfies the burden of proving that the Expense Advances or indemnification for Losses are not permitted by applicable law or are not required under this Agreement. For purposes of this Agreement, the termination of any Claim by judgment, order, settlement (whether with or without court approval) or conviction, or upon a plea of nolo contendere, or its equivalent, shall not create a presumption that Indemnitee did not meet any particular standard of conduct or have any particular belief or that a court has determined that Expense Advances or indemnification for Losses is not permitted by applicable law or hereunder. In addition, neither the failure of the Reviewing Party to have made a determination as to whether Indemnitee has met any particular standard of conduct or had any particular belief, nor an actual determination by the Reviewing Party that Indemnitee has not met such standard of conduct or did not have such belief, prior to the commencement of legal proceedings by Indemnitee to secure a judicial determination that Indemnitee should be entitled to receive Expense Advances or be indemnified for Losses under applicable law, shall be a defense to Indemnitee's claim or create a presumption that Indemnitee has not met any particular standard of conduct or did not have any particular belief.

4. Notice to Insurers . If, at the time of the receipt by the Company of a notice of a Claim relating to an Indemnifiable Event pursuant to Section 3(b), the Company has liability insurance in effect which may cover such Claim, the Company shall give prompt notice of the commencement of such Claim to the insurers in accordance with the procedures set forth in the respective policies. The Company shall thereafter take all commercially reasonable action to cause such insurers to pay, on behalf of the Indemnitee, all amounts payable as a result of such Claim in accordance with the terms of such policies.

5. Selection of Counsel . In any Claim made against Indemnitee relating to an Indemnifiable Event for which a request for Expense Advance or for which indemnification for Losses will or could be sought under this Agreement, the Company shall be entitled to assume the defense of such Claim with counsel approved by Indemnitee (not to be unreasonably withheld) upon the delivery to Indemnitee of written notice of the Company's election so to do. After delivery of such notice, approval of such counsel by Indemnitee and the retention of such counsel by the Company, the Company will not be liable to Indemnitee under this Agreement for any fees of counsel subsequently incurred by Indemnitee with respect to the same Claim; provided that, (i) Indemnitee shall have the right to employ Indemnitee's separate counsel in any such Claim at Indemnitee's expense and (ii) if (A) the employment of separate counsel by Indemnitee has been previously authorized by the Company, (B) Indemnitee shall have reasonably concluded that there may be a conflict of interest between the Company and Indemnitee in the conduct of any such defense, or (C) the Company shall not continue to retain such counsel to defend such Claim, then the fees and expenses of Indemnitee's separate counsel shall be at the expense of the Company.

6. The Trust .

a. The Company has established a trust for the benefit of the Indemnitee and certain other beneficiaries (the " Trust ") pursuant to an Indemnification Trust Agreement dated June 23, 2003 (as amended, the " Trust Agreement "), among the Company, BNY Mellon Trust of Delaware (formerly known as The Bank of New York (Delaware)), as trustee, and the Beneficiaries' Representative (as defined therein). In addition to Indemnitee's other rights under this Agreement, the Company's Certificate of Incorporation and Bylaws and any insurance policies, Indemnitee shall have the right to receive payments in respect of Expense Advances and indemnification for Losses in the manner provided in this Agreement and the Trust Agreement. Indemnitee hereby confirms that the beneficiaries' representative acting from time to time under the Trust Agreement, including all replacement representatives (each, the " Beneficiaries' Representative "), shall be Indemnitee's agent and attorney-in-fact to pursue demands for payment of Expense Advances or indemnification for Losses as provided in the Trust Agreement.

b. Indemnitee may request payment of Expense Advances or indemnification for Losses either under the Trust Agreement out of the trust funds under the Trust (the " Trust Fund ") or from the Company, or both, under this Agreement, in its discretion. Any such request by the Indemnitee shall be made to the Beneficiaries' Representative with a copy to the Company under the notice procedures specified in the Trust Agreement.

c. Upon receipt by the Company of a copy of notice from Indemnitee to the Beneficiaries' Representative requesting payment of any Expense Advance, the Company shall have the right promptly to make any such payment in its discretion in lieu of having such payment made out of the Trust Fund.

d. From and after receipt by the Company of a copy of notice from Indemnitee to the Beneficiaries' Representative requesting payment of indemnification for Losses out of the Trust Fund, the Company will cooperate reasonably to facilitate a determination by Independent Legal Counsel as Reviewing Party with respect thereto.

D. Additional Indemnification Rights; Nonexclusivity .

1. Scope . The Company hereby agrees to make Expense Advances to, and indemnify, the Indemnitee to the fullest extent permitted by law, notwithstanding that such Expense Advances and indemnification are not specifically authorized by the other provisions of this Agreement, the Company's Certificate of Incorporation, the Company's Bylaws or by statute. In the event of any change after the date of this Agreement in any applicable law, statute or rule which expands the right of a Delaware corporation to indemnify a member of its board of directors or an officer, employee, agent or fiduciary, it is the intent of the parties hereto that Indemnitee shall enjoy by this Agreement the greater benefits afforded by such change. In the event of any change in any applicable law, statute or rule which narrows the right of a Delaware corporation to indemnify a member of its board of directors or an officer, employee, agent or fiduciary, such change, to the extent not otherwise required by such law, statute or rule to be applied to this Agreement, shall have no effect on this Agreement or the parties' rights and obligations hereunder except as set forth in Section 9(a).

2. Nonexclusivity . The rights to Expense Advances and indemnification provided by this Agreement shall be in addition to any rights to which Indemnitee may be entitled under the Company's Certificate of Incorporation, its Bylaws, the Trust Agreement, any other agreement, any vote of stockholders or disinterested directors, the General Corporation Law of the State of Delaware, or otherwise. The indemnification provided under this Agreement shall continue as to Indemnitee for any action taken or not taken while serving in an indemnified capacity even though Indemnitee may have ceased to serve in such capacity.

E. No Duplication of Payments . The Company shall not be liable under this Agreement to make any payment in connection with any Claim made against Indemnitee to the extent Indemnitee has otherwise actually received payment of the amounts otherwise indemnifiable hereunder under the Trust, any insurance policy, provision of the Company's Certificate of Incorporation, Bylaw or otherwise.

F. Partial Indemnification . If Indemnitee is entitled under any provision of this Agreement to indemnification by the Company for some or a portion of Expenses or Losses incurred in connection with any Claim, but not, however, for all of the total amount thereof, the Company shall nevertheless indemnify Indemnitee for the portion of such Expenses or Losses to which Indemnitee is entitled.

G. Mutual Acknowledgment . Both the Company and Indemnitee acknowledge that in certain instances, federal law or applicable public policy may prohibit the Company from indemnifying its directors, officers, employees, agents or fiduciaries under this Agreement or otherwise. Indemnitee understands and acknowledges that the Company has undertaken or may be required in the future to undertake with the Securities and Exchange Commission to submit the question of indemnification to a court in certain circumstances for a determination of the Company's right under public policy to indemnify Indemnitee.

H. Liability Insurance . To the extent the Company maintains liability insurance applicable to directors, officers, employees, agents or fiduciaries, the Company shall use commercially reasonable efforts to ensure that Indemnitee shall be covered by such policies in such a manner as to provide Indemnitee the same rights and benefits as are provided to the most favorably insured of the Company's directors, if Indemnitee is a director; or of the Company's officers, if Indemnitee is not a director of the Company but is an officer; or of the Company's key employees, agents or fiduciaries, if Indemnitee is not an officer or director but is a key employee, agent or fiduciary.

I. Exceptions . Notwithstanding any other provision of this Agreement, the Company shall not be obligated pursuant to the terms of this Agreement:

1. Excluded Action or Omissions . To indemnify Indemnitee for acts, omissions or transactions from which Indemnitee may not be indemnified under applicable law.

2. Claims Initiated by Indemnitee . To indemnify for Losses or make Expense Advances to Indemnitee with respect to Claims or parts thereof initiated or brought voluntarily by Indemnitee and not by way of defense or by way of an appeal related to a Claim not initiated or

brought voluntarily by Indemnitee, except (i) with respect to actions or proceedings brought to establish or enforce a right to receive Expense Advances or indemnification for Losses under this Agreement, the Trust Agreement or any other agreement or insurance policy or under the Company's Certificate of Incorporation or Bylaws now or hereafter in effect relating to Claims for Indemnifiable Events, (ii) in specific cases if the Board of Directors has approved the initiation or bringing of such Claim, or (iii) as otherwise required under Delaware Law.

3. Lack of Good Faith . To indemnify Indemnitee for any Expenses incurred by the Indemnitee with respect to any proceeding instituted by Indemnitee to enforce or interpret this Agreement, if a court of competent jurisdiction determines that each of the material assertions made by the Indemnitee in such proceeding was not made in good faith or was frivolous.

4. Claims Under Section 16(b) . To indemnify Indemnitee for expenses and the payment of profits arising from the purchase and sale by Indemnitee of securities in violation of Section 16(b) of the Exchange Act, or any similar successor statute.

J. Period of Limitations . No legal action relating to the entitlement of Indemnitee to Expense Advances or indemnification for Losses shall be brought and no such cause of action shall be asserted by or in the right of the Company against Indemnitee, Indemnitee's estate, spouse, heirs, executors or personal or legal representatives after the expiration of two years from the date of accrual of such cause of action, and any claim or cause of action of the Company shall be extinguished and deemed released unless asserted by the timely filing of a legal action within such two-year period; provided, however, that if any shorter period of limitations is otherwise applicable to any such cause of action, such shorter period shall govern.

K. Counterparts . This Agreement may be executed in one or more counterparts, each of which shall constitute an original.

L. Binding Effect; Successors and Assigns . This Agreement shall be binding upon and inure to the benefit of and be enforceable by the parties hereto and their respective successors, assigns (including any direct or indirect successor by purchase, merger, consolidation or otherwise to all or substantially all of the business or assets of the Company), spouses, heirs and personal and legal representatives. The Company shall require and cause any successor (whether direct or indirect, and whether by purchase, merger, consolidation or otherwise) to all, substantially all, or a substantial part, of the business or assets of the Company, by written agreement in form and substance satisfactory to Indemnitee, expressly to assume and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform if no such succession had taken place, provided that if the Company continues to exist it shall remain jointly and severally liable with such successor for the obligations hereunder. This Agreement shall continue in effect regardless of whether Indemnitee continues to serve as a director, officer, employee, agent or fiduciary (as applicable) of the Company or of any other enterprise at the Company's request.

M. Attorneys' Fees . If any action is instituted by Indemnitee under this Agreement or under the Trust Agreement or under any liability insurance policies maintained by the Company to enforce or interpret any of the terms hereof or thereof, Indemnitee shall be entitled to be paid all Expenses incurred by Indemnitee with respect to such action, regardless of whether Indemnitee is ultimately successful in such action, and shall be entitled to the advancement of Expenses with respect to such action, unless as a part of such action a court of competent jurisdiction over such action determines that each of the material assertions made by Indemnitee as a basis for such action were not made in good faith or were frivolous. In the event of an action instituted by or in the right of the Company under this Agreement to enforce or interpret any of the terms of this Agreement, Indemnitee shall be entitled to be paid all Expenses incurred by Indemnitee in defense of such action (including costs and expenses incurred with respect to Indemnitee's counterclaims and cross-claims made in such action), and shall be entitled to the advancement of Expenses with respect to such action, unless as a part of such action a court having jurisdiction over such action determines that each of Indemnitee's material defenses to such action were made in bad faith or were frivolous.

N. Notice. All notices, requests, demands and other communications under this Agreement shall be in writing and shall be deemed duly given (i) if delivered by hand and signed for by the party addressed, on the date of such delivery, or (ii) if mailed by domestic certified or registered mail with postage prepaid, on the third Business Day after the date postmarked. Addresses for notice to either party are as shown on the signature page of this Agreement, or as subsequently modified by written notice. So long as this Agreement and the Trust Agreement remain in effect, the Company agrees to provide prompt written notice of the name and address of the Beneficiaries' Representative and each change of address or of the Beneficiaries' Representative from time to time under the Trust Agreement.

O. Consent to Jurisdiction. The Company and Indemnitee each hereby irrevocably consent to the jurisdiction of the courts of the State of Delaware for all purposes in connection with any action or proceeding which arises out of or relates to this Agreement, and agree that any action instituted under this Agreement shall be commenced, prosecuted and continued only in the Court of Chancery of the State of Delaware, which shall be the exclusive and only proper forum for adjudicating such a claim. The Company and Indemnitee irrevocably waive any right to object that any action brought in such court is in an inconvenient forum.

P. Severability. The provisions of this Agreement shall be severable in the event that any of the provisions hereof (including any provision within a single section, paragraph or sentence) are held by a court of competent jurisdiction to be invalid, void or otherwise unenforceable, and the remaining provisions shall remain enforceable to the fullest extent permitted by law. Furthermore, to the fullest extent possible, the provisions of this Agreement (including, without limitations, each portion of this Agreement containing any provision held to be invalid, void or otherwise unenforceable, that is not itself invalid, void or unenforceable) shall be construed so as to give effect to the intent manifested by the provision held invalid, illegal or unenforceable.

Q. Choice of Law. This Agreement shall be governed by and its provisions construed and enforced in accordance with the laws of the State of Delaware as applied to contracts between Delaware residents entered into and to be performed entirely within the State of Delaware.

R. Subrogation. In the event of payment under this Agreement, the Company shall be subrogated to the extent of such payment to all of the rights of recovery of Indemnitee, who shall execute all documents required and shall do all acts that may be necessary to secure such rights and to enable the Company effectively to bring suit to enforce such rights.

S. Amendment and Termination . No amendment, modification, termination or cancellation of this Agreement shall be effective unless it is in writing signed by both the parties hereto. No waiver of any of the provisions of this Agreement shall be deemed to be or shall constitute a waiver of any other provisions hereof (whether or not similar), nor shall such waiver constitute a continuing waiver.

T. Integration and Entire Agreement . This Agreement and the Trust Agreement set forth the entire understanding between the parties hereto and supersedes and merges all previous written and oral negotiations, commitments, understandings and agreements relating to the subject matter hereof between the parties hereto.

U. No Construction as Employment Agreement . Nothing contained in this Agreement shall be construed as giving Indemnitee any right to be retained in the employ of the Company or any of its subsidiaries or affiliated entities.

[Remainder of Page Intentionally Blank]

IN WITNESS WHEREOF, the parties hereto have executed this Indemnification Agreement as of the date first above written.

COMPANY

JUNIPER NETWORKS, INC.

By: ______________________

Name: ______________________

Title: ______________________

Address: Juniper Networks, Inc.
1133 Innovation Way
Sunnyvale, CA 94089
Attention: General Counsel &
Secretary

INDEMNITEE

Address: ______________________

Facsimile: ______________________

EXHIBIT 12.1

Juniper Networks, Inc.
Statements of Computation of Ratio of Earnings to Fixed Charges
(In millions, except ratios)

	Years Ended December 31,				
	2016 (*)	2015 (*)	2014 (*)	2013 (*)	2012 (*)
Earnings for computation of ratio:					
Income (loss) before income taxes and before adjustment for noncontrolling interests in consolidated subsidiaries or income from equity investees	$ 827.4	$ 852.2	$ (86.3)	$ 518.4	$ 266.0
Plus:					
Fixed charges	109.4	98.5	83.3	76.1	72.0
Amortization of capitalized interest	1.3	0.8	0.5	0.4	—
Less:					
Interest capitalized	(0.4)	(2.2)	(2.7)	(1.9)	(7.1)
Total earnings (loss)	$ 937.7	$ 949.3	$ (5.2)	$ 593.0	$ 330.9
Fixed charges:					
Interest expense	$ 95.7	$ 81.9	$ 66.0	$ 58.1	$ 52.2
Interest capitalized	0.4	2.2	2.7	1.9	—
Amortized premiums, discounts, and capitalized expenses relating to indebtedness	1.9	1.4	0.8	0.3	0.8
Estimate of interest within rental expense	11.4	13.0	13.8	15.8	19.0
Total fixed charges	$ 109.4	$ 98.5	$ 83.3	$ 76.1	$ 72.0
Ratio of earnings (loss) to fixed charges	8.6x	9.6x	(0.1)x	7.8x	4.6x

(*) For this ratio, both "earnings" and “fixed charges” conform to the calculation required by Item 503(d) of Regulation S-K.

EXHIBIT 21.1

SUBSIDIARIES OF THE COMPANY AS OF DECEMBER 31, 2016*

NAME	JURISDICTION OF INCORPORATION
JN International C.V.	The Netherlands
Juniper Networks International B.V.	The Netherlands
Juniper Networks (US), Inc.	California, USA

* All other subsidiaries would not in the aggregate constitute a “significant subsidiary” as defined in Regulation S-X.

EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statement (Form S-3 No. 333-212915) of Juniper Networks, Inc. and

(2) Registration Statements (Form S-8 Nos. 333-213490, 333-211824, 333-211821, 333-204297, 333-183165, 333-151669, 333-176171, 333-171299, 333-166248, 333-132260, 333-118340, 333-57860, 333-186884 and 333-193906) of Juniper Networks, Inc.

of our reports dated February 24, 2017, with respect to the consolidated financial statements and schedule of Juniper Networks, Inc., and the effectiveness of internal control over financial reporting of Juniper Networks, Inc., included in this Annual Report (Form 10-K) of Juniper Networks, Inc., for the year ended December 31, 2016.

/s/ Ernst & Young LLP

San Jose, California
February 24, 2017

EXHIBIT 31.1

Certification of Chief Executive Officer
Pursuant to
Exchange Act Rules 13a-14(a) and 15d-14(a),
As Adopted Pursuant to
Section 302 of the Sarbanes-Oxley Act of 2002

I, Rami Rahim, certify that:

1. I have reviewed this Annual Report on Form 10-K of Juniper Networks, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize, and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 24, 2017

/s/ Rami Rahim
Rami Rahim
Chief Executive Officer

EXHIBIT 31.2

Certification of Chief Financial Officer
Pursuant to
Exchange Act Rules 13a-14(a) and 15d-14(a),
As Adopted Pursuant to
Section 302 of the Sarbanes-Oxley Act of 2002

I, Kenneth B. Miller, certify that:

1. I have reviewed this Annual Report on Form 10-K of Juniper Networks, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize, and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 24, 2017

/s/ Kenneth B. Miller
Kenneth B. Miller
Executive Vice President, Chief Financial Officer

EXHIBIT 32.1

Certification of Chief Executive Officer
Pursuant to 18 U.S.C. Section 1350 As Adopted
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

I, Rami Rahim, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Juniper Networks, Inc. on Form 10-K for the fiscal year ended December 31, 2016 , fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Annual Report on Form 10-K fairly presents, in all material respects, the financial condition and results of operations of Juniper Networks, Inc.

/s/ Rami Rahim
Rami Rahim
Chief Executive Officer
February 24, 2017

EXHIBIT 32.2

Certification of Chief Financial Officer
Pursuant to 18 U.S.C. Section 1350 As Adopted
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

I, Kenneth B. Miller, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Juniper Networks, Inc. on Form 10-K for the fiscal year ended December 31, 2016 , fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Annual Report on Form 10-K fairly presents, in all material respects, the financial condition and results of operations of Juniper Networks, Inc.

/s/ Kenneth B. Miller
Kenneth B. Miller
Executive Vice President, Chief Financial Officer
February 24, 2017