

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, 2017

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

(State or other jurisdiction of incorporation or organization)

77-0422528

(I.R.S. Employer Identification No.)

1133 Innovation Way

Sunnyvale, California

(Address of principal executive offices)

94089

(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

Smaller reporting company

Emerging growth company

(Do not check if a smaller reporting company)

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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 \$10,485,000,000 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, 2017).

As of February 16, 2018, there were 343,756,577 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 2018 Annual Meeting of Stockholders, which is expected to be filed not later than 120 days after the registrant's fiscal year ended December 31, 2017.

**Juniper Networks, Inc.  
Form 10-K**

**Table of Contents**

	<u>Page</u>
<b><u>PART I</u></b>	
<a href="#"><u>ITEM 1.</u></a>	<a href="#"><u>Business</u></a> <span style="float: right;"><a href="#"><u>3</u></a></span>
<a href="#"><u>ITEM 1A.</u></a>	<a href="#"><u>Risk Factors</u></a> <span style="float: right;"><a href="#"><u>16</u></a></span>
<a href="#"><u>ITEM 1B.</u></a>	<a href="#"><u>Unresolved Staff Comments</u></a> <span style="float: right;"><a href="#"><u>36</u></a></span>
<a href="#"><u>ITEM 2.</u></a>	<a href="#"><u>Properties</u></a> <span style="float: right;"><a href="#"><u>36</u></a></span>
<a href="#"><u>ITEM 3.</u></a>	<a href="#"><u>Legal Proceedings</u></a> <span style="float: right;"><a href="#"><u>36</u></a></span>
<a href="#"><u>ITEM 4.</u></a>	<a href="#"><u>Mine Safety Disclosures</u></a> <span style="float: right;"><a href="#"><u>36</u></a></span>
<b><u>PART II</u></b>	
<a href="#"><u>ITEM 5.</u></a>	<a href="#"><u>Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities</u></a> <span style="float: right;"><a href="#"><u>37</u></a></span>
<a href="#"><u>ITEM 6.</u></a>	<a href="#"><u>Selected Financial Data</u></a> <span style="float: right;"><a href="#"><u>39</u></a></span>
<a href="#"><u>ITEM 7.</u></a>	<a href="#"><u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u></a> <span style="float: right;"><a href="#"><u>41</u></a></span>
<a href="#"><u>ITEM 7A.</u></a>	<a href="#"><u>Quantitative and Qualitative Disclosures About Market Risk</u></a> <span style="float: right;"><a href="#"><u>59</u></a></span>
<a href="#"><u>ITEM 8.</u></a>	<a href="#"><u>Financial Statements and Supplementary Data</u></a> <span style="float: right;"><a href="#"><u>61</u></a></span>
<a href="#"><u>ITEM 9.</u></a>	<a href="#"><u>Changes in and Disagreements With Accountants on Accounting and Financial Disclosure</u></a> <span style="float: right;"><a href="#"><u>111</u></a></span>
<a href="#"><u>ITEM 9A.</u></a>	<a href="#"><u>Controls and Procedures</u></a> <span style="float: right;"><a href="#"><u>111</u></a></span>
<a href="#"><u>ITEM 9B.</u></a>	<a href="#"><u>Other Information</u></a> <span style="float: right;"><a href="#"><u>111</u></a></span>
<b><u>PART III</u></b>	
<a href="#"><u>ITEM 10.</u></a>	<a href="#"><u>Directors, Executive Officers and Corporate Governance</u></a> <span style="float: right;"><a href="#"><u>112</u></a></span>
<a href="#"><u>ITEM 11.</u></a>	<a href="#"><u>Executive Compensation</u></a> <span style="float: right;"><a href="#"><u>112</u></a></span>
<a href="#"><u>ITEM 12.</u></a>	<a href="#"><u>Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u></a> <span style="float: right;"><a href="#"><u>112</u></a></span>
<a href="#"><u>ITEM 13.</u></a>	<a href="#"><u>Certain Relationships and Related Transactions, and Director Independence</u></a> <span style="float: right;"><a href="#"><u>113</u></a></span>
<a href="#"><u>ITEM 14.</u></a>	<a href="#"><u>Principal Accounting Fees and Services</u></a> <span style="float: right;"><a href="#"><u>113</u></a></span>
<b><u>PART IV</u></b>	
<a href="#"><u>ITEM 15.</u></a>	<a href="#"><u>Exhibits, Financial Statement Schedules</u></a> <span style="float: right;"><a href="#"><u>114</u></a></span>
<a href="#"><u>ITEM 16.</u></a>	<a href="#"><u>Form 10-K Summary</u></a> <span style="float: right;"><a href="#"><u>117</u></a></span>
<a href="#"><u>SIGNATURES</u></a>	<a href="#"><u>118</u></a>

## 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 expected impact of the Tax Cuts and Jobs Act, 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,” “will,” “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 150 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 technologies. In addition to our products, we offer our customers services, including maintenance and support, professional services, and education and training programs.

Our products and services address high-performance network requirements for our customers within our verticals: Cloud, Telecom/Cable, and Strategic Enterprise who view the network as critical to their success. A discussion of the types of customers included in our verticals is discussed in the *Customer Verticals* section below. 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.

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](http://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 are focused on and continue to see significant opportunities from the implementation of cloud architectures, such as large public and private data centers, as well as distributed cloud infrastructure which resides in multiple, distributed data centers in order to place applications or services closer to end users, such as enabling security and networking as a service.

We believe the network needs for our customers in our Telecom/Cable and Cloud verticals are converging, as are those of Strategic Enterprises, as all of these customers recognize the need for high performance networks and leveraging the cloud for improved agility and greater levels of operating efficiency.

As these customers continue to grow, we believe their network architectures will continue to evolve. We believe our understanding of high performance networking technology, and our strategy, position us to capitalize on the industry transition to more automated, cost-efficient, scalable networks.

### ***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.

### **Customer Verticals**

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 following verticals: Cloud, Telecom/Cable, and Strategic Enterprise. In 2017, we began reporting revenue on these verticals, which we believe better aligns with our business model compared to our previous reporting of revenue by Service Provider and Enterprise. A summary of the types of customers included in our verticals is discussed below.

Further, we believe our networking infrastructure offerings benefit our key 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;
- 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;
- Offering 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

- Offering operational improvements that enable cost reductions, including lower administrative, training, customer care, and labor costs.

### ***Cloud***

Our Cloud vertical includes companies that are heavily reliant on the cloud for their business model's success. As an example, customers in the Cloud vertical can include cloud service providers as well as enterprises that provide software-as-a-service, or SaaS; infrastructure-as-a-service; or platform-as-a-service.

Cloud customers value high-performance, highly compact, power efficient infrastructures which we support and continue to develop. In addition, as these customers are pushing the envelope in networking, our focus on collaboration combined with networking innovation around automation has made us a strategic partner with these Cloud customers, helping them develop high performance and lower total cost of ownership networking solutions to support their business.

### ***Telecom/Cable***

Our Telecom/Cable vertical includes wireline and wireless carriers and cable operators, and we support most of the major carrier and operator networks in the world with our high-performance network infrastructure offerings. In recent years, we have seen increased convergence of these different types of customers through acquisitions, mergers, and partnerships. Telecom/Cable customers are increasingly investing in the build-out of high performance networks and the transformation of existing legacy infrastructure to distributed cloud environments in order to satisfy the growth in mobile traffic and video as a result of the increase in mobile device usage including smartphones, tablets, and connected devices of various kinds.

Further, as these customers prepare for next generation mobile network build-outs, or 5G, which we expect to begin to occur over the next few years, as well as create new approaches to delivering value to their enterprise customers, we believe these opportunities will present further opportunities for Juniper across our portfolio. The need for a highly efficient infrastructure to handle large amounts of data along with low latency, or minimal delay, plays into the need to have a high performance, scalable infrastructure in combination with the automation and flexibility required to drive down operational costs and rapidly provision applications. As our Telecom/Cable customers prepare for 5G, we expect that Network Function Virtualization, or NFV, and software-defined networking, or SDN, will be critical elements to enable our customers the flexibility to achieve the business use cases around Internet of Things, or IoT; enhanced mobile video support; and dynamic new service deployments. With our focus on delivering a strong portfolio of network virtualization and software-based orchestration solutions, we believe we will be poised to deliver on the automation and agility requirements needs of the Telecom/Cable vertical.

### ***Strategic Enterprise***

Our high-performance network infrastructure offerings are designed to meet the performance, reliability, and security requirements of the world's most demanding enterprises. We offer enterprise solutions and services for data centers as well as branch and campus applications. Our Strategic Enterprise vertical includes enterprises not included in the Cloud vertical. In particular, they are industries with high performance, high agility requirements, including financial services; national, federal, state, and local governments; as well as research and educational institutions. We believe that our Strategic Enterprise customers are able to deploy our solutions as a powerful component in delivering the advanced network capabilities needed for their leading-edge applications.

Innovation continues to be a critical component in our strategy for the Strategic Enterprise vertical. We believe that as these customers 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 (which is a mix of public and private cloud, as well as a growing number of SaaS applications) 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 architecture solutions for maximum flexibility.

In 2017, 2016, and 2015, 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 telecom and cable operators. 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 OS, NFVs (such as firewall), SDN, 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 financial information on our business, including by geographic area. The following is an overview of our major product families and service offerings in 2017 :

### Routing Products

- *ACX Series* : Our ACX Series Universal Access Routers cost-effectively addresses current operator challenges to rapidly deploy new high-bandwidth services. With industry-leading performance of up to 2.56 Terabytes per second, or Tbps, and support for 1 Gigabit Ethernet, or GbE, 10 GbE, and 40GbE interfaces, the ACX Series is well positioned to address the growing metro Ethernet and mobile backhaul needs of our customers. 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, SDN-ready, Ethernet routers that function as a Universal Edge platform with high system capacity, density, and performance. 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 Series platforms utilize our Trio silicon and provide carrier-class performance, scale, and reliability to support large-scale Ethernet deployments. We also offer 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.
- *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 is available in four form factors—PTX1000, PTX3000, PTX5000, and PTX 10000 and delivers several critical core functionalities and capabilities, including high density and scalability, cost optimization, high availability, and network simplification. We believe 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. 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 services, from Juniper and third parties, simultaneously. The NFX250, when used as part of our Cloud CPE solution, reduces 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 our customers 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.
- *QFX Series* : Our QFX Series of core, spine and top-of-rack data center switches offer a revolutionary approach to switching that are designed to deliver 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.

### **Security Products**

- *SRX Series Services Gateways for the Data Center* : Our mid-range, high-end and virtual SRX Series platforms, including the SRX4100 and SRX4200 firewalls, provide high-performance, scalability, and service integration which are ideally suited for medium to large enterprise, data centers 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/VPN, performance and scalability, and includes the AppSecure suite of next-generation security capabilities that is designed to provide visibility, enforcement, control, and protection over the network.
- *Branch SRX, Security Policy and Management* : The Branch SRX family, including the SRX300 Series and SRX1500, provides an integrated firewall and next-generation firewall capabilities. Junos Space Security Director is a network security management product that offers efficient, highly scalable, and comprehensive network security policy management. These solutions are designed to enable organizations to securely, reliably, and economically deliver powerful new services and applications to all locations and users with superior service quality.
- *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. 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. In the second half of 2017, we completed the acquisition of Cyphort Inc., or Cyphort, a software company that provides security analytics for advanced threat defense. This acquisition is expected to strengthen the capabilities of Sky ATP by increasing efficiency and performance and providing additional threat detection functionalities and analytics.

### **Services**

In addition to our products, we offer maintenance and 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, 2017, we employed 1,912 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 and services, 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. 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 Junos OS as the single operating system that powers our broad portfolio of physical and virtual networking and security products, we believe Junos OS provides us a competitive advantage over other major network equipment vendors.

## ***Orchestration and Monitoring Products***

As many of our customers are moving to a hybrid, multi-cloud environment, managing, orchestrating, and securing that complex environment can be a challenge. We are committed to providing solutions to simplify networking operations to help our customers to optimize their infrastructure and workload placement across their hybrid, multi-cloud environment with the following offerings:

- *Contrail* : 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 interoperate with equipment from major networking vendors; an open-source licensing model, 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.
- *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.
- *AppFormix* : AppFormix is an optimization and management software platform for public, private, and hybrid clouds. This intent-driven software manages automated operations, visibility, and reporting in cloud and NFV use cases. It features machine learning-based policy and smart monitors, application and software-defined infrastructure analytics, and alarms. Appformix allows tracking and automation of operations in applications and software-defined infrastructure. Its smart-monitoring features detect issues and automatically manage remedial action based on predefined service-level agreements,



or SLAs. AppFormix is an integral component of Contrail Cloud, providing comprehensive visualization, smart analytics, and the ability to manage automatic remediation for service assurance.

### **Significant Product Development Projects and Solutions**

In 2017, we continued to execute on our product and solutions strategy, specifically around the cloud. We announced Cloud-Grade Networking, which we expect will accelerate agility and innovation with cloud customers. Cloud-Grade Networking builds on carrier-grade reach and reliability with enterprise-grade control and usability, bringing cloud-level agility and operational scale to networks everywhere. This announcement included two new foundational products:

- Junos Node Slicing: converges multiple concurrent network functions on the same physical routing infrastructure, letting customers optimize their infrastructure while offering differentiated services with enhanced operational and administrative isolation within a single chassis.
- Universal Chassis: a breakthrough system allowing customers to standardize on a hardware platform across their data center, core, and network edge. We believe the system will create significant value for our customers by enhancing their return on investment through reduced costs.

Aligning with our Cloud-Grade Networking initiative, we also announced a Programmable Photonic Layer solution, comprised of two main products: TCX1000 Series Programmable ROADM and proNX Optical Director. This solution is a disaggregated optical line system that is designed to offer greater levels of flexibility, cost control, and multi-layer visibility to packet-optical transport.

We also announced enhancements to our SDSN platform and expanded our public cloud offering with the introduction of vSRX for Microsoft Azure. Our SDSN enhancements deliver pervasive security across multi-vendor environments, public clouds, and private clouds. Further, we announced enhancements to our Contrail Cloud platform that includes AppFormix integrations, pre-validated virtual network functions, and a managed solution of professional services offering to simplify our customers' transition to telco clouds.

In addition, we announced further cloud-based enhancements to our security portfolio. We introduced our Contrail Security product, a new solution specifically designed to allow enterprises and SaaS cloud providers to protect applications running in multiple cloud environments.

### **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, 2017, we employed 3,723 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 our corporate strategy and 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 \$980.7 million, \$1,013.7 million, and \$994.5 million in 2017, 2016, and 2015, respectively.

## **Sales and Marketing**

As of December 31, 2017, we employed 2,474 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 Cloud and Telecom/Cable customers directly. Otherwise, we sell to all of our key customer verticals 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 all of our key customer verticals. These distributors tend to focus 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 Cloud and Telecom/Cable 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, 2017, we employed 326 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, 2017, 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. We believe that 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 business partner code of conduct and promote compliance with such code of conduct to our suppliers. One element of our business partner code of conduct is adoption and compliance with the Responsible Business Alliance Code of Conduct. The Responsible Business Alliance, 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 goals are to promote ethical business practices, 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. By using standard audit and assessment protocols and tools, we measure and monitor manufacturing partners' and direct material suppliers' compliance to the codes of conduct, including but not limited to: onsite audits; risk assessments; CDP climate change and water requests; and conflict minerals surveys. CDP is a global standardized mechanism by which companies can report their environmental performance on climate change, water and forest programs to institutional investors and customers. Our Corporate Citizenship and Sustainability Report and Business Partner 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, 2017 and December 31, 2016, our total product backlog was approximately \$400.7 million and \$441.2 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; 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 consider opportunities to minimize resource impacts and improve efficiencies over a product's life cycle, from the materials we use and a product's energy footprint, to packaging and end-of-life, or EOL, activities such as reuse, refurbishment, and recycling.

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. Our products are independently tested by third parties for energy efficiency compliance. As an example, our MX series 3D Universal Edge Routers offer breakthrough energy efficiency with the MX10003 delivering ultra-high density in a space- and power-optimized package, while consuming 0.8W per Gigabit of throughput. Additionally, we have redesigned packaging in ways that optimizes costs while minimizing resource impacts.

We are also voluntarily participating in CDP climate change and water disclosures and encourage our direct material suppliers representing an aggregate of at least 80% of our consolidated total direct expenditure and 100% of our manufacturing partners to do the same. Additionally, we are a member of the Responsible Business Alliance, or RBA, and have adopted and promote the adoption by our suppliers of the practices of the RBA Code of Conduct, as discussed above in the section entitled *Manufacturing and Operations*. 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, 2017, we had over 3,300 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, 2017, we had 9,381 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	47	Chief Executive Officer and Director
Anand Athreya	54	Executive Vice President, Chief Development Officer
Bikash Koley	44	Executive Vice President, Chief Technology Officer
Brian Martin	56	Senior Vice President, General Counsel and Secretary
Kenneth B. Miller	47	Executive Vice President, Chief Financial Officer
Vince Molinaro	54	Executive Vice President, Chief Customer Officer
Terrance F. Spidell	49	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.

*ANAND ATHREYA* joined Juniper in August 2004 and became our Executive Vice President and Chief Development Officer in August 2017. In this role, he is responsible for Juniper's Engineering organization. Since joining Juniper in 2004, Mr. Athreya has held various leadership positions within Engineering, including most recently serving as Senior Vice President of Engineering from May 2014 through August 2017, and Corporate Vice President of Engineering from February 2011 through May 2014. Mr. Athreya joined Juniper from Procket Networks, where he served as Director of Software Engineering. Prior to that, he was Vice President of Engineering at Malibu Networks, Assistant Vice President of Product Management and Strategy at Tiara Networks, and held engineering roles at Novell. Mr. Athreya received his Bachelor degree in Electrical Engineering from Bangalore University, a master's degree in Computer Science and Engineering from Osmania University, and an MBA from National University. He is also a graduate of the Advanced Management Program at Harvard Business School.

*BIKASH KOLEY* has served as our Executive Vice President, Chief Technology Officer since he joined Juniper in September 2017. Prior to joining Juniper, Mr. Koley worked at Google from January 2008 until August 2017, where he served most recently as a Distinguished Engineer and the Head of Network Architecture, Engineering and Planning from November 2015 through August 2017, where he helped to design, build and operate Google's production network infrastructure. In addition, Mr. Koley also served as a Principal Architect and Director, Network Architecture and Engineering at Google from May 2012 through October 2015. Prior to Google, Mr. Koley was the CTO of Qstreams Networks, a company he co-founded. He also spent several years at Ciena Corporation in various technical roles. Mr. Koley received his Bachelor of Technology degree in Electronics and Communications Engineering from the Indian Institute of Technology, Kharagpur, India and M.S. and Ph.D. degrees in Electrical and Computer Engineering from the University of Maryland at College Park.

## [Table of Contents](#)

*BRIAN MARTIN* joined Juniper in October 2015 as Senior Vice President, General Counsel and Secretary. In January 2018, Mr. Martin also assumed the role of interim Chief Human Resources Officer, or CHRO, while the Company continues its search for a full-time CHRO. From April 2007 to September 2015, Mr. Martin served as Executive Vice President, General Counsel and Corporate Secretary of KLA-Tencor Corporation ("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. ("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 B. MILLER* joined Juniper in June 1999 and has served as our Executive Vice President, 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 our 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. Since February 2014, Mr. Molinaro has served as our Executive Vice President, Chief Customer Officer. In February 2018, Juniper announced that Mr. Molinaro will step down from his current role, but that he will continue to serve as our interim Chief Customer Officer until his replacement has been named and is in place. 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 the University of Bridgeport.

*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 our Chief Accounting Officer. Before joining Juniper, 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 of Business Administration 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](mailto: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, 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;
- price and product competition;
- long sales, qualification and implementation cycles;
- unpredictable ordering patterns and reduced visibility into our customers' spending plans and associated revenue;
- how well we execute on our strategy and operating plans and the impact of changes in our business model that could result in significant restructuring charges;
- our ability to achieve targeted cost reductions;
- changes in tax laws or accounting rules, or interpretations thereof;
- 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. In addition, while we may have backlog orders for products that have not shipped, we believe that our backlog may not be a reliable indicator of future operating results for a number of reasons, including project delays, changes in project scope and the fact that our customers may cancel purchase orders or change delivery schedules without significant penalty. Furthermore, market trends, competitive pressures, commoditization of products, rebates and discounting, increased component or logistics 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. In the past, our operating results have been below our guidance, our long-term financial model or the expectations of securities analysts or investors, and this may happen in the future, 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.



***We expect our gross margins and operating margins to vary over time, and the level of gross margins and operating margins we have achieved 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, vertical, 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, modifications to our pricing strategy in order to gain footprint in certain markets or with certain customers, currency fluctuations that impact our costs or the cost of our products and services to our customers, increases in material, labor, logistics, warranty costs, 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 inaccurately forecasting 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 2017, our margins decreased as compared to fiscal year 2016, primarily due to lower product net revenues and product mix, resulting from the year-over-year decline in routing revenues, our customers' architectural shifts, and higher costs of certain memory components. 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. 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 Telecom/Cable and Cloud verticals. Changes in the business requirements or focus, vendor selection, project prioritization, financial prospects, capital resources, and expenditures, or purchasing behavior (including product mix purchased or delays in deployment) 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, CenturyLink, Inc.'s acquisition of Level 3 Communications, Inc., and Vodafone India's proposed acquisition of Idea Cellular Ltd.) 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 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 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. For example, in the second half of 2017, our switching and routing results were adversely affected by spending delays from our largest cloud customers, who we believe are in the process of implementing a networking architectural shift. The duration of the delay is difficult to predict, in part because each cloud customer will migrate their network architecture based on their own constraints. Such delays in purchases can make it more difficult to predict revenues from customers, can cause fluctuations in the level of spending by customers and, even where our products are ultimately selected, can have a material adverse effect on our business, financial condition, and results of operations.

***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 revenues 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 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 and gross margins 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 and business models 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 February 2017 we initiated the 2017 Restructuring Plan to realign our workforce and increase operational efficiencies. This included workforce reductions and contract terminations. As we assessed the performance of our operating results against our long-term operating goals and evaluated potential opportunities for improvement, the 2017 Restructuring Plan was expanded and additional restructuring charges were incurred in the fourth quarter of 2017 to further align our workforce. 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 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 routing and switching markets have historically been dominated by Cisco, with competition coming from other companies such as Nokia Corporation (following its acquisition of Alcatel-Lucent), Arista, 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, and Fortinet. 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 AppDynamics, 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 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 subscriptions 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 31% , 29% , and 27% of total revenue in fiscal year 2017, 2016, and 2015, 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 or those 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 and services is part of our intended strategy to expand our software business, and certain software revenues may be recognized periodically over the term of the relevant use period or subscription period. As a result, certain software, subscription and support and maintenance revenue we report each fiscal quarter is the recognition of deferred revenue from contracts entered into during previous fiscal quarters. Consequently, a decline in such 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 such software or services revenue through additional sales in any period, as revenue from those software, subscription and support and maintenance contracts must be recognized over the applicable period.

Additionally, we determine our operating expenses largely on the basis of anticipated revenues and technology roadmap 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, continuous pricing pressures and a constantly evolving industry. We may not 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 wide area network, or WAN, infrastructures towards software-defined WAN, or SD-WAN, has been receiving considerable attention. In our view, it will take several years to see the full impact of SD-WAN, 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 recent years, we have announced a number of new products and enhancements to our hardware and software products across routing, switching and security. 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, our ability to support 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. 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
- issues with third party technologies used with our disaggregated products may 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 or regional conflicts. 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. In addition, some optical modules we use are experiencing faster product transitions than our other products, which increases the risk that we could have excess inventory of those modules. 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 and our customers' 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 that 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 have been and 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 has experienced breaches and may

be vulnerable in the future to breach or attacks by computer programmers, hackers or sophisticated nation-state and nation-state supported actors or breached due to employee error or wrongful conduct, malfeasance, or other disruptions. If any breach or attack compromises our networks, creates system disruptions or slowdowns or exploits security vulnerabilities of our products, the information stored on our networks or those of our customers 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, hardware, components and operating system software and applications that we produce or procure from third parties may contain defects in design or manufacture, including "bugs", vulnerabilities and other problems that could unexpectedly interfere with the operation of our networks or expose us or our products to cyber attacks. 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.

When vulnerabilities are discovered, we evaluate the risk, apply patches or take other remediation actions as required and notify customers and suppliers when appropriate. All of this requires significant time and attention from management and our employees.

As a result of any 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. As a large, well known provider of networking products, cyber attackers may specifically target our products or attempt to imitate us or our products in order to compromise a network. 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 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 and higher pricing, 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. In addition, we have experienced, and from time-to-time may experience, component shortages or quality issues that resulted, or could result, in delays of product shipments and/or warranty or other claims. For example, in late 2016, we became aware of a defect in a clock-signal component from a third-party supplier that affected certain of our products and which resulted in remediation costs. As a result of this issue, we recorded a product cost of revenue charge that impacted our product gross margins for our fiscal year ended December 31, 2016 and three months ended March 31, 2017, and we may incur additional costs. We also 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 and Korea. In addition, there has been consolidation among certain suppliers of our components. For example, GLOBALFOUNDRIES acquired IBM's semiconductor manufacturing business, Avago Technologies Limited acquired Broadcom Corporation, Intel Corporation acquired Altera Corporation and Broadcom Limited is proposing to acquire Qualcomm Incorporated. 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, military conflicts, 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 2016, Nokia Corporation merged with Alcatel-Lucent, a competitor of ours, and in 2015 Cisco 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.

We are also vulnerable to third parties who illegally distribute or sell counterfeit, stolen or unfit versions of our products, which has happened in the past and could happen in the future. Such sales could have a negative impact on our reputation and business.

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, we are 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 2017 we acquired Cyphort Inc. and in 2016, we acquired AppFormix Inc., Aurion, Inc. and BTI Systems 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, is conducting, and the U.S. Department of Justice, or the DOJ, was previously 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 certain of the Company’s marketing practices and whether the Company or any third party on behalf of the Company gave anything 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, if we incorporate infringing technology in our products or if we license required proprietary rights at material expense, 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. 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 was 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 electronic equipment, including our products. Currently, our products comply with the EU RoHS requirements. However, certain exemptions are scheduled to lapse, or have lapsed. The lapse of any 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.

In addition, as a contractor and subcontractor to U.S. government departments and agencies, we are subject to Federal regulations pertaining to our IT systems. For instance, as a subcontractor to the U.S. Department of Defense, or DOD, the Defense Federal Acquisition Regulation Supplement (DFARS) required that our IT systems comply with the security and privacy controls described in National Institute of Standards and Technology Special Publication 800-171, or NIST SP 800-171 no later than December 31, 2017. The DFARS also requires that we flow the security control requirement down to certain of our own subcontractors. Failure to comply with these requirements could result in a loss of Federal government business, subject us to claims or other remedies for non-compliance and negatively impact our business, financial condition, and results of operations.

The 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, in December 2017, the U.S. Federal Communications Commission repealed its 2015 regulations governing aspects of fixed broadband networks and wireless networks. This change in regulatory treatment of networks 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, 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. Certain governments also control importation and in-country use of encryption items and technology. The scope, nature and severity of such controls vary widely across different countries and may change frequently over time. For example, China has promulgated cybersecurity regulations and published a new draft export law affecting networking products that may impair our ability to profitably market and sell our products in China. Certain countries' encryption control regimes may significantly limit our ability to sell major lines of our products in those countries.

Certain governments also impose special local content, certification, testing, source code review, escrow and governmental recovery of private encryption keys, or feature requirements on network equipment for purposes of government procurements. Similar requirements may also be imposed in procurements by state owned entities ("SOE's"). Our ability to sell into substantial government and SOE markets (whether or not the products we sell include encryption) is vulnerable to changes in applicable 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 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 either the Privacy Shield or EU Model Contracts may be legally challenged or voided like Safe Harbor in an uncertain political environment. In addition, the EU General Data Protection Regulation, which goes into full effect in May 2018, is expected to result in substantial changes to our compliance obligations, including contractual requirements for data transfers outside the EEA, and a significant increase in potential administrative fines for non-compliance. Similarly, 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.S., U.K., EU and the rest of the world.

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 with specialized industry expertise, 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 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, 2017, our goodwill was \$3,096.2 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.

From time to time, 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 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.

During the three months ended June 30, 2017, we concluded that there were sufficient indicators to require us to perform an interim goodwill impairment analysis on our Security reporting unit. Based on our analysis, we determined that our Security reporting unit's goodwill was not impaired. However, 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; limitations on the deductibility of net interest expense; or changes in tax laws, regulations, accounting principles, or interpretations thereof. The Tax Cuts and Jobs Act of 2017 (the "Tax Act"), which was signed into law on December 22, 2017, makes significant changes to the taxation of U.S. business entities that will have a meaningful impact to our provision for income taxes. These changes include a reduction to the federal corporate income tax rate, the current taxation of certain foreign earnings, the imposition of base-erosion prevention measures which may limit the deduction of certain transfer pricing payments, and possible limitations on the deductibility of net interest expense or corporate debt obligations. Accounting for the income tax effects of the Tax Act requires significant

judgements and estimates that are based on current interpretations of the Tax Act and could be affected by changing interpretations of the Act, as well as additional legislation and guidance around the Act. Any refinements to these provisional estimates are difficult to predict and could impact our results.

Furthermore, 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. 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;
- laws that restrict sales of products developed or manufactured outside of the country;
- 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 and the possibility of reciprocal tariffs by foreign countries;
- 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 and the U.K.'s formal initiation of the exit process in March 2017, commonly referred to as Brexit, has caused, and may continue to cause, uncertainty in the global markets. The U.K.'s 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.

***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. These errors may arise from hardware or software we produce or procure from third parties. 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, negative publicity, 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. 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.

***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, Chinese Yuan, Euro, and Indian Rupee 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 currency exposures associated with certain assets and liabilities denominated in nonfunctional currencies and periodically hedge anticipated foreign currency cash flows, with the aim of offsetting the impact of currency fluctuations on these exposures. However, hedge activities can be costly, and hedging cannot fully offset all risks, including long-term declines or appreciation in the value of the U.S. Dollar. If our attempts to hedge against these risks are not successful, or if long-term declines or appreciation in the value of the U.S. Dollar persist, our financial condition and results of operations could be adversely impacted.

***A portion 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 \$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, we 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. On May 1, 2017, we received a principal payment in the amount of \$75.0 million and outstanding interest on the note and we and the issuer agreed to further amend the terms of the note with respect to the remaining approximately \$58.0 million to, among other things, extend the maturity date from December 31, 2018 to September 30, 2022, provide that interest due can be paid in kind by increasing the outstanding principal amount of the note and subordinate the note to other debt issued by senior lenders. Since a portion of the transaction consideration is in the form of a non-contingent seller promissory note and the note is subordinated to debt issued by senior lenders, 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 or we fail to monitor and ensure that these systems and processes are being used correctly, our ability to manage our business, financial condition, and results of operations may be negatively 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. Third party technology we incorporate into our products that is deemed to infringe on the intellectual property of others may result, and in some cases has resulted, in limitations on our ability to source technology from those third parties, restrictions on our ability to sell products that incorporate the infringing technology, increased exposure to liability that we will be held responsible for incorporating the infringing technology in our products and increased costs involved in removing that technology from our products or developing substitute technology. 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 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 Notes and the Revolving Credit Facility.***

As of December 31, 2017, we have issued \$2,150.0 million in aggregate principal amount of senior notes, which we refer to collectively as the Notes, and had \$2,136.3 million in outstanding long-term debt (see discussion in Note 10, *Debt and Financing*, in the Notes to Consolidated Financial Statements of this Report). 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 by up to an additional \$200.0 million. The Credit Agreement will terminate in June 2019, at which point all amounts borrowed must be repaid. As of December 31, 2017, 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) 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).

In addition, certain changes under the Tax Act may result in limitations on the deductibility of our net business interest expenses. Beginning in 2018, the Tax Act generally limits the annual deduction for net business interest expense to an amount equal to 30% of adjusted taxable income. As a result, if our taxable income were to decline, we may not be able to fully deduct our net interest expense. These changes, among others under the Tax Act, could result in increases to our future U.S. tax expenses, which could have a material impact on our business.

***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.***

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 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. In January 2018, we announced that our Board of Directors approved a new \$2 billion buyback authorization, which replaced our prior authorization. In February 2018, as a part of our new buyback authorization, we entered into a \$750 million accelerated share repurchase program. In addition, our Board of Directors declared an increase to our quarterly cash dividend to \$0.18 per share, which reflects an increase of 80% compared to previous quarterly dividends. Any failure to meet our commitments to return capital to our stockholders 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, 2017, we had \$2,006.5 million in cash and cash equivalents and \$2,014.5 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, money market funds, mutual funds, publicly-traded equity securities, time deposits, U.S. government agency securities, 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. In addition, our insurance coverage may not be adequate to compensate us for all losses or failures that may occur. Losses not covered by insurance could be substantial and unpredictable and could adversely affect our financial condition and results of operations.

***Our stock price may be volatile.***

Historically, our common stock has experienced substantial price volatility, particularly as a result of variations between our actual financial results and the published expectations of analysts and as a result of announcements by our competitors and us. Furthermore, speculation in the press or investment community about our strategic position, financial condition, results of operations, business, security of our products, or significant transactions can cause changes in our stock price. In addition, the stock market has experienced extreme price and volume fluctuations that have affected the market price of many technology companies in particular and that have often been unrelated to the operating performance of these companies. These factors, as well as general economic and political conditions and the announcement of proposed and completed acquisitions or other significant transactions, or any difficulties associated with such transactions, by us or our current or potential competitors, may materially adversely affect the market price of our common stock in the future.

**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 in Sunnyvale, California as part of our corporate headquarters as of December 31, 2017 .

In addition to our leased buildings in Sunnyvale, we also lease space (including offices and other facilities) 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, 2017 , we leased approximately 1.8 million square feet worldwide, with approximately 38% in North America. The respective operating leases expire at various times through March 2028 . 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 current business needs. We may improve, replace or reduce facilities as considered appropriate to meet the needs of our operations.

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

#### Common Stock Market Prices

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.

	2017		2016	
	High	Low	High	Low
First quarter	\$ 29.10	\$ 24.90	\$ 27.73	\$ 21.49
Second quarter	\$ 30.96	\$ 27.42	\$ 25.69	\$ 21.18
Third quarter	\$ 30.29	\$ 26.50	\$ 24.45	\$ 21.18
Fourth quarter	\$ 29.95	\$ 23.87	\$ 29.21	\$ 22.41

#### Stockholders

As of February 16, 2018, there were 832 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

We paid cash dividends of \$0.10 per share each quarter, totaling \$150.4 million and \$152.5 million, during the years ended December 31, 2017 and 2016, respectively. In January 2018, we declared an increase of our quarterly cash dividend to \$0.18 per share to be paid on March 22, 2018 to stockholders of record as of the close of business on March 1, 2018. This reflects an increase of 80% compared to previous quarterly dividends. 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.

#### Unregistered Securities Issued

On December 6, 2017, we issued 109,271 shares of our common stock as consideration to an individual in connection with the 2016 AppFormix acquisition.

The issuance of the above securities were exempt from registration under the Securities Act of 1933, as amended (the "Securities Act"), in reliance upon Section 4(a)(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, 2017 (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 <sup>(*)</sup>	Maximum Dollar Value of Shares that May Still Be Purchased Under the Plans or Programs <sup>(*)</sup>
October 1 - October 31, 2017	0.6	\$ 25.14	0.6	\$ 314.7
November 1 - November 30, 2017	8.5	\$ 25.51	8.5	\$ 97.0
December 1 - December 31, 2017	3.4	\$ 28.40	3.4	\$ —
Total	12.5	\$ 26.28	12.5	

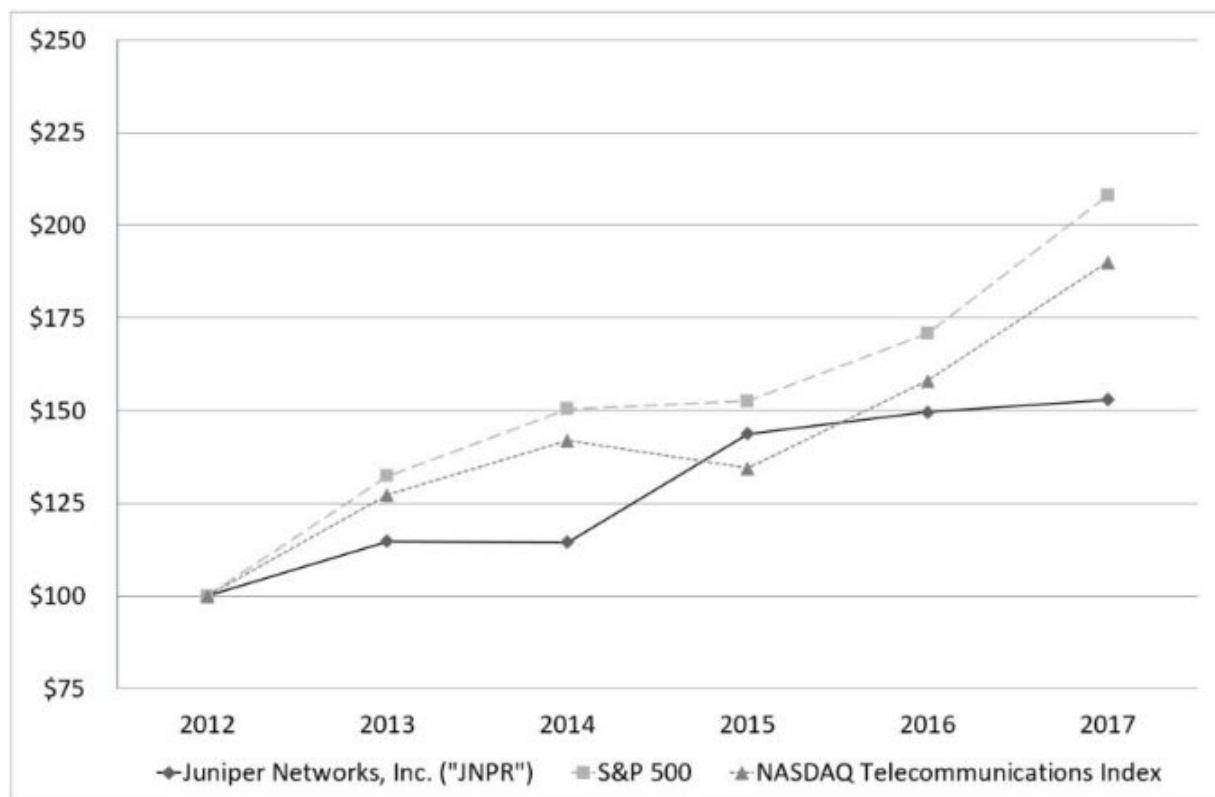
<sup>(\*)</sup> Shares were repurchased during the periods set forth in the table above under our stock repurchase program, which had been approved by the Board and authorized us to purchase an aggregate of up to \$4.4 billion of our common stock. In January 2018, the Board approved a new \$2.0 billion share repurchase authorization, which replaces the existing authorization, and authorized Juniper to enter into an accelerated share repurchase program for up to \$750 million. 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. See Note 18, *Subsequent Events*, in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report for further discussion.

**Company Stock Performance**

The information contained in this Company Stock Performance section 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.

The performance graph below shows the cumulative total stockholder return over a five-year period assuming the investment of \$100 on December 31, 2012, in each of Juniper Networks' common stock, the Standard & Poor's 500 Stock Index ("S&P 500"), and the NASDAQ Telecommunications Index ("IXTC"). Total stockholder return assumes reinvestment of all dividends.

**Stock Performance Graph**



	As of December 31,					
	2012	2013	2014	2015	2016	2017
JNPR	\$ 100.00	\$ 114.74	\$ 114.48	\$ 143.68	\$ 149.55	\$ 152.97
S&P 500	\$ 100.00	\$ 132.37	\$ 150.48	\$ 152.55	\$ 170.78	\$ 208.05
NASDAQ Telecommunications Index	\$ 100.00	\$ 127.29	\$ 141.93	\$ 134.42	\$ 158.06	\$ 190.02

**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, 2017, see *Notes to Consolidated Financial Statements* in Item 8 of Part II of this Report.

**Consolidated Statements of Operations Data**

	Years Ended December 31,				
	2017 <sup>(1)</sup>	2016	2015	2014 <sup>(2)</sup>	2013
	(In millions, except per share amounts)				
Net revenues	\$ 5,027.2	\$ 4,990.1	\$ 4,857.8	\$ 4,627.1	\$ 4,669.1
Gross margin	3,072.1	3,104.5	3,078.6	2,858.2	2,941.4
Operating income (loss)	848.1	889.7	912.0	(419.7)	565.9
Net income (loss)	\$ 306.2	\$ 592.7	\$ 633.7	\$ (334.3)	\$ 439.8
Net income (loss) per share:					
Basic	\$ 0.81	\$ 1.55	\$ 1.62	\$ (0.73)	\$ 0.88
Diluted	\$ 0.80	\$ 1.53	\$ 1.59	\$ (0.73)	\$ 0.86
Shares used in computing net income (loss) per share:					
Basic	377.7	381.7	390.6	457.4	501.8
Diluted	384.2	387.8	399.4	457.4	510.3
Cash dividends declared per share of common stock	\$ 0.40	\$ 0.40	\$ 0.40	\$ 0.20	\$ —

<sup>(1)</sup> Fiscal year 2017 includes an estimated \$289.5 million of tax expense related to the U.S. Tax Cuts and Jobs Act, and pre-tax restructuring charges of \$65.6 million.

<sup>(2)</sup> 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 of \$19.6 million.

**Consolidated Balance Sheet Data**

	As of December 31,				
	2017	2016	2015	2014	2013
	(In millions)				
Cash, cash equivalents, and investments	\$ 4,021.0	\$ 3,657.3	\$ 3,192.2	\$ 3,104.9	\$ 4,097.8
Working capital	2,446.3	2,236.0	1,110.5	1,297.2	2,182.7
Goodwill	3,096.2	3,081.7	2,981.3	2,981.5	4,057.7
Total assets <sup>(1)</sup>	9,833.8	9,656.5	8,607.9	8,273.6	10,267.1
Short-term and long-term debt <sup>(1)</sup>	2,136.3	2,133.7	1,937.4	1,341.2	993.7
Total long-term liabilities (excluding long-term debt) <sup>(2)</sup>	1,278.4	824.4	594.1	499.9	529.8
Total stockholders' equity <sup>(3)</sup>	\$ 4,680.9	\$ 4,962.5	\$ 4,574.4	\$ 4,919.1	\$ 7,302.2

<sup>(1)</sup> 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 required presentation.

<sup>(2)</sup> Fiscal 2017 includes an estimated \$394.0 million recorded in long-term income taxes payable related to the one-time transition tax as a result of the Tax Cuts and Jobs Act.

<sup>(3)</sup> Fiscal year 2017 includes the adoption of ASU No. 2016-09 (Topic 718) *Compensation—Stock Compensation: Improvements to Employee Share-Based Payment Accounting*, which simplifies several aspects of the accounting for share-based payment transactions, including the accounting for forfeitures, among other things. The Company elected to account for forfeitures as they occur using a modified retrospective transition method, rather than estimating forfeitures, resulting in a cumulative-effect adjustment of \$9.0 million, which increased the January 1, 2017 opening accumulated deficit balance on the Consolidated Balance Sheets.



## **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. 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. Each of these decisions has some impact on the financial results for any given period. 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, which includes a summary of our business and market environment along with a financial results and key performance metrics overview. 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.

### **Executive Overview**

#### ***Business and Market Environment***

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.

Our products are sold in three geographic regions: Americas; Europe, Middle East, and Africa, or EMEA; and Asia Pacific, or APAC. We sell our high-performance network products and service offerings across routing, switching, and security technologies. In addition to our products, we offer our customers services, including maintenance and support, professional services, and education and training programs. 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.

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 further value over their 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 2017, we began reporting revenue on the following verticals: Cloud, Telecom/Cable, and Strategic Enterprise, which we believe better aligns with our business model compared to our previous reporting of revenue by Service Provider and Enterprise. A summary of the types of customers included in our verticals is as follows:

- Cloud: companies that are heavily reliant on the cloud for their business model's success. As an example, customers in the cloud vertical can include cloud service providers as well as enterprises that provide software-as-a-service, infrastructure-as-a-service, or platform-as-a-service.
- Telecom/Cable: includes wireline and wireless carriers and cable operators.
- Strategic Enterprise: includes enterprises not included in the Cloud vertical. In particular, they are industries with high performance, high agility requirements, including financial services; national, federal, state, and local governments; as well as research and educational institutions.

We are focused on and continue to see significant opportunities from the implementation of cloud architectures, such as large public and private data centers, as well as distributed cloud infrastructure which resides in multiple, distributed data centers in order to place applications or services closer to end users, such as enabling security and networking as a service.

We believe the network needs for our customers in our Telecom/Cable and Cloud verticals are converging, as are those of Strategic Enterprises, as all of these customers recognize the need for high performance networks and leveraging the cloud for improved agility and greater levels of operating efficiency.

As these customers continue to grow, we believe their network architectures will continue to evolve. We believe our understanding of high performance networking technology, and our strategy, position us to capitalize on the industry transition to more automated, cost-efficient, scalable networks.

In routing, we believe that certain large cloud customers are starting to transition their wide area networks from scale-up to a scale-out architecture as they continue to add capacity, which has resulted and we expect may continue to result in a transition of these customers from purchasing our MX product family to our PTX product family. These architectural shifts have led to a near-term slowdown in our net revenues as in some cases there is a pause before the new architecture ramps as well as lower average selling prices for PTX product family compared to MX product family. We are unable to predict the exact timing or duration of the transition, as it will vary from customer to customer.

In switching, we see that certain large cloud customers who can rapidly scale based on increased demand are in the process of adopting 100-Gigabit connections, or 100G, resulting in certain large deployment delays at our largest cloud customers as they prepare for this adoption.

Despite these ongoing deployment delays and architectural shifts, we remain confident in our competitive position and strong relationships with these strategic customers. Our overall strategy with our cloud customers has not changed and we continue to execute against our innovation roadmap, which includes our plan to continue to grow our relevance and our business in the cloud vertical.

In 2017, we continued to execute on our product strategy, specifically around the cloud. We announced Cloud-Grade Networking, which we expect will accelerate agility and innovation with cloud customers. Cloud-Grade Networking builds on carrier-grade reach and reliability with enterprise-grade control and usability, bringing cloud-level agility and operational scale to networks everywhere. This announcement included two new foundational products:

- Junos Node Slicing: converges multiple concurrent network functions on the same physical routing infrastructure, letting customers optimize their infrastructure while offering differentiated services with enhanced operational and administrative isolation within a single chassis.
- Universal Chassis: a breakthrough system allowing customers to standardize on a hardware platform across their data center, core, and network edge. We believe the system will create significant value for our customers by enhancing their return on investment through reduced costs.

Aligning with our Cloud-Grade Networking initiative, we also announced a Programmable Photonic Layer solution, comprised of two main products: TCX1000 Series Programmable ROADM and proNX Optical Director. This solution is a disaggregated optical line system that is designed to offer greater levels of flexibility, cost control, and multi-layer visibility to packet-optical transport.

We also announced enhancements to our Software-Defined Secure Networks, or SDSN, platform and expanded our public cloud offering with the introduction of vSRX for Microsoft Azure. Our SDSN enhancements deliver pervasive security across multi-vendor environments, public clouds, and private clouds. Further, we announced enhancements to our Contrail Cloud platform that includes AppFormix integrations, pre-validated virtual network functions, and a managed solution of professional services offering to simplify our customers' transition to telco clouds.

In addition, we announced further cloud-based enhancements to our security portfolio. We introduced our Contrail Security product, a new solution specifically designed to allow enterprises and Software-as-a-Service, or SaaS, cloud providers to protect applications running in multiple cloud environments. We also completed the acquisition of Cyphort Inc., a software company that provides security analytics for advanced threat defense. This acquisition is expected to strengthen the capabilities of our cloud-based threat prevention service, Sky Advanced Threat Prevention, or Sky ATP, by increasing efficiency and performance and providing additional threat detection functionalities and analytics. We will continue to look at targeted and strategic acquisitions that we believe can complement our product portfolio, operations, R&D strategy or overall business.

### Financial Results and Key Performance Metrics Overview

The following table provides an overview of our financial results and key financial metrics (in millions, except per share amounts, percentages and days sales outstanding, or DSO):

	As of and for the Years Ended December 31,						
	2017	2016	2015	2017 vs. 2016		2016 vs. 2015	
				\$ Change	% Change	\$ Change	% Change
Net revenues	\$ 5,027.2	\$ 4,990.1	\$ 4,857.8	\$ 37.1	1 %	\$ 132.3	3 %
Gross margin	\$ 3,072.1	\$ 3,104.5	\$ 3,078.6	\$ (32.4)	(1)%	\$ 25.9	1 %
<i>Percentage of net revenues</i>	<i>61.1%</i>	<i>62.2%</i>	<i>63.4%</i>				
Operating income	\$ 848.1	\$ 889.7	\$ 912.0	\$ (41.6)	(5)%	\$ (22.3)	(2)%
<i>Percentage of net revenues</i>	<i>16.9%</i>	<i>17.8%</i>	<i>18.8%</i>				
Net income	\$ 306.2	\$ 592.7	\$ 633.7	\$ (286.5)	(48)%	\$ (41.0)	(6)%
<i>Percentage of net revenues</i>	<i>6.1%</i>	<i>11.9%</i>	<i>13.0%</i>				
Net income per share							
Basic	\$ 0.81	\$ 1.55	\$ 1.62	\$ (0.74)	(48)%	\$ (0.07)	(4)%
Diluted	\$ 0.80	\$ 1.53	\$ 1.59	\$ (0.73)	(48)%	\$ (0.06)	(4)%
Cash dividends declared per common stock	\$ 0.40	\$ 0.40	\$ 0.40	\$ —	— %	\$ —	— %
Operating cash flows	\$ 1,260.1	\$ 1,107.2	\$ 899.5	\$ 152.9	14 %	\$ 207.7	23 %
Stock repurchase plan activity	719.7	312.9	1,142.5	406.8	130 %	(829.6)	(73)%
DSO (*)	62	68	53	(6)	(9)%	15	28 %
Deferred revenue	\$ 1,539.3	\$ 1,481.1	\$ 1,168.1	\$ 58.2	4 %	\$ 313	27 %
Product deferred revenue	\$ 334.2	\$ 322.9	\$ 240.3	\$ 11.3	3 %	\$ 82.6	34 %

(\*) DSO is for the fourth quarter ended December 31, 2017, 2016, and 2015.

- *Net Revenues:* During 2017, net revenues increased compared to 2016, due to growth from our services business driven by strong attach rates and renewals of support contracts, partially offset by a decline in product revenues. The decline in product revenues was primarily driven by lower revenues from our routing products as a result of the continued architectural shifts in the Cloud vertical to more automated, cost efficient, and scalable networks and a decrease in our high-end SRX series in our security business. This was partially offset by an increase in net revenues from our switching products driven by continued growth from our data center switching portfolio, particularly from our QFX product family which grew 25% year-over-year.

Of our top ten customers for 2017, four were Cloud, five were Telecom/Cable, and one was a Strategic Enterprise. Of these customers, two were located outside of the U.S.

- *Gross Margin:* Our gross margin as a percentage of net revenues decreased during 2017, compared to 2016, primarily due to lower product net revenues, customer mix, and product mix resulting from the year-over-year decline in routing revenues, including as a result of architectural shifts described above, partially offset by higher service gross margin.
- *Operating Margin:* During 2017, compared to 2016, operating income as a percentage of net revenues decreased primarily due to lower gross margin as discussed above and higher operating expenses primarily from restructuring charges, partially offset by higher net revenues driven by the strength from our services and switching businesses.
- *Capital Return:* In 2017, we repurchased 26.1 million shares of our common stock for an aggregate amount of \$719.7 million and paid cash dividends of \$0.10 per share each quarter for an aggregate annual amount of \$150.4 million.
- *Operating Cash Flows:* Cash flow from operations increased in 2017, compared to 2016, primarily due to an increase in cash collections from customers in the first half of 2017 due to higher invoicing activity during the fourth quarter.

of 2016, partially offset by an increase in payments to suppliers, higher payments for restructuring activities, and an increase in cash paid for income taxes.

- *DSO*: DSO is calculated as the ratio of ending accounts receivable, net of allowances, divided by net revenues for the preceding 90 days. DSO for the quarter ended December 31, 2017 decreased, compared to the quarter ended December 31, 2016, primarily due to lower invoicing activities.
- *Product Deferred Revenue*: Product deferred revenue increased as of December 31, 2017, compared to December 31, 2016, primarily due to shipments that have not met certain revenue recognition criteria.

### 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 liabilities, 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<sup>st</sup>, 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 carrying 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 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.

In the second step, the reporting unit's fair value is allocated to all of the assets and liabilities, including any unrecognized intangible assets; such as, existing technology, backlog, and customer relationships, in a hypothetical analysis that calculates the implied fair value of goodwill in the same manner as if the reporting unit was being acquired in a business combination. If the implied fair value of the reporting unit's goodwill is less than the carrying value, the difference is recorded as an impairment loss. Assumptions used in measuring the fair value of these assets and liabilities included the discount rates, customer renewal rates, and technology obsolescence rates used in valuing intangible assets, and pricing of comparable transactions in the market in valuing the tangible assets.

During the second quarter of 2017, we concluded that there were sufficient indicators to require us to perform an interim goodwill impairment analysis on our Security reporting unit. Based on our analysis, we determined that our Security reporting unit's goodwill was not impaired.

During the fourth quarter of 2017, we performed a qualitative assessment for all of our reporting units: Routing, Switching, and Security. This qualitative assessment included the review of certain macroeconomic factors and entity-specific qualitative factors to determine if it was more-likely-than-not that the fair values of our reporting units were below carrying value. We considered macroeconomic factors including the economic growth, general macroeconomic trends and growth for the markets in which the reporting units operate, changes in the industry environment, and the performance of market competitors. In addition to these macroeconomic factors, we considered the reporting units' current results and forecasts, any changes in the nature of the business, any changes in cost factors, any significant legal, regulatory, contractual, or other business factors, and changes in the carrying values. As a result of our qualitative assessment, we concluded that it was more-likely-than-not that our goodwill was not impaired and we did not perform a quantitative assessment.

- *Inventory Valuation and Contract Manufacturer Liabilities:* Inventory consists primarily of component parts to be used in the manufacturing process and finished goods in-transit, and is stated at lower of cost or net realizable value. 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, 2017 and December 31, 2016, our net inventory balances were \$97.8 million and \$95.5 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, 2017 and December 31, 2016, our contract manufacturer liabilities were \$22.0 million and \$14.0 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.

We have accounted for the tax effects of the Tax Cuts and Jobs Act, which we refer to as the Tax Act, enacted on December 22, 2017, on a provisional basis. Our accounting for certain income tax effects is incomplete, but we have determined reasonable estimates for those effects. Our reasonable estimates are included in our financial statements

as of December 31, 2017. We expect to complete our accounting during the one year measurement period from the enactment date.

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

The following table presents net revenues by product and service, customer vertical, and geographic region (in millions, except percentages):

	As of and for the Years Ended December 31,						
	2017	2016	2015	2017 vs. 2016		2016 vs. 2015	
				\$ Change	% Change	\$ Change	% Change
Routing	\$ 2,189.5	\$ 2,352.9	\$ 2,359.2	\$ (163.4)	(7)%	\$ (6.3)	— %
Switching	963.4	858.0	768.3	105.4	12 %	89.7	12 %
Security	293.3	318.0	435.6	(24.7)	(8)%	(117.6)	(27)%
Total Product	3,446.2	3,528.9	3,563.1	(82.7)	(2)%	(34.2)	(1)%
<i>Percentage of net revenues</i>	<i>68.6%</i>	<i>70.7%</i>	<i>73.3%</i>				
Total Service	1,581.0	1,461.2	1,294.7	119.8	8 %	166.5	13 %
<i>Percentage of net revenues</i>	<i>31.4%</i>	<i>29.3%</i>	<i>26.7%</i>				
Total net revenues	\$ 5,027.2	\$ 4,990.1	\$ 4,857.8	\$ 37.1	1 %	\$ 132.3	3 %
Cloud	\$ 1,314.9	\$ 1,322.3	\$ 1,021.2	\$ (7.4)	(1)%	\$ 301.1	29 %
<i>Percentage of net revenues</i>	<i>26.1%</i>	<i>26.5%</i>	<i>21.0%</i>				
Telecom/Cable	2,315.7	2,324.7	2,417.1	(9.0)	— %	(92.4)	(4)%
<i>Percentage of net revenues</i>	<i>46.1%</i>	<i>46.6%</i>	<i>49.8%</i>				
Strategic Enterprise	1,396.6	1,343.1	1,419.5	53.5	4 %	(76.4)	(5)%
<i>Percentage of net revenues</i>	<i>27.8%</i>	<i>26.9%</i>	<i>29.2%</i>				
Total net revenues	\$ 5,027.2	\$ 4,990.1	\$ 4,857.8	\$ 37.1	1 %	\$ 132.3	3 %
Americas:							
United States	\$ 2,712.6	\$ 2,737.0	\$ 2,568.6	\$ (24.4)	(1)%	\$ 168.4	7 %
Other	234.6	231.8	223.6	2.8	1 %	8.2	4 %
Total Americas	2,947.2	2,968.8	2,792.2	(21.6)	(1)%	176.6	6 %
<i>Percentage of net revenues</i>	<i>58.6%</i>	<i>59.5%</i>	<i>57.5%</i>				
EMEA	1,195.8	1,238.1	1,320.3	(42.3)	(3)%	(82.2)	(6)%
<i>Percentage of net revenues</i>	<i>23.8%</i>	<i>24.8%</i>	<i>27.2%</i>				
APAC	884.2	783.2	745.3	101.0	13 %	37.9	5 %
<i>Percentage of net revenues</i>	<i>17.6%</i>	<i>15.7%</i>	<i>15.3%</i>				
Total net revenues	\$ 5,027.2	\$ 4,990.1	\$ 4,857.8	\$ 37.1	1 %	\$ 132.3	3 %

### 2017 Compared to 2016

Product net revenues decreased in 2017, compared to 2016, primarily due to a decrease in routing and, to a lesser extent, security, partially offset by growth in switching.

Lower routing revenues was driven by Cloud customers in the Americas as a result of the ongoing architectural shifts in the Cloud vertical to more automated, cost efficient, and scalable networks. Routing revenues in EMEA also declined year-over-year due to lower sales from Telecom/Cable customers, partially offset by revenue growth in APAC from our Telecom/Cable vertical. As we continue to expand our footprint with certain strategic APAC Telecom and Cloud customers, particularly in Australia, we expect these strategic opportunities will ultimately help to drive revenue growth in APAC. Revenues from our MX and legacy routing products declined year-over-year, which was partially offset by an increase in revenues from our PTX products from the continued adoption of our PTX1000 series of products. We are expecting a year-over-year revenue decline in our routing business in 2018 as a result of the ongoing architectural shifts in the Cloud vertical.

Security net revenues declined in 2017, compared to 2016, primarily driven by a decrease in our high-end SRX series as it has been undergoing a product refresh cycle and the decline in our Other Legacy products. We are expecting a year-over-year revenue increase in our security business in 2018 as a result of product refresh.



The decline in product net revenues was partially offset by an increase in switching net revenues due to continued growth from our data center switching portfolio, particularly from our QFX product family, which grew 25% year-over-year. This growth was across public and private clouds driven in part by 100G adoption. The switching net revenue growth was primarily driven by the Cloud vertical in the Americas and, to a lesser extent, our Strategic Enterprise vertical. We expect that our data center switching portfolio will continue to drive revenue growth in our switching business and we expect year-over-year revenue growth in our switching business in 2018.

Service net revenues increased during in 2017, compared to 2016, primarily due to strong renewal and attach rates of support contracts. Additionally, we saw strong year-over-year services revenue growth in APAC and EMEA.

### 2016 Compared to 2015

Product net revenues decreased slightly in 2016, compared to 2015, primarily due to a decrease in security and, to a lesser extent, routing, partially offset by growth in switching.

The decrease in security was driven by our SRX products, which has been undergoing a product refresh cycle, and 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. The decrease in security net revenues was driven by our Strategic Enterprise vertical due to competitive pressures.

Routing product net revenues decreased slightly in 2016, compared to 2015, primarily due to a decline in revenues from our MX products, resulting from lower sales from our Telecom/Cable vertical in the Americas and EMEA, which is impacted by the timing of large deployments. Revenues from our legacy products continued to decline, as expected, as we continued 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 of products due to higher sales to Cloud and Telecom/Cable customers, as well as the ramp up of sales of our new products.

The decline in product net revenues was partially offset by an increase in switching, primarily due to continued growth from our data center switching portfolio, particularly 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 revenues from Cloud customers in Americas. This was partially offset by lower demand for our EX products, as we transitioned 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.

Service net revenues increased in 2016, compared to 2015, primarily driven by strong attach rates and renewals of support contracts.

### Customer

No customer accounted for greater than 10% of our net revenues during the years ended December 31, 2017, 2016, and 2015.

### Gross Margins

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

	Years Ended December 31,						
	2017	2016	2015	2017 vs. 2016		2016 vs. 2015	
				\$ Change	% Change	\$ Change	% Change
Product gross margin	\$ 2,085.3	\$ 2,202.7	\$ 2,293.5	\$ (117.4)	(5)%	\$ (90.8)	(4)%
<i>Percentage of product revenues</i>	<i>60.5%</i>	<i>62.4%</i>	<i>64.4%</i>				
Service gross margin	986.8	901.8	785.1	85.0	9 %	116.7	15 %
<i>Percentage of service revenues</i>	<i>62.4%</i>	<i>61.7%</i>	<i>60.6%</i>				
Total gross margin	\$ 3,072.1	\$ 3,104.5	\$ 3,078.6	\$ (32.4)	(1)%	\$ 25.9	1 %
<i>Percentage of net revenues</i>	<i>61.1%</i>	<i>62.2%</i>	<i>63.4%</i>				

Our gross margins as a percentage of net revenues 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 and component costs, expenses for inventory obsolescence and warranty obligations, cost of support and service personnel, customer

mix as we continue to expand our footprint with certain strategic customers and certain geographic regions, and the mix of distribution channels through which our products and services are sold.

**2017 Compared to 2016**

*Product gross margin*

Product gross margin as a percentage of product revenues decreased in 2017, compared to 2016, primarily due to lower product net revenues, customer mix, and product mix resulting from the year-over-year decline in routing revenues and our customers' architectural shifts, partially offset by improvements in our cost structure. In the near-term, we expect product gross margin will continue to be affected by lower revenues and product mix, including from our customers' architectural shifts. We are undertaking specific efforts to address certain factors impacting our product gross margin. These efforts include cost reductions, performance and quality improvements through engineering to increase value across our products; optimizing our supply chain; pricing management; and increasing software and solution sales; however, there can be no guarantee that these efforts will be successful or that they will be realized in the time frame we anticipate.

We expect that our product gross margin will continue to vary in the future due to the mix of products sold, geographic mix, and competitive pricing pressures.

*Service gross margin*

Service gross margin as a percentage of service net revenues increased in 2017, compared to 2016, due to higher service revenues, partially offset by higher material and higher delivery costs.

**2016 Compared to 2015**

*Product gross margin*

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 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.

*Service gross margin*

Service gross margin as a percentage of service net revenues increased in 2016, compared to 2015, 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.

**Operating Expenses**

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

	Years Ended December 31,											
	2017		2016		2015		2017 vs. 2016		2016 vs. 2015			
							\$ Change	% Change	\$ Change	% Change		
Research and development	\$	980.7	\$	1,013.7	\$	994.5	\$	(33.0)	(3)%	\$	19.2	2 %
<i>Percentage of net revenues</i>		<i>19.5%</i>		<i>20.3%</i>		<i>20.5 %</i>						
Sales and marketing		950.2		972.9		943.8		(22.7)	(2)%		29.1	3 %
<i>Percentage of net revenues</i>		<i>18.9%</i>		<i>19.5%</i>		<i>19.4 %</i>						
General and administrative		227.5		224.9		228.9		2.6	1 %		(4.0)	(2)%
<i>Percentage of net revenues</i>		<i>4.5%</i>		<i>4.5%</i>		<i>4.7 %</i>						
Restructuring charges (benefits)		65.6		3.3		(0.6)		62.3	N/M		3.9	N/M
<i>Percentage of net revenues</i>		<i>1.3%</i>		<i>0.1%</i>		<i>— %</i>						
<b>Total operating expenses</b>	<b>\$</b>	<b>2,224.0</b>	<b>\$</b>	<b>2,214.8</b>	<b>\$</b>	<b>2,166.6</b>	<b>\$</b>	<b>9.2</b>	<b>— %</b>	<b>\$</b>	<b>48.2</b>	<b>2 %</b>
<i>Percentage of net revenues</i>		<i>44.2%</i>		<i>44.4%</i>		<i>44.6 %</i>						

N/M - percentage is not meaningful.

Our operating expenses have historically been driven in large part by personnel-related costs, including salaries and wages; commissions and bonuses, which we refer to collectively as variable compensation; 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 9,381, 9,832, and 9,058 employees as of December 31, 2017, 2016, and 2015, respectively. Our headcount decreased by 451 employees, or 5%, in 2017, compared to 2016, primarily due to our restructuring plan initiated in the first quarter of 2017 to realign our workforce and increase operational efficiency, which we refer to as the 2017 Restructuring Plan. 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.

**2017 Compared to 2016***Research and development*

Research and development expense, or R&D, decreased in 2017, compared to 2016, primarily due to a decline in personnel-related costs, including lower share-based compensation of \$39.8 million primarily driven by lower expense from certain performance share awards, or PSAs, whose vesting is contingent upon the achievement of financial performance metrics or certain performance milestones, and lower variable compensation of \$13.7 million. The decrease was partially offset by higher costs related to certain R&D project cancellations of \$11.4 million and higher prototype costs of \$10.4 million.

*Sales and marketing*

Sales and marketing expense decreased in 2017, compared to 2016, primarily due to a decline in personnel-related costs of \$20.5 million, including lower variable compensation of \$15.5 million primarily as a result of lower commissions expense and lower salaries and wages driven by a decrease in headcount as a result of the 2017 Restructuring Plan.

*General and administrative*

General and administrative expense increased in 2017, compared to 2016, primarily due to litigation settlement charges pursuant to a litigation settlement reached in November 2017 in connection with a legal proceeding of approximately \$13.0 million, partially offset by a decline in other legal costs of \$6.4 million.

[Table of Contents](#)*Restructuring charges (benefits)*

Restructuring charges (benefits) increased in 2017, compared to 2016, primarily due to severance and contract termination costs recorded under the 2017 Restructuring Plan.

**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 variable compensation expense. The increase in salaries and wages was driven by a higher headcount of 331 from 3,723 at the end of 2015 to 4,054 at the end of 2016, 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 126 from 2,464 at the end of 2015 to 2,590 at the end of 2016, as well as an increase in share-based compensation expense, partially offset by lower variable compensation 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 variable compensation 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 charges (benefits)*

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

**Other Expense, Net**

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

	Years Ended December 31,							
	2017	2016	2015	2017 vs. 2016		2016 vs. 2015		
				\$ Change	% Change	\$ Change	% Change	
Interest income	\$ 53.0	\$ 35.4	\$ 21.8	\$ 17.6	50 %	\$ 13.6	62 %	
Interest expense	(101.2)	(97.7)	(83.3)	(3.5)	4 %	(14.4)	17 %	
Gain (loss) on investments, net	14.6	(1.8)	6.8	16.4	N/M	(8.6)	(126)%	
Other	(2.7)	1.8	(5.1)	(4.5)	(250)%	6.9	N/M	
Total other expense, net	\$ (36.3)	\$ (62.3)	\$ (59.8)	\$ 26.0	(42)%	\$ (2.5)	4 %	
<i>Percentage of net revenues</i>	<i>(0.7)%</i>	<i>(1.2)%</i>	<i>(1.2)%</i>					

N/M - percentage is not meaningful.

*Other Expense, Net*

Interest income primarily includes interest earned on our cash, cash equivalents, investments, and promissory note issued to us in connection with the sale of Junos Pulse. Interest expense primarily includes interest, net of capitalized interest expense, from long-

term debt and customer financing arrangements. Gain (loss) on investments, net, primarily includes gains from the sale of investments in public and privately-held companies, and any impairment charges recorded on these investments. Other typically consists of foreign exchange gains and losses and other non-operational income and expense items.

### **2017 Compared to 2016**

#### *Interest Income*

Interest income increased in 2017, compared to 2016, primarily due to an increase in interest income related to our investment portfolio, as a result of higher yields and a larger balance in the portfolio.

#### *Interest Expense*

Interest expense increased in 2017, compared to 2016, primarily due to a full-year effect of interest expense from the issuance of our 2019 and 2024 Notes 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.

#### *Gain (Loss) on Investments, Net*

During the year ended December 31, 2017, we saw an increase from gains on equity investments, primarily related to the sale of investments in public and privately-held companies. In addition, we recorded impairment charges on certain investments in privately-held companies in 2016, and there were no such charges recorded in 2017.

### **2016 Compared to 2015**

#### *Interest Income*

Interest income increased in 2016 compared to 2015, primarily due to higher interest income on our promissory note issued to us in connection with the previously completed sale of Junos Pulse, which we refer to as the Pulse Note, 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.

#### *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.

#### *Gain (Loss) 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.

**Income Tax Provision**

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

	Years Ended December 31,						
	2017	2016	2015	2017 vs. 2016		2016 vs. 2015	
				\$ Change	% Change	\$ Change	% Change
Income tax provision	\$ 505.6	\$ 234.7	\$ 218.5	\$ 270.9	115%	\$ 16.2	7%
Effective tax rate	62.3%	28.4%	25.6%				

**2017 Compared to 2016**

The effective tax rate for the fiscal year 2017 was higher than 2016, primarily due to an estimated \$289.5 million of net income tax expense related to changes imposed by the Tax Act, which was enacted on December 22, 2017. Effective January 1, 2018, the Tax Act provides for significant changes to U.S. income tax law including the reduction of the U.S. federal corporate income tax rate from 35% to 21% and the creation of a minimum tax on foreign earnings. In addition, the Tax Act imposed a one-time transition tax on accumulated foreign earnings through December 31, 2017. The \$289.5 million income tax expense includes an estimated tax charge of \$431.2 million on the Company's accumulated foreign earnings, which the Company has elected to pay over eight years, as described in Note 14, Income Taxes, in the Notes to Consolidated Financial Statements in Item 1 of Part I of this Report.

We expect the future effective rate to trend toward the newly enacted U.S. statutory rate with the exception of the impacts of stock based compensation and one-time items. In addition, 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.

**2016 Compared to 2015**

The effective tax rate for the fiscal year 2016 was higher than 2015, primarily due to a change in the geographic mix of earnings. The effective tax rate for the fiscal 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, or OECD, on Base Erosion and Profit Shifting, certain countries in EMEA and APAC have either enacted new corporate tax legislation or 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 as regards to transfer pricing. Consequently, we expect global tax authorities to increasingly challenge the Company's cost sharing and other intercompany arrangements, and the related sourcing of taxable profits in global jurisdictions. In 2017, discussions were held with tax authorities, including UK and Australia, regarding corporate tax reform legislation enacted by those countries.

## Liquidity and Capital Resources

The following sections discuss the effects of changes in our balance sheet, our capital return strategy, including our stock repurchase program and dividends, our contractual obligations, and certain other commitments and activities on our liquidity and capital resources.

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

	As of December 31,			
	2017	2016	\$ Change	% Change
Working capital	\$ 2,446.3	\$ 2,236.0	\$ 210.3	9 %
Cash and cash equivalents	\$ 2,006.5	\$ 1,833.2	\$ 173.3	9 %
Short-term investments	1,026.1	752.3	273.8	36 %
Long-term investments	988.4	1,071.8	(83.4)	(8)%
Total cash, cash equivalents, and investments	4,021.0	3,657.3	363.7	10 %
Long-term debt	2,136.3	2,133.7	2.6	—%
Cash, cash equivalents, and investments, net of debt	\$ 1,884.7	\$ 1,523.6	\$ 361.1	24 %

### Summary of Cash Flows

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

	Years Ended December 31,						
	2017	2016	2015	2017 vs. 2016		2016 vs. 2015	
				\$ Change	% Change	\$ Change	% Change
Net cash provided by operating activities (*)	\$ 1,260.1	\$ 1,107.2	\$ 899.5	\$ 152.9	14 %	\$ 207.7	23 %
Net cash used in investing activities	\$ (309.0)	\$ (444.6)	\$ (503.4)	\$ 135.6	(30)%	\$ 58.8	(12)%
Net cash used in financing activities (*)	\$ (794.8)	\$ (236.3)	\$ (593.7)	\$ (558.5)	236 %	\$ 357.4	(60)%

(\*) On January 1, 2017, we adopted the new accounting pronouncement on Improvements to Employee Share-Based Payment Accounting, requiring excess tax benefits to be presented as an operating activity in the consolidated statements of cash flows. We applied this provision on a retrospective basis. During 2016 and 2015, \$6.7 million and \$12.3 million of excess tax benefits have been reclassified from financing to operating activities to conform to the current-year presentation.

### 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.

#### 2017 Compared to 2016

Net cash provided by operating activities increased in 2017, compared to 2016, primarily due to an increase in cash collections from customers in the first half of 2017 due to higher invoicing activity during the fourth quarter of 2016, partially offset by an increase in payments to suppliers, higher payments for restructuring activities and an increase in cash paid for income taxes.

#### 2016 Compared to 2015

Net cash provided by operating activities increased in 2016, compared to 2015, primarily due to an increase in cash collections from customers in 2016 due to higher invoicing activity during the fourth quarter of 2015, partially offset by an increase in income taxes paid.

**Investing Activities**

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

*2017 Compared to 2016*

Net cash used in investing activities decreased in 2017, compared to 2016, primarily due to lower payments for business combinations and capital expenditures and the receipt of \$75.0 million in proceeds from the Pulse Note, partially offset by higher net purchases of available-for-sale securities.

*2016 Compared to 2015*

Net cash used in investing activities decreased 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.

**Financing Activities**

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

*2017 Compared to 2016*

Net cash used in financing activities increased in 2017, compared to 2016, primarily due to an increase in repurchases and retirement of our common stock in 2017. In 2016, we raised \$494.0 million from our 2019 Notes and 2024 Notes and repaid \$300.0 million of our 2016 Notes.

*2016 Compared to 2015*

Net cash used in financing activities decreased 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.

**Capital Return**

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

Year	Dividends		Stock Repurchase Program			Total
	Per Share	Amount	Shares	Average price per share	Amount Repurchased	Amount
2017	\$ 0.40	\$ 150.4	26.1	\$ 27.61	\$ 719.7	\$ 870.1
2016	\$ 0.40	\$ 152.5	13.5	\$ 23.25	\$ 312.9	\$ 465.4
2015	\$ 0.40	\$ 156.3	45.4	\$ 25.16	\$ 1,142.5	\$ 1,298.8

In 2014 and 2015, 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 ("ASR"), and subsequent increases to the authorization totaling \$1.8 billion ("Stock Repurchase Program"). In February 2017, the Board authorized a \$500 million increase to the Stock Repurchase Program for a total of \$4.4 billion. As of December 31, 2017, we utilized all of the authorized funds under the Stock Repurchase Program.

In January 2018, our Board approved a new \$2.0 billion share repurchase authorization ("2018 Stock Repurchase Program"), which replaces the previous authorization. Our Board also authorized us to enter into an ASR for an amount up to \$750 million under the 2018 Stock Repurchase Program, and we expect to be opportunistic with our share repurchases in 2018.

In February 2018, we entered into ASR agreements with two financial institutions to repurchase an aggregate of \$750 million of our common stock. The Company made an up-front payment of \$750 million pursuant to the ASR and received and retired an



initial 23.3 million shares of our common stock for an aggregate price of \$600.0 million based on the market value of our common stock on the date of the transaction. We have an aggregate of \$1.3 billion of authorized funds remaining under the 2018 Stock Repurchase Program, as of the filing date of this Annual Report on Form 10-K.

In addition, our Board declared a quarterly cash dividend of \$0.18 per common stock to be paid on March 22, 2018 to stockholders of records as of the close of business on March 1, 2018. This reflects an increase of 80% compared to previous quarterly dividends. We intend to grow our dividend over time.

Future share repurchases under the 2018 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. Our 2018 Stock Repurchase Program may be discontinued at any time. Additionally, 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.

### **Off-Balance Sheet Arrangements**

As of December 31, 2017 and 2016, 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, 2017 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 <sup>(1)</sup>	\$ 139.7	\$ 36.1	\$ 48.1	\$ 26.7	\$ 28.8
Other lease arrangement <sup>(2)</sup>	112.0	9.8	26.7	28.4	47.1
Purchase commitments with contract manufacturers and suppliers <sup>(1)</sup>	615.2	603.5	11.7	—	—
Long-term debt <sup>(3)</sup>	2,150.0	—	650.0	300.0	1,200.0
Interest payment on long-term debt <sup>(3)</sup>	892.9	94.0	166.6	125.6	506.7
Tax liability related to the Tax Act <sup>(4)</sup>	431.2	37.2	68.5	68.5	257.0
Other contractual obligations <sup>(1)</sup>	94.8	47.1	38.5	9.1	0.1
<b>Total</b>	<b>\$ 4,435.8</b>	<b>\$ 827.7</b>	<b>\$ 1,010.1</b>	<b>\$ 558.3</b>	<b>\$ 2,039.7</b>

<sup>(1)</sup> 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.

<sup>(2)</sup> Lease arrangement is related to a data center lease agreement that we entered in to in July 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 lease agreement.

<sup>(3)</sup> 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.

<sup>(4)</sup> 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 tax liability related to the Tax Act.

As of December 31, 2017, we had \$256.6 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***

As of December 31, 2017, we have not borrowed any funds and we were in compliance with all covenants under our unsecured revolving credit facility that will expire in 2019, which enables borrowings up to \$500.0 million, with the option to increase the amount of the credit facility by up to an additional \$200.0 million. See Note 10, *Debt and Financing*, in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report for further information on our credit facility.

### ***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, 2017, we recorded \$20.4 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 and standby letters of credit for certain lease facilities and insurance programs of \$23.0 million and \$6.0 million, as of December 31, 2017 and December 31, 2016, respectively.

### ***Liquidity and Capital Resources***

Liquidity and capital resources may be impacted by our operating activities as well as acquisitions, investments in strategic relationships, repurchases of additional shares of our common stock, and payment of cash dividends on our common stock. As of December 31, 2017, 91% of our cash, cash equivalents, and investment balances were held outside of the U.S. Following the enactment of the Tax Act, we plan to repatriate approximately \$3.0 billion. We expect the new territorial tax system to provide us lower cost access to nearly all of our global free cash flow on an ongoing basis. Free cash flow is calculated as net cash provided by operating activities less capital expenditures. We intend to use the repatriated cash to invest in the business, support value-enhancing merger and acquisitions, or M&A, and fund our return of capital to stockholders.

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.

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 will be sufficient to fund our operations, planned stock repurchases and dividends, capital expenditures, commitments, and other liquidity requirements and anticipated growth for at least the next twelve months. However, our future liquidity and capital requirements may vary materially from those now planned depending on many factors, including, but not limited to, our growth rate, the timing and amount we spend to support development efforts, the expansion of sales and marketing activities, the introduction of new and enhanced products and services, the costs to acquire or invest in businesses and technologies, and the risks and uncertainties detailed in the “Risk Factors” section of Item 1A of Part I of this Report.

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

The primary objectives of our investment activities are, in order of priority, to preserve principal, maintain liquidity, and maximize yield. The value of our investments is subject to market price volatility. To minimize this risk, we maintain an investment portfolio of various holdings, types, and maturities, which includes asset-backed securities, certificates of deposit, commercial paper, corporate debt securities, foreign government debt securities, money market funds, mutual funds, time deposits, U.S. government agency securities, and U.S. government securities. 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.

The following tables present hypothetical changes in fair value of our available-for-sale fixed income securities held as of December 31, 2017 and 2016 that are sensitive to changes in interest rates assuming immediate parallel shifts in the yield curve of 50 basis points, or BPS, 100 BPS and 150 BPS, which are representative of the historical movements in the Federal Funds Rate (in millions):

	- 150 BPS	- 100 BPS	- 50 BPS	Fair Value as of December 31, 2017	+ 50 BPS	+ 100 BPS	+ 150 BPS
Available-for-sale fixed income securities	\$ 2,387.8	\$ 2,380.4	\$ 2,372.9	\$ 2,365.5	\$ 2,358.0	\$ 2,350.6	\$ 2,343.2

	- 150 BPS	- 100 BPS	- 50 BPS	Fair Value as of December 31, 2016	+ 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

**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 foreign currencies. These foreign exchange forward contracts typically have maturities of approximately one month.

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, Chinese Yuan, Euro, and the Indian Rupee. 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 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 0.1% and 1.1% for the year ended December 31, 2017 and December 31, 2016, respectively. See Note 5, *Derivative Instruments*, in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report for further discussion of our derivative and hedging activity.

We have performed a sensitivity analysis as of December 31, 2017 and 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, 2017 and December 31, 2016, respectively. 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, 2017 and December 31, 2016 by less than 1%, respectively.

### **Equity Price Risk**

Our non-qualified deferred compensation, or NQDC, plan, which may hold publicly-traded equity securities, are inherently exposed to equity price risk as the stock market fluctuates. As of December 31, 2017 and December 31, 2016, the total investments under our NQDC plan were \$27.6 million and \$21.0 million, respectively. A hypothetical 30% adverse change on the total investments under our NQDC plan would not have a material impact to the fair value of these investments, respectively.

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. The carrying values of our investments in privately-held companies were \$83.0 million and \$61.3 million as of December 31, 2017 and December 31, 2016, respectively. 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**

	<b>Page</b>
<a href="#">Reports of Independent Registered Public Accounting Firm</a>	<a href="#">62</a>
<a href="#">Management's Report on Internal Control Over Financial Reporting</a>	<a href="#">64</a>
<a href="#">Consolidated Statements of Operations</a>	<a href="#">65</a>
<a href="#">Consolidated Statements of Comprehensive Income</a>	<a href="#">66</a>
<a href="#">Consolidated Balance Sheets</a>	<a href="#">67</a>
<a href="#">Consolidated Statements of Cash Flows</a>	<a href="#">68</a>
<a href="#">Consolidated Statements of Changes in Stockholders' Equity</a>	<a href="#">69</a>
<a href="#">Notes to Consolidated Financial Statements</a>	<a href="#">70</a>
<a href="#">Note 1. Description of Business and Basis of Presentation</a>	<a href="#">70</a>
<a href="#">Note 2. Significant Accounting Policies</a>	<a href="#">70</a>
<a href="#">Note 3. Business Combinations</a>	<a href="#">79</a>
<a href="#">Note 4. Cash Equivalents and Investments</a>	<a href="#">82</a>
<a href="#">Note 5. Fair Value Measurements</a>	<a href="#">85</a>
<a href="#">Note 6. Derivative Instruments</a>	<a href="#">87</a>
<a href="#">Note 7. Goodwill and Purchased Intangible Assets</a>	<a href="#">88</a>
<a href="#">Note 8. Other Financial Information</a>	<a href="#">89</a>
<a href="#">Note 9. Restructuring and Other Charges (Benefits)</a>	<a href="#">92</a>
<a href="#">Note 10. Debt and Financing</a>	<a href="#">93</a>
<a href="#">Note 11. Equity</a>	<a href="#">95</a>
<a href="#">Note 12. Employee Benefit Plans</a>	<a href="#">96</a>
<a href="#">Note 13. Segments</a>	<a href="#">101</a>
<a href="#">Note 14. Income Taxes</a>	<a href="#">102</a>
<a href="#">Note 15. Net Income per Share</a>	<a href="#">107</a>
<a href="#">Note 16. Commitments and Contingencies</a>	<a href="#">108</a>
<a href="#">Note 17. Selected Quarterly Financial Data (Unaudited)</a>	<a href="#">110</a>
<a href="#">Note 18. Subsequent Events</a>	<a href="#">110</a>

## Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Juniper Networks, Inc.

### Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Juniper Networks, Inc. (the Company) as of December 31, 2017 and 2016, 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, 2017, and the related notes and the financial statement schedule listed in the Index at Item 15(a)2 (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2017, 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 23, 2018 expressed an unqualified opinion thereon.

### Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1996.  
San Jose, California  
February 23, 2018

## Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Juniper Networks, Inc.

### Opinion on Internal Control over Financial Reporting

We have audited Juniper Networks, Inc.'s internal control over financial reporting as of December 31, 2017, 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). In our opinion, Juniper Networks, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2017 and 2016, 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, 2017, and the related notes and the financial statement schedule listed in the Index at Item 15(a)2, and our report dated February 23, 2018, expressed an unqualified opinion thereon.

### Basis for Opinion

The Company'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 are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. 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.

### Definition and Limitations of Internal Control Over Financial Reporting

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.

/s/ Ernst & Young LLP

San Jose, California  
February 23, 2018

## 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, 2017, 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, 2017, 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, 2017 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, 2017.



**Juniper Networks, Inc.****Consolidated Statements of Operations**  
**(In millions, except per share amounts)**

	Years Ended December 31,		
	2017	2016	2015
Net revenues:			
Product	\$ 3,446.2	\$ 3,528.9	\$ 3,563.1
Service	1,581.0	1,461.2	1,294.7
Total net revenues	<u>5,027.2</u>	<u>4,990.1</u>	<u>4,857.8</u>
Cost of revenues:			
Product	1,360.9	1,326.2	1,269.6
Service	594.2	559.4	509.6
Total cost of revenues	<u>1,955.1</u>	<u>1,885.6</u>	<u>1,779.2</u>
Gross margin	<u>3,072.1</u>	<u>3,104.5</u>	<u>3,078.6</u>
Operating expenses:			
Research and development	980.7	1,013.7	994.5
Sales and marketing	950.2	972.9	943.8
General and administrative	227.5	224.9	228.9
Restructuring charges (benefits)	65.6	3.3	(0.6)
Total operating expenses	<u>2,224.0</u>	<u>2,214.8</u>	<u>2,166.6</u>
Operating income	<u>848.1</u>	<u>889.7</u>	<u>912.0</u>
Other expense, net	(36.3)	(62.3)	(59.8)
Income before income taxes	<u>811.8</u>	<u>827.4</u>	<u>852.2</u>
Income tax provision	<u>505.6</u>	<u>234.7</u>	<u>218.5</u>
Net income	<u>\$ 306.2</u>	<u>\$ 592.7</u>	<u>\$ 633.7</u>
Net income per share:			
Basic	<u>\$ 0.81</u>	<u>\$ 1.55</u>	<u>\$ 1.62</u>
Diluted	<u>\$ 0.80</u>	<u>\$ 1.53</u>	<u>\$ 1.59</u>
Shares used in computing net income per share:			
Basic	<u>377.7</u>	<u>381.7</u>	<u>390.6</u>
Diluted	<u>384.2</u>	<u>387.8</u>	<u>399.4</u>
Cash dividends declared per common stock	<u>\$ 0.40</u>	<u>\$ 0.40</u>	<u>\$ 0.40</u>

See accompanying Notes to Consolidated Financial Statements

**Juniper Networks, Inc.****Consolidated Statements of Comprehensive Income  
(In millions)**

	Years Ended December 31,		
	2017	2016	2015
Net income	\$ 306.2	\$ 592.7	\$ 633.7
Other comprehensive income (loss), net of tax:			
Available-for-sale securities:			
Unrealized gains net of tax provision of \$4.0, tax benefit of \$0.7, and tax provision of \$6.5 for 2017, 2016, and 2015, respectively	4.5	0.8	9.1
Reclassification adjustments for realized net gains included in net income, net of tax provisions of \$0.9 and \$0.5, and zero for 2017, 2016, and 2015, respectively	(2.1)	(1.2)	(0.5)
Net change on available-for-sale securities, net of tax	2.4	(0.4)	8.6
Cash flow hedges:			
Unrealized gain (losses) net of tax provisions of \$4.4, \$0.8, and \$0.4 for 2017, 2016, and 2015, respectively	15.7	(2.1)	(6.7)
Reclassification adjustments for realized (gains) loss included in net income, net of tax provisions of \$2.4 and \$0.7, and zero for 2017, 2016, and 2015, respectively	(5.2)	(1.1)	9.6
Net change on cash flow hedges, net of tax	10.5	(3.2)	2.9
Change in foreign currency translation adjustments	19.0	(14.5)	(16.9)
Other comprehensive income (loss), net of tax	31.9	(18.1)	(5.4)
Comprehensive income	\$ 338.1	\$ 574.6	\$ 628.3

See accompanying Notes to Consolidated Financial Statements

**Juniper Networks, Inc.**  
**Consolidated Balance Sheets**  
(In millions, except par values)

	<u>December 31, 2017</u>	<u>December 31, 2016</u>
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 2,006.5	\$ 1,833.2
Short-term investments	1,026.1	752.3
Accounts receivable, net of allowance for doubtful accounts of \$5.7 and \$7.6 as of December 31, 2017 and 2016, respectively	852.0	1,054.1
Prepaid expenses and other current assets	299.9	332.3
<b>Total current assets</b>	<b>4,184.5</b>	<b>3,971.9</b>
Property and equipment, net	1,021.1	1,063.8
Long-term investments	988.4	1,071.8
Restricted cash and investments	36.1	99.9
Purchased intangible assets, net	128.1	130.2
Goodwill	3,096.2	3,081.7
Other long-term assets	379.4	237.2
<b>Total assets</b>	<b>\$ 9,833.8</b>	<b>\$ 9,656.5</b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 217.6	\$ 221.0
Accrued compensation	186.0	233.6
Deferred revenue	1,030.3	1,032.0
Other accrued liabilities	304.3	249.3
<b>Total current liabilities</b>	<b>1,738.2</b>	<b>1,735.9</b>
Long-term debt	2,136.3	2,133.7
Long-term deferred revenue	509.0	449.1
Long-term income taxes payable	650.6	209.2
Other long-term liabilities	118.8	166.1
<b>Total liabilities</b>	<b>5,152.9</b>	<b>4,694.0</b>
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; 365.5 shares and 381.1 shares issued and outstanding as of December 31, 2017 and 2016, respectively	—	—
Additional paid-in capital	8,042.1	8,281.6
Accumulated other comprehensive loss	(5.4)	(37.3)
Accumulated deficit	(3,355.8)	(3,281.8)
<b>Total stockholders' equity</b>	<b>4,680.9</b>	<b>4,962.5</b>
<b>Total liabilities and stockholders' equity</b>	<b>\$ 9,833.8</b>	<b>\$ 9,656.5</b>

See accompanying Notes to Consolidated Financial Statements

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

	Years Ended December 31,		
	2017	2016	2015
<b>Cash flows from operating activities:</b>			
Net income	\$ 306.2	\$ 592.7	\$ 633.7
Adjustments to reconcile net income to net cash provided by operating activities:			
Share-based compensation expense	187.5	224.6	217.3
Depreciation, amortization, and accretion	225.6	206.7	176.5
Non-cash restructuring benefits	—	—	(3.5)
Deferred income taxes	(139.6)	55.9	(14.6)
(Gain) loss on investments and other, net	(14.5)	3.5	(6.4)
Changes in operating assets and liabilities, net of effects from acquisitions:			
Accounts receivable, net	203.8	(263.5)	(218.9)
Prepaid expenses and other assets	43.0	(43.6)	(43.5)
Accounts payable	(10.1)	66.6	(80.2)
Accrued compensation	(42.8)	(21.1)	43.7
Income taxes payable	447.3	3.1	104.3
Other accrued liabilities	(1.3)	(19.4)	(1.2)
Deferred revenue	55.0	301.7	92.3
Net cash provided by operating activities	1,260.1	1,107.2	899.5
<b>Cash flows from investing activities:</b>			
Purchases of property and equipment	(151.2)	(214.7)	(210.3)
Purchases of available-for-sale investments	(1,882.9)	(1,598.0)	(1,486.4)
Proceeds from sales of available-for-sale investments	944.0	1,182.1	861.6
Proceeds from maturities and redemptions of available-for-sale investments	741.6	342.3	319.8
Purchases of trading investments	(4.6)	(4.9)	(4.4)
Proceeds from sales of trading investments	2.3	3.0	2.9
Proceeds from Pulse note receivable	75.0	—	—
Purchases of privately-held investments	(10.3)	(20.3)	(5.4)
Proceeds from sales of privately-held investments	10.1	9.5	10.6
Payments for business acquisitions, net of cash and cash equivalents acquired	(33.0)	(144.6)	(3.5)
Changes in restricted cash	—	1.0	11.7
Net cash used in investing activities	(309.0)	(444.6)	(503.4)
<b>Cash flows from financing activities:</b>			
Repurchase and retirement of common stock	(725.8)	(324.6)	(1,152.8)
Proceeds from issuance of common stock	64.5	62.3	121.2
Payment of dividends	(150.4)	(152.5)	(156.3)
Customer financing arrangement	16.9	—	—
Payment of debt	—	(300.0)	—
Issuance of debt, net	—	494.0	594.6
Payment of financing obligations	—	(15.5)	(0.4)
Net cash used in financing activities	(794.8)	(236.3)	(593.7)
Effect of foreign currency exchange rates on cash and cash equivalents	17.0	(14.0)	(21.1)
Net increase (decrease) in cash and cash equivalents	173.3	412.3	(218.7)
Cash and cash equivalents at beginning of period	1,833.2	1,420.9	1,639.6
Cash and cash equivalents at end of period	\$ 2,006.5	\$ 1,833.2	\$ 1,420.9
<b>Supplemental disclosures of cash flow information:</b>			
Cash paid for interest, net of amounts capitalized	\$ 93.9	\$ 92.8	\$ 80.6
Cash paid for income taxes, net	\$ 193.5	\$ 173.9	\$ 128.3

**Non-cash investing and financing activities:**

Construction costs for building with financing obligation	\$	—	\$	15.3	\$	45.6
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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 Loss	Accumulated Deficit	Total Stockholders' Equity
<b>Balance at December 31, 2014</b>	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)
<b>Balance at December 31, 2015</b>	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)
<b>Balance at December 31, 2016</b>	381.1	—	8,281.6	(37.3)	(3,281.8)	4,962.5
Consolidated net income	—	—	—	—	306.2	306.2
Other comprehensive income, net	—	—	—	31.9	—	31.9
Issuance of common stock	10.7	—	64.5	—	—	64.5
Repurchase and retirement of common stock	(26.3)	—	(354.6)	—	(371.2)	(725.8)
Share-based compensation expense	—	—	188.2	—	—	188.2
Payment of cash dividends	—	—	(150.4)	—	—	(150.4)
Cumulative adjustment for share-based compensation expense upon adoption of Accounting Standards Update ("ASU") 2016-09, net of tax	—	—	12.8	—	(9.0)	3.8
<b>Balance at December 31, 2017</b>	365.5	\$ —	\$ 8,042.1	\$ (5.4)	\$ (3,355.8)	\$ 4,680.9

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 customers within its verticals: Cloud, Telecom/Cable, and Strategic Enterprise who view the network as critical to their success. In addition to the Company's products, the Company offers services, including technical support, professional services, and education and training programs to its customers.

*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.

Excess tax benefits from share-based compensation in prior periods have been reclassified to conform to the current-period presentation in the Consolidated Statements of Cash Flows upon adoption of the accounting standard described in Note 2, *Significant Accounting Policies*. In addition, certain amounts in the Consolidated Statements of Cash Flows have been reclassified to conform to the current-period presentation.

**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 debt 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.

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

The Company's non-qualified compensation plan ("NQDC") 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 and common stock securities that are carried at cost. The Company's investments in debt and redeemable preferred stock securities are classified as available-for-sale. Unrealized gains and losses on these investments are reported as a separate component of accumulated other comprehensive loss in the Consolidated Balance Sheets. The investments carried at cost and fair value are adjusted for any impairment determined to be other than temporary 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 markets for technologies or products manufactured by these companies are generally in the 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 in debt and redeemable preferred stock securities 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. 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, net, on its Consolidated Statements of Operations. Cash flows from such hedges are classified as operating activities.

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, 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.



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

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. The Company is neither required to pledge nor entitled to receive cash collateral related to these derivative transactions.

**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 net realizable value. 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:

	<b>Estimated Useful Life (years)</b>
Computers, equipment, and software	1.5 to 7
Furniture and fixtures	5 to 7
Building and building improvements	7 to 40
Land improvements	10 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 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 compares the estimated fair value of each reporting unit 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 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.

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

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 are 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

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

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 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 incurred 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 \$19.9 million, \$15.8 million, and \$20.2 million, for 2017, 2016, and 2015, 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 rates that approximate those in effect during 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, net in the Consolidated Statements of Operations.

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

**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, restricted stock awards ("RSAs"), restricted stock units ("RSUs"), performance share awards ("PSAs") and employee stock purchases related to the Employee Stock Purchase Plan ("ESPP"). For service condition only awards, share-based compensation expense is based on the fair value of the underlying awards and amortized on a straight-line basis. For PSAs and market-based RSUs, share-based compensation expense is amortized on a straight-line basis for each separate vesting portion of the awards. Upon adoption of the accounting standard described in the *Recently Adopted Accounting Standard* section below, the Company accounts for forfeitures as they occur.

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 grant date fair value of its RSUs, RSAs, and 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 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.

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.

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

**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 asset classes, and limits to the amount of credit exposure to any single issuer and credit rating.

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, 2017, 2016, and 2015, 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.

**Recently Adopted Accounting Standard**

**Share-based Compensation:** On January 1, 2017, the Company adopted Financial Accounting Standards Board ("FASB") Accounting Standards Update ("ASU") No. 2016-09 (Topic 718) *Compensation—Stock Compensation: Improvements to Employee Share-Based Payment Accounting*, 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. The impact of the adoption on the Company's Consolidated Financial Statements was as follows:

- **Forfeitures:** The Company elected to account for forfeitures as they occur using a modified retrospective transition method, rather than estimating forfeitures, resulting in a cumulative-effect net of tax adjustment of \$9.0 million, which increased the January 1, 2017 opening accumulated deficit balance on the Consolidated Balance Sheets.
- **Income tax accounting:** The Company is also required to record excess tax benefits and tax deficiencies related to stock-based compensation 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 as previously unrecognized excess tax effects were fully offset by a valuation allowance.
- **Cash flow presentation of excess tax benefits:** The Company is required to classify excess tax benefits along with other income tax cash flows as an operating activity either prospectively or retrospectively. The Company 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 financing activity. For 2016 and 2015, the Company reclassified \$6.7 million and \$12.3 million, respectively, of excess tax benefits from share-based compensation to operating activities from financing activities.

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

***Recent Accounting Standards Not Yet Adopted***

***Derivatives and Hedging:*** In August 2017, the FASB issued ASU No. 2017-12 (Topic 815) *Derivatives and Hedging — Targeted Improvements to Accounting for Hedging Activities*, which expands an entity's ability to hedge financial and nonfinancial risk components and amends how companies assess effectiveness as well as changes the presentation and disclosure requirements. The new standard is to be applied on a modified retrospective basis and is effective for interim and annual periods beginning after December 15, 2018, with early adoption permitted. The Company is currently evaluating the impact of adoption on the Consolidated Financial Statements.

***Share-based Compensation:*** In May 2017, the FASB issued ASU No. 2017-09 (Topic 718) *Compensation—Stock Compensation: Scope of Modification Accounting*, which provides guidance on the types of changes to the terms or conditions of share-based payment awards to which an entity would be required to apply modification accounting. The new standard is effective on a prospective basis for interim and annual periods beginning after December 15, 2017, with early adoption permitted.

***Amortization on Purchased Callable Debt Securities:*** In March 2017, the FASB issued ASU No. 2017-08 *Receivables—Nonrefundable Fees and Other Costs (Subtopic 310-20): Premium Amortization on Purchased Callable Debt Securities* which shortens the amortization period for the premium on certain purchased callable debt securities to the earliest call date. The ASU will not impact debt securities held at a discount. This standard is effective for annual reporting periods beginning after December 15, 2018, including interim reporting periods within those annual reporting periods, and is to be applied on a modified retrospective basis with early adoption permitted. The Company is currently evaluating the impact of adoption on the Consolidated Financial Statements.

***Derecognition of Nonfinancial Assets:*** In February 2017, the FASB issued ASU No. 2017-05 *Other Income—Gains and Losses from the Derecognition of Nonfinancial Assets (Subtopic 610-20): Clarifying the Scope of Asset Derecognition Guidance and Accounting for Partial Sales of Nonfinancial Assets*, which amends guidance on how entities account for the derecognition of a nonfinancial asset or an in substance nonfinancial asset that is not a business. This standard is effective for annual reporting periods beginning after December 15, 2017, including interim reporting periods within those annual reporting periods, and is to be applied on either a retrospective or modified retrospective basis with early adoption permitted. The adoption of this standard will not have a material impact on the Consolidated Financial Statements.

***Simplifying the Test for Goodwill Impairment:*** In January 2017, the FASB issued ASU No. 2017-04 (Topic 350) *Intangibles—Goodwill and Other: Simplifying the Test for Goodwill Impairment*, which removes Step 2 of the goodwill impairment test, which requires a hypothetical purchase price allocation. Under the amended guidance, a goodwill impairment charge will now be recognized for the amount by which the carrying value of a reporting unit exceeds its fair value, not to exceed the carrying amount of goodwill. This ASU will be applied on a prospective basis and is effective for interim and annual periods beginning after December 15, 2019, with early adoption permitted for any impairment tests performed after January 1, 2017.

***Definition of a Business:*** In January 2017, the FASB issued ASU No. 2017-01 (Topic 805) *Business Combinations: Clarifying the Definition of a Business*, which clarifies the definition of a business and assists entities with evaluating when a set of transferred assets and activities is a business. This ASU is effective for interim and annual periods beginning after December 15, 2017, and will be applied on a prospective basis.

***Restricted Cash in Statement of Cash Flow:*** In November 2016, the FASB issued ASU No. 2016-18 (Topic 230) *Statement of Cash Flow: Restricted Cash*, which provides guidance on the classification of restricted cash to be included with cash and cash equivalents when reconciling the beginning of period and end of period total amounts on the statement of cash flows. The amendments of this ASU are effective for interim and annual periods beginning after December 15, 2017. The standard must be applied retrospectively to all periods presented. The adoption of this standard will not have a material impact on the cash flow activity presented on the Company's Consolidated Statements of Cash Flows.

***Income Taxes on Intra-Entity Transfers of Assets:*** In October 2016, the FASB issued ASU No. 2016-16 (Topic 740) *Income Taxes: Intra-Entity Transfers of Assets Other Than Inventory*, which requires the recognition of the income tax consequences of an intra-entity transfer of an asset, other than inventory, when the transfer occurs. This ASU will be effective for annual and interim reporting periods beginning after December 15, 2017 and is to be applied on a modified retrospective basis. The adoption of this standard will not have a material impact on the Consolidated Financial Statements.

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

**Classification in Statement of Cash Flow:** In August 2016, the FASB issued ASU No. 2016-15 (Topic 230) *Statement of Cash Flow: Classification of Certain Cash Receipts and Cash Payments*, which clarifies how companies present and classify certain cash receipts and cash payments in the statement of cash flows. This pronouncement is effective for interim and annual reporting periods beginning after December 15, 2017 and will be applied on a retrospective basis. The adoption of this standard will not have a material impact on the Company's Consolidated Statements of Cash Flows.

**Credit Losses on Financial Instruments:** In June 2016, the FASB issued ASU No. 2016-13 (Topic 326) *Financial Instruments—Credit Losses: Measurement of Credit Losses on Financial Instruments*, which provides 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. Early adoption is permitted. The Company is currently evaluating the impact that this standard will have on its Consolidated Financial Statements and disclosures.

**Leases:** In February 2016, the FASB issued ASU No. 2016-02 (Topic 842), *Leases*, which requires recognition of lease assets and lease liabilities on the balance sheet by lessees for leases classified as operating leases with a lease term of more than twelve months. This ASU 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 and has completed the assessment phase to determine the approach for implementing this standard. The adoption of this standard is expected to have a material impact on the Company's Consolidated Balance Sheets and disclosures. The Company is still evaluating the impact this standard will have on the Consolidated Statements of Operations.

**Financial Instruments:** In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments—Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*, which changes how entities measure equity investments and present changes in the fair value of financial liabilities measured under the fair value option. The guidance also updates certain presentation and disclosure requirements. This ASU is effective for financial statements issued for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. This ASU is to be applied on a prospective basis for amendments related to equity securities without readily determinable fair values, and all other amendments in this standard will be applied on a modified retrospective basis. For equity securities without readily determinable fair values, we expect to elect the measurement alternative, defined as cost, less impairments, adjusted by observable price changes. The Company does not anticipate that the adoption of the amendments that will be applied on a modified retrospective basis will have a material impact on the Consolidated Financial Statements.

**Revenue:** 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 that will supersede the revenue recognition requirements in Topic 605, and most industry specific guidance. The core principle for ASU 2014-09 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. ASU 2014-09 is effective for annual reporting periods beginning after December 15, 2017.

The Company expects to adopt ASU 2014-09 on January 1, 2018 under the modified retrospective approach, applying the amendments to prospective reporting periods. The Company does not expect a significant change in its control environment due to the adoption of the new standard, however, this assessment will continue until the completion of the first reporting period.

Upon adoption, the Company expects a material impact to the opening balance sheet as of January 1, 2018, related to the cumulative effect of adopting the standard, primarily as a result of the items discussed below. The Company will continue to assess and complete the review of all potential impacts of the standard including the tax related impact. 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. At December 31, 2017, the deferred revenue under Topic 605 related to shipments to distributors that had not sold through to end-users is \$68.0 million. Since the Company will recognize revenue when control of the products transfer to the distributor under Topic 606, the majority of this amount will be eliminated as a cumulative effect adjustment of implementing Topic 606 as of January 1, 2018.

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

- **Software Revenue:** Under Topic 605 the Company deferred revenue for software licenses where VSOE of fair value had not been established for undelivered items (primarily services). Under Topic 606, revenue for software licenses will be recognized at the time of delivery unless the ongoing services provide frequent, critical updates to the software, without which the software functionality would be rapidly diminished. At December 31, 2017, deferred software license revenue under Topic 605 is \$144.5 million. The Company expects approximately half of such deferred revenue to be eliminated as a cumulative effect adjustment of implementing Topic 606 as of January 1, 2018.
- **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 expensed sales commissions. The change required by Topic 606 will result in the creation of an asset as a cumulative effect adjustment of implementing Topic 606 as of January 1, 2018.
- **Variable Consideration:** Some of the Company's contracts include penalties, extended payment terms, acceptance provisions or other price variability that precluded revenue recognition under Topic 605 because of the requirement for amounts to be fixed or determinable. Topic 606 requires the Company to estimate and account for variable consideration as a reduction of the transaction price. At December 31, 2017, deferred revenue under Topic 605 due to amounts not being fixed or determinable is \$71.0 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, 2018.
- **Revenue Allocation:** Similar to Topic 605, Topic 606 requires an allocation of revenue between deliverables, or performance obligations, within an arrangement. Topic 605 restricted the allocation of revenue that is contingent on future deliverables to current deliverables, however Topic 606 removes this restriction. In addition, the nature of the performance obligations identified within a contract under Topic 606 as compared to Topic 605 will impact the allocation of the transaction price between product and services. The Company expects a reduction to the deferred service revenue balance as a cumulative effect adjustment of implementing Topic 606 as of January 1, 2018.

The Company does not expect the changes described above to have a material impact to the Company's quarterly and/or annual Statement of Operations, however the exact impact of Topic 606 will be dependent on facts and circumstances that could vary from quarter to quarter.

**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 acquired Cyphort Inc. ("Cyphort") in 2017 and BTI Systems Inc. ("BTI"), Aurrion, Inc. ("Aurrion"), and AppFormix, Inc. ("AppFormix") in 2016. The following table summarizes the estimated fair values of the assets acquired and liabilities assumed at the acquisition dates (in millions):

	2017		2016	
	Cyphort	AppFormix	Aurrion	BTI <sup>(1)</sup>
Net tangible assets acquired/(liabilities) assumed	\$ 1.4	\$ (5.3)	\$ 6.0	\$ (19.7)
Intangible assets	15.4	20.3	49.0	43.3
Goodwill <sup>(2)</sup>	16.7	32.9	46.9	20.2
Total	\$ 33.5	\$ 47.9	\$ 101.9	\$ 43.8

<sup>(1)</sup> See Note 7, *Goodwill and Purchased Intangible Assets*, for adjustments made during the measurement period subsequent to the acquisition dates.

<sup>(2)</sup> 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):

	2017		2016		2016		2016	
	Cyphort		AppFormix		Aurrion		BTI	
	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	\$ 15.4	5	\$ 20.1	—	\$ —	8	\$ 37.1
Customer relationships	—	—	1	0.2	—	—	8	5.3
Other	—	—	—	—	—	—	1	0.9
Total intangible assets with finite lives		15.4		20.3		—		43.3
Indefinite-lived intangible assets:								
IPR&D		—		—		49.0		—
Total intangible assets acquired		15.4		\$ 20.3		\$ 49.0		\$ 43.3

### 2017 Acquisition

#### *Cyphort*

On September 18, 2017, the Company acquired 100% of Cyphort for \$33.5 million of cash. The acquisition of Cyphort, a software company providing security analytics for advanced threat defense, is expected to strengthen Juniper's security product portfolio.

Under the terms of the acquisition agreement with Cyphort, the Company assumed certain share-based awards for continuing employees, which were granted in contemplation of future services. The fair value of these share-based awards was \$3.8 million, which will be expensed as share-based compensation over the remaining service period.

### 2016 Acquisitions

#### *AppFormix*

On December 6, 2016, the Company acquired 100% of 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.

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

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 had 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.

***Acquisition Costs***

The Company recognized \$2.1 million and \$11.8 million of acquisition-related costs during the years ended December 31, 2017 and December 31, 2016 , 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 .

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

**Note 4. Cash Equivalents and Investments**
**Investments in Available-for-Sale Securities**

The following table summarizes the Company's unrealized gains and losses and fair value of investments designated as available-for-sale as of December 31, 2017 and December 31, 2016 (in millions):

	As of December 31, 2017				As of December 31, 2016			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Fixed income securities:								
Asset-backed securities	\$ 287.1	\$ —	\$ (0.6)	\$ 286.5	\$ 303.0	\$ 0.2	\$ (0.2)	\$ 303.0
Certificates of deposit	83.8	—	—	83.8	66.1	—	—	66.1
Commercial paper	217.1	—	—	217.1	147.7	—	—	147.7
Corporate debt securities	929.6	0.4	(3.0)	927.0	846.5	0.4	(2.0)	844.9
Foreign government debt securities	62.9	—	(0.2)	62.7	34.0	—	(0.1)	33.9
Time deposits	239.2	—	—	239.2	264.6	—	—	264.6
U.S. government agency securities	143.9	—	(0.7)	143.2	127.0	—	(0.3)	126.7
U.S. government securities	406.8	0.1	(0.9)	406.0	390.7	0.1	(0.4)	390.4
Total fixed income securities	2,370.4	0.5	(5.4)	2,365.5	2,179.6	0.7	(3.0)	2,177.3
Money market funds	969.8	—	—	969.8	592.2	—	—	592.2
Privately-held debt and redeemable preferred stock securities	15.9	37.4	—	53.3	15.9	26.4	—	42.3
Publicly-traded equity securities	—	—	—	—	5.3	—	(0.7)	4.6
Total available-for-sale securities	\$ 3,356.1	\$ 37.9	\$ (5.4)	\$ 3,388.6	\$ 2,793.0	\$ 27.1	\$ (3.7)	\$ 2,816.4

**Reported as:**

Cash equivalents	\$ 1,279.0	\$ —	\$ —	\$ 1,279.0	\$ 907.1	\$ —	\$ —	\$ 907.1
Restricted investments <sup>(*)</sup>	41.8	—	—	41.8	42.9	—	—	42.9
Short-term investments	1,027.2	0.1	(1.2)	1,026.1	753.4	0.1	(1.2)	752.3
Long-term investments	992.2	0.4	(4.2)	988.4	1,073.7	0.6	(2.5)	1,071.8
Other long-term assets	15.9	37.4	—	53.3	15.9	26.4	—	42.3
Total	\$ 3,356.1	\$ 37.9	\$ (5.4)	\$ 3,388.6	\$ 2,793.0	\$ 27.1	\$ (3.7)	\$ 2,816.4

<sup>(\*)</sup> Balance includes \$31.4 million and \$4.0 million of short-term restricted investments classified as prepaid expenses and other current assets.

The following table presents the contractual maturities of the Company's total fixed income securities as of December 31, 2017 (in millions):

	Amortized Cost	Estimated Fair Value
Due in less than one year	\$ 1,378.2	\$ 1,377.1
Due between one and five years	992.2	988.4
Total	\$ 2,370.4	\$ 2,365.5

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

The following tables present the Company's available-for-sale securities that were in an unrealized loss position as of December 31, 2017 and December 31, 2016 (in millions):

	As of December 31, 2017					
	Less than 12 Months		12 Months or Greater		Total	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Fixed income securities:						
Asset-backed securities	\$ 215.2	\$ (0.4)	\$ 38.4	\$ (0.2)	\$ 253.6	\$ (0.6)
Corporate debt securities	646.7	(2.1)	108.6	(0.9)	755.3	(3.0)
Foreign government debt securities	47.3	(0.2)	6.6	—	53.9	(0.2)
U.S. government agency securities	68.3	(0.2)	67.9	(0.5)	136.2	(0.7)
U.S. government securities	260.8	(0.7)	51.8	(0.2)	312.6	(0.9)
Total available-for sale securities	<u>\$ 1,238.3</u>	<u>\$ (3.6)</u>	<u>\$ 273.3</u>	<u>\$ (1.8)</u>	<u>\$ 1,511.6</u>	<u>\$ (5.4)</u>
	As of December 31, 2016					
	Less than 12 Months		12 Months or Greater		Total	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
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	<u>\$ 978.7</u>	<u>\$ (3.6)</u>	<u>\$ 76.7</u>	<u>\$ (0.1)</u>	<u>\$ 1,055.4</u>	<u>\$ (3.7)</u>

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, 2017, the Company had 956 investments in unrealized loss position. The gross unrealized losses related to these investments were primarily due to changes in market interest rates. 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, 2017, 2016, and 2015.

During the years ended December 31, 2017, 2016 and 2015, there were no material gross realized gains or losses from available-for-sale securities.

**Investments in Trading Securities**

As of December 31, 2017 and December 31, 2016, the total investments under the Company's NQDC plan were \$27.6 million and \$21.0 million, respectively, and are invested in mutual funds and classified as trading securities. During the years ended December 31, 2017, 2016 and 2015, trading gains and losses related to these trading securities were not material.

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

***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 2017; (ii) the Directors and Officers indemnification trust ("D&O Trust"); (iii) amounts held under the Company's short-term disability plan in California; and (iv) amounts under the 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, 2017, total restricted cash and investments was \$122.0 million, of which \$85.9 million was included in prepaid expenses and other current assets, \$36.1 million was included in restricted cash and investments on the Consolidated Balance Sheets.

***Investments in Privately-Held Companies***

As of December 31, 2017 and December 31, 2016, the carrying values of the Company's privately-held investments of \$83.0 million and \$61.3 million, respectively, were included in other long-term assets in the Consolidated Balance Sheets, of which \$29.7 million and \$19.0 million were accounted for under the cost method as of December 31, 2017 and December 31, 2016, respectively. See Note 5, *Fair Value Measurements*, for the Company's investments in privately-held companies that are carried at fair value and cost method investments measured at fair value on a nonrecurring basis.

**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 table 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, 2017				Fair Value Measurements at December 31, 2016			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
<b>Assets:</b>								
<b>Available-for-sale securities:</b>								
Asset-backed securities	\$ —	\$ 286.5	\$ —	\$ 286.5	\$ —	\$ 303.0	\$ —	\$ 303.0
Certificates of deposit	—	83.8	—	83.8	—	66.1	—	66.1
Commercial paper	—	217.1	—	217.1	—	147.7	—	147.7
Corporate debt securities	—	927.0	—	927.0	—	844.9	—	844.9
Foreign government debt securities	—	62.7	—	62.7	—	33.9	—	33.9
Money market funds <sup>(1)</sup>	969.8	—	—	969.8	592.2	—	—	592.2
Publicly-traded equity securities	—	—	—	—	4.6	—	—	4.6
Time deposits	—	239.2	—	239.2	—	264.6	—	264.6
U.S. government agency securities	—	143.2	—	143.2	—	126.7	—	126.7
U.S. government securities	322.4	83.6	—	406.0	345.0	45.4	—	390.4
Privately-held debt and redeemable preferred stock securities	—	—	53.3	53.3	—	—	42.3	42.3
<b>Total available-for-sale securities</b>	<b>1,292.2</b>	<b>2,043.1</b>	<b>53.3</b>	<b>3,388.6</b>	<b>941.8</b>	<b>1,832.3</b>	<b>42.3</b>	<b>2,816.4</b>
Trading securities <sup>(2)</sup>	27.6	—	—	27.6	21.0	—	—	21.0
<b>Derivative assets:</b>								
Foreign exchange contracts	—	9.2	—	9.2	—	0.9	—	0.9
<b>Total assets measured at fair value</b>	<b>\$ 1,319.8</b>	<b>\$ 2,052.3</b>	<b>\$ 53.3</b>	<b>\$ 3,425.4</b>	<b>\$ 962.8</b>	<b>\$ 1,833.2</b>	<b>\$ 42.3</b>	<b>\$ 2,838.3</b>
<b>Liabilities:</b>								
<b>Derivative liabilities:</b>								
Foreign exchange contracts	\$ —	\$ (1.8)	\$ —	\$ (1.8)	\$ —	\$ (4.9)	\$ —	\$ (4.9)
<b>Total liabilities measured at fair value</b>	<b>\$ —</b>	<b>\$ (1.8)</b>	<b>\$ —</b>	<b>\$ (1.8)</b>	<b>\$ —</b>	<b>\$ (4.9)</b>	<b>\$ —</b>	<b>\$ (4.9)</b>
<b>Total assets, reported as:</b>								
Cash equivalents	\$ 928.1	\$ 350.9	\$ —	\$ 1,279.0	\$ 549.4	\$ 357.7	\$ —	\$ 907.1
Restricted investments	69.4	—	—	69.4	63.9	—	—	63.9
Short-term investments	247.5	778.6	—	1,026.1	178.0	574.3	—	752.3
Long-term investments	74.8	913.6	—	988.4	171.5	900.3	—	1,071.8
Prepaid expenses and other current assets	—	9.2	—	9.2	—	0.9	—	0.9
Other long-term assets	—	—	53.3	53.3	—	—	42.3	42.3
<b>Total assets measured at fair value</b>	<b>\$ 1,319.8</b>	<b>\$ 2,052.3</b>	<b>\$ 53.3</b>	<b>\$ 3,425.4</b>	<b>\$ 962.8</b>	<b>\$ 1,833.2</b>	<b>\$ 42.3</b>	<b>\$ 2,838.3</b>
<b>Total liabilities, reported as:</b>								
Other accrued liabilities	\$ —	\$ (1.8)	\$ —	\$ (1.8)	\$ —	\$ (4.9)	\$ —	\$ (4.9)
<b>Total liabilities measured at fair value</b>	<b>\$ —</b>	<b>\$ (1.8)</b>	<b>\$ —</b>	<b>\$ (1.8)</b>	<b>\$ —</b>	<b>\$ (4.9)</b>	<b>\$ —</b>	<b>\$ (4.9)</b>

<sup>(1)</sup> Balance includes \$41.8 million and \$42.9 million of restricted investments measured at fair value, related to the Company's D&O Trust and acquisition-related escrows for the years ended December 31, 2017 and 2016, respectively.

<sup>(2)</sup> Balance relates to restricted investments measured at fair value related to the Company's NQDC plan.

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

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, 2017 and 2016, 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. During the year ended December 31, 2017, there were \$11.0 million of unrealized gains related to privately-held debt and redeemable preferred stock securities and no other significant activities related to Level 3 assets.

***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 non-redeemable preferred stock and common stock securities, are measured at fair value on a nonrecurring basis, when they are deemed to be other-than-temporarily impaired.

Investments in privately-held non-redeemable preferred stock and common stock securities, 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 materially impacting the carrying value of the investments. The Company estimates the fair value of these investments using an analysis of the financial condition and near-term prospects of the investee, including recent financing activities and the investee's capital structure. As of December 31, 2016, investments in privately-held non-redeemable preferred stock and common stock securities totaled \$19.0 million, of which \$6.8 million of investments had been remeasured at fair value due to an other-than-temporary decline in value and were written-down to their fair value of zero. These assets were classified as Level 3 assets due to lack of observable inputs to determine fair value. As of December 31, 2017, investments in privately-held non-redeemable preferred stock and common stock securities totaled \$29.7 million and there were no assets measured at fair value on a nonrecurring basis. There were no impairment charges during the years ended December 31, 2017 and 2015.

As of December 31, 2017 and 2016, 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, accounts payable, and other accrued liabilities approximate fair value due to their short maturities. As of December 31, 2017 and December 31, 2016, the estimated fair value of the Company's long-term debt in the Consolidated Balance Sheets was \$2,252.9 million and \$2,215.7 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, ("the Pulse Note"), of \$61.2 million and \$132.9 million approximates its fair value, as of December 31, 2017 and December 31, 2016, respectively. The Pulse 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 Pulse Note.

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

**Note 6. Derivative Instruments**

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

	As of December 31,	
	2017	2016
Cash flow hedges	\$ 521.1	\$ 172.0
Non-designated derivatives	108.3	—
Total	\$ 629.4	\$ 172.0

**Cash Flow Hedges**

The Company uses foreign currency forward contracts to hedge the Company's planned cost of revenues and operating expenses denominated in foreign currencies. These derivatives are designated as cash flow hedges. Execution of cash flow hedge derivatives typically occurs every month with maturities of eighteen months or less. As of December 31, 2017, an estimated \$7.6 million of existing gains or losses within accumulated other comprehensive loss is expected to be reclassified into earnings within the next 12 months.

The Company recognized an unrealized gain of \$20.2 million and unrealized losses of \$1.3 million and \$6.3 million in accumulated other comprehensive loss for the effective portion of its derivative instruments during the years ended December 31, 2017, 2016, and 2015, respectively. The Company reclassified gains of \$7.6 million and \$1.8 million and a loss of \$9.6 million out of accumulated other comprehensive loss to cost of revenues and operating expenses in the Consolidated Statement of Operations during the years ended December 31, 2017, 2016, and 2015, respectively.

The ineffective portion of the Company's derivative instruments recognized in its Consolidated Statements of Operations were not material during the years ended December 31, 2017, 2016, and 2015, respectively.

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

**Non-Designated Derivatives**

The Company also uses foreign currency forward contracts to mitigate variability in gains and losses generated from the remeasurement of certain monetary assets and liabilities denominated in foreign currencies. These foreign exchange forward contracts typically have maturities of approximately one month. The outstanding non-designated derivative instruments are carried at fair value. Changes in the fair value of these derivatives recorded in other expense, net within the Consolidated Statements of Operations were not material during the years ended December 31, 2017, 2016, and 2015.

See Note 2, *Significant Accounting Policies*, for the Company's policy regarding the offsetting of derivative assets and derivative liabilities.



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

**Note 7. Goodwill and Purchased Intangible Assets**
**Goodwill**

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

	<b>Total</b>
December 31, 2015	\$ 2,981.3
Additions due to business combinations	100.4
December 31, 2016	3,081.7
Additions due to business combination	16.7
Other (*)	(2.2)
December 31, 2017	\$ 3,096.2

(\*) Other primarily consists of certain purchase accounting adjustments related to the acquisition of BTI.

In the fourth quarter of 2017, 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, 2017, 2016, and 2015 there was no goodwill impairment during the respective periods.

**Purchased Intangible Assets**

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

	<u>As of December 31, 2017</u>				<u>As of December 31, 2016</u>			
	<u>Gross</u>	<u>Accumulated Amortization</u>	<u>Accumulated Impairments and Other Charges</u>	<u>Net</u>	<u>Gross</u>	<u>Accumulated Amortization</u>	<u>Accumulated Impairments and Other Charges</u>	<u>Net</u>
Finite-lived intangible assets:								
Technologies and patents	\$ 640.3	\$ (518.1)	\$ (49.9)	\$ 72.3	\$ 624.9	\$ (504.2)	\$ (49.9)	\$ 70.8
Customer contracts, support agreements, and related relationships	83.6	(74.1)	(2.8)	6.7	83.6	(70.8)	(2.8)	10.0
Other	2.0	(1.9)	—	0.1	2.0	(1.6)	—	0.4
Total	725.9	(594.1)	(52.7)	79.1	710.5	(576.6)	(52.7)	81.2
Indefinite-lived intangible assets:								
IPR&D	49.0	—	—	49.0	49.0	—	—	49.0
Total purchased intangible assets	\$ 774.9	\$ (594.1)	\$ (52.7)	\$ 128.1	\$ 759.5	\$ (576.6)	\$ (52.7)	\$ 130.2

Amortization expense was \$17.5 million, \$16.3 million, and \$28.5 million for the years ended December 31, 2017, 2016, and 2015, respectively. There were no impairment charges related to purchased intangible assets during the years ended December 31, 2017 and 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.

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

As of December 31, 2017, the estimated future amortization expense of purchased intangible assets with finite lives is as follows (in millions):

<u>Years Ending December 31,</u>	<u>Amount</u>
2018	\$ 17.5
2019	17.3
2020	17.2
2021	12.9
2022	7.7
Thereafter	6.5
Total	\$ 79.1

**Note 8. Other Financial Information**

***Inventory***

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

	<u>As of December 31,</u>	
	<u>2017</u>	<u>2016</u>
Production and service materials	\$ 71.2	\$ 75.6
Finished goods	26.6	19.9
Inventory	\$ 97.8	\$ 95.5

Reported as:

	<u>2017</u>	<u>2016</u>
Prepaid expenses and other current assets	\$ 93.8	\$ 91.4
Other long-term assets	4.0	4.1
Total	\$ 97.8	\$ 95.5

***Property and Equipment, Net***

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

	<u>As of December 31,</u>	
	<u>2017</u>	<u>2016</u>
Computers and equipment	\$ 1,151.7	\$ 1,070.1
Software	217.8	285.4
Leasehold improvements	258.6	235.6
Furniture and fixtures	47.9	47.0
Building and building improvements	252.8	251.8
Land and land improvements	241.0	241.0
Construction-in-process	53.5	26.2
Property and equipment, gross	2,223.3	2,157.1
Accumulated depreciation	(1,202.2)	(1,093.3)
Property and equipment, net	\$ 1,021.1	\$ 1,063.8

Depreciation expense was \$202.8 million, \$184.5 million, and \$141.5 million in 2017, 2016, and 2015, respectively.

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

**Note Receivable**

In October 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.

In October 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; and
- require a minimum payment of \$75.0 million on or prior to April 1, 2017, less any principal amount previously pre-paid to the Company.

In May 2017, the Company received payment of \$75.0 million and the outstanding interest due. The Company and the issuer of the Pulse Note further mutually agreed to amend the terms of the Pulse Note to, among other things:

- extend the maturity date of the remaining outstanding amount of approximately \$58.0 million from December 31, 2018 to September 30, 2022;
- provide that interest due after April 1, 2017 can be paid in kind by increasing the outstanding principal amount of the note or paid in cash;
- require the promissory note to be subordinated to other debt raised by the issuer; and
- entitle the Company to additional financial considerations if the issuer of the note and its affiliates meet certain conditions.

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. No impairment charge was required for the Pulse Note as of December 31, 2017. The outstanding balance of the Pulse Note, along with the accumulated interest paid in kind, of \$61.2 million as of December 31, 2017 is classified as a long-term asset based on expected collection beyond twelve months from the Consolidated Balance Sheet date.

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, 2017, 2016, and 2015, the related amount of interest income recognized was \$8.3 million, \$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,	
	2017	2016
Beginning balance	\$ 41.3	\$ 28.4
Provisions made during the period, net	36.7	43.0
Actual costs incurred during the period	(50.6)	(30.1)
Ending balance	<u>\$ 27.4</u>	<u>\$ 41.3</u>

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

**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,	
	2017	2016
Deferred product revenue:		
Undelivered product commitments and other product deferrals	\$ 312.6	\$ 302.4
Distributor inventory and other sell-through items	68.1	74.2
Deferred gross product revenue	380.7	376.6
Deferred cost of product revenue	(46.5)	(53.7)
Deferred product revenue, net	334.2	322.9
Deferred service revenue	1,205.1	1,158.2
Total	\$ 1,539.3	\$ 1,481.1
Reported as:		
Current	\$ 1,030.3	\$ 1,032.0
Long-term	509.0	449.1
Total	\$ 1,539.3	\$ 1,481.1

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, Net**

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

	Years Ended December 31,		
	2017	2016	2015
Interest income	\$ 53.0	\$ 35.4	\$ 21.8
Interest expense	(101.2)	(97.7)	(83.3)
Gain (loss) on investments, net	14.6	(1.8)	6.8
Other	(2.7)	1.8	(5.1)
Other expense, net	\$ (36.3)	\$ (62.3)	\$ (59.8)

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 long-term debt and customer financing arrangements. Gain (loss) on investments, net, primarily includes gains from the sale of investments in public and privately-held companies, and any impairment charges recorded on these investments. Other typically consists of foreign exchange gains and losses and other non-operational income and expense items.

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

**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,		
	2017	2016	2015
Severance	\$ 57.7	\$ 2.8	\$ 0.4
Facilities	—	0.5	(1.0)
Contract terminations	7.9	—	—
Asset write-downs	—	—	(3.5)
<b>Total</b>	<b>\$ 65.6</b>	<b>\$ 3.3</b>	<b>\$ (4.1)</b>
<b>Reported as:</b>			
Cost of revenues	\$ —	\$ —	\$ (3.5)
Restructuring charges (benefits)	65.6	3.3	(0.6)
<b>Total</b>	<b>\$ 65.6</b>	<b>\$ 3.3</b>	<b>\$ (4.1)</b>

*2017 Restructuring Plan*

During the first quarter of 2017, the Company initiated a restructuring plan (the “2017 Restructuring Plan”) to realign its workforce and increase operational efficiencies. The 2017 Restructuring Plan consisted of severance and contract termination costs that were recorded to restructuring charges (benefits) in the Consolidated Statement of Operations. In the fourth quarter of 2017, the Company amended the 2017 Restructuring Plan to further realign its workforce and also incurred charges related to contract terminations.

During the year ended December 31, 2017, the Company recorded \$57.7 million of severance costs and \$7.9 million of contract terminations, respectively, that were recorded to restructuring charges (benefits) in the Consolidated Statement of Operations. The Company does not expect to incur material future charges under the 2017 Restructuring Plan.

*Prior Restructuring Activities*

In 2016, the Company recorded restructuring charges related to severance costs for certain former BTI employees as well as restructuring costs related to facilities. In 2015, the Company recorded favorable adjustments for changes in previous estimates associated with restructuring activities initiated in 2014. These activities were substantially completed as of December 31, 2017.

Restructuring liabilities are reported within other accrued liabilities in the Consolidated Balance Sheets. The following table provides a summary of changes in the restructuring liabilities (in millions):

	December 31, 2016	Charges	Cash Payments	Other	December 31, 2017
Severance	\$ 0.7	\$ 57.7	\$ (40.5)	\$ (0.2)	\$ 17.7
Contract terminations and other	0.5	7.9	(6.2)	0.1	2.3
<b>Total</b>	<b>\$ 1.2</b>	<b>\$ 65.6</b>	<b>\$ (46.7)</b>	<b>\$ (0.1)</b>	<b>\$ 20.0</b>

The Company expects to substantially pay the remaining restructuring liabilities in the first quarter of 2018.

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

**Note 10. Debt and Financing**
**Debt**

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

	As of December 31, 2017			Effective Interest Rates
	Issuance date	Maturity Date	Amount	
Senior Notes ("Notes"):				
3.125% fixed-rate notes ("2019 Notes")	February 2016	February 2019	\$ 350.0	3.36%
3.300% fixed-rate notes ("2020 Notes")	March 2015	June 2020	300.0	3.47%
4.600% fixed-rate notes	March 2011	March 2021	300.0	4.69%
4.500% fixed-rate notes <sup>(*)</sup> ("2024 Notes")	March 2014	March 2024	350.0	4.63%
4.500% fixed-rate notes <sup>(*)</sup> ("2024 Notes")	February 2016	March 2024	150.0	4.87%
4.350% fixed-rate notes ("2025 Notes")	March 2015	June 2025	300.0	4.47%
5.950% fixed-rate notes	March 2011	March 2041	400.0	6.03%
Total Notes			2,150.0	
Unaccreted discount and debt issuance costs			(13.7)	
Total			\$ 2,136.3	

<sup>(\*)</sup> 2024 Notes issued in March 2014 and February 2016 form a single series and are fully fungible.

The Notes above 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.

As of December 31, 2017, the Company's aggregate debt maturities based on outstanding principal were as follows (in millions):

<u>Years Ending December 31,</u>	<u>Amount</u>
2018	\$ —
2019	350.0
2020	300.0
2021	300.0
2022	—
Thereafter	1,200.0
Total	\$ 2,150.0

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.

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

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, 2017, the Company was in compliance with all covenants in the indentures governing the Notes.

***Revolving Credit Facility***

In June 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, 2017, the Company has not borrowed any funds under the Credit Agreement and was in compliance with all covenants in the Credit Agreement.

***Financing Arrangements***

The Company provides certain customers with access to extended financing arrangements that allow for 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 providers are due to the Company within 1 to 90 days from the sale of the receivable. In these transactions with the financing providers, the Company surrenders control over the transferred assets.

Pursuant to the financing arrangements for the sale of receivables, the Company sold receivables of \$169.4 million, \$95.6 million and \$72.5 million during the years ended December 31, 2017, 2016, and 2015, respectively. The Company received cash proceeds from financing providers of \$169.3 million, \$83.2 million, and \$99.3 million during the years ended December 31, 2017, 2016, and 2015, respectively. As of December 31, 2017 and December 31, 2016, the amounts owed by the financing providers were \$13.7 million and \$13.6 million, respectively, which were recorded in accounts receivable on the Company's Consolidated Balance Sheets.

The portion of the receivable financed that has not been recognized as revenue is accounted for as a financing arrangement and is included in other accrued liabilities in the Consolidated Balance Sheets. As of December 31, 2017, the cash received from the financing provider not recognized as revenue was \$16.9 million. There was no outstanding balance as of December 31, 2016.

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

**Note 11. Equity**

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

Year	Dividends		Stock Repurchase Program			Total
	Per Share	Amount	Shares	Average price per share	Amount	Amount
2017	\$ 0.40	\$ 150.4	26.1	\$ 27.61	\$ 719.7	\$ 870.1
2016	\$ 0.40	\$ 152.5	13.5	\$ 23.25	\$ 312.9	\$ 465.4
2015	\$ 0.40	\$ 156.3	45.4	\$ 25.16	\$ 1,142.5	\$ 1,298.8

**Cash Dividends on Shares of Common Stock**

During 2017, the Company declared four quarterly cash dividends of \$0.10 per share on its common stock on January 26, 2017, April 25, 2017, July 25, 2017 and October 24, 2017, which were paid on March 22, 2017, June 22, 2017, September 22, 2017 and December 22, 2017, respectively, to stockholders of record as of the close of business on March 1, 2017, June 1, 2017, September 1, 2017, and December 1, 2017, respectively. 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 an authorized committee thereof. See Note 18, *Subsequent Events*, for discussion of the Company's dividend declaration subsequent to December 31, 2017.

**Stock Repurchase Activities**

In 2014 and 2015, 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, and subsequent increases to the authorization totaling \$1.8 billion ("Stock Repurchase Program"). In February 2017, the Board authorized an additional \$500 million increase to the Stock Repurchase Program for a total of \$4.4 billion. As of December 31, 2017, the Company had utilized all of the authorized funds under the Stock Repurchase Program. See Note 18, *Subsequent Events*, for discussion of the Company's stock repurchase activity subsequent to December 31, 2017.

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. Repurchases associated with tax withholdings were \$6.0 million, \$11.7 million, and \$11.1 million for the years ended December 31, 2017, 2016, and 2015, respectively.



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

***Accumulated Other Comprehensive Loss, Net of Tax***

The components of accumulated other comprehensive loss, net of related taxes, for the years ended December 31, 2017, 2016, and 2015 were as follows (in millions):

	Unrealized Gains on Available-for- Sale Securities <sup>(1)</sup>	Unrealized Gains (Losses) on Cash Flow Hedges <sup>(2)</sup>	Foreign Currency Translation Adjustments	Total
Balance as of December 31, 2014	\$ 8.4	\$ (4.2)	\$ (18.0)	\$ (13.8)
Other comprehensive income (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 income (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 income (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)
Other comprehensive income before reclassifications	4.5	15.7	19.0	39.2
Amount reclassified from accumulated other comprehensive loss	(2.1)	(5.2)	—	(7.3)
Other comprehensive income, net	2.4	10.5	19.0	31.9
Balance as of December 31, 2017	\$ 19.0	\$ 6.0	\$ (30.4)	\$ (5.4)

<sup>(1)</sup> The reclassifications out of accumulated other comprehensive loss during the years ended December 31, 2017, 2016, and 2015 for realized gains on available-for-sale securities were not material, and were included in other expense, net, in the Consolidated Statements of Operations.

<sup>(2)</sup> The reclassifications out of accumulated other comprehensive loss during the years ended December 31, 2017, 2016, and 2015 for realized gains and losses on cash flow hedges were not material, and were included within cost of revenues, research and development, sales and marketing, and general and administrative in the Consolidated Statements of Operations.

**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, RSUs, and PSAs. In addition, in connection with certain past acquisitions, the Company has assumed stock options, RSUs, 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. In May 2017, the Company's stockholders approved an additional 23.0 million shares of common stock for issuance under the 2015 Plan. As of December 31, 2017, an aggregate of 17.0 million shares were subject to outstanding equity awards under the 2015 Plan and the 2006 Plan. As of December 31, 2017, 33.5 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.

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 35.0 million shares of the Company's common stock for issuance under the ESPP, which includes an additional 7.0 million and 9.0 million shares approved by the Company's stockholders in May 2015 and May 2017, respectively.

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

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. On November 6, 2017, the Company's Compensation Committee amended and restated the ESPP to provide that for the offering period that begins on February 1, 2018, the ESPP will consist of a 24 -month offering period with four 6 -month purchase periods in each offering period. The purchase price for the Company's common stock under the ESPP will be 85% of the lower of the fair market value of the shares at (1) the beginning of a rolling 2 year offering period or (2) the end of each 6 -month purchase period during such offering period. The ESPP will continue in effect until February 25, 2028, unless terminated earlier under the provisions of the ESPP. As of December 31, 2017 , approximately 23.8 million shares have been issued and 11.2 million shares remain available for future issuance under the ESPP.

During 2017 and 2016, the Company completed the acquisitions of Cyphort, AppFormix, Aurrion, and BTI. In connection with these acquisitions, the Company assumed an aggregate of 3.9 million shares of stock options, RSUs, RSAs, and PSAs. No additional awards can be granted under the stock plans of the acquired companies. As of December 31, 2017 , approximately 3.4 million shares of common stock were outstanding under all awards assumed through the Company's acquisitions.

**Stock Option Activities**

The Company has granted stock option awards that have a maximum contractual life of seven years from the date of grant. Options assumed in connection with past acquisitions generally have 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 year ended December 31, 2017 (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, 2016	2.4	\$ 29.20		
Exercised	(0.5)	14.83		
Expired/Canceled	(1.0)	31.87		
Balance as of December 31, 2017	0.9	\$ 34.41	1.0	\$ 3.0
As of December 31, 2017:				
Vested and expected-to-vest options	0.9	\$ 34.41	1.0	\$ 3.0
Exercisable options	0.9	\$ 35.67	0.7	\$ 2.1

The aggregate intrinsic value represents the difference between the Company's closing stock price on the last trading day of the period, which was \$28.50 per share as of December 29, 2017 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 for both 2017 and 2016 and \$27.5 million for 2015 . Total fair value of options vested during 2017 , 2016 , and 2015 was \$0.7 million , \$3.9 million , and \$7.0 million , respectively.

The following table summarizes additional information regarding outstanding and exercisable options as of December 31, 2017 :

Range of Exercise Price (In dollars)	Options Outstanding			Options Exercisable	
	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)
\$0.08 - \$38.93	0.3	2.7	\$ 20.02	0.3	\$ 22.10
\$40.26 - \$44.00	0.6	0.2	41.12	0.6	41.12
\$0.08 - \$44.00	0.9	1.0	\$ 34.41	0.9	\$ 35.67

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

**RSU, RSA, and PSA 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.

The following table summarizes the Company's RSU, RSA, and PSA activity and related information as of and for the year ended December 31, 2017 (in millions, except per share amounts and years):

	Outstanding RSUs, RSAs, and PSAs <sup>(6)</sup>			
	Number of Shares	Weighted Average Grant-Date Fair Value per Share	Weighted Average Remaining Contractual Term (In Years)	Aggregate Intrinsic Value
Balance at December 31, 2016	20.9	\$ 24.05		
RSUs granted <sup>(1)(2)</sup>	7.9	27.54		
RSUs assumed in acquisitions <sup>(2)(5)</sup>	0.1	26.91		
PSAs granted <sup>(2)(4)</sup>	0.9	27.52		
RSUs vested <sup>(3)</sup>	(6.7)	23.99		
RSAs vested <sup>(3)</sup>	(0.5)	23.72		
PSAs vested <sup>(3)</sup>	(0.5)	24.29		
RSUs canceled	(2.1)	24.97		
PSAs canceled	(0.5)	25.25		
Balance at December 31, 2017	19.5	\$ 25.39	1.0	\$ 555.3
As of December 31, 2017				
Vested and expected-to-vest RSUs, RSAs, and PSAs	15.9	\$ 25.76	1.1	\$ 452.3

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

<sup>(2)</sup> The weighted-average grant-date fair value of RSUs, RSAs, and PSAs granted and assumed during 2017, 2016, and 2015 was \$27.53, \$24.66, and \$23.45, respectively.

<sup>(3)</sup> Total fair value of RSUs, RSAs, and PSAs vested during 2017, 2016, and 2015 was \$187.3 million, \$185.7 million, and \$202.7 million, respectively.

<sup>(4)</sup> 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 0.7 million shares. Depending on achievement of such performance goals, the range of shares that could be issued under these awards is 0 million to 0.9 million shares.

<sup>(5)</sup> RSUs assumed in connection with the acquisition of Cyphort.

<sup>(6)</sup> Excludes 1.4 million shares of PSAs that were modified in 2017, which relate to PSAs assumed by the Company in connection with acquisitions consummated in 2016. These awards are contingent upon the achievement of certain performance milestones. The total incremental compensation cost resulting from the modifications totaled \$6.7 million to be recognized over the remaining terms of the modified awards.

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

**Shares Available for Grant**

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

	<b>Number of Shares</b>
Balance as of December 31, 2016	22.5
Additional shares authorized	23.0
RSUs and PSAs granted <sup>(1)</sup>	(18.5)
RSUs and PSAs canceled <sup>(2)</sup>	5.5
Options canceled/expired <sup>(2)</sup>	1.0
Balance as of December 31, 2017	33.5

<sup>(1)</sup> 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.

<sup>(2)</sup> Canceled or expired options and canceled RSUs and PSAs under the 2006 Plan are no longer available for future grant under such plan; however, the number of shares available for grant under the 2015 Plan are increased by (i) the amount of such canceled or expired options and (ii) two and one-tenth the shares for each canceled 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 2.7 million shares of common stock through the ESPP during each year in 2017, 2016, and 2015 at an average exercise price of \$20.83, \$19.66, and \$19.25 per share, 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:

	<b>Years Ended December 31,</b>		
	<b>2017</b>	<b>2016</b>	<b>2015</b>
<b>ESPP:</b>			
Volatility	25%	32%	29%
Risk-free interest rate	0.9%	0.4%	0.1%
Expected life (years)	0.5	0.5	0.5
Dividend yield	1.5%	1.8%	1.7%
Weighted-average fair value per share	\$6.04	\$5.56	\$5.63
<b>Market-based RSUs:</b>			
Volatility	30%	36%	34%
Risk-free interest rate	1.9%	1.2%	1.4%
Dividend yield	1.4%	1.7%	1.8%
Weighted-average fair value per share	\$19.30	\$14.71	\$14.97
<b>Stock Options Assumed:</b>			
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	—

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

**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,		
	2017	2016	2015
Cost of revenues - Product	\$ 4.6	\$ 6.4	\$ 5.6
Cost of revenues - Service	17.5	15.3	13.8
Research and development	86.6	126.5	125.4
Sales and marketing	55.6	55.2	45.6
General and administrative	23.2	23.4	26.9
Total	<u>\$ 187.5</u>	<u>\$ 226.8</u>	<u>\$ 217.3</u>

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

	Years Ended December 31,		
	2017	2016	2015
Stock options	\$ 0.5	\$ 4.4	\$ 6.6
RSUs, RSAs, and PSAs	171.3	206.9	197.3
ESPP	15.7	15.5	13.4
Total	<u>\$ 187.5</u>	<u>\$ 226.8</u>	<u>\$ 217.3</u>

For the years ended December 31, 2017, 2016 and 2015, the Company recognized tax benefits on total stock-based compensation expense, which are reflected in the income tax provision in the Consolidated Statements of Operations, of \$29.1 million, \$53.3 million, and \$49.5 million, respectively.

For the years ended December 31, 2017, 2016 and 2015, tax benefit realized related to awards vested or exercised during the period was \$64.1 million, \$58.6 million and \$67.1 million, respectively. These amounts do not include the indirect effects of stock-based awards, which primarily relate to the research and development tax credit.

As of December 31, 2017, the total unrecognized compensation cost related to unvested share-based awards was \$270.1 million to be recognized over a weighted-average period of 1.7 years.

**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 \$21.1 million, \$20.7 million, and \$19.6 million during 2017, 2016, and 2015, respectively.

**Deferred Compensation Plan**

The Company's 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. As of December 31, 2017, the liability of the Company to the plan participants was \$27.6 million, of which \$4.9 million was included within other accrued liabilities and \$22.7 million was included in other long-term liabilities on the Consolidated Balance Sheets. The Company had investments of \$27.6 million correlating to the deferred compensation obligations, of which \$4.9 million was included within prepaid expenses and other current assets and \$22.7 million was included within restricted cash and investments on the Consolidated Balance Sheets. As of December 31, 2016, the liability of the Company was \$21.0 million, which was included in other long-term liabilities on the Consolidated Balance Sheets and the Company had investments of \$21.0 million correlating to the deferred compensation obligations, which were included in restricted cash and investment in the Consolidated Balance Sheets.

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

**Non-US Pension Plans**

The Company maintains the India Gratuity Trust and Israel Retirement Trust (or "the Pension Plans") to cover statutory severance obligations in the event of termination of any of its India and Israel employees, respectively. The Pension Plans are primarily invested in mutual funds and measured at fair value using Level 1 hierarchy on a recurring basis. The Company reports the Pension Plans on a net basis on the Consolidated Balance Sheets. As of December 31, 2017 and December 31, 2016, the fair value of the Pension Plans was \$11.3 million and \$8.4 million, respectively. As of December 31, 2017 and December 31, 2016, the Company recorded a net plan liability of \$4.3 million and \$2.4 million, respectively, in accrued compensation on the Consolidated Balance Sheets.

**Note 13. Segments**

The Company operates in one reportable segment. The Company's chief executive officer, who is the chief operating decision maker, reviews financial information presented on a consolidated basis for purposes of allocating resources and evaluating financial performance, accompanied by disaggregated information about net revenues by product and service, customer vertical, and geographic region as presented below.

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

	Years Ended December 31,		
	2017	2016	2015
Routing	\$ 2,189.5	\$ 2,352.9	\$ 2,359.2
Switching	963.4	858.0	768.3
Security	293.3	318.0	435.6
Total product	3,446.2	3,528.9	3,563.1
Total service	1,581.0	1,461.2	1,294.7
Total	\$ 5,027.2	\$ 4,990.1	\$ 4,857.8

In 2017, the Company began reporting revenue on the following verticals: Cloud, Telecom/Cable, and Strategic Enterprise. A summary of the types of customers included in these verticals is as follows:

- Cloud: companies that are heavily reliant on the cloud for their business model's success. As an example, customers in the cloud vertical can include cloud service providers as well as enterprises that provide software-as-a-service, infrastructure-as-a-service, or platform-as-a-service.
- Telecom/Cable: includes wireline and wireless carriers and cable operators.
- Strategic Enterprise: includes financial services; national, federal, state, and local governments; research and educational institutions and enterprises not included in the Cloud vertical.

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

The following table presents net revenues by customer vertical (in millions):

	Years Ended December 31,		
	2017	2016	2015
Cloud	\$ 1,314.9	\$ 1,322.3	\$ 1,021.2
Telecom/Cable	2,315.7	2,324.7	2,417.1
Strategic Enterprise	1,396.6	1,343.1	1,419.5
Total	<u>\$ 5,027.2</u>	<u>\$ 4,990.1</u>	<u>\$ 4,857.8</u>

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

	Years Ended December 31,		
	2017	2016	2015
Americas:			
United States	\$ 2,712.6	\$ 2,737.0	\$ 2,568.6
Other	234.6	231.8	223.6
Total Americas	<u>2,947.2</u>	<u>2,968.8</u>	<u>2,792.2</u>
Europe, Middle East, and Africa	1,195.8	1,238.1	1,320.3
Asia Pacific	884.2	783.2	745.3
Total	<u>\$ 5,027.2</u>	<u>\$ 4,990.1</u>	<u>\$ 4,857.8</u>

During the years ended December 31, 2017, 2016, and 2015, 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,	
	2017	2016
United States	\$ 1,005.1	\$ 1,046.6
International	144.1	147.4
Property and equipment, net and purchased intangible assets, net	<u>\$ 1,149.2</u>	<u>\$ 1,194.0</u>

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, 2017 and December 31, 2016, were attributable to U.S. operations.

**Note 14. Income Taxes**

The components of pretax income are summarized as follows (in millions):

	Years Ended December 31,		
	2017	2016	2015
Domestic	\$ 474.2	\$ 466.2	\$ 456.3
Foreign	337.6	361.2	395.9
Total pretax income	<u>\$ 811.8</u>	<u>\$ 827.4</u>	<u>\$ 852.2</u>

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

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

	Years Ended December 31,		
	2017	2016	2015
Current provision:			
Federal	\$ 594.3	\$ 121.4	\$ 181.4
States	13.9	10.3	15.9
Foreign	45.4	46.0	43.3
Total current provision	653.6	177.7	240.6
Deferred (benefit) provision:			
Federal	(128.7)	57.2	(16.7)
States	(17.7)	4.3	(0.4)
Foreign	(1.6)	(4.5)	(5.0)
Total deferred (benefit) provision	(148.0)	57.0	(22.1)
Total provision for income taxes	\$ 505.6	\$ 234.7	\$ 218.5

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

	Years Ended December 31,		
	2017	2016	2015
Expected provision at 35% rate	\$ 284.1	\$ 289.6	\$ 298.3
State taxes, net of federal benefit	12.0	8.9	8.9
Foreign income at different tax rates	(46.4)	(53.4)	(68.9)
R&D tax credits	(15.1)	(16.8)	(12.7)
Share-based compensation	—	10.5	13.2
Release of valuation allowance	(1.7)	(0.7)	—
Domestic production activities	(12.4)	(9.5)	(15.1)
Non-deductible compensation	1.6	2.4	3.7
Cost sharing adjustment (*)	—	—	(13.2)
Impact of the U.S. Tax Cuts and Jobs Act	289.5	—	—
Other	(6.0)	3.7	4.3
Total provision for income taxes	\$ 505.6	\$ 234.7	\$ 218.5

(\*) 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).

On December 22, 2017, the U.S. Tax Cuts and Jobs Act (the "Tax Act") was enacted into law. Effective January 1, 2018, the Tax Act provides for significant changes to U.S. income tax law, including the reduction of the U.S. federal corporate income tax rate from 35% to 21% and the creation of a minimum tax on foreign earnings. In addition, the Tax Act imposed a one-time transition tax on accumulated foreign earnings through December 31, 2017. The Company recognized a provisional income tax charge of \$289.5 million, which is included as a component of the income tax provision on our Consolidated Statements of Operations.

Included in the provisional amounts is (i) a one-time transition tax of \$431.2 million on the Company's accumulated foreign earnings, which the Company has elected to pay over eight years, (ii) \$134.5 million related to the re-measurement of the Company's deferred tax assets at the revised U.S. statutory rates and (iii) \$65.1 million of other accrued taxes on foreign distributable earnings, primarily related to withholding taxes and certain foreign timing differences. These impacts were partially offset by \$341.3 million related to the reversal of deferred tax liabilities previously accrued on foreign earnings.

The Company's tax expense of \$431.2 million on the Company's accumulated foreign earnings is based on estimates of the effects of the Tax Act as the analysis requires significant data from the Company's foreign subsidiaries which is not regularly collected or analyzed, including the impact of certain foreign timing differences as well as the effect of foreign earnings upon the Company's ability to utilize foreign tax credits.



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

In addition, the provisional amount includes the remeasurement of certain U.S. deferred tax assets and liabilities of \$134.5 million, foreign withholding taxes and the impact of certain foreign timing differences of \$65.1 million. The Company has computed the amounts based on information available to it, including its expectation that the settlement of certain foreign basis differences will affect the amount of U.S. minimum tax upon reversal; however there is still uncertainty as to the application of the Tax Act.

As the Company collects and prepares the necessary data, interprets the Tax Act and reviews any additional guidance issued by the U.S. Treasury Department, state revenue and taxation authorities and other standard-setting bodies, the Company may make adjustments to the provisional amounts noted above which may materially impact its provision for income taxes from continuing operations in the period in which the adjustments are made. The accounting for the tax effects of the Tax Act will be completed in 2018.

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. In accordance with the Tax Act, the effect of the cumulative adjustment was remeasured.

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,	
	2017	2016
Deferred tax assets:		
Net operating loss carry-forwards	\$ 18.3	\$ 23.8
Research and other credit carry-forwards	198.8	137.5
Deferred revenue	103.5	125.6
Stock-based compensation	31.1	52.3
Cost sharing adjustment	12.4	69.9
Reserves and accruals not currently deductible	76.7	141.3
Other	12.8	12.8
Total deferred tax assets	453.6	563.2
Valuation allowance	(214.5)	(154.4)
Deferred tax assets, net of valuation allowance	239.1	408.8
Deferred tax liabilities:		
Property and equipment basis differences	(42.5)	(58.1)
Purchased intangibles	(12.4)	(28.8)
Unremitted foreign earnings	(25.4)	(311.4)
Deferred compensation and other	(10.4)	(11.0)
Total deferred tax liabilities	(90.7)	(409.3)
Net deferred tax assets (liabilities)	\$ 148.4	\$ (0.5)

Based on changes provided by the Tax Act, the Company re-measured certain deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future, which is generally 21%.

As of December 31, 2017 and 2016, the Company had a valuation allowance on its U.S. domestic deferred tax assets of approximately \$214.5 million and \$154.4 million, respectively. The balance at December 31, 2017 consisted of approximately \$191.0 million and \$19.7 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 \$3.8 million related to losses that are capital in nature and may carry forward to offset future capital gains only. The valuation allowance increased in 2017 and 2016 by \$60.1 million and \$8.2 million, respectively, primarily related to the change in California and Massachusetts R&D tax credits.

As of December 31, 2017, the Company had federal and California net operating loss carry-forwards of approximately \$66.7 million and \$123.9 million, respectively. The California net operating loss carry-forwards of \$123.9 million are expected to expire unused. The Company also had federal and California tax credit carry-forwards of approximately \$2.6 million and \$222.4 million, respectively. Unused net operating loss carry-forwards will expire at various dates beginning in the year 2018. The California tax credit carry-forwards will carry forward indefinitely.

As of December 31, 2017, 2016, and 2015, the total amount of gross unrecognized tax benefits was \$264.5 million, \$223.1 million, and \$216.1 million, respectively. As of December 31, 2017, approximately \$259.8 million of the \$264.5 million gross unrecognized tax benefits, if recognized, would affect the effective tax rate. The increase in unrecognized tax benefits for the fiscal year 2017 was primarily related to changes in estimates resulting from the Tax Act.

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

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,		
	2017	2016	2015
Balance at beginning of year	\$ 223.1	\$ 216.1	\$ 199.2
Tax positions related to current year:			
Additions	64.6	27.2	18.1
Tax positions related to prior years:			
Additions	1.8	1.0	5.3
Reductions	(16.6)	(4.1)	(2.9)
Settlements	(4.0)	(14.3)	—
Lapses in statutes of limitations	(4.4)	(2.8)	(3.6)
Balance at end of year	<u>\$ 264.5</u>	<u>\$ 223.1</u>	<u>\$ 216.1</u>

As of December 31, 2017, 2016, and 2015, the Company had accrued interest and penalties related to unrecognized tax benefits of \$40.7 million, \$31.3 million, and \$24.1 million, respectively, to other long-term liabilities in the Consolidated Balance Sheets. The Company recognized an expense for net interest and penalties of \$8.5 million, \$6.0 million, and \$2.5 million in its Consolidated Statements of Operations during the years ended December 31, 2017, 2016, and 2015, 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 \$48.0 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, 2017, 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 December 2017, the UK tax authorities concluded its audit of the 2013 through 2015 tax years, which did not have a material impact to the Company's financial statements.

The Company is also subject to separate ongoing examinations by the UK tax authorities for the 2016 tax year, the German tax authorities for the 2010 through 2013 tax years, the Australia tax authorities for the 2016 and 2017 tax years, and the India tax authorities for the 2003 tax year, the 2004 through 2008 tax years, and the 2009 through 2014 tax years. As of December 31, 2017, 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

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

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 per share as follows (in millions, except per share amounts):

	Years Ended December 31,		
	2017	2016	2015
Numerator:			
Net income	\$ 306.2	\$ 592.7	\$ 633.7
Denominator:			
Weighted-average shares used to compute basic net income per share	377.7	381.7	390.6
Dilutive effect of employee stock awards	6.5	6.1	8.8
Weighted-average shares used to compute diluted net income per share	384.2	387.8	399.4
Net income per share:			
Basic	\$ 0.81	\$ 1.55	\$ 1.62
Diluted	\$ 0.80	\$ 1.53	\$ 1.59
Anti-dilutive shares	1.1	2.5	3.4

Basic net income per share is computed using net income 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 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.

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

**Note 16. Commitments and Contingencies****Commitments**

The following table summarizes the Company's unconditional purchase obligations and future minimum payments under non-cancelable operating and other lease arrangements for each of the next five years and thereafter as of December 31, 2017 (in millions):

<u>Years Ending December 31,</u>	<u>Unconditional Purchase Obligations</u>	<u>Leases</u>	
		<u>Operating Leases</u>	<u>Other Lease Arrangement</u>
2018	\$ 47.1	\$ 36.1	\$ 9.8
2019	25.2	27.3	13.2
2020	13.3	20.8	13.5
2021	6.0	16.0	13.8
2022	3.1	10.7	14.6
Thereafter	0.1	28.8	47.1
Total	<u>\$ 94.8</u>	<u>\$ 139.7</u>	<u>\$ 112.0</u>

*Unconditional Purchase Obligations*

Unconditional purchase obligations consist 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.

*Operating Leases*

The Company leases its facilities and certain equipment under non-cancelable operating leases that expire at various dates through March 2028. 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 2017, 2016, and 2015 was approximately \$39.3 million, \$37.9 million, and \$43.2 million, respectively.

*Other Lease Arrangement*

In July 2015, the Company entered into a lease arrangement through March 2026 for approximately 63,000 square feet of space in the State of Washington. 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. The Company capitalized the construction costs by recording a build-to-suit lease asset and a corresponding build-to-suit financing liability. Upon the completion of construction in 2016, 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. As of December 31, 2017, the total payment under the lease agreement over the ten-year term is approximately \$112.0 million of which \$62.6 million is included in other-long term liabilities on the Consolidated Balance Sheets.

*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 \$615.2 million as of December 31, 2017.

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, 2017, the Company had accrued \$22.0 million based on its estimate of such charges.

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

*Clock-Signal, Supplier Component Remediation Liability*

As of December 31, 2017 and December 31, 2016, the Company had approximately zero and \$10.8 million, respectively, 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 had been advised by the component supplier that components may begin to fail after the product has been in operation for 18 months. As of December 31, 2017, the Company has substantially completed the remediation process with its customers.

*Debt and Interest Payment on Debt*

As of December 31, 2017, the Company held long-term debt consisting of the Notes with a carrying value of \$2,136.3 million. See Note 10, *Debt and Financing*, for further discussion of the Company's long-term debt and expected future principal maturities.

*Tax Liability*

As of December 31, 2017, the Company has made a reasonable estimate of the effects on the one-time transition tax as a result of the Tax Act, which includes estimated charges of \$431.2 million of tax on the Company's accumulated foreign earnings, of which \$394.0 million is included within long-term income taxes payable in the Consolidated Balance Sheets. See Note 14, *Income Taxes*, for further discussion.

As of December 31, 2017, the Company had \$256.6 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, 2017, the Company recorded \$20.4 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 and standby letters of credit for certain lease facilities and insurance programs of \$23.0 million and \$6.0 million, as of December 31, 2017 and December 31, 2016, respectively.

**Legal Proceedings**

*Investigations*

The Company previously disclosed that the U.S. Securities and Exchange Commission ("SEC") and the U.S. Department of Justice ("DOJ") were conducting investigations into possible violations by the Company of the U.S. Foreign Corrupt Practices Act ("FCPA"). The Company has been cooperating with these agencies regarding these matters. In the fourth quarter of 2017, the DOJ notified the Company that the DOJ has closed its investigation related to these matters without taking any action against the Company. 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 ongoing SEC investigation, 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 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 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 intends to aggressively defend itself in these matters, and while there can be no assurances and the outcome of these matters is currently not

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

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.

**Note 17. Selected Quarterly Financial Data (Unaudited)**

The table below sets forth selected unaudited financial data for each quarter of the years ended December 31, 2017 and December 31, 2016 (in millions, except per share amounts):

	Year Ended December 31, 2017				Year Ended December 31, 2016			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Net revenues	\$ 1,221.0	\$ 1,308.9	\$ 1,257.8	\$ 1,239.5	\$ 1,097.9	\$ 1,221.3	\$ 1,285.3	\$ 1,385.6
Gross margin	746.6	801.9	772.4	751.2	690.9	756.4	799.5	857.7
Income before income taxes	140.6	245.2	225.8	200.2	126.5	192.2	236.6	272.1
Net income (loss) <sup>(1)</sup>	\$ 108.8	\$ 179.8	\$ 165.7	\$ (148.1)	\$ 91.4	\$ 140.0	\$ 172.4	\$ 188.9
Net income (loss) per share: <sup>(2)</sup>								
Basic	\$ 0.29	\$ 0.47	\$ 0.44	\$ (0.40)	\$ 0.24	\$ 0.37	\$ 0.45	\$ 0.50
Diluted <sup>(3)</sup>	\$ 0.28	\$ 0.47	\$ 0.43	\$ (0.40)	\$ 0.23	\$ 0.36	\$ 0.45	\$ 0.49

<sup>(1)</sup> Net loss for the fourth quarter of 2017 includes an estimated \$289.5 million of tax expense related to the Tax Act, and restructuring charges of \$36.2 million.

<sup>(2)</sup> Net income (loss) 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.

<sup>(3)</sup> Potentially dilutive common shares for the fourth quarter of 2017 were excluded from the computation of diluted net loss per share because their effect would be anti-dilutive.

**Note 18. Subsequent Events**

***Dividend Declaration***

On January 30, 2018, the Company announced that the Board declared a quarterly cash dividend of \$0.18 per share of common stock to be paid on March 22, 2018 to stockholders of record as of the close of business on March 1, 2018. This reflects an increase of 80% compared to previous quarterly dividends.

***Stock Repurchase Activities***

In January 2018, the Board approved a new \$2.0 billion share repurchase authorization ("2018 Stock Repurchase Program"), which replaces the previous authorization. The Board also authorized the Company to enter into an accelerated share repurchase program ("ASR") for an amount up to \$750.0 million under the 2018 Stock Repurchase Program.

In February 2018, the Company entered into ASR agreements with two financial institutions to repurchase an aggregate of \$750.0 million of the Company's common stock. The Company made an up-front payment of \$750.0 million pursuant to the ASR and received and retired an initial 23.3 million shares of the Company's common stock for an aggregate price of \$600.0 million based on the market value of the Company's common stock on the date of the transaction. The Company has an aggregate of \$1.3 billion of authorized funds remaining under the 2018 Stock Repurchase Program, as of the filing date of this Annual Report on Form 10-K.

Future share repurchases under the 2018 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. The Company's 2018 Stock Repurchase 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**

There were no changes in our internal control over financial reporting during the fourth quarter of 2017 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, is included in our definitive Proxy Statement to be filed with the SEC in connection with our 2018 Annual Meeting of Stockholders (the “Proxy Statement”) under “Corporate Governance Principles and Board Matters,” and “Election of Directors” and is incorporated herein by reference.

Information concerning Section 16(a) beneficial ownership reporting compliance is included in the Proxy Statement under “Section 16(a) Beneficial Ownership Reporting Compliance” and is incorporated herein by reference.

Information concerning our worldwide code of business conduct that applies to our principal executive officer and all other employees is included in the Proxy Statement under “Corporate Governance Principles and Board Matters” and is incorporated herein by reference.

### **ITEM 11. *Executive Compensation***

Information required by Item 402 of Regulation S-K is included in the Proxy Statement under “Director Compensation,” and “Executive Compensation,” and 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 is included in the Proxy Statement under “Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters” and is incorporated herein by reference.

Information concerning our equity compensation plan information is included in the Proxy Statement under “Equity Compensation Plan Information” and is incorporated herein by reference.

**ITEM 13. *Certain Relationships and Related Transactions, and Director Independence***

Information concerning certain relationships and related transactions is included in the Proxy Statement under the heading “Certain Relationships and Related Transactions” and is incorporated herein by reference.

Information concerning director independence is included in the Proxy Statement under the heading “Board Independence” and 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 is included in the Proxy Statement under the heading “Principal Accountant Fees and Services” and 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

**Juniper Networks, Inc.**

**Schedule II - Valuation and Qualifying Accounts**  
**Years Ended December 31, 2017, 2016, and 2015**  
(In millions)

<b>Allowance for Doubtful Accounts</b>	<b>Balance at Beginning of Year</b>	<b>Charged to (Reversed from) Costs and Expenses</b>	<b>Write-offs, Net of Recoveries</b>	<b>Balance at End of Year</b>
2017	\$ 7.6	\$ (2.0)	\$ 0.1	\$ 5.7
2016	\$ 9.3	\$ 1.0	\$ (2.7)	\$ 7.6
2015	\$ 4.7	\$ 6.5	\$ (1.9)	\$ 9.3

<b>Sales Return Reserve</b>	<b>Balance at Beginning of Year</b>	<b>Additions</b>			<b>Balance at End of Year</b>
		<b>Charged as a Reduction in Revenues</b>	<b>Charged to Other Accounts</b>	<b>Used</b>	
2017	\$ 71.4	\$ 25.0	\$ 65.9	\$ (107.1)	\$ 55.2
2016	\$ 71.2	\$ 44.6	\$ 89.6	\$ (134.0)	\$ 71.4
2015	\$ 50.2	\$ 65.4	\$ 92.6	\$ (137.0)	\$ 71.2

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.

[Table of Contents](#)

3. Exhibits

Exhibit No.	Exhibit	Incorporated by Reference			
		Filing	Exhibit No.	File No.	File Date
3.1	<a href="#">Restated Certificate of Incorporation of Juniper Networks, Inc. and Certificate of Amendment</a>	S-8	3.1	333-218344	5/30/2017
3.2	<a href="#">Amended and Restated Bylaws of Juniper Networks, Inc.</a>	8-K	3.2	001-34501	5/30/2017
4.1	<a href="#">Indenture, dated March 3, 2011, by and between Juniper Networks, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee</a>	8-K	4.1	001-34501	3/4/2011
4.2	<a href="#">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</a>	8-K	4.8	001-34501	3/4/2011
4.3	<a href="#">Second Supplemental Indenture, dated March 4, 2014, by and between Juniper Networks, Inc. and The Bank of New York</a>	8-K	4.1	001-34501	3/4/2014
4.4	<a href="#">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</a>	8-K	4.1	001-34501	3/10/2015
4.5	<a href="#">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</a>	8-K	4.1	001-34501	2/29/2016
4.6	<a href="#">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</a>	8-K	4.2	001-34501	2/29/2016
4.7	<a href="#">Form of Note for Juniper Networks, Inc.'s 4.600% Senior Notes due 2021</a>	8-K	4.8	001-34501	3/4/2011
4.8	<a href="#">Form of Note for Juniper Networks, Inc.'s 5.950% Senior Notes due 2041</a>	8-K	4.8	001-34501	3/4/2011
4.9	<a href="#">Form of Note for Juniper Networks, Inc.'s 4.500% Senior Notes due 2024</a>	8-K	4.1	001-34501	3/4/2014
4.10	<a href="#">Form of Note for Juniper Networks, Inc.'s 3.300% Senior Notes due 2020</a>	8-K	4.1	001-34501	3/10/2015
4.11	<a href="#">Form of Note for Juniper Networks, Inc.'s 4.350% Senior Notes due 2025</a>	8-K	4.1	001-34501	3/10/2015
4.12	<a href="#">Form of Note for Juniper Networks, Inc.'s 3.125% Senior Notes due 2019</a>	8-K	4.1	001-34501	2/29/2016
10.1	<a href="#">Form of Indemnification Agreement entered into by the Registrant with each of its directors, officers and certain employees+</a>	10-Q	10.1	000-26339	11/14/2003
10.2	<a href="#">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+</a>	10-K	10.2	001-34501	2/24/2017
10.3	<a href="#">Juniper Networks, Inc. 2006 Equity Incentive Plan, as amended October 2, 2014+</a>	10-Q	10.9	001-34501	11/10/2014
10.4	<a href="#">Form of Stock Option Agreement for the Juniper Networks, Inc. 2006 Equity Incentive Plan+</a>	8-K	10.2	000-26339	5/24/2006
10.5	<a href="#">Form of Non-Employee Director Stock Option Agreement for the Juniper Networks, Inc. 2006 Equity Incentive Plan+</a>	8-K	10.3	000-26339	5/24/2006
10.6	<a href="#">Form of Notice of Grant and Restricted Stock Unit Agreement for the Juniper Networks, Inc. 2006 Equity Incentive Plan+</a>	10-K	10.20	000-26339	2/29/2008
10.7	<a href="#">Form of Notice of Grant and Performance Share Agreement for the Juniper Networks, Inc. 2006 Equity Incentive Plan+</a>	10-K	10.21	000-26339	2/29/2008
10.8	<a href="#">Form of India Stock Option Agreement under the Juniper Networks, Inc. 2006 Equity Incentive Plan+</a>	10-Q	10.2	000-26339	5/9/2008
10.9	<a href="#">Form of India Restricted Stock Unit Agreement under the Juniper Networks, Inc. 2006 Equity Incentive Plan+</a>	10-Q	10.3	000-26339	5/9/2008
10.10	<a href="#">Australian Addendum to the Juniper Networks, Inc. 2006 Equity Incentive Plan, as amended+</a>	10-Q	10.2	000-34501	11/5/2010
10.11	<a href="#">Amended and Restated Juniper Networks, Inc. Performance Bonus Plan, effective January 1, 2017+</a>	8-K	10.1	001-34501	5/27/2016
10.12	<a href="#">BTI Systems Inc. Amended and Restated 2012 Stock Option Plan and Long-Term Incentive Plan+</a>	S-8	4.3	333-211821	6/3/2016

Exhibit No.	Exhibit	Incorporated by Reference			
		Filing	Exhibit No.	File No.	File Date
10.13	<a href="#">Aurion, Inc. Amended and Restated 2008 Equity Incentive Plan+</a>	S-8	4.3	333-213490	9/2/2016
10.14	<a href="#">AppFormix Inc. Amended and Restated 2013 Stock Plan+</a>	10-K	10.16	001-34501	2/24/2017
10.15	<a href="#">Juniper Networks, Inc. Deferred Compensation Plan+</a>	S-8	4.4	333-151669	6/16/2008
10.16	<a href="#">Cyphort Inc. Amended &amp; Restated 2011 Stock Incentive Plan+</a>	S-8	4.3	333-221422	11/8/2017
10.17	<a href="#">Amended and Restated Conrail Systems Inc. 2012 Stock Plan, dated December 2, 2012+</a>	10-K	10.56	001-34501	2/26/2013
10.18	<a href="#">Amended and Restated Juniper Networks, Inc. 2015 Equity Incentive Plan+</a>	8-K	10.1	001-34501	5/30/2017
10.19	<a href="#">Amended and Restated Juniper Networks, Inc. 2008 Employee Stock Purchase Plan*</a>				
10.20	<a href="#">Form of Restricted Stock Unit Agreement effective as of May 19, 2015+</a>	8-K	10.2	001-34501	5/20/2015
10.21	<a href="#">Form of Performance Share Agreement effective as of May 19, 2015+</a>	8-K	10.3	001-34501	5/20/2015
10.22	<a href="#">Form of Stock Option Agreement effective as of May 19, 2015+</a>	8-K	10.4	001-34501	5/20/2015
10.23	<a href="#">Form of Severance Agreement for Certain Officers, approved for use on September 19, 2016+</a>	8-K	10.1	001-34501	9/20/2016
10.24	<a href="#">Form of Severance Agreement for Certain Officers, approved for use on August 29, 2017+</a>	8-K	10.2	001-34501	8/31/2017
10.25	<a href="#">Severance Agreement, dated September 5, 2017, between Juniper Networks, Inc. and Bikash Koley+</a>	10-Q	10.6	001-34501	11/7/2017
10.26	<a href="#">Form of Change of Control Agreement for Certain Officers, approved for use on September 19, 2016+</a>	8-K	10.2	001-34501	9/20/2016
10.27	<a href="#">Form of Change of Control Agreement for Certain Officers, approved for use on August 29, 2017+</a>	8-K	10.1	001-34501	8/31/2017
10.28	<a href="#">Change of Control Agreement, dated September 5, 2017, between Juniper Networks, Inc. and Bikash Koley+</a>	10-Q	10.5	001-34501	11/7/2017
10.29	<a href="#">Settlement, Release and Cross-License Agreement, dated May 27, 2014, by and between Juniper Networks, Inc. and Palo Alto Networks, Inc.</a>	8-K	10.1	001-34501	5/29/2014
10.30	<a href="#">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</a>	8-K	10.1	001-34501	6/27/2014
10.31	<a href="#">Letter Amendment to Credit Agreement, dated as of November 21 2017, by and among Juniper Networks, Inc., the lenders from time to time party thereto and Citibank, N.A., as administrative agent*</a>				
10.32	<a href="#">Employment Offer Letter, dated November 18, 2014, between Juniper Networks, Inc. and Rami Rahim+</a>	8-K	10.1	001-34501	11/24/2014
10.33	<a href="#">Employment Offer Letter between Juniper Networks, Inc. and Brian Martin+</a>	10-Q	10.2	001-34501	11/5/2015
10.34	<a href="#">Compensation Letter, dated August 9, 2017, between Juniper Networks, Inc. and Anand Athreva+</a>	10-Q	10.3	001-34501	11/7/2017
10.35	<a href="#">Employment Offer Letter, dated August 9, 2017, between Juniper Networks, Inc. and Bikash Koley+</a>	10-Q	10.4	001-34501	11/7/2017
10.36	<a href="#">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+</a>	10-K	10.58	001-34501	2/19/2016
10.37	<a href="#">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+</a>	10-K	10.59	001-34501	2/19/2016

Exhibit No.	Exhibit	Incorporated by Reference			
		Filing	Exhibit No.	File No.	File Date
10.38	<a href="#">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+</a>	10-K	10.58	001-34501	2/24/2017
10.39	<a href="#">Form of Executive Compensation Recovery Agreement for Certain Officers, approved for use in November 2015+</a>	10-K	10.60	001-34501	2/29/2016
12.1	<a href="#">Computation of Ratio of Earnings to Fixed Charges*</a>				
21.1	<a href="#">Subsidiaries of the Company*</a>				
23.1	<a href="#">Consent of Independent Registered Public Accounting Firm*</a>				
24.1	Power of Attorney (included on the signature page to the Report)				
31.1	<a href="#">Certification of Chief Executive Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934*</a>				
31.2	<a href="#">Certification of Chief Financial Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934*</a>				
32.1	<a href="#">Certification of the Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**</a>				
32.2	<a href="#">Certification of the Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**</a>				
101	The following materials from Juniper Networks Inc.'s Annual Report on Form 10-K for the year ended December 31, 2017, 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

+ Indicates management contract or compensatory plan, contract or arrangement.

(b) Exhibits

See Exhibits in Item 15(a)(3) above in this Report.

(c) None

**ITEM 16. Form 10-K Summary**

Not applicable.

JUNIPER NETWORKS, JUNIPER, the Juniper Networks logo, JUNOS, CONTRAIL, BTI, BTI SYSTEMS, CYPHORT, APPFORMIX, AURRION, NETSCREEN, and SCREENOS are registered trademarks of Juniper Networks, Inc. and/or its affiliates in the United States and other countries. Other names may be trademarks of their respective owners.

**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 23, 2018 By: /s/ Kenneth B. Miller  
Kenneth B. Miller  
*Executive Vice President, Chief Financial Officer*  
(Duly Authorized Officer and Principal Financial Officer)

February 23, 2018 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.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Rami Rahim</u> Rami Rahim	Chief Executive Officer and Director (Principal Executive Officer)	February 23, 2018
<u>/s/ Kenneth B. Miller</u> Kenneth B. Miller	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 23, 2018
<u>/s/ Terrance F. Spidell</u> Terrance F. Spidell	Vice President, Corporate Controller and Chief Accounting Officer (Principal Accounting Officer)	February 23, 2018
<u>/s/ Scott Kriens</u> Scott Kriens	Chairman of the Board	February 23, 2018
<u>/s/ Robert M. Calderoni</u> Robert M. Calderoni	Director	February 23, 2018

[Table of Contents](#)

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Rahul Merchant</u> Rahul Merchant	Director	February 23, 2018
<u>/s/ James Dolce</u> James Dolce	Director	February 23, 2018
<u>/s/ Mercedes Johnson</u> Mercedes Johnson	Director	February 23, 2018
<u>/s/ Kevin DeNuccio</u> Kevin DeNuccio	Director	February 23, 2018
<u>/s/ Gary Daichendt</u> Gary Daichendt	Director	February 23, 2018
<u>/s/ William R. Stensrud</u> William R. Stensrud	Director	February 23, 2018



**JUNIPER NETWORKS, INC.**  
**2008 EMPLOYEE STOCK PURCHASE PLAN**  
**As amended and restated as of December 1, 2017**

1. Purpose. The purpose of the Plan is to provide employees of the Company and its Designated Subsidiaries with an opportunity to purchase Common Stock through accumulated payroll deductions. The Company's intention is to have the Plan qualify as an "employee stock purchase plan" under Section 423 of the Code, although the Company makes no undertaking nor representation to maintain such qualification. The provisions of the Section 423(b) Plan (as defined below), accordingly, will be construed so as to extend and limit Plan participation in a uniform and nondiscriminatory basis consistent with the requirements of Section 423 of the Code. In addition, this Plan document authorizes the grant of rights to purchase stock that do not qualify under Section 423(b) of the Code ("Non-Section 423(b) Plan") pursuant to rules, procedures or sub-plans adopted by the Board or Committee designed to achieve tax, securities law or other Company compliance objectives in particular locations outside the United States. Such references to the Plan include the 423(b) and the Non-Section 423(b) Plan components.

If grants are intended to be made under the Non-Section 423(b) Plan, they will be designated as such at the time of grant.

On December 1, 2017 (the "Amendment Date"), the Administrator (as defined below) amended and restated the Plan (as defined below) as set forth herein. All options granted prior to the Amendment Date shall remain subject to the terms of the Plan and the Offering Period that were in effect prior to the Amendment Date.

2. Definitions.

(a) "Administrator" means the Board or any Committee designated by the Board to administer the Plan pursuant to Section 14.

(b) "Applicable Laws" means the requirements relating to the administration of equity-based awards under U.S. state corporate laws, U.S. federal and state securities laws, the Code, any stock exchange or quotation system on which the Common Stock is listed or quoted and the applicable laws of any foreign country or jurisdiction where Awards are, or will be, granted under the Plan.

(c) "Board" means the Board of Directors of the Company.

(d) "Change in Control" means the occurrence of any of the following events:

(i) 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 securities of the Company representing fifty percent (50%) or more of the total voting power represented by the Company's then outstanding voting securities; or

(ii) The consummation of the sale or disposition by the Company of all or substantially all of the Company's assets; or

(iii) The consummation of 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 or its parent) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity or its parent outstanding immediately after such merger or consolidation; or

(iv) A change in the composition of the Board occurring within a two (2) year period, as a result of which less than a majority of the Directors are Incumbent Directors. "Incumbent Directors" means Directors who either (A) are Directors as of the effective date of the Plan, or (B) are elected, or nominated for election, to the Board with the affirmative votes of at least a majority of the Directors at the time of such election or nomination (but will not include an individual whose election or nomination is in connection with an actual or threatened proxy contest relating to the election of Directors to the Company).

(e) "Code" means the Internal Revenue Code of 1986, as amended. Any reference to a section of the Code herein will be a reference to any successor or amended section of the Code.

(f) "Committee" means a committee of the Board appointed in accordance with Section 14 hereof.

(g) "Common Stock" means the common stock of the Company.

(h) "Company" means Juniper Networks, Inc., a Delaware corporation.

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(i) “ Compensation ” means an Employee’s regular and recurring straight time gross earnings, exclusive of payments for overtime, shift premium, incentive compensation, incentive payments, bonuses, sales commission, and other similar compensation.

(j) “ Designated Subsidiary ” means any Parent or Subsidiary that has been designated by the Administrator from time to time in its sole discretion as eligible to participate in the Plan.

(k) “ Director ” means a member of the Board.

(l) “ Eligible Employee ” means any Employee who is customarily employed for at least twenty (20) hours per week and more than five (5) months in any calendar year by the Employer, provided, however that under the Non-Section 423(b) Plan, the Board or Committee appointed by the Board may determine that Employees are eligible to participate in the Plan even if they are employed for less than twenty (20) hours per week or less than five (5) months in any calendar year by the Employer, if such Employee has a right to participate in the Plan under applicable law. For purposes of the Plan, the employment relationship will be treated as continuing intact while the individual is on sick leave or other leave of absence that the Employer approves. Where the period of leave exceeds three (3) months and the individual’s right to reemployment is not guaranteed either by statute or by contract, the employment relationship will be deemed to have terminated on the first day following three (3) months of such leave.

(m) “ Employee ” means any individual who is a common law employee of an Employer.

(n) “ Employer ” means any one or all of the Company and its Designated Subsidiaries.

(o) “ Exchange Act ” means the Securities Exchange Act of 1934, as amended, including the rules and regulations promulgated thereunder.

(p) “ Exercise Date ” means the last day of each Purchase Period (as defined below).

(q) “ Fair Market Value ” means, as of any date and unless the Administrator determines otherwise, the value of Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or a national market system, its Fair Market Value will be the closing sales price for such stock (or the closing bid, if no sales were reported) as quoted on such exchange or system on the date of determination, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable;

(ii) If the Common Stock is regularly quoted by a recognized securities dealer but selling prices are not reported, its Fair Market Value will be the mean of the closing bid and asked prices for the Common Stock on the date of determination, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable; or

(iii) In the absence of an established market for the Common Stock, its Fair Market Value thereof will be determined in good faith by the Administrator.

(r) “ Fiscal Year ” means the fiscal year of the Company.

(s) “ New Exercise Date ” means a new Exercise Date implemented by shortening any Offering Period then in progress.

(t) “ Offering Date ” means the first Trading Day of each Offering Period.

(u) “ Offering Period ” means a period of approximately twenty-four (24) months during which an option granted pursuant to the Plan may be exercised. A new Offering Period shall (i) commence on the first Trading Day on or after February 1 and August 1 of each year and (ii) terminate on the last Trading Day in the final Purchase Period ending on or before January 31 and July 31, respectively. The duration and timing of Offering Periods may be changed pursuant to Sections 4, 20 and 21.

(v) “ Parent ” means a “parent corporation,” whether now or hereafter existing, as defined in Section 424(e) of the Code.

(w) “ Plan ” means this Juniper Networks, Inc. 2008 Employee Stock Purchase Plan, as amended from time to time, which includes a Section 423(b) Plan and a Non-Section 423(b) Plan.

(x) “ Purchase Price ” means an amount equal to eighty-five percent (85%) of the Fair Market Value of a share of Common Stock on the Offering Date or on the Exercise Date, whichever is lower; provided however, that the Purchase Price may be determined for future Offering Periods pursuant to Section 20.

(y) “ Section 423(b) Plan ” means an employee stock purchase plan which is designed to meet the requirements set forth in Section 423(b) of the Code, as amended. The provisions of the Section 423(b) Plan shall be construed, administered and enforced in accordance with Section 423(b) of the Code.

(z) “ Subsidiary ” means a “subsidiary corporation,” whether now or hereafter existing, as defined in Section 424(f) of the Code.

(aa) “ Trading Day ” means a day on which the stock exchange or national market system on which shares of Common Stock are listed is open for trading.

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### 3. Eligibility.

(a) Offering Periods. Any individual who is an Eligible Employee on a given Offering Date will be eligible to participate in such Offering Period, subject to the requirements of Section 5.

(b) Limitations. Any provisions of the Plan to the contrary notwithstanding, no Eligible Employee will be granted an option under the Plan (i) to the extent that, immediately after the grant, such Eligible Employee (or any other person whose stock would be attributed to such Eligible Employee pursuant to Section 424(d) of the Code) would own capital stock of the Company or any Parent or Subsidiary of the Company and/or hold outstanding options to purchase such stock possessing five percent (5%) or more of the total combined voting power or value of all classes of the capital stock of the Company or of any Parent or Subsidiary of the Company, or (ii) to the extent that his or her rights to purchase stock under all employee stock purchase plans (as defined in Section 423 of the Code) of the Company or any Parent or Subsidiary of the Company accrues at a rate which exceeds twenty-five thousand dollars (\$25,000) worth of stock (determined at the Fair Market Value of the stock at the time such option is granted) for each calendar year in which such option is outstanding at any time.

4. Offering Periods and Purchase Periods. The Plan will be implemented by consecutive Offering Periods with a new Offering Period commencing on the first Trading Day on or after February 1 and August 1 each year, or on such other date as the Administrator will determine. The Administrator will have the power to change the duration of Offering Periods (including the commencement dates thereof) with respect to future offerings without stockholder approval if such change is announced to Eligible Employees at least five (5) days prior to the scheduled beginning of the first Offering Period to be affected thereafter. For purposes of the Plan, the Administrator may designate separate Offering Periods under the Plan in which Eligible Employees will participate and the provisions of the Plan will separately apply to each Offering Period. For purposes of clarity, the terms of each Offering Period need not be identical provided that if the Offering Period is being implemented pursuant to the provisions of the Plan that are intended to qualify under Section 423(b) of the Code, the terms of the Plan and the Offering Period together must satisfy Section 423 of the Code.

Each Offering Period shall consist of four (4) consecutive periods (each, a “Purchase Period”) of approximately six (6) months duration, or such other number or duration as the Administrator shall determine. A Purchase Period commencing (i) on the first Trading Day on or after February 1 shall terminate on the last Trading Day in the period ending on July 31 and (ii) on the first Trading Day on or after August 1 shall terminate on the last Trading Day in the period ending on January 31. Notwithstanding the foregoing, the Administrator may establish a different duration for one or more future Purchase Periods or different commencing or ending dates for such Purchase Periods.

5. Participation. An Eligible Employee may participate in the Plan pursuant to Section 3(a) by (i) submitting to the Company’s payroll office (or its designee), on or before a date prescribed by the Administrator prior to an applicable Offering Date, a properly completed subscription agreement authorizing payroll deductions in the form as specified by the Company for such purpose, or (ii) following an electronic or other enrollment procedure prescribed by the Company.

### 6. Payroll Deductions.

(a) At the time a participant enrolls in the Plan pursuant to Section 5, he or she will elect to have payroll deductions made on each pay day during the Offering Period for which the participant has enrolled in. Subject to Applicable Law, the payroll deduction amount for a participant shall not exceed ten percent (10%) of the Compensation which he or she receives on each pay day during the Offering Period. The Administrator, in its discretion, may decide that an Eligible Employee may submit contributions to the Non-Section 423(b) Plan by means other than payroll deductions. A participant’s subscription agreement will remain in effect for successive Offering Periods unless terminated as provided in Sections 10 and 11 hereof. An Eligible Employee that enrolls in the Plan after the Offering Date for an Offering Period shall not (i) be eligible to participate in such Offering Period but may participate in the subsequent Offering Period and (ii) have deductions withheld from such Eligible Employee’s payroll for purposes of participation in the Plan until after the commencement of such subsequent Offering Period.

(b) Payroll deductions for a participant will commence on the first pay day following the Offering Date and will end on the last pay day prior to the termination of such Offering Period to which such authorization is applicable, unless sooner terminated as provided in Sections 10 and 11 hereof.

(c) All payroll deductions made for a participant will be credited to his or her account under the Plan and will be withheld in whole percentages only. A participant may not make any additional payments into such account. No Eligible Employee shall be permitted to participate simultaneously in more than one Offering Period.

(d) Subject to Applicable Law, a participant may discontinue his or her participation in the Plan as provided in Section 10, or may decrease the rate of his or her payroll deductions during the Offering Period by (i) properly completing and submitting to the Company’s payroll office (or its designee), on or before a date prescribed by the Company prior to an applicable Exercise Date, a new subscription agreement authorizing the change in payroll deduction rate in the form provided by the Company for such purpose, or (ii) following an electronic or other procedure prescribed by the Company. If a participant has not followed such procedures to change the rate of payroll deductions, the rate of his or her payroll deductions will continue at the originally elected

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rate throughout the Offering Period and future Offering Periods (unless terminated as provided in Section 6(d)). The Company may, in its sole discretion, limit the nature and/or number of payroll deduction rate changes that may be made by participants during any Offering Period. Any change in payroll deduction rate made pursuant to this Section 6(d) will be effective as of the first full payroll period following five (5) business days after the date on which the change is made by the participant. If a participant decreases his or her payroll deductions to zero percent (0%), any subsequent election to increase his or her rate of payroll deductions will not take effect until the next Purchase Period (or the next Offering Period, if such increase is being made in the last Purchase Period of the Offering Period). If a participant elects to increase his or her payroll deductions during a Purchase Period, such election will not take effect until the next Purchase Period (or the next Offering Period, if such increase is being made in the last Purchase Period of the Offering Period).

(e) Notwithstanding the foregoing, to the extent necessary to comply with Section 423(b)(8) of the Code and Section 3(b) and Applicable Law, a participant's payroll deductions may be decreased to zero percent (0%) at any time during an Offering Period. Subject to Section 423(b)(8) of the Code and Section 3(b) hereof, payroll deductions will recommence at the rate originally elected by the participant prior to such reduction, unless terminated by the participant as provided in Section 10.

(f) At the time the option is exercised, in whole or in part, or at the time some or all of the Common Stock issued under the Plan is disposed of, the participant must make adequate provision for the Company's or Employer's federal, state, or any other tax withholding liability payable to any authority, national insurance, social security or other tax withholding obligations, if any, which arise upon the exercise of the option or the disposition of the Common Stock. At any time, the Company or the Employer may, but will not be obligated to, withhold from the participant's compensation the amount necessary for the Company or the Employer to meet applicable withholding obligations, including any withholding required to make available to the Company or the Employer any tax deductions or benefits attributable to the sale or early disposition of Common Stock by the participant.

7. Grant of Option. On the Offering Date of each Offering Period, each Eligible Employee participating in such Offering Period will be granted an option to purchase on each Exercise Date during such Offering Period (at the applicable Purchase Price) up to a number of shares of Common Stock determined by dividing such Eligible Employee's payroll deductions accumulated prior to such Exercise Date and retained in the Eligible Employee's account as of the Exercise Date by the applicable Purchase Price; provided that in no event will an Eligible Employee be permitted to purchase during any twelve (12) month period more than six thousand (6,000) shares of the Common Stock (subject to any adjustment pursuant to Section 19), and provided further that such purchase will be subject to the limitations set forth in Sections 3(b) and 13. The Eligible Employee may accept the grant of such option with respect to any Offering Period under the Plan, by electing to participate in the Plan in accordance with the requirements of Section 5. The Administrator may, for future Offering Periods, increase or decrease, in its absolute discretion, the maximum number of shares of Common Stock that each Eligible Employee may purchase during each Offering Period. Exercise of the option will occur as provided in Section 8, unless the participant has withdrawn pursuant to Sections 10 or 11. The option will expire on the last day of the Offering Period.

8. Exercise of Option.

(a) Unless a participant withdraws from the Plan as provided in Sections 10, 11 or otherwise, his or her option for the purchase of shares of Common Stock will be exercised automatically on the Exercise Date, and the maximum number of full shares of Common Stock subject to his or her option will be purchased for such participant at the applicable Purchase Price with the accumulated payroll deductions remaining in his or her account that have not been previously applied toward the purchase of Common Stock under this Plan. No fractional shares of Common Stock will be purchased; any payroll deductions accumulated in a participant's account which are not sufficient to purchase a full share of Common Stock will be retained in the participant's account for the subsequent Offering Period or Purchase Period, as applicable, subject to earlier withdrawal by the participant as provided in Sections 10 and 11. Any other funds left over in a participant's account after the Exercise Date will be returned to the participant. During a participant's lifetime, a participant's option to purchase shares hereunder is exercisable only by him or her. No shares of Common Stock shall be purchased on an Exercise Date on behalf of a participant whose participation in an Offering Period or the Plan has terminated before such Exercise Date.

(b) If the Administrator determines that, on a given Exercise Date, the number of shares of Common Stock with respect to which options are to be exercised may exceed the number of shares of Common Stock available for sale under the Plan on such Exercise Date, the Company will make a pro rata allocation of the shares of Common Stock available for purchase on such Exercise Date in as uniform a manner as will be practicable and as it will determine in its sole discretion to be equitable among all participants exercising options to purchase Common Stock on such Exercise Date, and the Administrator may continue all Offering Periods then in effect or terminate all Offering Periods then in effect pursuant to Section 20. The Company may make a pro rata allocation of the shares available on the Offering Date of any applicable Offering Period pursuant to the preceding sentence, notwithstanding any authorization of additional shares for issuance under the Plan by the Company's stockholders subsequent to such Offering Date.

9. Delivery. As soon as reasonably practicable after each Exercise Date on which a purchase of shares of Common Stock occurs, the Company will arrange the delivery to each participant the shares purchased upon exercise of his or her option in a form

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determined by the Company (in its sole discretion), subject to any rules established by the Administrator. No participant will have any voting, dividend, or other stockholder rights with respect to shares of Common Stock subject to any option granted under the Plan until such shares have been purchased and delivered to the participant as provided in this Section 9.

10. Withdrawal.

(a) A participant may withdraw all but not less than all the payroll deductions credited to his or her account and not yet used to exercise his or her option under the Plan at any time by (i) submitting to the Company's payroll office (or its designee) a written notice of withdrawal in the form prescribed by the Company for such purpose, or (ii) following an electronic or other withdrawal procedure prescribed by the Company. All of the participant's payroll deductions credited to his or her account will be paid to such participant promptly after receipt of notice of withdrawal and such participant's option for the Offering Period will be automatically terminated, and no further payroll deductions for the purchase of shares will be made for such Offering Period. If a participant withdraws from an Offering Period, payroll deductions will not resume at the beginning of the succeeding Offering Period, unless the participant re-enrolls in the Plan in accordance with the provisions of Section 5.

(b) A participant's withdrawal from an Offering Period will not have any effect upon his or her eligibility to participate in any similar plan which may hereafter be adopted by the Company or in succeeding Offering Periods which commence after the termination of the Offering Period from which the participant withdraws.

(c) Automatic Rollover. If the Fair Market Value of a share of Common Stock on an Exercise Date (other than the final Exercise Date of an Offering Period) is less than the Fair Market Value of a share of Common Stock on the Offering Date of an Offering Period (each such Offering Period, a "Terminating Offering Period"), then (i) each Terminating Offering Period shall terminate immediately at the end of such Exercise Date, but, for the avoidance of doubt, after giving effect to the exercise and purchase of shares of Common Stock for the Purchase Period, and (ii) each participant in such Terminating Offering Period shall be automatically enrolled in the Offering Period commencing on the first Trading Day immediately following such Exercise Date.

11. Termination of Eligibility. Upon a participant's ceasing to be an Eligible Employee, for any reason, he or she will be deemed to have elected to withdraw immediately from the Plan (and the participant's participation in the Plan shall terminate immediately) and the payroll deductions credited to such participant's account during the Offering Period but not yet used to purchase shares of Common Stock under the Plan will be returned to such participant or, in the case of his or her death, to the person or persons entitled thereto under Section 15, and such participant's option will be automatically terminated.

12. Interest. No interest will accrue on the payroll deductions of a participant in the Plan, unless required by Applicable Laws.

13. Stock.

(a) Subject to adjustment upon changes in capitalization of the Company as provided in Section 19 hereof, the maximum number of shares of Common Stock which will be made available for sale under the Plan will be thirty-five million (35,000,000) shares.

(b) Until the shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), a participant will only have the rights of an unsecured creditor with respect to such shares, and no right to vote or receive dividends or any other rights as a stockholder will exist with respect to such shares.

(c) Shares of Common Stock to be delivered to a participant under the Plan will be registered in the name of the participant or, at the sole discretion of the Company, in the name of the participant and his or her spouse.

14. Administration.

The Plan will be administered by the Board or a Committee appointed by the Board, which Committee will be constituted to comply with Applicable Laws. The Administrator will have full and exclusive discretionary authority to construe, interpret and apply the terms of the Plan, to determine eligibility and to adjudicate all disputed claims filed under the Plan. Every finding, decision and determination made by the Administrator will, to the full extent permitted by law, be final and binding upon all parties. Notwithstanding any provision to the contrary in this Plan, and, with respect to the Section 423(b) Plan, to the extent permissible under Code Section 423 and proposed or final Treasury Regulations promulgated thereunder (and other Internal Revenue Service guidance), the Administrator may adopt rules or procedures relating to the operation and administration of the Plan to accommodate the specific requirements of local laws and procedures for jurisdictions outside of the United States. Without limiting the generality of the foregoing, the Administrator is specifically authorized to adopt rules and procedures regarding handling payroll deductions, making of contributions to the Plan, defining eligible Compensation, establishment of bank or trust accounts to hold payroll deductions, conversion of local currency, obligations to pay payroll tax, determination of beneficiary designation requirements, withholding procedures and handling of stock certificates which vary with local requirements.

The Administrator may also adopt rules, procedures or sub-plans applicable to particular Subsidiaries or locations, which sub-plans may be designed to be outside the scope of Code Section 423. The rules of such sub-plans may take precedence over other provisions of this Plan, but unless otherwise superseded by the terms of such sub-plan, the provisions of this Plan shall govern

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the operation of such sub-plan. To the extent inconsistent with the requirements of Code Section 423, such sub-plan shall be considered part of the Non-Section 423(b) Plan, and rights granted thereunder shall not be considered to comply with Code Section 423.

15. Designation of Beneficiary.

(a) At the sole discretion of the Company, a participant may file a designation of a beneficiary who is to receive any shares of Common Stock and cash, if any, from the participant's account under the Plan in the event of such participant's death subsequent to an Exercise Date on which the option is exercised but prior to delivery to such participant of such shares and cash. In addition, a participant may file a designation of a beneficiary who is to receive any cash from the participant's account under the Plan in the event of such participant's death prior to exercise of the option. If a participant is married and the designated beneficiary is not the spouse, spousal consent will be required for such designation to be effective.

(b) Such designation of beneficiary may be changed by the participant at any time by notice in a form determined by the Company. In the event of the death of a participant and in the absence of a beneficiary validly designated under the Plan who is living at the time of such participant's death, the Company will deliver such shares and/or cash to the executor or administrator of the estate of the participant, or if no such executor or administrator has been appointed (to the knowledge of the Company), the Company, in its discretion, may deliver such shares and/or cash to the spouse or to any one or more dependents or relatives of the participant, or if no spouse, dependent or relative is known to the Company, then to such other person as the Company may designate.

(c) All beneficiary designations will be in such form and manner as the Company may designate from time to time.

16. Transferability. Neither payroll deductions credited to a participant's account nor any rights with regard to the exercise of an option or to receive shares of Common Stock under the Plan may be assigned, transferred, pledged or otherwise disposed of in any way (other than by will, the laws of descent and distribution or as provided in Section 15 hereof) by the participant. Any such attempt at assignment, transfer, pledge or other disposition will be without effect, except that the Company may treat such act as an election to withdraw funds from an Offering Period in accordance with Section 10 hereof.

17. Use of Funds. The Company may use all payroll deductions received or held by it under the Plan for any corporate purpose, and the Company will not be obligated to segregate such payroll deductions. Until shares of Common Stock are issued, participants will only have the rights of an unsecured creditor with respect to such shares.

18. Reports. Individual accounts will be maintained for each participant in the Plan. Statements of account will be given to participating Eligible Employees at least annually, which statements will set forth the amounts of payroll deductions, the Purchase Price, the number of shares of Common Stock purchased and the remaining cash balance, if any.

19. Adjustments, Dissolution, Liquidation, Merger or Change in Control.

(a) Adjustments. In the event that any dividend or other distribution (whether in the form of cash, Common Stock, other securities, or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, or exchange of Common Stock or other securities of the Company, or other change in the corporate structure of the Company affecting the Common Stock occurs, the Administrator, in order to prevent dilution or enlargement of the benefits or potential benefits intended to be made available under the Plan, will, in such manner as it may deem equitable, adjust the number and class of Common Stock which may be delivered under the Plan, the Purchase Price per share and the number of shares of Common Stock covered by each option under the Plan which has not yet been exercised, and the numerical limits of Sections 7 and 13.

(b) Dissolution or Liquidation. In the event of the proposed dissolution or liquidation of the Company, any Offering Period then in progress will be shortened by setting a New Exercise Date, and will terminate immediately prior to the consummation of such proposed dissolution or liquidation, unless provided otherwise by the Administrator. The New Exercise Date will be before the date of the Company's proposed dissolution or liquidation. The Administrator will notify each participant in writing, at least ten (10) business days prior to the New Exercise Date, that the Exercise Date for the participant's option has been changed to the New Exercise Date and that the participant's option will be exercised automatically on the New Exercise Date, unless prior to such date the participant has withdrawn from the Offering Period.

(c) Merger or Change in Control. In the event of a merger or Change in Control, each outstanding option will be assumed or an equivalent option substituted by the successor corporation or a Parent or Subsidiary of the successor corporation. In the event that the successor corporation refuses to assume or substitute for the option, the Offering Period with respect to which such option relates will be shortened by setting a New Exercise Date and will end on the New Exercise Date. The New Exercise Date will occur before the date of the Company's proposed merger or Change in Control. The Administrator will notify each participant in writing, at least ten (10) business days prior to the New Exercise Date, that the Exercise Date for the participant's option has been changed to the New Exercise Date and that the participant's option will be exercised automatically on the New Exercise Date, unless prior to such date the participant has withdrawn from the Offering Period.

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## 20. Amendment or Termination

(a) The Administrator, in its sole discretion, may amend, suspend, or terminate the Plan, or any part thereof, at any time and for any reason; provided, however, that adding additional shares available for sale under the Plan (other than pursuant to Section 19(a)) shall require stockholder approval. If the Plan is terminated, the Administrator, in its discretion, may elect to terminate all outstanding Offering Periods either immediately or upon completion of the purchase of shares of Common Stock on the next Exercise Date (which may be sooner than originally scheduled, if determined by the Administrator in its discretion), or may elect to permit Offering Periods to expire in accordance with their terms (and subject to any adjustment pursuant to Section 19). If the Offering Periods are terminated prior to expiration, all payroll deduction amounts then credited to participants' accounts which have not been used to purchase shares of Common Stock will be returned to the participants (without interest thereon, except as otherwise required under Applicable Laws) as soon as administratively practicable.

(b) Without stockholder consent and without limiting Section 20(a), to the extent permitted by applicable provisions of law, the Administrator will be entitled to amend the Offering Periods, determine the terms of new Offering Periods (including, but not limited to (i) the length of such Offering Periods, provided that no such Offering Period shall be more than 27 months, (ii) whether such Offering Periods will include one or more embedded Offering Periods and/or (iii) whether such Offering Periods will have an automatic restart or reset provision), provide for overlapping Offering Periods, limit the frequency and/or number of changes in the amount withheld during an Offering Period, establish the exchange ratio applicable to amounts withheld in a currency other than U.S. dollars, permit payroll withholding in excess of the amount designated by a participant in order to adjust for delays or mistakes in the Company's processing of properly completed withholding elections, establish reasonable waiting and adjustment periods and/or accounting and crediting procedures to ensure that amounts applied toward the purchase of Common Stock for each participant properly correspond with amounts withheld from the participant's Compensation, and establish such other limitations or procedures as the Administrator determines in its sole discretion advisable which are consistent with the Plan.

(c) In the event the Administrator determines that the ongoing operation of the Plan may result in unfavorable financial accounting consequences, the Administrator may, in its discretion and, to the extent necessary or desirable, modify, amend or terminate the Plan to reduce or eliminate such accounting consequence including, but not limited to:

- (i) amending the Plan to conform with the safe harbor definition under Statement of Financial Accounting Standards 123(R), including with respect to an Offering Period underway at the time;
- (ii) altering the Purchase Price for any Offering Period including an Offering Period underway at the time of the change in Purchase Price;
- (iii) shortening any Offering Period by setting a New Exercise Date, including an Offering Period underway at the time of the Administrator action;
- (iv) reducing the maximum percentage of Compensation a participant may elect to set aside as payroll deductions; and
- (v) reducing the maximum number of shares a participant may purchase during any Offering Period.

Such modifications or amendments will not require stockholder approval or the consent of any Plan participants.

21. Notices. All notices or other communications by a participant to the Company under or in connection with the Plan will be deemed to have been duly given when received in the form and manner specified by the Company at the location, or by the person, designated by the Company for the receipt thereof.

22. Conditions Upon Issuance of Shares. Shares of Common Stock will not be issued with respect to an option unless the exercise of such option and the issuance and delivery of such shares pursuant thereto will comply with all applicable provisions of law, domestic or foreign, including, without limitation, the Securities Act of 1933, as amended, the Exchange Act, the rules and regulations promulgated thereunder, and the requirements of any stock exchange upon which the shares may then be listed, and will be further subject to the approval of counsel for the Company with respect to such compliance.

As a condition to the exercise of an option, the Company may require the person exercising such option to represent and warrant at the time of any such exercise that the shares are being 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 required by any of the aforementioned applicable provisions of law.

23. Term of Plan. The Plan will continue in effect until February 25, 2028, unless sooner terminated under Section 20.

24. Reimbursement of Taxes. The Administrator shall have the discretion to require reimbursement from any Plan participant in full for any liability that the Company or the Employer incurs towards any tax paid or payable in respect to participant's participation in the Plan, the grant of any option pursuant to the Plan, or the exercise of participant's option, provided that such reimbursement is provided for in the subscription agreement. The Company may require security for such reimbursement of taxes as a precondition to participant participating in the Plan, the grant of any option, or the exercise of this option on behalf of Participant.

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The Administrator shall have the authority to approve additional documents or forms which may be requested by the Company for such security, collection or otherwise for reimbursement of such taxes to the Company.



## LETTER AMENDMENT

Dated as of November 24, 2017

To the banks, financial institutions  
and other institutional lenders  
(collectively, the “Lenders”) parties  
to the Credit Agreement referred to  
below and to Citibank, N.A., as agent  
(the “Agent”) for the Lenders

Ladies and Gentlemen:

We refer to the Credit Agreement dated as of June 27, 2014 (the “Credit Agreement”) among the undersigned and you. Capitalized terms not otherwise defined in this Letter Amendment have the same meanings as specified in the Credit Agreement.

The Credit Agreement is, effective as of the date of this Letter Amendment, hereby amended as follows:

(a) The following definition is added to Section 1.01 of the Credit Agreement in appropriate alphabetical order:

“Bail-In Action” has the meaning specified in Section 8.17.

(b) The definition of “Lender Insolvency Event” is amended immediately after the phrase “become the subject of” the phrase “a Bail-In Action or”.

(c) Section 5.01(h) of the Credit Agreement is amended by adding to the end thereof a new parenthetical proviso to read as follows:

(provided that, for purposes of clauses (i), (ii) and (iii) of this proviso, the 50% threshold in the defined term “Subsidiary” shall be deemed to be 40%)

(d) Section 5.02(b) of the Credit Agreement is amended in full to read as follows:

Mergers, Etc. Merge or consolidate with or into, or permit any of its Subsidiaries to merge or consolidate with or into, or convey, transfer, lease or otherwise dispose or permit any of its Subsidiaries to convey, transfer, lease or otherwise dispose of (whether in one transaction or in a series of transactions) all or substantially all of the assets (whether now owned or hereafter acquired) of the Borrower and its Subsidiaries, on a consolidated basis, to, any Person, except that any Subsidiary of the Borrower may merge or consolidate with or into, or dispose of assets (including by way of liquidation or dissolution) to, any other Subsidiary of the Borrower, and except that any Subsidiary of the Borrower may merge into or dispose of assets (including by way of liquidation or dissolution) to the Borrower, provided, in each case, that no Default shall have occurred and be continuing at the time of such proposed transaction or would result therefrom.

(e) A new Section 8.17 is added of the Credit Agreement to read as follows:

Section 8.17. Acknowledgement and Consent to Bail-In of EEA Financial Institutions. Notwithstanding anything to the contrary in any Loan Document or in any other agreement, arrangement or understanding among any such parties, each party hereto acknowledges that any liability of any EEA Financial Institution

arising under this Agreement, to the extent such liability is unsecured, may be subject to the Write-Down and Conversion Powers of an EEA Resolution Authority and agrees and consents to, and acknowledges and agrees to be bound by:

- (a) the application of any Write-Down and Conversion Powers by an EEA Resolution Authority to any such liabilities arising hereunder which may be payable to it by any party hereto that is an EEA Financial Institution; and
- (b) the effects of any Bail-In Action on any such liability, including, if applicable:
  - (i) a reduction in full or in part or cancellation of any such liability;
  - (ii) a conversion of all, or a portion of, such liability into shares or other instruments of ownership in such EEA Financial Institution, its parent undertaking, or a bridge institution that may be issued to it or otherwise conferred on it, and that such shares or other instruments of ownership will be accepted by it in lieu of any rights with respect to any such liability under this Agreement; or
  - (iii) the variation of the terms of such liability in connection with the exercise of the Write-Down and Conversion Powers of any EEA Resolution Authority.

The following terms, as used herein, have the following meanings:

“Bail-In Action” means the exercise of any Write-Down and Conversion Powers by the applicable EEA Resolution Authority in respect of any liability of an EEA Financial Institution.

“Bail-In Legislation” means, with respect to any EEA Member Country implementing Article 55 of Directive 2014/59/EU of the European Parliament and of the Council of the European Union, the implementing law for such EEA Member Country from time to time which is described in the EU Bail-In Legislation Schedule.

“EEA Financial Institution” means (a) any credit institution or investment firm established in any EEA Member Country which is subject to the supervision of an EEA Resolution Authority, (b) any entity established in an EEA Member Country which is a parent of an institution described in clause (a) of this definition, or (c) any financial institution established in an EEA Member Country which is a subsidiary of an institution described in clauses (a) or (b) of this definition and is subject to consolidated supervision with its parent.

“EEA Member Country” means any of the member states of the European Union, Iceland, Liechtenstein, and Norway.

“EEA Resolution Authority” means any public administrative authority or any Person entrusted with public administrative authority of any EEA Member Country (including any delegee) having responsibility for the resolution of any EEA Financial Institution.

“EU Bail-In Legislation Schedule” means the EU Bail-In Legislation Schedule published by the Loan Market Association (or any successor Person), as in effect from time to time.

“Loan Market Association” means the London trade association, which is the self-described authoritative voice of the syndicated loan markets in Europe, the Middle East and Africa.

“Write-Down and Conversion Powers” means, with respect to any EEA Resolution Authority, the write down and conversion powers of such EEA Resolution Authority from time to time under the Bail-In Legislation for the applicable EEA Member Country, which write-down and conversion powers are described in the EU Bail-In Legislation Schedule.

This Letter Amendment shall become effective as of the date first above written when, and only when, on or before December 31, 2017, the Agent shall have received counterparts of this Letter Amendment executed by the undersigned and the Required Lenders. This Letter Amendment is subject to the provisions of Section 8.01 of the Credit Agreement.

The Borrower represents and warrants that the representations and warranties contained in Section 4.01 of the Credit Agreement are correct on and as of the date hereof, except to the extent that any such representation or warranty is stated

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to relate to an earlier date, in which case such representation or warranty shall be true and correct on and as of such earlier date, before and after giving effect to this Letter Amendment, and no Default has occurred and is continuing.

On and after the effectiveness of this Letter Amendment, each reference in the Credit Agreement to "this Agreement", "hereunder", "hereof" or words of like import referring to the Credit Agreement, and each reference in the Notes to "the Credit Agreement", "thereunder", "thereof" or words of like import referring to the Credit Agreement, shall mean and be a reference to the Credit Agreement, as amended by this Letter Amendment.

The Credit Agreement and the Notes, as specifically amended by this Letter Amendment, are and shall continue to be in full force and effect and are hereby in all respects ratified and confirmed. The execution, delivery and effectiveness of this Letter Amendment shall not, except as expressly provided herein, operate as a waiver of any right, power or remedy of any Lender or the Agent under the Credit Agreement, nor constitute a waiver of any provision of the Credit Agreement.

If you agree to the terms and provisions hereof, please evidence such agreement by executing and returning a counterpart of this Letter Amendment to Susan L. Hobart, Shearman & Sterling LLP; email: [shobart@shearman.com](mailto:shobart@shearman.com).

This Letter Amendment may be executed in any number of counterparts and by different parties hereto in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement. Delivery of an executed counterpart of a signature page to this Letter Amendment by telecopier or other electronic delivery shall be effective as delivery of a manually executed counterpart of this Letter Amendment.

This Letter Amendment shall be governed by, and construed in accordance with, the laws of the State of New York.

Very Truly Yours,

JUNIPER NETWORK, INC.

By: /s/ Brian Martin

Name: Brian Martin

Title: *Senior Vice President, General Counsel*

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Agreed as of the date first above written:

CITIBANK, N.A.

as Agent and as Lender

By: /s/ Susan M. Olsen

Name: Susan M. Olsen

Title: *Vice President*

BANK OF AMERICA, N.A.

By: /s/ Christopher G. Fallone

Name: Christopher G. Fallone

Title: *Associate*

BARCLAYS BANK PLC

By: /s/ May Huang

Name: May Huang

Title: *Assistant Vice President*

BNP PARIBAS

By: /s/ Gregory R. Paul

Name: Gregory R. Paul

Title: *Managing Director*

By: /s/ Charles De Clapiers

Name: Charles De Clapiers

Title: *Director*

JPMORGAN CHASE BANK, N.A.

By: /s/ Caitlin Stewart

Name: Caitlin Stewart

Title: *Vice President*

MORGAN STANLEY BANK, N.A.

By: /s/ Donatus Anusionwu

Name: Donatus Anusionwu

Title: *Vice President*

THE BANK OF TOKYO-MISTUBISHI UFJ, LTD.

By: /s/ Matthew Antioco

Name: Matthew Antioco

Title: *Director*

WELLS FARGO BANK, N.A.

By: /s/ Patrick Levesque

Name: Patrick Levesque

Title: *Director*

**Juniper Networks, Inc.**  
**Statements of Computation of Ratio of Earnings to Fixed Charges**  
(In millions, except ratios)

	Years Ended December 31,				
	2017	2016	2015	2014	2013
Earnings for computation of ratio (*):					
Income (loss) before income taxes and before adjustment for noncontrolling interests in consolidated subsidiaries or income from equity investees	\$ 811.8	\$ 827.4	\$ 852.2	\$ (86.3)	\$ 518.4
Plus:					
Fixed charges	113.1	109.4	98.5	83.3	76.1
Amortization of capitalized interest	1.4	1.3	0.8	0.5	0.4
Less:					
Interest capitalized	—	(0.4)	(2.2)	(2.7)	(1.9)
<b>Total earnings (loss)</b>	<b>\$ 926.3</b>	<b>\$ 937.7</b>	<b>\$ 949.3</b>	<b>\$ (5.2)</b>	<b>\$ 593.0</b>
Fixed charges (*):					
Interest expense	\$ 99.2	\$ 95.7	\$ 81.9	\$ 66.0	\$ 58.1
Interest capitalized	—	0.4	2.2	2.7	1.9
Amortized premiums, discounts, and capitalized expenses relating to indebtedness	2.1	1.9	1.4	0.8	0.3
Estimate of interest within rental expense	11.8	11.4	13.0	13.8	15.8
<b>Total fixed charges</b>	<b>\$ 113.1</b>	<b>\$ 109.4</b>	<b>\$ 98.5</b>	<b>\$ 83.3</b>	<b>\$ 76.1</b>
Ratio of earnings (loss) to fixed charges	8.2x	8.6x	9.6x	(0.1)x	7.8x

(\*) For this ratio, both "earnings" and "fixed charges" conform to the calculation required by Item 503(d) of Regulation S-K.

## SUBSIDIARIES OF THE COMPANY AS OF DECEMBER 31, 2017\*

<u>NAME</u>	<u>JURISDICTION OF INCORPORATION</u>
Juniper Networks International B.V.	The Netherlands
Juniper Networks (US), Inc.	California, USA
Juniper Networks (Cayman) LP	Cayman Islands
Juniper Networks Systems Cayman Ltd.	Cayman Islands

\* All other subsidiaries would not in the aggregate constitute a “significant subsidiary” as defined in Regulation S-X.

**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. 333-221422, 333-218344, 333-216246, 333-213490, 333-211824, 333-211821, 333-204297, 333-183165, 333-151669, 333-176171, 333-132260, 333-118340, 333-57860, and 333-186884) of Juniper Networks, Inc.;

of our reports dated February 23, 2018 , 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, 2017.

/s/ Ernst & Young LLP

San Jose, California

February 23, 2018

**Certification of Principal 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 23, 2018

/s/ Rami Rahim  
Rami Rahim  
Chief Executive Officer  
(Principal Executive Officer)



**Certification of Principal 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 23, 2018

/s/ Kenneth B. Miller

Kenneth B. Miller

Executive Vice President, Chief Financial Officer

(Principal Financial Officer)

**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, 2017, 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 23, 2018

**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, 2017, 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 23, 2018