

2019

ANNUAL REPORT

Notice of 2020 Annual Meeting
of Stockholders and Proxy Statement

2020 Annual Meeting of Stockholders

Notice of Annual Meeting and Proxy Statement

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Notice of 2020 Annual Meeting of Stockholders



Time and Date 8:00 a.m., Pacific Time, on Thursday, May 14, 2020

Place* Juniper Networks, Inc.
1133 Innovation Way
Building A, Aristotle Conference Room
Sunnyvale, CA 94089

*As part of our precautions regarding the COVID-19 outbreak, we are planning for the possibility that the meeting may be held solely by means of remote communications. If we take this step, we will announce the decision to do so in advance, and details on how to participate will be posted on our website and filed with the SEC as additional proxy materials.

Notice of Annual Meeting of Stockholders

Items of Business

- (1) To elect ten directors to hold office until the next annual meeting of stockholders and until their respective successors have been elected and qualified;
- (2) To ratify the appointment of Ernst & Young LLP, as Juniper Networks, Inc.'s independent registered public accounting firm for the fiscal year ending December 31, 2020;
- (3) To hold a non-binding advisory vote on executive compensation;
- (4) To approve the amendment and restatement of the Juniper Networks, Inc. 2008 Employee Stock Purchase Plan to increase the number of shares available for issuance thereunder by 8,000,000 shares; and
- (5) To consider such other business as may properly come before the annual meeting.

Postponements and Adjournments

Any action on the items of business described above may be considered at the annual meeting at the time and on the date specified above or at any time and date to which the annual meeting may be properly postponed or adjourned.


Record Date

You are entitled to notice of, and to vote at, the annual meeting only if you were a Juniper Networks stockholder as of the close of business on March 19, 2020.

Meeting Admission

You are invited to attend the annual meeting if you were a Juniper Networks stockholder as of the close of business on the record date. You should be prepared to present valid government-issued photo identification for admittance. In addition, if you are a stockholder of record, your ownership will be verified against the list of stockholders of record on the record date prior to being admitted to the meeting. If you are not a stockholder of record but hold shares through a broker or nominee (i.e., in street name), you should provide proof of beneficial ownership as of the record date, such as your account statement as of the record date, a copy of any voting instruction card provided by your broker, trustee or nominee, or other similar evidence of ownership. If you do not provide photo identification or comply with the other procedures outlined above upon request, you may not be admitted to the annual meeting.

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The annual meeting will begin promptly at 8:00 a.m., Pacific Time. Check-in will begin at 7:30 a.m., Pacific Time, and you should allow ample time for the check-in procedures.

The Notice of Internet Availability of Proxy Materials is being mailed, and the attached proxy statement is being made available, to our stockholders on or about April 2, 2020.

Voting

Your vote is very important. Whether or not you plan to attend the annual meeting, we encourage you to read this proxy statement and vote your shares as soon as possible.

If you received notice of how to access the proxy materials over the Internet, you may vote by telephone or over the Internet. If you received a proxy card or voting instruction card and other proxy materials by mail, you may submit your proxy card or voting instruction card for the annual meeting by completing, signing, dating and returning your proxy card or voting instruction card in the pre-addressed envelope provided, or by using the telephone or the Internet. For specific instructions on how to vote your shares, please refer to the section entitled “General Information” of this proxy statement and the instructions on the proxy card or voting instruction card or that are provided by email or over the Internet.

By Order of the Board of Directors,

Brian Michael Martin

Senior Vice President,
General Counsel and Secretary

April 2, 2020

Important Notice Regarding the Availability of Proxy Materials for the Stockholder Meeting to Be Held on May 14, 2020

The proxy statement, form of proxy and our Annual Report on Form 10-K for the fiscal year ended December 31, 2019 are available at www.proxyvote.com

Proxy Statement Summary

This summary highlights selected information about the items to be voted on at the annual meeting and information contained elsewhere in this proxy statement. This summary does not contain all of the information that you should consider in deciding how to vote, and you should read the entire proxy statement carefully before voting. The information contained on juniper.net or any other website referred to herein is provided for reference only and is not incorporated by reference into this proxy statement.

Information about our 2020 Annual Meeting of Stockholders

Date and time: Thursday, May 14, 2020 at 8:00 a.m. Pacific Time

Location:* Juniper Networks, Inc.
1133 Innovation Way
Building A, Aristotle Conference Room
Sunnyvale, CA 94089

*As part of our precautions regarding the COVID-19 outbreak, we are planning for the possibility that the meeting may be held solely by means of remote communications. If we take this step, we will announce the decision to do so in advance, and details on how to participate will be posted on our website and filed with the SEC as additional proxy materials.

Record Date: March 19, 2020

Voting Matters

		More Information	Board Recommendation	Reasons for Recommendation
Proposal 1	To elect ten directors to hold office until the next annual meeting of stockholders and until their respective successors have been elected and qualified.	Page 17	✓ FOR each nominee	The Board and its Nominating and Corporate Governance Committee believe the Board nominees possess the skills, experience and diversity to effectively monitor performance, provide oversight and advise management on our long-term strategy.
Proposal 2	To ratify the appointment of Ernst & Young LLP as Juniper Networks, Inc.'s independent registered public accounting firm for the fiscal year ending December 31, 2020.	Page 23	✓ FOR	Based on the Audit Committee's assessment of Ernst & Young LLP's qualifications and performance, the Board believes that retention of Ernst & Young LLP for the fiscal year ending December 31, 2020 is in our stockholder's best interests.
Proposal 3	To hold a non-binding advisory vote regarding executive compensation.	Page 27	✓ FOR	Our executive compensation programs demonstrate the evolution of our pay for performance philosophy and reflect the input of stockholders from our outreach efforts.
Proposal 4	To approve the amendment and restatement of the Juniper Networks, Inc. 2008 Employee Stock Purchase Plan to increase the number of shares available for issuance thereunder by 8,000,000 shares.	Page 28	✓ FOR	Our 2008 Employee Stock Purchase Plan is designed to provide eligible employees with the opportunity to purchase shares of our common stock through accumulated payroll deductions. The plan is designed to align the interests of our employees with those of our stockholders by encouraging employees to invest in our common stock, and to help our employees share in the Company's success.

We will also consider any other matters that may properly be brought before the 2020 annual meeting of stockholders (and any postponements or adjournments thereof).

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Corporate Governance Highlights

We are committed to having sound corporate governance principles that we believe serve the best interest of all our stockholders. Some highlights of our corporate governance practices are listed below. In addition, we regularly evaluate our practices against prevailing best practices and emerging and evolving topics identified through outreach, current literature and corporate governance organizations.

Annual election of all directors	✓	Commitment to Board refreshment (including the appointment of three new directors in 2019)	✓
Majority voting and director resignation policy for directors in uncontested elections	✓	Annual Board, committee and director evaluations	✓
Proxy access right for stockholders	✓	Regular focus on management succession planning	✓
9 independent directors out of 10 director nominees	✓	Regular focus on director succession planning	✓
Separate chairman, lead independent director and CEO	✓	Regular executive sessions of independent directors	✓
Chairman is an independent director	✓	Risk oversight by full Board and committees	✓
Audit Committee, Compensation Committee and Nominating and Corporate Governance Committee are 100% independent	✓	Stockholder outreach/engagement program	✓
44% of our current independent directors are diverse	✓	Robust stock ownership requirements for directors and named executive officers	✓
Each director attended at least 75% of Board and committee meetings	✓	Prohibition against director and officer hedging and pledging of Juniper Networks stock and "claw-back" policy for any overpayment of incentive compensation awards	✓
No "over-boarding"	✓	Our Compensation Committee uses an independent compensation consultant	✓
2 of the 3 members of our Audit Committee are "audit committee financial experts" under SEC rules	✓	Annual publication of a corporate diversity update	✓

Directors and Director Nominees

The names of our directors and director nominees and their ages, positions, qualifications and experience are as of the date this proxy statement was filed with the U.S. Securities and Exchange Commission (the "SEC").



GARY DAICHENDT
Age: 68 | Director Since 2014
Compensation Committee
Committee Chair



ANNE DELSANTO
Age: 56 | Director Since 2019
Nominating and Corporate
Governance Committee



KEVIN DENUCCIO
Age: 60 | Director Since 2014
Compensation Committee



JAMES DOLCE
Age: 57 | Director Since 2015
Compensation Committee



CHRISTINE GORJANC
Age: 63 | Director Since 2019
Audit Committee



JANET HAUGEN
Age: 61 | Director Since 2019
Audit Committee
Committee Chair



SCOTT KRIENS
CHAIRMAN
Age: 62 | Director Since 1996
Committees: None



RAHUL MERCHANT
Age: 63 | Director Since 2015
Audit Committee



RAMI RAHIM, CEO
Age: 49 | Director Since 2014
Committees: None



WILLIAM STENSRUD
Age: 69 | Director Since 1996
Nominating and Corporate
Governance Committee
Committee Chair

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Active Stockholder Engagement

Since our 2019 annual meeting of stockholders, we proactively sought meetings with stockholders who in the aggregate hold over **55%** of our shares outstanding, which resulted in Juniper Networks meeting with stockholders who in the aggregate hold approximately **20%** of our shares outstanding. For more information on our stockholder engagement efforts, please see the “Stockholder Engagement” section of this proxy statement.

Executive Compensation Highlights

Our executive compensation program is designed to hold our executives accountable for results over the long term and reward them for consistent strong performance. Our Compensation Committee strives to design a fair and balanced approach to our executive compensation programs by providing for short and long-term focused programs that emphasize a pay-for-performance philosophy.

Demonstrating our continued commitment to align compensation to overall corporate performance, in 2019, 91% of our Chief Executive Officer’s total target direct compensation was “variable” compensation (in the form of annual cash bonus incentive target opportunity and equity awards). Further, our Chief Executive Officer’s target direct compensation compared to his realizable pay outcome demonstrates the strong “pay-for-performance” philosophy instituted by our Compensation Committee.

As a result of the Compensation Committee’s evaluation of the results of the “Say-on-Pay” advisory vote at our 2019 annual meeting of stockholders, the feedback received from our stockholder engagement and the advice from the Committee’s independent compensation consultant, the Compensation Committee did not make any significant changes to the design of our executive compensation and equity programs in 2019. Based on feedback from stockholders in 2019, the Compensation Committee continued to grant performance share awards based upon relative total shareholder return and focus on prudently managing our equity burn-rate. We encourage you to also review the full “Executive Compensation” section of this proxy statement, including the “Compensation Discussion and Analysis,” for additional details.

Corporate Governance Principles and Board Matters

Juniper Networks, Inc., a Delaware corporation (“Juniper Networks,” “Juniper”, the “Company,” “we” or “our”), is committed to having sound corporate governance principles. Having such principles is essential to running our business efficiently and maintaining our integrity in the marketplace. Our Corporate Governance Standards and Worldwide Code of Business Conduct and Ethics, which are applicable to all Juniper Networks employees, officers and directors, are available at <http://investor.juniper.net/investor-relations/corporate-governance/default.aspx>. Our Worldwide Code of Business Conduct and Ethics complies with the rules of the SEC and the listing standards of the New York Stock Exchange (“NYSE”). You may obtain free copies of these documents by contacting the Investor Relations Department at our corporate offices by calling 1-408-745-2000 or by sending an e-mail message to investor-relations@juniper.net. We intend to satisfy the disclosure requirement under Item 5.05 of Form 8-K regarding any amendment to, or waiver from, a provision of our code of ethics by posting such information on our website, at the address and location specified above.

Juniper Networks has adopted procedures for raising concerns related to accounting and auditing matters in compliance with the listing standards of the NYSE. The Company has established a Corporate Compliance Committee which is comprised of the Company’s Chief Financial Officer, General Counsel, Chief Compliance Officer, Chief Human Resources Officer, Chief Customer Officer, Chief Accounting Officer and the Head of Internal Audit. Concerns relating to accounting, legal, internal controls or auditing matters may be brought to the attention of either the Corporate Compliance Committee, its members individually, the Audit Committee directly, or an anonymous reporting channel maintained by the Company. Concerns are handled in accordance with procedures established with respect to such matters under our Reporting Ethics Concerns Policy. For information on how to contact the Audit Committee directly, please see the section entitled “*Communications with the Board*” of this proxy statement.

Board Independence

Our Board is independent:

- **9** of **10** director nominees are independent
- We have both an independent Chairman of the Board and a Lead Independent Director
- Audit Committee, Compensation Committee and Nominating and Corporate Governance Committee are **100%** independent

The NYSE’s listing standards and our Corporate Governance Standards provide that a majority of our Board of Directors (the “Board”) must be “independent.” Under the NYSE’s listing standards, no director will be considered independent unless our Board affirmatively determines that such director has no material relationship with the Company (either directly or as a partner, stockholder or officer of an organization that has a relationship with the Company). Our Board reviews the independence of its members annually. Our Board has determined that, except for Rami Rahim who is an employee of the Company, (i) none of the current directors have a material relationship with Juniper Networks, and (ii) that each of our current director nominees whose names are set forth below in Proposal No. 1 Election of Directors, and Mr. Calderoni and Ms. Johnson, who served on the Board in 2019, are independent within the meaning of the NYSE director independence standards.

The Board has determined that each of the members of the Audit Committee, Compensation Committee and Nominating and Corporate Governance Committee of the Board has no material relationship with Juniper Networks and is “independent” within the meaning of the NYSE director independence standards, including in the case of the members of the Audit Committee and the Compensation Committee, which are subject to the heightened “independence” standard required for such committee members set forth in the applicable Securities and Exchange Commission (“SEC”) and NYSE rules. The members of the Compensation Committee are also non-employee directors as defined in Rule 16b-3 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”).

In making the determination of the independence of our directors, the Board considered whether there were any transactions between Juniper Networks and entities associated with our directors or members of their immediate families, including transactions involving Juniper Networks, investments in companies in which our directors or their affiliated

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entities are stockholders and payments made to or from companies and entities in the ordinary course of business where our directors or members of their immediate families serve as partners, directors or as a member of the executive management of the other party to the transaction, and did not identify any such transactions.

Board Structure and Committee Composition

Annual Election and Majority Voting Standard

Each director serves for a term expiring at the next annual meeting of stockholders and until his or her successor is duly elected and qualified, or until his or her earlier death, resignation or removal.

Our bylaws provide that each director nominee must receive the majority of the votes cast with respect to his or her election (i.e., the number of shares voted "FOR" a director nominee must exceed the number of votes cast "AGAINST" that director nominee). However, in the event that a stockholder has properly nominated a person or persons for election to the board and such nomination is not timely withdrawn prior to the first mailing of our notice of a meeting where directors are to be elected, then each director nominee shall be elected by a plurality of the votes cast.

If a director nominee who is currently serving as a director is not re-elected at the annual meeting, under Delaware law, the director will continue to serve on the Board as a "holdover director." However, pursuant to our Corporate Governance Standards, as a condition to re-nomination, each incumbent director is required to submit a conditional resignation from the Board in writing to the Chair of the Nominating and Corporate Governance Committee of the Board. If the director nominee fails to receive the requisite vote contemplated by our bylaws, the Nominating and Corporate Governance Committee will make a recommendation to the Board as to whether to accept or reject the resignation, or whether other action should be taken. The Board will act on the Nominating and Corporate Governance Committee's recommendation and publicly disclose its decision and the rationale behind it within 90 days from the date of the certification of the election results. Thus, the resignation will become effective only if the director nominee fails to receive a majority of votes cast for re-election, and the Board accepts the resignation.

Proxy Access

The Company's bylaws provide that under certain circumstances, a stockholder, or group of up to 20 stockholders, who have maintained continuous ownership of at least three percent (3%) of our common stock for at least three years prior to such nomination may nominate and include a specified number of director nominees in our annual meeting proxy statement. The number of stockholder nominated candidates appearing in our proxy statement cannot exceed the greater of two or twenty percent (20%) of the aggregate number of directors then serving on the Board (rounding down). For a description of the process for nominating directors, see the information under the "*General Information — Stockholder Proposals and Nominations*" section of this proxy statement.

Board Committees

The Board has a standing Audit Committee, Compensation Committee, and Nominating and Corporate Governance Committee. The membership and principal function of each of these committees are described below. Each of these committees operates under a written charter adopted by the Board. The charters of these committees are available on Juniper Networks' website at <http://investor.juniper.net/investor-relations/corporate-governance/default.aspx>. The Board may add new committees as it deems advisable for purposes of fulfilling its primary responsibilities.

The following table shows all persons who served on the Board and the Audit Committee, Compensation Committee, and Nominating and Corporate Governance Committee, and the number of meetings for the Board and such committees during 2019:

Name of Director	Board	Audit Committee	Compensation Committee	Nominating and Corporate Governance Committee
<i>Non-Employee Directors:</i>				
Robert M. Calderoni ⁽¹⁾⁽²⁾	X	CHAIR		
Gary Daichendt	X		CHAIR	
Anne DelSanto ⁽³⁾	X			X
Kevin DeNuccio	X		X	
James Dolce	X		X	
Christine Gorjanc ⁽¹⁾⁽⁴⁾	X	X		
Janet Haugen ⁽¹⁾⁽⁴⁾⁽⁶⁾	X	CHAIR		
Mercedes Johnson ⁽¹⁾⁽²⁾	X	X		X
Scott Kriens	CHAIR			
Rahul Merchant ⁽⁵⁾	X	CHAIR		
William Stensrud	X			CHAIR
<i>Employee Director:</i>				
Rami Rahim	X			
Number of Meetings in Fiscal 2019	8	15	8	5

⁽¹⁾ The Board has determined that Mr. Calderoni, Ms. Johnson, Ms. Gorjanc and Ms. Haugen is each an “audit committee financial expert” within the meaning of the rules promulgated by the SEC.

⁽²⁾ Mr. Calderoni and Ms. Johnson left the Board on May 14, 2019.

⁽³⁾ Ms. DelSanto joined the Board on March 13, 2019.

⁽⁴⁾ Ms. Gorjanc and Ms. Haugen joined the Board on May 14, 2019.

⁽⁵⁾ Mr. Merchant became the chair of the Audit Committee on May 14, 2019.

⁽⁶⁾ Ms. Haugen became the chair of the Audit Committee on February 20, 2020.

Audit Committee

The Audit Committee, among other duties, assists the Board in fulfilling its responsibilities for general oversight of the:

- integrity of the Company’s financial statements;
- compliance with the Company’s legal and regulatory requirements;
- qualifications, independence and performance of the Company’s independent registered public accounting firm,
- performance of the Company’s internal audit function; and
- Company’s internal accounting and financial controls, as well as risk management policies.

The Audit Committee works closely with management as well as our independent registered public accounting firm to fulfill its obligations. In addition, to further strengthen the Audit Committee’s oversight responsibilities, each of the Vice President of Internal Audit and the Vice President and Chief Compliance Officer report directly to the Audit Committee, and the Company’s Chief Accounting Officer meets in executive sessions with the Audit Committee. The Audit Committee has the authority to receive appropriate funding from the Company for obtaining advice and assistance from outside legal, accounting or other advisors as the Audit Committee deems necessary to carry out its duties.

No member of the Audit Committee may serve on the audit committee of more than three public companies, including the Company, unless the Board determines that such simultaneous service would not impair the ability of such member to effectively serve on the Audit Committee, and discloses such determination in accordance with NYSE requirements.

Compensation Committee

The Compensation Committee discharges the Board’s responsibilities relating to the compensation of our executive officers and Board members, including:

- conducting an evaluation of the Chief Executive Officer with the entire Board;

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- reviewing the Compensation Discussion and Analysis and preparing an annual report on executive compensation for inclusion in our proxy statement;
- approving and evaluating executive officer compensation plans, policies and programs;
- evaluating and making recommendations regarding Board compensation on an annual basis; and
- conducting an annual compensation risk assessment to consider whether the Company's incentive compensation policies and programs contain incentives for executive officers to take risks in performing their duties that are reasonably likely to have a material adverse effect on the Company.

The Compensation Committee also has responsibility for reviewing the overall equity award practices of the Company. The Compensation Committee has the authority to receive appropriate funding from the Company for obtaining advice and assistance from outside legal, compensation consultants or other advisors as the Compensation Committee deems necessary to carry out its duties.

Nominating and Corporate Governance Committee

The Nominating and Corporate Governance Committee:

- seeks and recommends the nomination of individuals qualified to become Board members, consistent with criteria approved by the Board;
- reviews and makes recommendations regarding the composition of the Board;
- oversees the governance of the Board, including establishing and overseeing compliance with our Corporate Governance Standards; and
- identifies best practices and recommends corporate governance principles, including giving proper attention to and effectively responding to stockholder concerns regarding corporate governance.

Board Leadership Structure and Role of the Lead Independent Director

The Board's leadership structure is comprised of an independent Chairman of the Board and a Lead Independent Director who is appointed, and at least annually reaffirmed, by at least a majority of Juniper Networks' independent directors. Mr. Kriens has served as Chairman of the Board since 1996 and served as Chief Executive Officer of the Company from 1996 to 2008. Since March 2015, Mr. Daichendt has served as the Lead Independent Director.

The duties of the Chairman of the Board, Lead Independent Director and Chief Executive Officer are set forth in the table below:

	Chairman of the Board	Lead Independent Director	CEO
Duties	<ul style="list-style-type: none"> • Sets the agenda of Board meetings • Presides over meetings of the full Board • Contributes to Board governance and Board processes • Communicates with all directors on key issues and concerns outside of Board meetings • Presides over meetings of stockholders 	<ul style="list-style-type: none"> • Provides the Chairman with input regarding Board meetings scheduling and agendas • Makes recommendations to the Chairman regarding the retention of Board consultants • Presides over executive sessions of the Board if and when the Chairman is not independent under applicable standards • Acts as a liaison between the independent directors and the Chairman and CEO on sensitive issues 	<ul style="list-style-type: none"> • Sets strategic direction for the Company • Creates and implements the Company's vision and mission • Leads the affairs of the Company, subject to the overall direction and supervision of the Board and its committees and subject to such powers as reserved by the Board and its committees

The Board believes that this overall structure of a separate Chairman of the Board and Chief Executive Officer, combined with a Lead Independent Director, results in an effective balancing of responsibilities, experience and independent perspectives that meets the current corporate governance needs and oversight responsibilities of the Board. The Board also believes that this structure benefits the Company by enabling the Chief Executive Officer to focus on

strategic matters while the Chairman of the Board focuses on Board process and governance matters. The structure also allows the Company to benefit from Mr. Kriens' experience as a former Chief Executive Officer of the Company.

The independent directors of the Company meet at least quarterly in executive sessions. Executive sessions of the independent directors are chaired by the Lead Independent Director if and when the Chairman is not "independent" under applicable standards. The executive sessions include discussions and recommendations regarding guidance to be provided to the Chief Executive Officer and such other topics as the independent directors may determine.

Identification and Evaluation of Nominees for Director

The Nominating and Corporate Governance Committee's criteria and process for evaluating and identifying the candidates that it recommends to the full Board for selection as director nominees are as follows:

- The committee regularly, and at least annually, reviews the composition and size of the Board, and whether any vacancies on the Board are expected due to retirement or otherwise.
- The committee reviews the qualifications of any candidates who have been properly recommended or nominated by a stockholder other than through our proxy access bylaw, as well as those candidates who have been identified by management, individual members of the Board or, if the committee determines, a search firm. Such review may, in the committee's discretion, include a review solely of information provided to the committee or may also include discussions with persons familiar with the candidate, an interview with the candidate or other actions that the committee deems proper. Please see the information under the "*General Meeting — Stockholder Proposals and Nominations*" section of this proxy statement for more information on stockholder recommendations and nominations of director candidates.
- The committee conducts an annual evaluation of the performance of individual directors, the Board as a whole, and each of the Board's standing committees, including an evaluation of the qualifications of individual members of the Board and its committees. The evaluation is conducted via oral interviews by a third-party legal advisor selected by the committee, which uses as a basis for discussion, a list of questions that are provided to each director in advance. The results of the evaluation and any recommendations for improvement are provided orally to the committee by the third-party legal advisor, and to the Board and the other standing committees of the Board either by the chair of the committee or the third-party legal advisor.
- The committee considers the suitability of each director candidate, including the current members of the Board, in light of the current size and composition of the Board. Although the committee does not have a specific policy on diversity, in evaluating the qualifications of the candidates, the committee considers many factors, including issues of character, judgment, independence, age, education, expertise, diversity of experience, length of service, other commitments and ability to serve on committees of the Board, as well as other individual qualities and attributes that contribute to board heterogeneity, including characteristics such as race, gender, cultural background and national origin. The committee believes that diversity is important as a variety of points of view can help contribute to a more effective decision-making process. When recommending candidates, the committee strives to select candidates that have diverse perspectives, experiences and expertise such that the skillset of each candidate compliments those of other directors and nominees to create a balanced Board with diverse viewpoints and expertise, which together will contribute to the Board's effectiveness as a whole. The committee evaluates the factors discussed above, among others, and does not assign any particular weighting or priority to any of these factors. The committee considers each individual candidate in the context of the current perceived needs of the Board as a whole. While the committee has not established specific minimum qualifications for director candidates, the committee believes that candidates and director nominees must reflect a Board that is comprised of directors who (i) are predominantly independent, (ii) possess high personal and professional ethics and integrity, (iii) have qualifications that will increase overall Board effectiveness, (iv) meet requirements of applicable rules and regulations, such as financial literacy or financial expertise with respect to Audit Committee members, and (v) have a willingness to represent the best interests of all stockholders of the Company.
- The committee also considers the interests and plans of individual directors and their interest in continuing as members of the Board.
- In evaluating and identifying candidates, the committee has the authority to retain and terminate any third-party search firm that is used to identify director candidates. It also has the authority to approve the fees and retention terms of any search firm.

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- After such review and consideration, the committee recommends to the Board director candidates to be nominated by the Board for election to the Board. The Board reviews the committee's recommendations and approves final nominations.

In addition to the foregoing process, the committee and the Board also takes into consideration the perspectives of major stockholders regarding Board composition and corporate governance matters and incorporates those perspectives into its overall identification and selection process.

In May 2019, Christine Gorjanc and Janet Haugen were appointed to the Board. They were each initially identified and recommended by an independent third-party search firm. They were then considered by the Nominating and Corporate Governance Committee, which recommended their appointment to the full Board for approval.

Management Succession Planning

Our Board believes that the directors and the Chief Executive Officer should collaborate on management succession planning and that the entire Board should be involved in the critical aspects of the succession planning process for our Chief Executive Officer, including establishing selection criteria that reflect our business strategies, identifying and evaluating potential internal candidates, and making key management succession decisions. Management succession is regularly discussed by the directors in Board meetings and in executive sessions of the Board.

In addition, our Board annually conducts a detailed review of the Company's leadership pipeline, talent strategies and succession plans for key executive positions. Directors become familiar with potential successors for key management positions through various means, including the comprehensive annual talent review, Board dinners and presentations and informal meetings.

Board's Role in Risk Oversight

The Board recognizes that risk is inherent in the Company's pursuit and achievement of our strategic and operating objectives. The Board has oversight responsibility for the Company's risk management framework, which is designed to: (i) identify, assess, prioritize, manage and communicate risks to which the Company is exposed in our business, and (ii) foster a corporate culture of integrity. Consistent with this approach, the Board regularly reviews, consults and discusses with management on strategic direction, challenges and risks faced by the Company, and annual and quarterly financial results and forecasts to fulfill its oversight responsibility.

In addition, the Board has tasked designated committees of the Board with oversight of certain categories of risk management:

- The Audit Committee oversees management of financial risks, and reviews and provides oversight of the Company's risk management program and compliance and financial risks. The Audit Committee also reviews the Company's processes and procedures around managing cybersecurity risks and incidents.
- The Compensation Committee is responsible for overseeing the management of risks relating to and arising from the Company's executive and employee compensation plans and arrangements.
- The Nominating and Corporate Governance Committee assists the Board in fulfilling its oversight responsibilities with respect to the management of risks associated with Board organization, membership and structure, succession planning for our directors and executive officers, and corporate governance. These committees provide regular reports on the Company's risk management efforts to the full Board.

Management is responsible for the direct management and oversight of strategic, operational, legal/compliance, cybersecurity and financial risks, and the Company's formal program to continually and proactively identify, assess, prioritize and mitigate enterprise risk. Critical risks are managed through cross-functional participation in senior level corporate compliance and risk management committees. The corporate compliance committee focuses on legal and regulatory compliance risks, and the risk management committee focuses on operational and strategic risks.

Annually, management reviews with the Board a comprehensive assessment of risks for the Company based upon the COSO Integrated Risk Management Framework methodology. In addition, throughout the year, the Chief Executive Officer and other members of senior management review with the Board key strategic and operational issues, opportunities, and risks. Further, both the Board and the Audit Committee receive reports and presentations from

management on the Company's risk mitigation programs and efforts, cybersecurity programs, compliance programs and efforts, investment policy and practices and the results of various internal audit projects.

In connection with the recent COVID-19 outbreak, the Board, together with the Audit Committee, the Compensation Committee, and management, has overseen our efforts to mitigate financial and human capital management risk exposures associated with the outbreak.

Corporate Citizenship and Sustainability

Our Corporate Citizenship and Sustainability ("CCS") strategy at a glance:

- Positively impact and contribute to our global community of customers, partners, and employees, as well as emerging markets and areas in need
- Foster a more inclusive and diverse community for Juniper employees
- Conduct business ethically, with integrity and good corporate governance
- Meet or exceed international standards for product design, production, and waste reduction

Juniper Networks believes in building more than a network. We are committed to being responsible corporate citizens and encouraging responsible practices in our operations and throughout our worldwide supply chain — ensuring that working conditions are safe, workers are treated with respect and dignity, and that processes and products are environmentally responsible. We believe in conducting business ethically, with integrity and good corporate governance, wherever we do business. We also strive to positively affect and contribute to the global community of customers, partners, employees, emerging markets, and areas in need.


We utilize a materiality and risk-based approach to help focus our resources and attention on those areas that we believe we can most meaningfully impact Juniper, and have a meaningful impact beyond Juniper. Our CCS strategy is organized into three pillars — Corporate Governance and Culture, Environmental Sustainability, and People and Communities and is focused on those issues that we believe are material to our business and important to our stakeholders.

CORPORATE CITIZENSHIP AND SUSTAINABILITY STRATEGY



Our Corporate Social Responsibility ("CSR") Executive Committee is comprised of senior executives representing the various business functions across Juniper. The Committee oversees and directs the vision and strategy of our CSR efforts, and ensures alignment with corporate priorities. At the Board level, our Nominating & Corporate Governance Committee receives at least an annual report regarding the CCS strategy and the progress made across the various pillars. In addition, our Compensation Committee receives an annual report on the status of specific initiatives related to our People and Communities pillar, namely those related to employee diversity.

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We maintain an ongoing and inclusive dialogue with our internal and external stakeholders in which we communicate our progress on important topics and collect valuable insights and feedback, which help us assess both potential risks and opportunities and improve how we manage, refine and respond to material issues. As part of Juniper's stakeholder engagement model, Juniper is an active participant in a variety of government and industry organizations, such as the Responsible Business Alliance, Responsible Minerals Initiative, and CDP Supply Chain. Through our memberships, we promote the development and adoption of collaborative approaches in applying leading standards and practices in the Information Communication and Technology sector and throughout the supply chain, as well as to harmonize regulations.

Our commitments to and expectations of our employees and business partners for adhering to high ethical standards and compliance with laws are articulated through our Worldwide Code of Business Conduct and Ethics, and our Business Partner Code of Conduct.

Responsible Choices for an Inclusive and Diverse Workplace

We are creating change at Juniper Networks by building a more inclusive and diverse community. As a company committed to innovation and representing diversity in a myriad of ways — including race, ethnicity, age, background, perspectives, tenure, work style, and sexual orientation — we believe that diversity is a competitive asset. At our core, we believe excellence depends on seeking out diverse ideas and fostering a culture where all employees are actively engaged.

Creating a highly diverse and inclusive workplace, where everyone is empowered to do their best work, starts with transparency and accountability. Our commitment to this work starts with our Board and carries through to our Chief Executive Officer, our executive officers, and throughout our Company.

We track data regularly to enable us to monitor our progress against our strategy of diversifying our talent base, creating an environment where all employees feel included and valued, and driving accountability across the organization. We believe that honesty and communication are foundational to our success as a company, and to improve transparency in our inclusion and diversity efforts, we have shared our workforce data on our website at <https://www.juniper.net/us/en/company/inclusion-diversity/>.

Responsible Choices for the Environment

As part of our corporate citizenship and sustainability strategy, our environmental policy outlines our commitment to conducting business in an environmentally responsible way.

We maintain a steady focus on reducing our energy consumption, carbon footprint, and resource use in our facilities. Juniper has continued to increase the percentage of low carbon and renewable energy fuel sources in our portfolio. We completed the migration of a portion of our labs, our most energy-intensive activities, to a data center in Quincy, Washington, where the majority of the energy supply is generated through hydroelectric power. Additionally, Juniper signed a ten-year power purchase agreement in Bangalore, India. Under this agreement, electricity from two off-site solar power generation sources support approximately 75% of the total campus electricity requirement.

We also recognize that our greatest opportunity for positive environmental impact comes through our products. We believe our products meet some of the strictest environmental standards in the industry. Juniper has an environmental program, based on our new product introduction process that supports a circular economy model for environmental sustainability and focuses on energy efficiency, materials innovation, and recyclability. We continue to innovate and look at new technology and processes that can 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.

Responsible Choices for the Global Community

We strive to enrich lives across the globe. We believe our charitable efforts are closely aligned with our mission. Juniper Networks is a company built on innovation, and we believe in supporting innovative philanthropic programs that create a network of opportunities for future generations. Our giving is focused on the Juniper Networks Foundation Fund, employee volunteer programs, matching gifts, and disaster relief.

The Juniper Networks Foundation Fund inspires the next generation of engineers, critical thinkers, and technical thought leaders. Through it, we support K-12 science, technology, engineering, and mathematics (STEM) programs, targeted especially at girls, the underprivileged, and underrepresented students. Additionally, as a global company whose operations extend into both developed and developing economies throughout the world, Juniper recognizes its

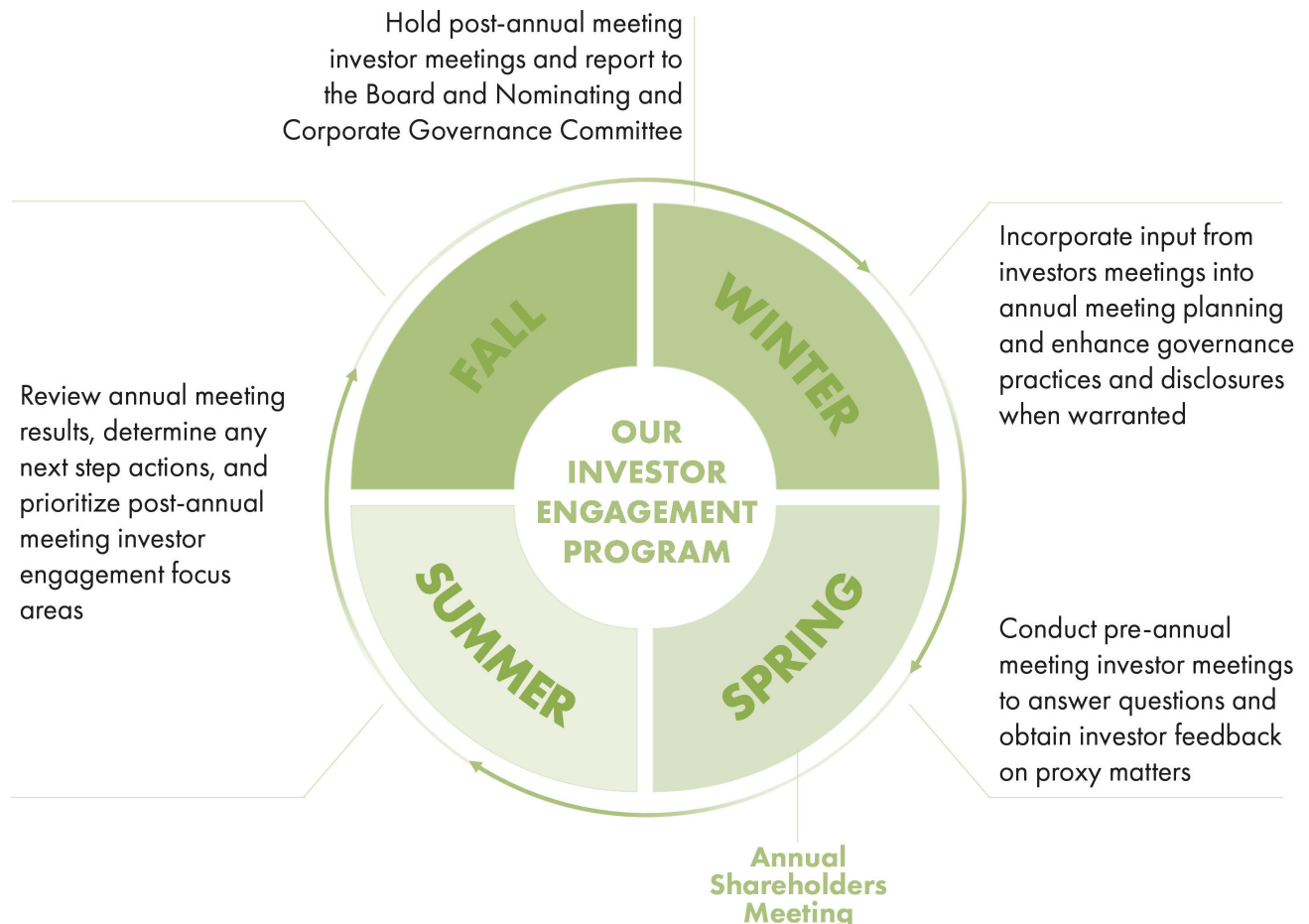
responsibility and its immense opportunity to support the regions and communities in which we operate. As an example, together with local non-governmental organizations, Juniper is addressing four developmental priorities in Orohalli, a village 30 kilometers away from our Bangalore, India campus: (1) education, (2) healthcare, (3) creating occupational opportunities, and (4) ultimately using network connectivity to tie these things together.

2019 CCS Progress and Achievements


We are pleased to share the strides we have made in our CCS priorities in our Corporate Citizenship and Sustainability Report, which is available at <https://www.juniper.net/us/en/company/corporate-responsibility>. Our Corporate Citizenship and Sustainability Report has been prepared using guidance from the Global Reporting Initiative G4 Sustainability Reporting Guidelines 'Core' option and the Sustainability Accounting Standards Board standards. We are proud to be recognized as one of Forbes' World's Best Employers in 2019, Forbes' America's Best Midsize Employers, Fortune's World's Most Admired Companies, Forbes' 2020 America's Most JUST Companies, and to be awarded a position on the 2019 CDP Supplier Engagement leader board.

Stockholder Engagement

The perspectives, insights and feedback of our stockholders are important to our Board and management, which is why we proactively engage on a regular basis with a significant portion of our stockholders that include our top institutional investors throughout the year. The goal of our stockholder engagement program is to foster strong stockholder relationships leading to mutual understanding of issues and approaches, ultimately giving Juniper insight into stockholder support as it designs and implements strategies for long-term growth. We recognize that stockholders are the owners of the Company and we remain committed to a stockholder engagement program that is truly a dialogue.



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Throughout 2019, senior members of our management team met with a significant number of our stockholders to discuss matters that are top of mind for our stockholders, such as our strategic direction, financial and operating performance, capital allocation, executive compensation, corporate social responsibility programs, human capital management, and corporate governance practices, including director refreshment and risk oversight. Since our 2019 annual meeting of stockholders, we proactively sought meetings with stockholders who in the aggregate hold over 55% of our shares outstanding, which resulted in Juniper Networks meeting with stockholders who in the aggregate hold approximately 20% of our shares outstanding.

Our engagement efforts have provided valuable feedback that help to inform our decisions and our corporate practices and the Board considers feedback from these conversations during its deliberations. For example, as a result of our collaboration:

- We published our second annual diversity update. At Juniper Networks, we are committed to innovation and representing diversity in a myriad of ways — including race, ethnicity, gender, age, background, perspectives, tenure, work style, and sexual orientation.
- We fundamentally believe that diversity is a competitive asset that we want to amplify because we believe our differences will drive our success.
- We have continued to focus on our equity grant practices to balance the impact on stockholder dilution while still being able to grant equity awards to our employees at levels reasonably necessary to attract, retain and motivate talent.

We view our stockholder outreach program as an important aspect of maintaining an open, candid and continuous dialogue with our stockholders on relevant issues, including our business and long-term strategy, corporate governance and risk management practices, board refreshment, corporate social responsibility initiatives (including environmental, social and governance matters), our executive compensation program and other matters of shareholder interest. We anticipate continuing our stockholder engagement efforts to help further our understanding of their perspectives and to incorporate their feedback, as appropriate. While we benefit from an ongoing dialogue with many of our shareholders, we recognize that we have not communicated directly with all of our shareholders. If you would like to engage with us, please send correspondence to Juniper Networks, Inc., Attn: Investor Relations, 1133 Innovation Way, Sunnyvale, California 94089 or email Investor-Relations@juniper.net.

Communications with the Board

The Nominating and Corporate Governance Committee of the Board has approved a process by which stockholders or other interested parties may communicate with the Board or individual members of the Board. Stockholders of Juniper Networks and other parties interested in communicating with the Board or any member of our Board may write to them c/o Juniper Networks, Inc., 1133 Innovation Way, Sunnyvale, California 94089. Under the process approved by the Nominating and Corporate Governance Committee, the General Counsel receives and logs communications directed to the Board or any member of the Board, and, unless marked “confidential,” reviews all such correspondence and regularly (not less than quarterly) delivers to the Board, the Lead Independent Director, Chairman of the Board or the independent directors of the Board, as applicable, copies of such correspondence. Communications marked “confidential” will be logged as received by the General Counsel and then will be delivered unopened to the addressee(s).

Board Meetings and Attendance

During 2019, the Board held eight meetings. Each director who was on the Board that year attended at least 75% of all Board and applicable committee meetings. As set forth in our Corporate Governance Standards, absent extraordinary circumstances, each member of the Board is strongly encouraged to attend each annual stockholder meeting in person. Nine of our current directors, including two of whom were appointed after the annual meeting, attended the 2019 annual meeting of stockholders. Two of our former directors, who did not stand for reelection, did not attend the 2019 annual meeting of stockholders.

Director Compensation

Non-Employee Director Compensation Highlights

- Annual review and assessment of director compensation by the Compensation Committee.
- Emphasis on equity in the overall compensation mix to support stockholder alignment.
- Annual restricted stock unit grants under a fixed stockholder approved annual grant formula.
- Stockholder approved limit on cash and equity compensation to non-employee directors.
- A robust stock ownership guideline set at five times the annual cash retainer to support stockholder alignment.
- Fees for committee service based on workload.

Non-Employee Director Retainer and Meeting Fee Information

Our director compensation programs are designed to provide an appropriate incentive to attract and retain qualified non-employee directors and to align their interests with the long-term interests of our stockholders. We compensate non-employee directors for their service on the Board through a combination of cash and equity awards, the amounts of which are commensurate with their role and involvement and with peer company practices. In setting director compensation, we consider the significant amount of time our directors will expend in fulfilling their duties as well as the skill level required for members of our Board. Directors who also serve as employees of the Company do not receive additional compensation for services as directors.

The Compensation Committee, which is comprised solely of independent directors, has the primary responsibility for reviewing and making recommendations to the Board regarding all matters pertaining to compensation paid to non-employee directors for Board, committee and committee chair services. Under the Compensation Committee's charter, the committee is authorized to engage consultants or advisors in connection with its review and analysis of director compensation.

Each year, the Compensation Committee evaluates the appropriate level and form of compensation for non-employee directors and recommends changes, if any, to the Board. In making non-employee director compensation recommendations, the Compensation Committee takes various factors into consideration, including, but not limited to, the responsibilities of directors generally, as well as committee chairs, and the forms of compensation paid to directors by peer companies, and considers advice from its independent compensation consultant who provides analysis on non-employee director compensation trends and data from companies in our executive compensation peer group. The Board reviews the recommendations of the Compensation Committee and determines the form and amount of director compensation. The analysis provided by the Compensation Committee's independent compensation consultant regarding our 2019 director compensation program showed that average pay per director was positioned near the median relative to our peer group. The Compensation Committee did not recommend any changes to the Company's program based on its 2019 director compensation review with the result that the program remained the same year over year.

Limits on Director Compensation: Our non-employee directors currently receive compensation in the form of restricted stock unit ("RSU") grants and cash fees. At our 2019 annual meeting of stockholders, our stockholders approved the amendment and restatement of our 2015 Equity Incentive Plan, which provides for (i) an annual fixed dollar value of RSUs in an amount equal to \$245,000 (based on the average daily closing price of the Company's common stock over the six month period ending on the last day of the fiscal year preceding the date of grant) to be granted to non-employee directors and (ii) a limit of \$1,000,000 on the total amount of annual equity compensation and cash fees that may be awarded to any non-employee director in a single fiscal year to provide for sufficient flexibility to adjust non-employee director compensation in the future if such changes are necessary to remain competitive with our peers.

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The following table provides information on Juniper Networks' compensation and reimbursement practices for non-employee directors during the fiscal year ended December 31, 2019 ("fiscal 2019"):

Annual retainer for all non-employee directors (payable quarterly)	\$ 60,000
Additional annual retainer for Audit Committee members (payable quarterly)	\$ 20,000
Additional annual retainer for Compensation Committee members (payable quarterly)	\$ 15,000
Additional annual retainer for Nominating and Corporate Governance Committee members (payable quarterly)	\$ 10,000
Additional annual retainer for Audit Committee Chair (payable quarterly)	\$ 25,000
Additional annual retainer for Compensation Committee Chair (payable quarterly)	\$ 20,000
Additional annual retainer for Nominating and Corporate Governance Committee Chair (payable quarterly)	\$ 10,000
Additional annual retainer for the Chairman of the Board (payable quarterly)	\$ 75,000
Additional annual retainer for the Lead Independent Director (payable quarterly)	\$ 30,000
Restricted Stock Units granted annually ⁽¹⁾	\$245,000
Reimbursement for expenses attendant to Board membership	Yes
Payment for each additional committee meeting attended after total committee meeting attendance exceeds eighteen (18) in a calendar year	\$ 1,250

⁽¹⁾ Non-employee directors receive non-discretionary annual grants of RSUs, to further align their interests with stockholders. Pursuant to the 2015 Plan, on the date of each of the Company's annual stockholder meetings, each non-employee director who is elected at (or whose term continues after) such meeting will automatically be granted RSUs for a number of shares equal to the Annual Value (as defined below), rounded down to the nearest whole share. For the grants made in 2019, the "Annual Value" was the number of RSUs equal to \$245,000 divided by the average daily closing price of the Company's common stock over the six-month period ending on the last day of the fiscal year preceding the date of grant.

Director Compensation Table for Fiscal 2019

The following table shows compensation information for our non-employee directors for fiscal 2019. Mr. Rahim, our Chief Executive Officer, did not receive any compensation for serving as a director. Compensation information for Mr. Rahim is included in the "Summary Compensation Table" set forth in this proxy statement.

Director Compensation for Fiscal 2019

Name ⁽¹⁾	Fees Earned or Paid in Cash	Stock Awards ⁽²⁾	All Other Compensation	Total
Robert M. Calderoni ⁽²⁾	\$ 52,500	\$ —	\$—	\$ 52,500
Gary Daichendt	\$125,000	\$215,472	\$—	\$340,472
Anne DelSanto ⁽³⁾	\$ 67,500	\$258,152	\$—	\$325,652
Kevin DeNuccio	\$ 75,000	\$215,472	\$—	\$290,472
James Dolce	\$ 75,000	\$215,052	\$—	\$290,052
Christine Gorjanc ⁽⁴⁾	\$ 60,000	\$215,472	\$—	\$275,472
Janet Haugen ⁽⁴⁾	\$ 60,000	\$215,472	\$—	\$275,472
Mercedes Johnson ⁽²⁾	\$ 45,000	\$ —	\$—	\$ 45,000
Scott Kriens	\$135,000	\$215,472	\$—	\$350,472
Rahul Merchant	\$ 98,750	\$215,472	\$—	\$314,222
William Stensrud	\$ 80,000	\$215,472	\$—	\$295,472

⁽¹⁾ As of December 31, 2019, each of our non-employee directors listed in the table above other than Mr. Calderoni and Ms. Johnson held 8,713 RSUs. Mr. Calderoni and Ms. Johnson did not hold any RSUs as of December 31, 2019. Amounts shown do not reflect compensation actually received by the director, and there can be no assurance that these amounts will ever be realized by the non-employee directors. Instead, the amount shown is the grant date fair value of the RSU awards granted in fiscal 2019 computed in accordance with ASC Topic 718 — *Compensation — Stock Compensation* ("ASC Topic 718"), disregarding forfeiture assumptions.

⁽²⁾ Mr. Calderoni and Ms. Johnson left the board on May 14, 2019.

⁽³⁾ Ms. DelSanto joined the Board on March 13, 2019.

⁽⁴⁾ Ms. Gorjanc and Ms. Haugen joined the Board on May 14, 2019.

Proposals to be Voted On

Proposal No. 1 Election of Directors

There are ten nominees for election as directors at this year's annual meeting — Gary Daichendt, Anne DelSanto, Kevin DeNuccio, James Dolce, Christine Gorjanc, Janet Haugen, Scott Kriens, Rahul Merchant, Rami Rahim and William Stensrud. A discussion of the primary experience, qualifications, attributes and skills of each director nominee that led our Board and Nominating and Corporate Governance Committee to the conclusion that he or she should serve or continue to serve as a director is included below in each of the director biographies. Each director nominee will be elected to serve for a term expiring at the Company's annual meeting of stockholders in 2021 and until his or her successor is duly elected and qualified, or until his or her earlier death, resignation or removal. There are no family relationships among any of our executive officers and directors.

If you sign your proxy card or voting instruction card or vote by telephone or over the Internet but do not give instructions with respect to the election of directors, your shares will be voted for the ten director nominees recommended by the Board. If you do not give voting instructions to your broker, your broker will not be able to vote your shares and your shares will not be voted on this matter.

Recommendation

Our Board recommends a vote "FOR" the election to the Board of: Gary Daichendt, Anne DelSanto, Kevin DeNuccio, James Dolce, Christine Gorjanc, Janet Haugen, Scott Kriens, Rahul Merchant, Rami Rahim and William Stensrud.

Vote Required

Provided a quorum is present, directors will be elected by a majority of the votes cast with respect to the director nominee at the annual meeting (i.e., the number of shares voted "FOR" a director nominee must exceed the number of votes cast "AGAINST" that director nominee).

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The names of our directors and director nominees and their ages, positions, qualifications and experience as of the date this proxy statement was filed with the SEC are set forth below.



Gary Daichendt

Age 68

Director since 2014

Lead Independent Director
Board Committees:
Compensation (Chair)

Other Current Public Company
Boards: None

Mr. Daichendt has been principally occupied as a private investor since June 2005 and has been a managing member of Theory R Properties LLC, a commercial real estate firm, since October 2002. Mr. Daichendt served as President and Chief Operating Officer of Nortel Networks Corporation, a supplier of communication equipment, from March 2005 to June 2005. Prior to joining Nortel Networks, Mr. Daichendt served in a number of senior executive positions at Cisco Systems, Inc. ("Cisco"), a manufacturer of communications and information technology networking products, for six years, including as Executive Vice President, Worldwide Operations from August 1998 to December 2000, and as Senior Vice President, Worldwide Operations from September 1996 to August 1998. Mr. Daichendt previously served as a director of NCR Corporation from April 2006 to April 2018, ShoreTel, Inc. from April 2007 to February 2015, Emulex Corporation from February 2014 to May 2015 and Polycom, Inc. from August 2015 to September 2016.

Qualifications

Mr. Daichendt's experience as an officer of various networking industry companies has provided him with expertise in management, sales, marketing, channel management and operations and an extensive understanding of the networking industry. Mr. Daichendt also brings public company governance experience as a member of the boards of directors and board committees of other public technology companies.



Anne DelSanto

Age 56

Director since 2019

Board Committees: Nominating
and Corporate Governance

Other Current Public Company
Boards: None

Ms. DelSanto has principally served as a limited partner at Operator Collective, a consulting company, since December 2019. Ms. DelSanto is also serving as a limited partner at Stage 2 Capital, a consulting company, since March 2019. From February 2018 to April 2019, she served as Executive Vice President and General Manager, Platform at Salesforce.com, Inc. ("Salesforce"), a customer relationship management company. Prior to her current role, she served in various executive-level roles at Salesforce since October 2012, including as the Executive Vice President, Americas Solution Engineering & Cloud Sales from February 2016 to February 2018; Executive Vice President, Global Solution Engineering and Cloud Specialist Sales from February 2015 to February 2016; and Senior Vice President, Global Solutions Engineering from October 2012 to February 2015. Prior to joining Salesforce, Ms. DelSanto also served in various roles of increasing responsibility in pre-sales from 1999 to 2012 at Oracle Corporation ("Oracle"), an information technology and services company, including most recently as Group Vice President, Sales Engineering from February 2012 to September 2012; and Vice President of Sales Engineering from 2007 to February 2012. She began her career in 1985 as an account systems engineer at IBM, an information technology and services company.

Qualifications:

Ms. DelSanto's extensive experience as a senior sales executive at several technology companies, including Salesforce and Oracle, has provided her with senior leadership and executive experience and management expertise. In addition, her experience as a senior leader in companies that leverage the cloud for their business model's success, has given her broad industry knowledge, background and expertise with cloud-businesses, software-as-a-service business models, and the requirements of enterprise customers.



Kevin DeNuccio

Age 60
Director since 2014

Board Committees:
Compensation

Other Current Public Company
Boards: Calix, Inc.

Mr. DeNuccio most recently served as Executive Chairman of SevOne, Inc., a digital infrastructure management software company, from May 2017 to November 2019. He served as President and Chief Executive Officer of Violin Memory, a flash-based storage array solutions company, from February 2014 to April 2017. In December 2016, Violin Memory filed a voluntary petition for reorganization under Chapter 11 of the U.S. Bankruptcy Code. Prior to joining Violin Memory, Mr. DeNuccio served as a co-founder of Wild West Capital, LLC, a venture and technology consulting firm he co-founded in July 2012. Prior to that, Mr. DeNuccio served as Chief Executive Officer of Metaswitch Networks, a provider of carrier systems and software solutions that enable communication networks to migrate to open, packet-based architectures, from February 2010 to July 2012. Mr. DeNuccio was President and Chief Executive Officer of Redback Networks Inc., a provider of advanced communications networking equipment, from August 2001 to January 2008, during which time it was acquired by Telefonaktiebolaget LM Ericsson ("Ericsson") in January 2007 and operated as a wholly-owned subsidiary of Ericsson. Mr. DeNuccio held various positions at Cisco from 1995 to 2001, including Senior Vice President of Worldwide Service Provider Operations. Previously, Mr. DeNuccio was the founder, President and Chief Executive Officer of Bell Atlantic Network Integration Inc., a wholly-owned subsidiary of Bell Atlantic (now Verizon Communications). Mr. DeNuccio has served as a director of Calix, Inc. since September 2012. Mr. DeNuccio previously served as a director of Sandisk Corporation from August 2009 to February 2014, Metaswitch Networks from December 2008 to February 2014 and Violin Memory from February 2014 to April 2017.

Qualifications

Mr. DeNuccio's experience as a senior executive at many companies in the technology and networking industry, including as chief executive officer at two networking companies, has provided him with senior leadership and executive experience, and management, operational and technological expertise. Mr. DeNuccio also brings public company governance experience as a member of boards of directors and board committees of other technology companies.



James Dolce

Age 57
Director since 2015

Board Committees:
Compensation

Other Current Public Company
Boards: None

Mr. Dolce has served as the Chief Executive Officer and a director at Lookout, Inc., a mobile security company, since March 2014. Prior to joining Lookout, Mr. Dolce was the Vice President of carrier market development at Akamai Technologies, Inc., a content delivery network and cloud services provider, from December 2012 until February 2014, and prior to that, he was the Founder and Chief Executive Officer at Verivue, Inc., a provider of digital content delivery solutions, which was acquired by Akamai, from 2006 until December 2012. Prior to Verivue, Mr. Dolce served as Executive Vice President of worldwide field operations at Juniper Networks from 2002 to 2006, where he led Juniper Networks' global sales, marketing and customer service efforts. Mr. Dolce joined Juniper Networks through its acquisition of Unisphere Networks, Inc., where he served as Chief Executive Officer from 1999 to 2002. Mr. Dolce served on the board of directors of Infinera Corporation from May 2014 until January 2016.

Qualifications

Mr. Dolce's experience as a senior executive at many companies in the technology and networking industry, including as chief executive officer at Lookout, Verivue and Unisphere, has provided him with senior leadership and executive experience and management, operational and technological expertise. In addition, his prior experience at Juniper Networks provides him with a detailed knowledge of Juniper Networks' customers and industry. Mr. Dolce also brings public company governance experience based on his prior service on the boards of directors and board committees of other technology companies.

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Christine Gorjanc

Age 63
Director Since 2019

Board Committees: Audit

Other Current Public Company
Boards: Invitae Corporation

Christine M. Gorjanc currently serves as the Chief Financial Officer for Arlo Technologies, Inc., an intelligent cloud infrastructure and mobile app platform company, a position she has held since August 2018. Prior to her current role, she served as the Chief Financial Officer of NETGEAR, Inc., a provider of networking products and services, since January 2008, where she previously served as Chief Accounting Officer from December 2006 to January 2008 and Vice President, Finance from November 2005 to December 2006. Prior to joining NETGEAR, Inc., Ms. Gorjanc served in a number of roles including as the Vice President, Controller, Treasurer, and Assistant Secretary of Aspect Communications Corporation, a provider of workforce and customer management solutions, from September 1996 through November 2005. Ms. Gorjanc served as the Manager of Tax for Tandem Computers, Inc., a provider of fault-tolerant computer systems, from October 1988 through September 1996. Prior to 1996, Ms. Gorjanc served in management positions at Xidex Corporation, a manufacturer of storage devices, and spent eight years in public accounting. Ms. Gorjanc has served on the board of directors and as a member of the audit committee of Invitae Corporation, a genetic testing and services company, since November 2015.

Qualifications:

Ms. Gorjanc’s extensive experience as an executive and financial expert with rapidly-growing international technology companies operating in the intelligent cloud, networking products and services industries provide her with executive business and financial expertise as well as broad industry knowledge. Ms. Gorjanc also brings public company governance experience as a member of the board of directors and audit committee of another public technology company.



Janet Haugen

Age 61
Director Since: 2019

Board Committees: Audit
(Chair)

Other Current Public Company
Boards: Paycom Corporation

Janet B. Haugen served as the Senior Vice President and Chief Financial Officer of Unisys Corporation (“Unisys”), a global information technology company, from April 2000 to November 2016. She also held positions as Vice President, Controller and Acting Chief Financial Officer of Unisys between April 1996 and April 2000. Prior to joining Unisys, she was an audit partner at Ernst & Young (“EY”) from 1993 to 1996, after serving in positions of increasing responsibility at EY from 1980 to 1993. Ms. Haugen currently serves on the board of directors, Audit Committee Chair and a member of the Compensation Committee of Paycom Software, Inc., a provider of comprehensive, cloud-based human capital management software, a position she has held since February 2018. She also served on the board of directors and chair of the audit committee of SunGard Data Systems Inc, a software and services company, from 2002 to 2005.

Qualifications:

Ms. Haugen has extensive leadership experience as an executive and financial expert with a global technology company and as an audit partner with a public accounting firm. Her depth of experience provides her with executive business and financial expertise as well as broad industry knowledge. Ms. Haugen also brings public company governance experience as a current and prior member of the board of directors and audit committee chair of other public technology companies.

**Scott Kriens**

Age 62
Director since 1996

Board Committees: Chairman of
the Board

Other Current Public Company
Boards: Equinix, Inc.

Mr. Kriens has served as Chairman of the Board of Directors of Juniper Networks since October 1996, Chief Executive Officer of Juniper Networks from October 1996 to September 2008 and an employee of Juniper Networks through April 2011. From April 1986 to January 1996, Mr. Kriens served as Vice President of Sales and Vice President of Operations at StrataCom, Inc., a telecommunications equipment company, which he co-founded in 1986. Mr. Kriens has served on the board of directors of Equinix, Inc. since July 2000.

Qualifications

As a result of Mr. Kriens' prior service as the Company's Chief Executive Officer, he developed an extensive understanding of the Company's business and the networking industry and provides the Board with a highly informed perspective on the business independent from that of the Chief Executive Officer. Mr. Kriens' experience with the Company from its early stages also offers the Board insight into the evolution of the Company, including from execution, cultural, operational, competitive and industry points of view. In addition, his experience as a director of other technology companies provides him with an understanding of the operation of other boards of directors that he can contribute in his role as Chairman.

**Rahul Merchant**

Age 63
Director since 2015

Board Committees: Audit

Other Current Public Company
Boards: None

Mr. Merchant has served as Senior Executive Vice President and Head of Client Services & Technology of TIAA-CREF, a leading financial services provider, since March 2017. Previously, Mr. Merchant served as Senior Executive Vice President and Chief Information Officer of TIAA-CREF from January 2017 to March 2017 and as Executive Vice President and Chief Information Officer of TIAA-CREF from April 2015 to January 2017. Prior to joining TIAA-CREF, he was the Chief Information and Innovation Officer for the City of New York from April 2012 to February 2014. From 2009 to April 2012, Mr. Merchant was a partner at Exigen Capital, a private equity firm based in New York City. From 2006 until 2008, Mr. Merchant was Executive Vice President, Chief Information Officer and member of the Executive Committee at Fannie Mae. He also served as Senior Vice President, Chief Information Officer and Chief Technology Officer at Merrill Lynch & Co. from 2000 to 2006. Mr. Merchant has also held senior leadership positions at Cooper Neff and Associates, Lehman Brothers, Sanwa Financial Products and Dresdner Bank. Mr. Merchant previously was a member of the board of directors of Emulex Corporation, Level 3 Communications, Inc., Sun Microsystems, Inc., and Fair Isaac Corporation.

Qualifications

Mr. Merchant's experience as a senior technology executive at many companies in the financial industry and in the public sector has provided him with senior leadership and executive experience and management, operational and technological expertise, as well as a detailed knowledge of Juniper Networks' customers and industry. As a Chief Information Officer, Mr. Merchant provides the Company with meaningful insight and experience related to information technology, cybersecurity best practices and the relationship between information security programs and broader business goals and objectives. Mr. Merchant also brings public company governance experience based on his prior service on the boards of directors and board committees of a number of other technology companies.

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Rami Rahim

Age 49

Director since 2014

Board Committees: None

Other Current Public Company Boards: None

Mr. Rahim joined Juniper Networks in January 1997 and was appointed as Chief Executive Officer of the Company in November 2014. Previously, Mr. Rahim served as Executive Vice President and General Manager, Juniper Development and Innovation, responsible for driving innovation across the Company through the oversight of all research and development programs, strategy, development, and business growth across the portfolio of routing, switching, and security. He has also overseen the ongoing evolution of silicon technology and the Junos operating system. In addition, Mr. Rahim has served at Juniper Networks in a number of roles, including Executive Vice President, Platform Systems Division, Senior Vice President and General Manager, Edge and Aggregation Business Unit, and Vice President, Product Management for the Edge and Aggregation Business Unit. Prior to that, Mr. Rahim spent the majority of his time at the Company in the development organization where he helped with the architecture, design and implementation of many Juniper Networks' core, edge, and carrier Ethernet products.

Qualifications

Mr. Rahim's day-to-day involvement in the Company's business has provided him with extensive knowledge and understanding of the Company and its industry. As Chief Executive Officer, he is able to provide the Board with insight and information related to the Company's strategy, financial condition, operations, competitive position and business. His prior experience in a number of management roles at Juniper Networks provided him with in-depth industry and business experience in building and operating complex networks and a detailed knowledge of Juniper Networks' customers and industry. In addition, his experience with Juniper Networks from its early stages also offers the Board insight into the evolution of the Company, including from execution, cultural, operational, competitive and industry points of view.



William Stensrud

Age 69

Director since 1996

Board Committees: Nominating and Corporate Governance (Chair)

Other Current Public Company Boards: None

Mr. Stensrud has served as a Partner of the SwitchCase Group, a consulting company, the Chairman of InstantEncore.com, a provider of web and mobile technology to the performing arts, and Chairman and Principal at Interactive Fitness Holdings, a designer and manufacturer of virtual stationary bicycles. From January 2007 to March 2007, he served as Chairman and Chief Executive Officer of Muze, Inc., a provider of business-to-business digital commerce solutions and descriptive entertainment media information. Mr. Stensrud was a general partner with the venture capital firm of Enterprise Partners from January 1997 to December 2006. Mr. Stensrud was an independent investor and turn-around executive from March 1996 to January 1997. During this period, Mr. Stensrud served as President of Paradyne Corporation and as a director of Paradyne Corporation, Paradyne Partners LLP and GlobeSpan Corporation, Inc. (acquired by Conexant, Inc.), all data networking companies. From January 1992 to July 1995, Mr. Stensrud served as President and Chief Executive Officer of Primary Access Corporation, a data networking company acquired by 3Com Corporation. From 1986 to 1992, Mr. Stensrud served as the Marketing Vice President of StrataCom, which he co-founded.

Qualifications

Mr. Stensrud's years of experience in venture capital and in the management of a wide variety of technology companies have exposed him to a broad range of issues affecting businesses, including a number of businesses in the technology industry. Mr. Stensrud's experience as an operating executive in the telecommunications and data communications industry provides the Board and management with knowledge and perspective on the Company's daily operating challenges. His work has included analyzing and focusing on improving various aspects of businesses, including operations, strategies and financial performance.

Proposal No. 2

Ratification of Appointment of Independent Registered Public Accounting Firm

The Audit Committee is directly responsible for the appointment, compensation, retention and oversight of our independent registered public accounting firm. The Audit Committee has appointed Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2020. Ernst and Young LLP has served as our independent registered public accounting firm since 1996, and Ernst & Young LLP's current lead audit partner was selected in 2018.

The Audit Committee periodically considers whether there should be a rotation of independent registered public accounting firms because the Audit Committee believes it is important for our independent registered public accounting firm to maintain independence and objectivity. The Audit Committee annually reviews Ernst & Young LLP's qualifications, performance, independence and fees in making its decision to engage Ernst & Young LLP and discusses the overall scope and plans for the annual audit with Ernst & Young LLP. The focus of this review process is to select and retain the most qualified firm to perform the annual audit. During the review and selection process, the Audit Committee considers a number of factors including:

- Recent and historical audit performance, including the results of a management survey concerning Ernst & Young's service;
- The relevant experience, expertise and capabilities of Ernst & Young LLP and the audit engagement team in relation to the nature and complexity of our business;
- A review of the firm's independence and internal quality controls;
- Any legal or regulatory proceedings that raise concerns about Ernst & Young LLP's qualifications or ability to continue to serve as our independent auditor, including reports, findings and recommendations of the Public Accounting Oversight Board;
- The appropriateness of Ernst & Young LLP's fees for audit and non-audit services; and
- The length of time that Ernst & Young LLP has served as our independent auditor, the benefits of maintaining a long-term relationship and controls and policies for ensuring that Ernst & Young LLP remains independent.


In accordance with SEC rules and company policies, our lead audit partner is limited to a maximum of 5 years of service in that capacity. In order to select the lead engagement partner, management meets with each candidate for the role and then reviews and discusses the candidates. Based on recommendations from management and the chair, the full committee reviews and approves the lead engagement partner. Based on our review, the members of the Audit Committee and the Board believe that the continued retention of Ernst & Young LLP to serve as our independent registered public accounting firm is in the best interests of the Company and its stockholders.

During fiscal 2019, Ernst & Young LLP provided certain tax and audit related services. See the "*Principal Accountant Fees and Services*" section of this proxy statement. Pursuant to its charter, the Audit Committee is responsible for pre-approving all audit and permissible non-audit services provided by the Company's independent registered public accounting firm. The Audit Committee pre-approved all services performed by the Company's independent registered public accounting firm in 2019 and 2018.

Representatives of Ernst & Young LLP are expected to attend the annual meeting, where they are expected to be available to respond to appropriate questions and, if they desire, to make a statement.

Although stockholder ratification of the appointment of our independent registered public accounting firm is not required by our bylaws or otherwise, the Board is submitting the appointment of Ernst & Young LLP to our stockholders for ratification because we value our stockholders' views on the Company's independent registered public accounting firm and as a matter of good corporate governance. If the appointment is not ratified, the Audit Committee will consider whether it should select another independent registered public accounting firm. Even if the appointment is ratified, the

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Audit Committee, in its discretion, may appoint a different independent registered public accounting firm at any time during the year if the Audit Committee determines that such a change would be in the Company's and its stockholders' best interests.

Recommendation

Our Board unanimously recommends a vote "FOR" the ratification of the appointment of Ernst & Young LLP as Juniper Networks' independent registered public accounting firm for the fiscal year ending December 31, 2020.

If you sign your proxy card or voting instruction card or vote by telephone or over the Internet but do not give instructions with respect to this proposal, your shares will be voted "FOR" the proposal, as recommended by the Board. Even if you do not give voting instructions to your broker, your broker may vote your shares on this matter.

Vote Required

Provided a quorum is present, ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2020 requires the affirmative vote of the holders of a majority of the shares of common stock present in person or represented by proxy and entitled to vote at the annual meeting.

Principal Accountant Fees and Services

The Audit Committee has appointed Ernst & Young LLP, an independent registered public accounting firm, to serve as Juniper Networks' auditors for the fiscal year ending December 31, 2020.

Fees Incurred by Juniper Networks for Ernst & Young LLP

Fees for professional services billed or to be billed by the Company's independent registered public accounting firm in each of the last two years were approximately:

	2019	2018
Audit Fees	\$5,951,882	\$6,008,700
Audit-Related Fees	\$ 622,000	\$ 965,000
Tax Fees	\$ 752,192	\$ 463,851
All Other Fees	\$ 0	\$ 0
Total	\$7,326,074	\$7,437,551

Audit fees include professional services fees in connection with the audit of the Company's annual financial statements, the review of its quarterly financial statements, and the issuance of a comfort letter and consents, and audit services provided in connection with other statutory or regulatory filings.

Audit-related fees consist of fees billed for assurance and related services that are reasonably related to the performance of the audit or review of the Company's consolidated financial statements, and are not reported under "Audit Fees". These services include accounting consultations in connection with transactions, attest services that are required by statute or regulation, and consultations concerning financial accounting and reporting standards.

Tax fees are for professional services rendered for tax compliance, tax advice or tax planning.

All other fees are for products and services for Ernst & Young LLP rendered to Juniper Networks, other than the services described above under "Audit Fees," "Audit-Related Fees," and "Tax Fees," for the years ended December 31, 2018 and December 31, 2019, were zero.

Audit Committee's Pre-Approval Policy and Procedures

Pursuant to its charter, the Audit Committee is responsible for pre-approving all audit and permissible non-audit services provided by the Company's independent registered public accounting firm. The Audit Committee's charter gives the Audit Committee the power to delegate to one or more members of the Audit Committee the authority to pre-approve permissible non-audit services. The Audit Committee pre-approved all services performed by the Company's independent registered public accounting firm in 2019 and 2018.

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Report of the Audit Committee of the Board of Directors

The following Audit Committee Report shall not be deemed to be "soliciting material" and should not be deemed "filed" and shall not be deemed to be incorporated by reference in future filings with the SEC, except to the extent that the Company specifically incorporates it by reference into a document filed under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended.

The Audit Committee is composed entirely of non-management directors. The members of the Audit Committee meet the independence and financial literacy requirements of the NYSE and additional, heightened independence criteria applicable to members of the Audit Committee under SEC and NYSE rules. The Audit Committee operates under a written charter, which contains a description of the scope of the Audit Committee's responsibilities and how they will be carried out, which may be found on the Company's website at <http://investor.juniper.net/investor-relations/corporate-governance/default.aspx>.

The Audit Committee oversees the Company's financial reporting process on behalf of the Board of Directors. Management has the primary responsibility for the financial statements and the reporting process, including establishing and maintaining adequate internal control over the Company's financial reporting. The independent registered public accounting firm of Ernst & Young LLP, or E&Y, reports to the Audit Committee, and E&Y is responsible for performing an independent audit of the Company's consolidated financial statements and internal control over financial reporting in accordance with generally accepted auditing standards in the United States. The Audit Committee discussed the overall scope and plans for the annual audit with E&Y.

The Audit Committee meets regularly with E&Y, with and without management present, to discuss the results of E&Y's examinations, evaluations of the Company's internal controls, and the overall quality of the Company's financial reporting. The Audit Committee held 15 meetings during fiscal 2019.

In this context, the Audit Committee hereby reports as follows:

1. The Audit Committee has reviewed and discussed the Company's audited financial statements for the fiscal year ended December 31, 2019 with the Company's management.
2. The Audit Committee has discussed with the Company's independent registered public accounting firm the matters required to be discussed by the applicable requirements of the Public Company Accounting Oversight Board and the SEC.
3. The Audit Committee has received the written disclosures and the letter from the Company's independent registered public accounting firm required by the applicable requirements of the Public Company Accounting Oversight Board regarding the independent registered public accounting firm's communications with the Audit Committee concerning independence, and has discussed with the Company's independent registered public accounting firm its independence.
4. Based on the review and discussion referred to in paragraphs (1) through (3) above, the Audit Committee recommended to the Board that the Company's audited financial statements for the fiscal year ended December 31, 2019 be included in Juniper Networks' Annual Report on Form 10-K for the fiscal year ended December 31, 2019, for filing with the SEC.

MEMBERS OF THE AUDIT COMMITTEE

*Janet Haugen (Chair)
Christine Gorjanc
Rahul Merchant*

Proposal No. 3

Non-Binding Advisory Vote on Executive Compensation

This proposal provides our stockholders with the opportunity to cast a vote, on an advisory basis, on the compensation of the executive officers named in the “*Summary Compensation Table*” below, who we refer to as our “named executive officers” or “NEOs,” pursuant to Section 14A of the Exchange Act. For more detail on the compensation of our NEOs, please see the section entitled “*Executive Compensation*,” including the “*Compensation Discussion and Analysis*” and the compensation tables included in this proxy statement. This proposal, commonly known as a “Say-on-Pay” proposal, gives you, as a stockholder, the opportunity to express your views on our executive compensation program and policies and the compensation paid to our NEOs.

The Company’s current policy is to hold a Say-on-Pay vote each year, and we expect to hold another advisory vote with respect to executive compensation at the 2021 annual meeting of stockholders.

As described in detail in the “*Compensation Discussion and Analysis*” section of this proxy statement, we design our executive compensation program to implement our core objectives of (i) providing competitive pay, (ii) paying for performance, and (iii) aligning management’s interests with the interests of our long-term stockholders. We believe that compensation in 2019 for our Chief Executive Officer and our other NEOs is well aligned with the Company’s performance and the interests of our stockholders and reflects our objective to link pay with performance for our NEOs.

Recommendation

Our Board believes that the Company’s executive compensation program uses appropriate structures and sound pay practices that are effective in achieving our core objectives. Accordingly, the Board of Directors recommends that you vote “FOR” the following resolution:

“RESOLVED, that Juniper Networks, Inc. stockholders approve, on an advisory basis, the compensation of the Company’s named executive officers as disclosed pursuant to the Securities and Exchange Commission’s compensation disclosure rules, including the Compensation Discussion and Analysis and Executive Compensation sections of this proxy statement.”

If you sign your proxy card or voting instruction card or vote by telephone or over the Internet but do not give instructions with respect to this proposal, your shares will be voted “FOR” the proposal, as recommended by the Board. If you do not give voting instructions to your broker, your broker will not be able to vote your shares and your shares will not be voted on this matter.

Vote Required

Provided a quorum is present, the advisory approval of our executive compensation requires the affirmative vote of the holders of a majority of the shares of common stock present in person or represented by proxy and entitled to be voted at the annual meeting.

As this is an advisory vote, the result will not be binding; however, the Compensation Committee, which is responsible for designing and administering the Company’s executive compensation program, values the opinions expressed by our stockholders and will take the outcome of the vote under advisement in evaluating our executive compensation principles, design and practices.

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Proposal No. 4

Approval of the Amendment and Restatement of the Juniper Networks, Inc. 2008 Employee Stock Purchase Plan

Background

Our 2008 Employee Stock Purchase Plan or, the 2008 ESPP, is designed to provide our eligible employees and those of our participating subsidiaries with the opportunity to purchase shares of our common stock on periodic purchase dates through their accumulated payroll deductions.

We believe our success is largely due to our highly talented employee base and that our future success depends on our ability to attract and retain high caliber personnel. We believe that the 2008 ESPP is an important employee retention and recruitment vehicle, as it closely aligns the interests of our employees with those of our stockholders by encouraging employees to invest in our common stock, and helps our employees share in the Company's success through the appreciation in value of such purchased stock.

Summary of the Proposal

Our Board approved the amendment and restatement of the 2008 ESPP on February 20, 2020, subject to approval by our stockholders, which we refer to as the "Amended 2008 ESPP." If approved by stockholders, the Amended 2008 ESPP will provide for an increase of 8,000,000 shares over the number of shares of common stock currently authorized for issuance under the 2008 ESPP, for a total of 43,000,000 shares. The Amended 2008 ESPP also clarifies, among other things, that the transfer of employment from one participating company to another will not constitute a termination of employment for purposes of the Amended 2008 ESPP but may result in the participant participating in a different offering under the Amended 2008 ESPP, and certain terms and conditions may continue to apply.

When the 2008 ESPP was adopted and approved by our stockholders in May 2008, the 2008 ESPP had a maximum number of 12,000,000 shares of common stock available for purchase. The 2008 ESPP was subsequently amended by our Board, which amendments were approved by our stockholders in May 2012, May 2015 and May 2017, to increase the maximum number of shares available for purchase by an aggregate of 23,000,000 shares of common stock.

As of March 19, 2020, an aggregate of 4,900,995 shares of common stock remained available for future issuance under the 2008 ESPP. We estimate that, with an increase of 8,000,000 shares, we will have a sufficient number of shares of common stock to cover purchases under the 2008 ESPP through 2024, assuming a stable stock price and consistent participation rate in our ESPP. Our Board believes it is in the best interests of Juniper Networks and our stockholders to continue to provide our employees with the opportunity to acquire an ownership interest in Juniper Networks through their participation in the 2008 ESPP for the reasons noted above.

Description of the Amended 2008 ESPP

The material features of the Amended 2008 ESPP are summarized below. This summary does not purport to be a complete description of all the provisions of the Amended 2008 ESPP, and this summary is qualified in its entirety by reference to the text of the Amended 2008 ESPP.

A complete copy of the proposed Amended 2008 ESPP is attached to this proxy statement as **Annex A**.

SHARES. Subject to adjustment upon changes in capitalization of the Company, the maximum number of shares of which will be made available for purchase under the Amended 2008 ESPP will be 43,000,000 shares. The Amended 2008 ESPP does not contain an evergreen provision, pursuant to which the share pool would be automatically increased each year based on a specified formula.

ADMINISTRATION. The Amended 2008 ESPP may generally be administered by the Board or a committee of the Board which we refer to, as applicable, as the ESPP Administrator. The ESPP Administrator has the authority to construe and interpret any of the provisions of the Amended 2008 ESPP.

INTERNATIONAL STOCK PURCHASE RIGHTS. To provide us with greater flexibility in structuring our equity compensation programs for our non-U.S. employees, the Amended 2008 ESPP also permits us to grant our non-U.S. employees rights to purchase stock pursuant to rules or sub-plans adopted by the ESPP Administrator in order to achieve tax, securities law or other compliance objectives, which we refer to as International Awards. While the Amended 2008 ESPP is intended to be an “employee stock purchase plan” within the meaning of Section 423 of the Code, or Section 423, these International Awards will not qualify under Section 423. Please refer to “Certain United States Federal Tax Consequences” below for a discussion of tax consequences under Section 423.

ELIGIBILITY. Employees generally are eligible to participate in the Amended 2008 ESPP if they are customarily employed by Juniper Networks or by a participating subsidiary for more than twenty (20) hours per week and more than five (5) months in any calendar year. International Awards may be made to employees customarily employed for fewer hours or months. Eligible employees may select a rate of payroll deduction between 1% and 10% of their compensation and are subject to certain maximum purchase limitations.

As of March 19, 2020, approximately 9,437 employees, including all of our current executive officers, were eligible to participate in the Amended 2008 ESPP. For the offering period under the 2008 ESPP that concluded on January 31, 2020, 4,934 employees actually participated in such offering, representing approximately 51.5% of our 9,574 employees who were eligible to participate in that offering period.

OFFERINGS. Currently, each offering under the Amended 2008 ESPP will be for a period of twenty-four months and will consist of four consecutive purchase periods of approximately six months in length. Offering periods begin on February 1 and August 1, or if such date is not a “trading day” (as defined in the Amended 2008 ESPP), the next trading day. Each participant in the Amended 2008 ESPP will be granted a right to purchase shares on the first day of the offering period and the purchase right will be automatically exercised on the last day of each offering period during the offering period using the contributions the participant has made for this purpose. The purchase price for the common stock purchased under the Amended 2008 ESPP is 85% of the lesser of the fair market value of the common stock on the first business day of the applicable offering period or on the last business day of the applicable purchase period. If the fair market value of a share of our 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 our common stock on the first business day of the applicable offering period, then (i) such offering period will terminate immediately at the end of such exercise date, after giving effect to the exercise and purchase of shares of common stock for the purchase period, and (ii) each participant in such offering period will be automatically enrolled in the offering period commencing on the first trading day immediately following such exercise date.

Notwithstanding the foregoing, the Administrator for the Amended 2008 ESPP has the power to change the terms of new offering periods under the Amended 2008 ESPP (including, but not limited to (i) the length of such offering periods, provided that no such offering period is longer than 27 months, (ii) whether such offering periods will include one or more embedded purchase periods and/or (iii) whether such offering periods will have automatic rollover or reset provisions). Further, the ESPP Administrator may designate separate offering periods under the Amended 2008 ESPP in which eligible employees will participate and the provisions of the Amended 2008 ESPP will separately apply to each offering period.

SPECIAL LIMITATIONS. The Amended 2008 ESPP imposes certain limitations upon a participant’s rights to acquire common stock, including the following limitations:

- Purchase rights may not be granted to any individual who owns stock, including stock purchasable under any outstanding purchase rights, possessing 5% or more of the total combined voting power or value of all classes of stock of Juniper Networks or any of its affiliates;
- Purchase rights granted to a participant may not permit the individual to accrue the right to purchase our common stock at an annual rate of more than \$25,000, valued at the time each purchase right is granted; and
- Unless otherwise approved by the ESPP Administrator in advance for future offering periods, no participant will be permitted to purchase during any twelve (12) month period more than six thousand (6,000) shares of our common stock (subject to any adjustment pursuant to stock splits, recapitalizations, dividends or other similar events).

TERMINATION OF PURCHASE RIGHTS. A purchase right will terminate upon the participant’s election to withdraw from the Amended 2008 ESPP. Any payroll deductions that the participant may have made with respect to the terminated purchase right that have not been used to purchase shares will be refunded to the participant if the election to withdraw

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from the Amended 2008 ESPP is received by Juniper Networks prior to the end of an offering period. A participant's election to withdraw from the Amended 2008 ESPP is irrevocable, and the participant may not re-join the offering period for which the terminated purchase right was granted.

A purchase right will also terminate upon the participant's termination of employment. Any payroll deductions that the participant may have made during the offering period in which the termination occurs will be refunded to the participant. A transfer of employment from one participating company to another will not constitute a termination of employment for purposes of the Amended 2008 ESPP but may result in the participant participating in a different offering under the Amended 2008 ESPP, and certain terms and conditions may continue to apply.

In addition, Juniper Networks has specifically reserved the right, exercisable in the sole discretion of the ESPP Administrator, to terminate the Amended 2008 ESPP, or any offering period thereunder, at any time.

STOCKHOLDER RIGHTS. No participant will have any stockholder rights with respect to the shares covered by his or her purchase rights until the shares are actually purchased on the participant's behalf. No adjustment will be made for dividends, distributions or other rights for which the record date is prior to the date of the purchase.

ASSIGNABILITY. No purchase rights will be assignable or transferable by the participant, except by will or the laws of inheritance following the participant's death. Each purchase right will, during the lifetime of the participant, be exercisable only by the participant.

MERGERS, CONSOLIDATIONS AND CHANGE IN CONTROL. The Amended 2008 ESPP provides that, in the event of the proposed dissolution or liquidation of Juniper Networks, the offering period will terminate immediately prior to the consummation of the proposed action, provided that the ESPP Administrator may, in its sole discretion, fix an earlier date for termination of the Amended 2008 ESPP and provide each participant the opportunity to purchase shares under the Amended 2008 ESPP prior to the termination. The Amended 2008 ESPP also provides that in the event of certain merger or "change-in-control" transactions, if the successor corporation refuses to assume or substitute for the purchase right under an ongoing offering period, the offering period with respect to which such purchase right relates will be shortened by setting a new exercise date that occurs before the date of the Company's proposed merger or change in control.

AMENDMENT OF THE AMENDED 2008 ESPP. The ESPP Administrator has the authority to amend, terminate or extend the term of the Amended 2008 ESPP, except that stockholder approval is required to increase the number of shares that may be issued under the Amended 2008 ESPP.

TERMINATION OF THE AMENDED 2008 ESPP. The Amended 2008 ESPP will terminate in 2028, on the twentieth anniversary of the date of the initial adoption of the 2008 ESPP by our Board, unless terminated earlier under the terms of the Amended 2008 ESPP. The effect of termination is that no new offering periods will commence under the Amended 2008 ESPP, but any outstanding offering periods will continue according to their terms.

Federal Income Tax Consequences

Except with respect to International Awards, the Amended 2008 ESPP is intended to be an "employee stock purchase plan" within the meaning of Section 423. Under such a plan, no taxable income will be reportable by a participant, and no deductions will be allowable to Juniper Networks, as a result of the grant or exercise of the purchase rights issued under the Amended 2008 ESPP. Taxable income will not be recognized until there is a sale or other disposition of the shares acquired under the Amended 2008 ESPP or in the event the participant should die while still owning the purchased shares.

If the participant sells or otherwise disposes of the purchased shares within two years after commencement of the offering period during which those shares were purchased or within one year of the date of purchase, the participant will recognize ordinary income in the year of sale or disposition equal to the amount by which the fair market value of the shares on the purchase date exceeded the purchase price paid for those shares. If the participant sells or disposes of the purchased shares more than two years after the commencement of the offering period in which those shares were purchased and more than one year from the date of purchase, then the participant will recognize ordinary income in the year of sale or disposition equal to the lesser of the amount by which the fair market value of the shares on the sale or disposition date exceeded the purchase price paid for those shares or 15% of the fair market value of the shares on the date of commencement of such offering period. Any additional gain upon the disposition will be taxed as a capital gain.

If the participant still owns the purchased shares at the time of death, the lesser of the amount by which the fair market value of the shares on the date of death exceeds the purchase price or 15% of the fair market value of the shares on the date of commencement of the offering period during which those shares were purchased will constitute ordinary income in the year of death.

If the purchased shares are sold or otherwise disposed of within two years after commencement of the offering period during which those shares were purchased or within one year after the date of purchase, then Juniper Networks will be entitled to an income tax deduction in the year of sale or disposition equal to the amount of ordinary income recognized by the participant as a result of such sale or disposition. No deduction will be allowed in any other case.

New Plan Benefits

Our named executive officers have an interest in this proposal because they are eligible to participate in the Amended 2008 ESPP. Non-employee directors of the Board are not eligible to participate in the 2008 ESPP.

The benefits to be received by our executive officers and employees if the Amended 2008 ESPP becomes effective are not determinable, since the amounts of future purchases by participants are (i) based on elective participant contributions and the per-share purchase price, which depends on the future value of our common stock, and (ii) subject to the restrictions of Section 423 and the Amended 2008 ESPP. No purchase rights have been granted, and no shares of common stock have been issued, with respect to the 8,000,000 share increase for which stockholder approval is sought under this proposal. If stockholder approval is not obtained, the amendment and restatement of the 2008 ESPP will not become effective, and the share increase will not be implemented.

The official closing price per share of our common stock as reported on the NYSE as of March 19, 2020 was \$18.17.

History of Grants under 2008 ESPP

The table below shows, as to the listed individuals and specified groups, the number of shares of common stock that were purchased under the 2008 ESPP from the inception of the 2008 ESPP through March 19, 2020.

Name and Position	Number of Purchased Shares ⁽³⁾
Rami Rahim ⁽¹⁾ Chief Executive Officer and Director	0
Kenneth Miller ⁽¹⁾ Executive Vice President, Chief Financial Officer	12,026
Manoj Leelanivas Executive Vice President, Chief Product Officer	0
Anand Athreya ⁽¹⁾ Executive Vice President, Chief Development Officer	11,808
Brian Martin Senior Vice President, General Counsel	3,248
Executive Officer Group (6 persons)	27,082
Non-Executive Director Group (9 persons) ⁽¹⁾⁽²⁾	N/A
Non-Executive Officer Employee Group ⁽¹⁾	30,099,005

⁽¹⁾ Non-employee directors are not eligible to participate in the 2008 ESPP and will not be eligible to participate in the Amended 2008 ESPP; however, Mr. Kriens purchased an aggregate of 1,361 shares of common stock under the 2008 ESPP while he was an employee of the Company. The number of shares of common stock purchased by Mr. Kriens under the 2008 ESPP when he was an employee of the Company is reflected in the amount set forth for the Non-Executive Officer Employee Group.

⁽²⁾ There are no nominees for election as a director who are not covered by the above. No purchase rights have been granted under the 2008 ESPP by any associate of any of our executive officers or directors, and no person received 5% or more of the total number of purchase rights granted under the 2008 ESPP since its inception.

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Recommendation

Our Board unanimously recommends a vote “FOR” approval of the foregoing amendment and restatement of the Juniper Networks, Inc. 2008 Employee Stock Purchase Plan.

If you sign your proxy or voting instruction card or vote by telephone or over the Internet but do not give instructions with respect to this proposal, your shares will be voted for approval of the Amended 2008 ESPP, as recommended by the Board. If you do not give voting instructions to your broker, your broker will not be able to vote your shares and your shares will not be voted on this matter.

Vote Required

Provided a quorum is present, approval of the foregoing amendment and restatement of the Juniper Networks, Inc. 2008 Employee Stock Purchase Plan requires the affirmative vote of a majority of the shares of common stock present in person or represented by proxy and entitled to vote at the annual meeting.

Executive Compensation

Compensation Discussion and Analysis

Our Compensation Discussion and Analysis provides an overview of (1) our executive compensation policies, framework and philosophy, and (2) the compensation decisions the Compensation Committee has made under such policies, framework and philosophy for the named executive officers (“NEOs”) of the Company, who are listed below.

Named Executive Officers	
Rami Rahim	Chief Executive Officer (“CEO”)
Anand Athreya	Executive Vice President, Chief Development Officer
Kenneth Miller	Executive Vice President, Chief Financial Officer
Manoj Leelanivas	Executive Vice President, Chief Product Officer
Brian Martin	Senior Vice President, General Counsel

We refer to the Compensation Committee in this “*Compensation Discussion and Analysis*” section of the proxy statement as the “Committee.”

Our Compensation Discussion and Analysis is organized into four sections.

- Section 1 — Executive Summary
- Section 2 — Setting Executive Compensation
- Section 3 — Elements of Executive Compensation
- Section 4 — Other Compensation Policies and Information

Section 1 — Executive Summary

Juniper Networks Overview and 2019 Performance

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. In 2019, we continued to execute our strategy to capture share in the cloud and cloud-enabled segments of our market.

In 2019, net revenues decreased primarily due to the Service Provider vertical, partially offset by growth in Enterprise and Cloud. We believe the decline in the Service Provider vertical is due to continued business challenges facing some of our largest Service Provider customers. Our Cloud vertical returned to year-over-year growth in 2019. Certain large Cloud customers were transitioning their network architecture as they continued to add capacity. The transition from purchasing our MX product family to our PTX product family contributed to the decline in our net revenues as the PTX product family has a lower average selling price compared to the MX product family. We believe the MX to PTX transition is largely behind us. Nevertheless, we are focused on the Cloud vertical as well as the transition to 400-gig Ethernet, which we believe will present further opportunities for Juniper across our portfolio as our Cloud customers value high-performance, highly compact, power efficient infrastructures, which we support and continue to develop. Likewise, we were pleased by the year-over-year revenue growth in 2019 that we experienced in our Enterprise vertical.

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The following tables highlight certain year-over-year key financial results.

Certain Key Financial Results: 2019 vs. 2018

Results (in millions, except per share amounts and percentages)	Fiscal 2018	Fiscal 2019	Year-over-Year % Change
Revenue	\$4,647.5	\$4,445.4	-4.3%
Cash Flow from Operations	\$ 861.1	\$ 528.9	-38.6%
Per Share Stock Price at Fiscal Year End	\$ 26.91	\$ 24.63	-8.5%
Dividends per Share	\$ 0.72	\$ 0.76	5.6%
Stock Buyback	\$ 750.0	\$ 550.0	-26.7%

2019 Pay Outcomes

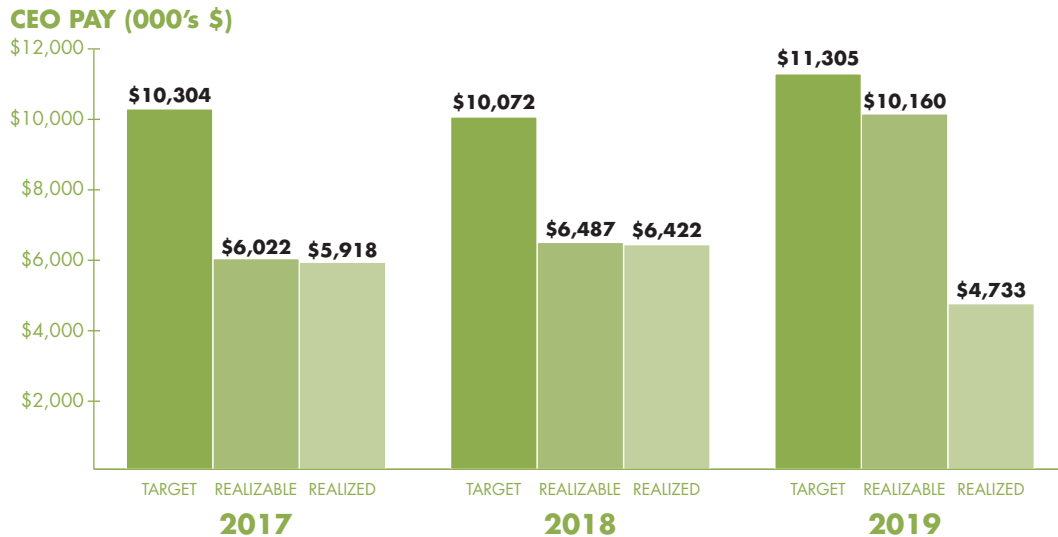
Our fiscal year financial results and stock price performance resulted in executive compensation program outcomes, which align with our pay-for-performance philosophy:

- The Executive Annual Incentive Plan (“AIP”) paid out at less than target. For 2019, our AIP had a 90% cash payout for our NEOs, but the cash payout amount was reduced to account for the vesting of previously granted Bonus PSUs (as described in greater detail below).
- Similarly, the 2019 tranche for our three-year performance share awards (“PSAs”) “banked” at an amount less than target. For 2019, our PSAs “banked” at 78%.
- Based on performance during the three-year period covering fiscal years 2017, 2018 and 2019, our 2017 PSAs were earned and settled at approximately 26% of target.
- Based on stock price performance in 2019, no price-vested RSUs, which were issued in prior years, vested in 2019.

CEO Compensation for 2017-2019

Consistent with the Committee's "pay-for-performance" philosophy, the majority of our CEO's target pay is at risk. As a result, we believe that the value that will ultimately be realized by our CEO aligns with the Company's strategic and financial results and stock price performance. We believe that realizable and realized compensation perspectives provide valuable data points to evaluate the alignment between pay-and-performance for our CEO.

Target versus Realizable and Realized Pay: 2017-2019



The above chart illustrates the value of target pay granted to the CEO from fiscal years 2017-2019 compared to both his realizable pay and realized pay over the same time frame.

"Target Pay" reflects (1) the sum of the following components reported in our "Summary Compensation Table" for the applicable year: Salary, Stock Awards, and All Other Compensation, and (2) the target opportunity reflected in our "Grants of Plan-Based Awards" table for the applicable year with respect to Non-Equity Incentive Plan Awards.

"Realizable Pay" is calculated in the same manner as "Target Pay," except (i) the amounts shown in the Bonus column in our "Summary Compensation Table" for the applicable year are included, (ii) the Non-Equity Incentive Plan Compensation reflects the actual value disclosed for the applicable year in our "Summary Compensation Table," and (iii) equity incentive vehicles are valued based on the closing price per share of our common stock at each fiscal year end, and further adjusted as follows:

- PSA awards are adjusted to reflect the actual number of "banked" shares for the relevant fiscal year to reflect the achievement of annual performance targets established for that year,
- PSA awards that vest based upon achievement of Juniper's total shareholder return relative to the S&P 500 Index, as well as price-vested equity awards, reflect the target number of shares issuable for such awards, and
- Bonus PSUs for the applicable year are included only if the performance conditions were achieved.

"Realized Pay" reflects (i) Salary, Bonus, Non-Equity Incentive Plan Compensation and All Other Compensation as reported in our "Summary Compensation Table" for the applicable year and (ii) the Value Realized on Vesting as reported in our "Stock Vested" table for the applicable year.

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Stockholder Engagement for 2019

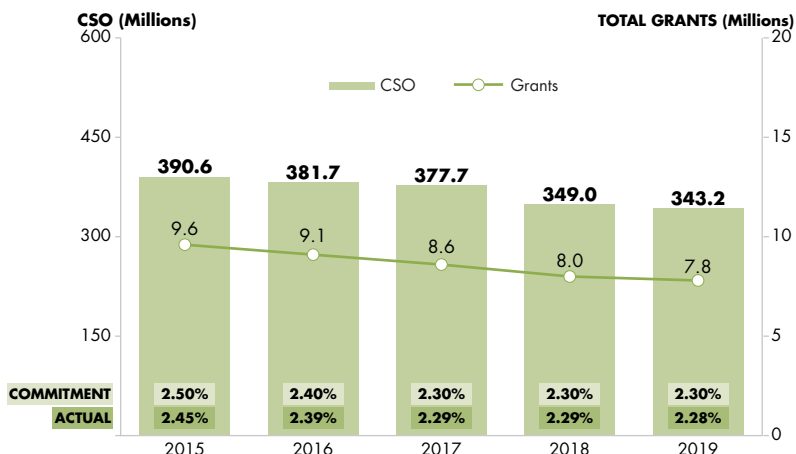
The Committee considers the outcome of the annual “Say-on-Pay” advisory vote when making decisions regarding the executive compensation program. At the Company’s 2019 Annual Meeting of Stockholders, approximately 91% of the votes cast on the fiscal year 2018 Say-on-Pay advisory vote were cast in favor of approving the compensation of our NEOs. The Committee viewed the outcome of the Say-on-Pay advisory vote as indicative that a significant majority of the Company’s stockholders view the Committee’s approach to executive compensation favorably.

In addition, following our 2019 annual “Say-on-Pay” advisory vote, Juniper Networks continued its practice of meeting with stockholders to solicit feedback on our executive compensation program. As described above in the section entitled “Stockholder Engagement” of this proxy statement, our engagement efforts, as well as ongoing conversations between management and stockholders on a variety of matters, reflect our commitment to strong corporate governance and our goal of seeking input directly from our stockholders, which we believe allows us to better understand our stockholders’ perspectives.

As a result of the Committee’s evaluation of the results of the “Say-on-Pay” advisory vote, the feedback received from stockholders and the advice from the Committee’s independent compensation consultant, the Committee determined that significant changes to the design of the Company’s executive compensation and equity programs were not warranted at this time; however, the Committee determined to:

- Continue Providing PSAs Based Upon Relative Total Shareholder Return.** In 2018, the Company provided NEOs with a new class of PSAs based upon the Company’s total shareholder return relative to the S&P 500 Index over three years (“RTSR PSAs”). The Committee believes that RTSR PSAs help to strengthen the alignment between our NEOs’ compensation with shareholder interests as payout is predicated on the Company’s long-term performance relative to the S&P 500 Index over a sustained period. Based on the Company’s TSR performance, shares may be earned at the conclusion of the three-year performance period, ensuring that NEOs are incentivized to remain at the Company to develop and execute on long-term strategic goals. Based in part upon input received from stockholders in 2018 and 2019, the Committee continued to utilize RTSR PSAs in 2019 and also increased the relative proportion of RTSR PSA grants as an element of long-term performance-based compensation for our NEOs.
- Continue Focusing on Prudent Management of the Company’s Equity Burn Rate.** The Company intends to continue focusing on keeping its equity burn-rate in-line with its peer companies. Based in part upon input received from stockholders, for 2019, the Committee continued its commitment to an equity burn-rate of 2.30% of basic weighted-average common shares outstanding (“CSO”) notwithstanding the sustained decrease in CSO over the last five years. We believe this commitment helps to mitigate stockholder dilution while still allowing us to be competitive to attract and retain talent. The following chart shows how we have managed our equity burn rate over the past five years.

Total Shares Granted (Burn Rate): 2015-2019⁽¹⁾



BURN RATE

The burn rate commitment decreased from 2.50% in 2015 to 2.30% in 2019, even while CSO declined over the same period from 390.6 million shares to 343.2 million shares. The Company reduced annual equity grants from 9.6 million shares in 2015 to 7.8 million shares in 2019.

⁽¹⁾ Shares granted, as well as burn rate, counts each RSU as one share and counts each performance share as one share based on the target number of shares issuable under the award.

Strong Executive Compensation Practices

The Committee takes seriously its duty to maintain a comprehensive governance framework that is aligned with market leading practice and standards. Therefore, the Committee has adopted a strong corporate governance framework for executive compensation that includes the components described below.

What We Do	
Pay-for-performance	A significant percentage of total target direct compensation is performance-based and aligned with the Company's financial performance and stockholder return. Our annual and long-term plans provide a balance of incentives and include different measures of performance.
Annual "Say-on-Pay" Advisory Vote and Stockholder Outreach	We conduct an annual "Say-on-Pay" advisory vote and we maintain an active stockholder engagement program to foster strong relationships with our stockholders.
Stock ownership guidelines	We have established stock ownership guidelines for members of our Board and NEOs to align the interests of our leadership with those of our stockholders.
"Claw-back" policy	We adopted a "claw-back" policy under which all of our executive officers are required, in certain instances, to repay overpayments of incentive compensation awards.
"Double-trigger" change-in-control arrangements	An executive's cash severance rights will trigger and unvested equity awards will vest upon a change in control only if the executive also experiences a qualifying termination of employment.
Retain an independent compensation consultant	The Committee engaged an independent compensation consultant, Compensia, to provide analysis, advice and guidance on executive compensation matters.
Annual Assessment of Executive Compensation	The Committee reviews an annual executive compensation assessment prepared by Compensia.
Avoid excessive risk taking	The Committee reviews an annual executive compensation program risk assessment conducted by its independent compensation consultant.
What We Don't Do	
No stock option or stock appreciation right repricing	The Company's 2015 Equity Incentive Plan does not permit us to reprice or repurchase "underwater" stock options or stock appreciation rights without stockholder approval or to grant stock options or stock appreciation rights with an exercise price below fair market value.
No "Golden Parachute" tax gross-ups	The Company has no executive officer contracts providing for an excise tax gross-up following a change in control.
No hedging or pledging of Company stock and no use of margin accounts	The Company has adopted a policy that prohibits members of our Board and all employees, including Section 16 Officers, from pledging their Company stock or engaging in short sales of Company stock and other similar transactions that could be used to hedge the risk of Company stock ownership.
No "evergreen" or fixed-term employment agreements	We do not provide "evergreen" positions in any employment agreements with executive officers. Employment of our executive officers is "at will" and may be terminated by either the Company or the employee at any time.
No dividend equivalents on unvested equity awards	We do not and our stock plan does not permit us to pay dividends or dividend equivalents on unearned shares or units.
No excessive perks	We offer only certain limited benefits as required to remain competitive and to attract and retain highly talented executives.
No single trigger change-in-control or excessive severance benefits	We do not provide single trigger change-in-control benefits or severance cash payments exceeding 3x base salary and bonus.
No Executive Pension or SERPs	We do not provide for any executive pension plans or SERPs.

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Section 2 — Setting Executive Compensation

Roles

The Company's executive compensation program is established and overseen by the Committee with support provided by its independent compensation consultant, Compensia, Inc. ("Compensia"), and management. Each of their roles is described below.

Role of the Compensation Committee

The Committee is comprised entirely of independent directors and has the responsibility of establishing compensation for our officers who are designated as reporting officers under Section 16 of the Exchange Act. The Committee has overall responsibility for establishing and evaluating executive officer compensation plans, policies, and programs, including the evaluation of the Chief Executive Officer. The Committee also has responsibility for reviewing the overall equity award practices of the Company. The Committee has the authority to receive appropriate funding from Juniper Networks for obtaining advice and assistance from outside legal counsel, compensation consultants, or other advisors, as the Committee deems necessary to carry out its duties. In addition, the Committee is free to replace its independent compensation consultants or retain additional advisors at any time.

The Committee independently decides the salary, incentive target and equity awards for the Chief Executive Officer with input from its independent compensation consultant. Based on the information presented from the independent compensation consultant, the Committee discusses the Chief Executive Officer's contribution and performance, Company performance, the competitive market, and the other factors discussed below, and independently makes compensation decisions in an executive session, without members of management present.

Role of the Independent Compensation Consultant

The Committee engaged Compensia to serve as its independent consultant beginning in August 2018 and continuing through 2019. Compensia advised the Committee with respect to trends in executive compensation, review of market information, and assessment of compensation actions required under its charter. Based on the consideration of the various factors as set forth in the rules of the SEC and the NYSE, the Committee has determined that its relationship with Compensia is an independent compensation consultant under the rules of the NYSE and there are no conflicts of interest. In 2019, Compensia did not provide the Company with any other services and did not receive any compensation from us other than with respect to the services described above.

The Committee's compensation consultant attends most Committee meetings either in person or by phone and provides its advice and guidance, as well as relevant market data on executive pay levels, practices and design, to the Committee. For additional details on the engagement and services provided by Compensia, please refer to the "Compensation Consultant Disclosure" section of this proxy statement.

Role of Management

Our CEO makes recommendations to the Committee regarding the salary, incentive target and equity awards for the executive officers other than himself. These recommendations are based on market-based analysis and guidance provided by its compensation consultant on behalf of the Committee and our CEO's assessment of individual specific factors, such as the individual's role and contribution to Company performance and the other factors discussed below. Our CEO is also assisted by the Company's Human Resources department in making these recommendations.

Executive Compensation Philosophy

The Committee has established guiding principles with respect to our executive compensation program, as detailed below. The Committee believes that these guiding principles drive desirable behaviors, accountability, and alignment with stockholder interests.

Principle	Strategy
Enhance Accountability	Executive compensation linked to a clear set of business objectives
Manage to Balanced Results	Compensation strategy that drives balanced results between the following: <ul style="list-style-type: none"> • Short- and long-term objectives • Individual and team performance • Financial and non-financial objectives • Customer satisfaction and growth
Reward High Performance	Upside potential for superior performance with downside risk for under performance
Attract & Retain Talent	Market-competitive programs with flexibility to be aggressive for critical talent retention and acquisition
Align with Stockholder Interests	Programs that are transparent, easily understood and aligned with long-term stockholder interests
Encourage Health and Financial Well-Being	Market-competitive benefit programs that encourage wellness and financial savings

Based on the guiding principles, the Committee then reviews the various elements of compensation in order to develop our executive compensation program. The following table lists the elements of our 2019 executive compensation program and the primary purpose and performance measures associated with each element of the 2019 executive compensation program.

	Fixed		Variable Short-Term		Variable Long-Term		Other
	Base Salary	Executive AIP Cash	Bonus PSU	Financial PSA	RTSR PSA	RSU	Benefits
Primary Purpose	Attract and retain		Retain	Attract and retain			Encourage wellness and financial savings
	Provide focus on annual financial and non-financial goals, motivate performance		Reward achievement of financial and strategic results that drive long-term stockholder value				
	Create ownership and align employee efforts with stockholder interests						
Performance Measures		<ul style="list-style-type: none"> • Revenue • Non-GAAP EPS • Software Revenue • Strategic goals 	<ul style="list-style-type: none"> • Revenue 	<ul style="list-style-type: none"> • Revenue • Non-GAAP EPS • Software Revenue 	<ul style="list-style-type: none"> • Shareholder return over a sustained duration 		
Total Performance/Vest Period	Ongoing	1-year	1-year performance 2-year vest (ratable)	1-year performance in each of 3 years 3-year vest (cliff)	3-year performance & vest (cliff)	3-year (ratable)	Ongoing

Finally, the Committee continued its practice of setting compensation on an individual basis aligned with our guiding principles for executive compensation. Generally, in determining compensation for our NEOs, the Committee considers a number of factors, including, among other things, each executive's:

- individual performance,
- tenure,
- role, including complexity of responsibilities and scope,
- pre-existing compensation arrangements, including equity retention hold,
- internal comparisons and peer market data, and
- ability to impact business results.

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The Committee believes this practice aligns executive officer compensation levels with stockholder interests while continuing to potentially reward executives for achieving financial and strategic results that drive stockholder value over the long-term, including rewarding above-target performance with above-target pay.

Our NEOs' pay mix emphasizes "at risk" pay opportunities, including performance-based compensation. In 2019, with respect to our CEO's annual target compensation package, "performance-based" compensation was awarded in the form of an annual cash bonus incentive and performance-based equity. Overall, our CEO's "variable" compensation in the form of an annual cash bonus incentive and equity awards comprised 91% of his target total direct compensation.

2019 Target Pay Mix



(1) Target Total Direct Compensation reflects (i) salary disclosed in the "Summary Compensation Table", (ii) the target opportunity for non-equity incentive plan awards disclosed in the "Grants of Plan-Based Awards For Fiscal 2019" table, and (iii) the grant date fair value of all stock awards as disclosed in the "Grants of Plan-Based Awards For Fiscal 2019" table.

(2) Target Total Direct Compensation reflects an average of the following components for our continuing-NEOs (other than the CEO): (i) salary as disclosed in the "Summary Compensation Table," (ii) the target opportunity for non-equity incentive plan awards disclosed in the "Grants of Plan-Based Awards For Fiscal 2019" table, and (iii) the grant date fair value of all stock awards as disclosed in the "Grants of Plan-Based Awards For Fiscal 2019" table.

Competitive Compensation Data

The Committee reviews competitive compensation data to establish market reference points, including data from the Peer Group (as described below) and broader technology company data based on a custom Radford survey.

2019 Peer Group

The Committee utilizes a compensation peer group of publicly traded networking equipment and other high technology companies (the "Peer Group") to monitor and assess the market competitiveness of the compensation levels of our NEOs relative to similar positions in the Peer Group, and to review the compensation practices of similarly situated companies. In August 2018, the Committee, with input from its compensation consultant, established the Peer Group for use in 2019. In deciding whether a company should be included in the Peer Group, the Committee generally considered the following screening criteria:

- Industry relevance;
- Revenue and historical revenue growth;
- Market value;
- Business model;
- Scope of operations; and
- Whether the Company is likely to compete with the company in the Peer Group for executive talent.

The Peer Group is regularly reviewed and assessed by the Committee with the assistance of its compensation consultant to take into account changes in both the Company and the companies in the Peer Group based on the selection criteria described above. For 2019, the Committee determined to remove Brocade Communication Systems, Corning and NVIDIA from the prior year Peer Group, and determined to add F5 Networks and Palo Alto Networks. For compensation decisions made in 2019, the Peer Group consisted of the 14 companies set forth below.

Company Name	
Adobe Systems, Inc.	Intuit, Inc.
ARRIS Intl. Plc.	Motorola Solutions, Inc.
Autodesk, Inc.	NetApp, Inc.
CA, Inc.	Palo Alto Networks, Inc.
Ciena Corp.	Symantec Corp.
Citrix Systems, Inc.	VMware, Inc.
F5 Networks, Inc.	Xilinx, Inc.

Section 3 – Elements of Executive Compensation

Base Salary

The Committee reviews base salaries of our NEOs annually and adjusts salaries based on the scope and complexity of responsibilities; growth in experience and capabilities; contributions or responsibilities beyond the typical scope of the role; individual performance; internal comparisons; and market competitiveness as measured against our Peer Group and other competitors for similar executive talent.

In 2019, the Committee increased the base salaries of Messrs. Miller, Leelanivas, Athreya and Martin after (i) considering Mr. Rahim's recommendations, which were based upon analysis and guidance from its compensation consultant, including competitive data from our Peer Group and the CEO's assessment of individual-specific factors and (ii) determining that the increases in base salaries were commensurate with the NEOs' individual specific performance and responsibilities and the competitive data from our Peer Group. In making such decisions, the Committee also took into account that none of the NEOs received salary increases in 2018. The Committee determined not to increase Mr. Rahim's base salary, which has remained unchanged since he assumed the role of CEO in 2015. The Committee believes that leaving Mr. Rahim's base salary unchanged is a clear demonstration of the Committee's commitment to the guiding principles for our executive compensation program, as described above.

Executive	2018 Base Salary	2019 Base Salary ⁽¹⁾	% Salary Increase
Rami Rahim	\$1,000,000	\$1,000,000	—%
Kenneth Miller	\$ 575,000	\$ 600,000	4.3%
Manoj Leelanivas	\$ 550,000	\$ 570,000	3.6%
Anand Athreya	\$ 460,000	\$ 500,000	8.7%
Brian Martin	\$ 500,000	\$ 525,000	5.0%

⁽¹⁾ The increase in base salaries were effective as of July 1, 2019.

Executive Annual Incentive Plan

Our NEOs have the opportunity to receive annual incentives through our AIP. Consistent with the Committee's objective to link a significant portion of our NEOs' compensation to attainment of predetermined annual financial and strategic goals, the Committee established a target annual performance-based incentive opportunity for each NEO, expressed as a percentage of base salary. In setting the amount of the target incentive opportunity, the Committee, with input from its compensation consultant, takes into account competitive market data, the individual's role and contribution to performance, and internal comparisons. The actual payout may be higher or lower than this target incentive amount, based on Company and/or individual performance factors. In addition, the Committee retains the discretion to reduce each NEO's payout as determined by the Committee in its sole discretion.

For 2019, the target incentive opportunities (expressed as a percentage of actual base salary) for all NEOs remained consistent with 2018 levels. With respect to the 2019 AIP, a portion of each NEO's target opportunity under the AIP was awarded in performance shares ("Bonus PSUs") at the beginning of the AIP performance period, as discussed in further detail below. The target incentive opportunities for our NEOs and potential payout ranges for 2019 are presented below (without giving effect to the Bonus PSUs).

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Executive	Annual Salary as of 12/31/2019	2019 Actual Salary ⁽¹⁾	AIP Target as % of Salary ⁽²⁾	Potential Payout Range (of Target)
Rami Rahim	\$1,000,000	\$1,000,000	175%	0% – 200%
Kenneth Miller	\$ 600,000	\$ 587,500	100%	0% – 200%
Manoj Leelanivas	\$ 570,000	\$ 560,000	100%	0% – 200%
Anand Athreya	\$ 500,000	\$ 480,000	100%	0% – 200%
Brian Martin	\$ 525,000	\$ 512,500	100%	0% – 200%

⁽¹⁾ Reflects actual salaries earned in 2019. Increases to salaries were effective as of July 1, 2019.

⁽²⁾ A portion of the target incentive opportunity value was awarded in Bonus PSUs (as discussed below). The percentages disclosed in this column reflect the target incentive opportunity value as a percentage of base salary prior to adjusting for Bonus PSUs.

Performance Goals under the Executive Annual Incentive Plan

The actual amounts payable to individual NEOs under the 2019 AIP depended on the actual level of achievement measured against the pre-established objectives for the financial and strategic components. Our NEOs can earn anywhere between 0%-200% of their respective target AIP opportunities based on the Company's actual performance, less the portion of the 2019 AIP used to calculate Bonus PSUs.

Under the 2019 AIP, our NEOs could earn annual cash incentive payments based on the targets and formula illustrated below:

FINANCIAL PERFORMANCE TARGETS (70% Weight, 0% - 200% Payout)

Revenue		
	Revenue Attainment (\$millions)	Revenue Payout Percentage (%) [*]
Max	\$5,400	200%
Target	\$4,650	100%
Threshold	\$4,185	50%

X
The sum of the following formula:

(100 +

Non-GAAP EPS** Decelerator		
Non-GAAP EPS (\$/share)	Revenue Payout Percentage (%) [*]	Decelerator
Less than \$1.75	200%	-25%
	100%	-10%
	50%	-1%

+

Software Revenue Accelerator		
Software Revenue Percentage (%)	Revenue Payout Percentage (%) [*]	Accelerator [*]
More than 10.0%	160%	25%
	100%	10%
	50%	1%

)

PLUS

STRATEGIC PERFORMANCE TARGETS (70% Weight, 0% - 200% Payout)

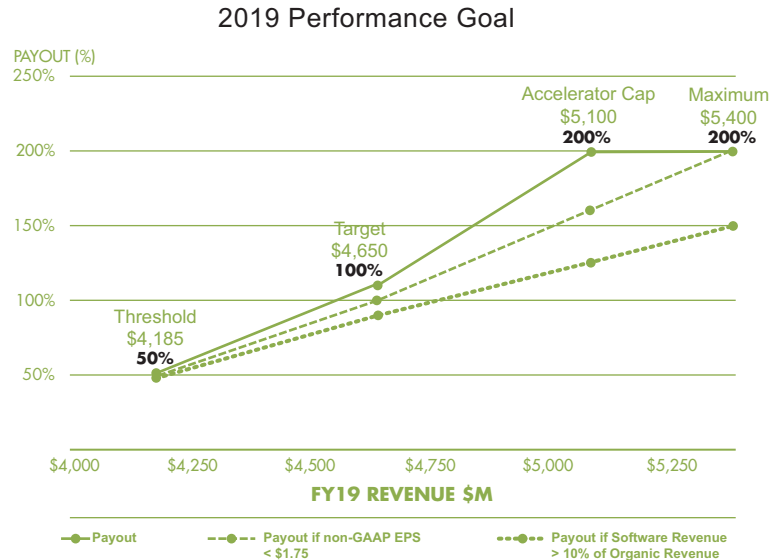
Goals	Weighting
Innovation Advantage	7.5%
Profitable Growth	7.5%
Quality First	7.5%
Junivator Success	7.5%

* Linear interpolation will be used to the extent (i) "Revenue Attainment" falls between two discrete "Revenue Payout Percentage" points or (ii) "Revenue Payout Percentage" falls between two discrete "Decelerator" or "Accelerator" points. There is no payout with respect to each applicable financial component to the extent the applicable metric is below the threshold amounts.

** The components of non-GAAP EPS, along with a reconciliation to EPS, for fiscal year 2019 is provided in our press release furnished with the SEC on January 27, 2020, which reports our preliminary fiscal year 2019 financial results.

For purposes of the 2019 AIP:

- The financial performance component, weighted at 70% of the AIP target payout, was comprised of organic revenue, non-GAAP EPS, and software revenue targets. The Committee believes that each element of the financial performance component of the AIP helps to drive long-term stockholder value creation through revenue growth and prudent management of the Company's operating expenses.



- The strategic performance component, weighted at 30% of the AIP target payout, was focused on a number of key corporate objectives, namely around improving our long-term technology advantage, delivering profitable growth for the Company, ensuring delivery of high-quality products, and strengthening the Company's culture, including around inclusion and diversity. The strategic goals were established at the same time as the financial goals. The Committee believes that achieving key elements of our corporate objectives that are not necessarily tied to in-year financial performance is critical for driving sustainable growth, operational excellence and long-term value creation for our stockholders. The Committee established "stretch" goals across the four corporate objectives and evaluates the achievement of each strategic metric on a quantitative scale. Each strategic metric is weighted equally.

Bonus PSUs Granted Pursuant to the Executive Annual Incentive Plan

In order to enhance long-term retention of our NEOs and further align the interests of our NEOs with our stockholders, the Committee (i) awarded approximately 50% of each NEO's target opportunity under the 2019 AIP in Bonus PSUs at the beginning of the AIP performance period and (ii) reduced the cash payable under the 2019 AIP for each NEO who was granted Bonus PSUs. Subject to the achievement of the applicable performance goal, the Bonus PSUs vest in two equal installments over a two-year period, which is approximately one year longer than the cash portion of the AIP and helps to further drive longer-term retention of our NEOs. In addition, because the final value earned under the Bonus PSUs is directly tied to our stock price, the Committee believes the Bonus PSUs further aligns our NEOs to the interests of our stockholders.

In connection with the longer vesting period for the Bonus PSUs, the Committee awarded Bonus PSUs in an amount equal to 1.5 times the approximately 50% target AIP opportunity for each applicable NEO. The Bonus PSUs vest only if the threshold organic corporate revenue goal under the 2019 AIP, as described above, is achieved. Subject to achievement of the performance criteria and each individual's continued service at the Company, the Bonus PSUs vest in two equal installments in February 2020 and 2021. The Bonus PSUs are not eligible for performance multipliers.

The Financial component for the 2019 AIP was achieved as the Company attained approximately 95% of the target organic corporate revenue goal under the 2019 AIP, which exceeded the threshold performance goal for the Bonus PSUs. As a result, the Bonus PSUs were earned.

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Our NEOs received the following Bonus PSUs with respect to the 2019 performance period:

Executive	Portion of 2019 AIP Used to Calculate Bonus PSUs ⁽¹⁾	Value Multiplier for Two-Year Vest ⁽²⁾	Bonus PSUs Granted and Earned ⁽³⁾
Rami Rahim Chief Executive Officer	\$875,000	1.5x	45,763
Kenneth Miller EVP, Chief Financial Officer	\$293,750	1.5x	15,363
Manoj Leelanivas EVP, Chief Product Officer	\$280,000	1.5x	14,644
Anand Athreya EVP, Chief Development Officer	\$240,000	1.5x	12,552
Brian Martin SVP, General Counsel	\$256,250	1.5x	13,402

⁽¹⁾ Reflects the target annual incentive opportunity value for the Bonus PSU prior to the 1.5x multiplier.

⁽²⁾ In connection with the longer vesting period for the Bonus PSUs, the Committee awarded Bonus PSUs in the amount equal to 1.5 times the approximately 50% target AIP opportunity for each applicable NEO.

⁽³⁾ Bonus PSUs vest 50% in February 2020 and 50% in February 2021, subject to continued employment by the NEO at the Company.

2019 AIP Compensation Decisions

Upon completion of the performance period for 2019, the Committee reviewed Company performance across the predetermined financial and strategic performance goals to verify and approve the attainment for the applicable goals and the calculations of the amounts to be paid to the NEOs. The Committee determined achievement of such goals as shown in the table below. In particular, with respect to the payout associated with the strategic performance goals, the Committee took into consideration, among other things:

- Delivering excellent customer experiences and high-quality products
- Defining and implementing a high-quality innovation engine
- Revenue growth in the Company's Cloud and Enterprise verticals
- Enhancements made to the overall employee experience aligned with the Company's culture
- Defining the strategy and reviewing the results of the Company's inclusion and diversity initiatives

MILESTONES					
Metric	Threshold	Target	Maximum	Performance	Result
Financial (70% weight)					
Software Revenue	10% of Corporate Revenue			11%	Accelerator applied
Non-GAAP EPS		\$1.75		\$1.79	Decelerator not applied
Corporate Revenue	\$4,185M	\$4,650M	\$5,400M	\$4,409M	74%
FINANCIAL RESULT					78%
Strategic (30% weight)					
Innovation Advantage	1 point	25 points	50 points	20 points	80%
Profitable Growth	1 point	25 points	50 points	17 points	68%
Quality First	1 point	25 points	50 points	35 points	140%
Junivator Success	1 point	25 points	50 points	45 points	180%
STRATEGIC RESULT					117%
EXECUTIVE AIP PAYOUT FUNDING					90%

The table below summarizes 2019 AIP cash payouts for the NEOs.

Executive	Target 2019 AIP Value	2019 AIP Funding	Deduction for Bonus PSUs	Actual AIP Cash Payout ⁽¹⁾
Rami Rahim	\$1,750,000	\$1,575,000	\$875,000	\$700,000
Kenneth Miller	\$ 587,500	\$ 528,750	\$293,750	\$235,000
Manoj Leelanivas	\$ 560,000	\$ 504,000	\$280,000	\$224,000
Anand Athreya	\$ 480,000	\$ 432,000	\$240,000	\$192,000
Brian Martin	\$ 512,500	\$ 461,250	\$256,250	\$205,000

⁽¹⁾ The amounts reflected in the "Target AIP Cash Payout" column are reflected under the "Non-Equity Incentive Plan Compensation" column of the "Summary Compensation Table".

Long-Term Equity Incentive Compensation

The Company and the Committee remain focused on aligning the Company's long-term equity compensation program with stockholder interests. The Committee granted the following types of awards:

- PSAs with financial performance goals;
- RTSR PSAs; and
- Service-vested RSUs.

The Committee, in consultation with its compensation consultant, believes this equity mix aligns with the practices of the Peer Group. Further, the Committee believes that this equity mix continues to align NEO compensation directly with the interests of our stockholders by motivating ongoing stock price appreciation, total shareholder return, and focusing on key top- and bottom-line financial metrics.

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In determining the amount of long-term equity incentives to award our NEOs, the Committee reviewed grant values provided to comparable executives of companies in the Peer Group and the survey data, and considered the executive's respective role, individual performance, and existing unvested equity retention hold.

Executive	PSAs with Financial Goals*	RTSR PSAs*	Service-Vested RSUs
Rami Rahim	93,750	62,500	156,250
Kenneth Miller	24,840	16,560	63,500
Manoj Leelanivas	24,840	16,560	45,100
Anand Athreya	24,840	16,560	52,400
Brian Martin	20,940	13,960	45,900

* Number of PSAs and RTSR PSAs reflect achievement at target. The actual amount of shares that can be earned range from 0-200% based on performance.

For 2019, the Committee awarded 30% of our CEO's 2019 long-term equity incentives, which does not include Bonus PSUs, in the form of PSAs with financial performance goals, 20% in the form of RTSR PSAs, and 50% in the form of service-vested RSUs. In addition, for 2019, the Committee awarded approximately 43% of our other NEOs' 2019 long-term equity incentives, which does not include Bonus PSUs, in the form of PSAs and RTSR PSAs. The Committee, in consultation with its compensation consultant, believes that the mix of PSAs and RSUs for our CEO and other NEOs for 2019 provides an appropriate balance between performance-based and time-based equity incentives, as it provides incentives to our CEO and other NEOs to contribute to the Company's long-term success and stock price appreciation, while also encouraging retention. In determining the number of RSU awards for NEOs, the Committee considered the realized value of incentive awards granted in the last few years and the retentive value of their outstanding equity awards. See the section entitled "Restricted Stock Units" below for more information.

Financial Performance Share Awards

Our ability to successfully offer our products and services in a rapidly evolving market requires us to effectively scale and adjust our business to fluctuating market opportunities and conditions on an annual basis, while also remaining focused on long-term success and retention. In this regard, the Committee believes that, by using three concurrent one-year tranches that cliff-vest over a three-year period, the Committee can best align the financial objectives for our NEOs with accountability for both long-term stockholder value creation and the business plans and goals approved by our Board.

One-third of the total target PSAs are subject to annual performance targets established by the Committee and the amount of PSAs "banked" for a particular year is based on the achievement of annual performance targets established for that year. With respect to each year's performance, participants can "bank" between 0% and 200% of the target number of PSAs for that year (i.e., one-third of the total PSAs awarded to a participant) based on the level of achievement against the performance targets for that year. Vesting for the "banked" shares under PSAs occurs only after the Committee certifies the level of achievement for the third tranche, and any "banked" but unvested shares under PSAs are forfeited if the participant leaves the Company before the vest date.

Given the significant strategic importance to focus on top-line growth in a sustained and reasonable manner in the current market, the Committee determined that a significant focus on organic corporate revenue, non-GAAP EPS, and software revenue was appropriate. Accordingly, the Committee, in consultation with its compensation consultant, approved the use of financial performance goals for the 2019 performance period under the PSAs similar to those used in the AIP. The performance targets and formula for 2019 are illustrated below.

Revenue		
	Revenue Attainment (\$millions)	Revenue Payout Percentage (%)*
Max	\$5,400	200%
Target	\$4,650	100%
Threshold	\$4,185	50%



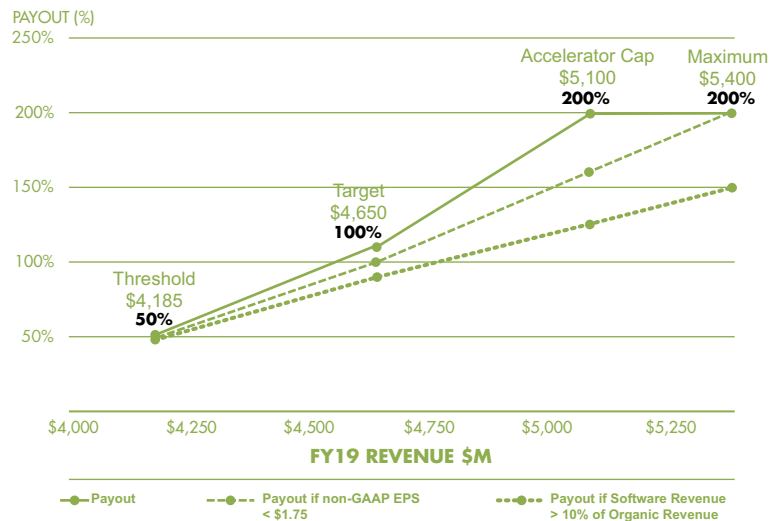
The sum of the following formula:

Non-GAAP EPS** Decelerator			Software Revenue Accelerator		
Non-GAAP EPS (\$/share)	Revenue Payout Percentage (%)*	Decelerator*	Software Revenue Percentage (%)	Revenue Payout Percentage (%)*	Accelerator*
Less than \$1.75	200%	-25%	More than 10.0%	160%	25%
	100%	-10%		100%	10%
	50%	-1%		50%	1%

* Linear interpolation will be used to the extent (i) "Revenue Attainment" falls between two discrete "Revenue Payout Percentage" points or (ii) "Revenue Payout Percentage" falls between two discrete "Decelerator" or "Accelerator" points. There is no payout with respect to each applicable financial component to the extent the applicable metric is below the threshold amounts.

** The components of non-GAAP EPS, along with a reconciliation to EPS, for fiscal year 2019 is provided in our press release furnished with the SEC on January 27, 2020, which reports our preliminary fiscal year 2019 financial results.

2019 Performance Goal



For 2019, the Committee set target performance goals under the PSA at levels which it believed at the time to be challenging but achievable and set maximum performance goals at a level which it believed to be very difficult to achieve.

2019 Financial PSA Compensation Decision

Upon completion of the performance period for 2019, the Committee reviewed Company performance across the predetermined financial performance goals for the 2019 PSAs. The calculation of the financial performance goals are calculated below:

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MILESTONES					
Metric	Threshold	Target	Maximum	Forecast	Result
Financial					
Software Revenue	10% of Corporate Revenue			11%	Accelerator applied
Software Revenue		\$1.75		\$1.79	Decelerator not applied
Corporate Revenue	\$4,185M	\$4,650M	\$5,400M	\$4,409M	74%
FINANCIAL PSA BANKING					78%

(1) No payout for the financial component if revenue is less than the threshold revenue amount. The actual payout percentage scales linearly between threshold and target and between target and maximum.

Shares Earned for 2019 Financial PSA Goal Achievement

Executive	Award Year	2019 PSA Target ⁽¹⁾	2019 Performance Achievement (% of Target)	2019 Total PSAs Banked	2017 PSAs to Vest in 2019 ⁽²⁾
Rami Rahim Chief Executive Officer	2019	31,250	78%	24,375	—
	2018	38,745	78%	30,221	—
	2017	30,591	78%	23,861	23,861
	Total	100,586	78%	78,457	23,861
Kenneth Miller Executive Vice President, Chief Financial Officer	2019	8,280	78%	6,458	—
	2018	10,667	78%	8,320	—
	2017	8,800	78%	6,864	6,864
	Total	27,747	78%	21,642	6,864
Manoj Leelanivas Executive Vice President, Chief Product Officer	2019	8,280	78%	6,458	—
	2018	—	—	—	—
	2017	—	—	—	—
	Total	8,280	78%	6,458	None
Anand Athreya Executive Vice President, Chief Development Officer	2019	8,280	78%	6,458	—
	2018	11,333	78%	8,840	—
	2017	—	—	—	—
	Total	19,613	78%	15,388	None
Brian Martin Senior Vice President, General Counsel	2019	6,980	78%	5,444	—
	2018	9,333	78%	7,280	—
	2017	6,050	78%	4,719	4,719
	Total	22,363	78%	17,443	4,719

(1) The number of shares that can be earned based on achievement of the Company's financial goals range from 0%-200% of target.

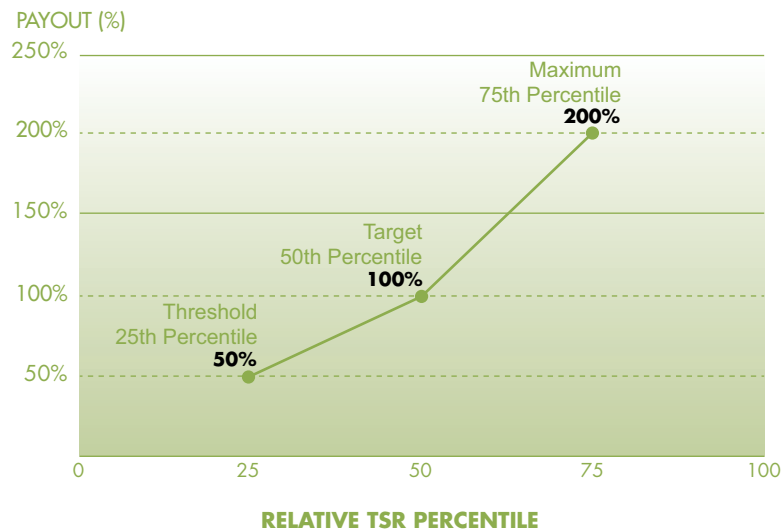
(2) PSAs vested include shares "banked" for the following years: 2019, 2018, and 2017. Shares will vest only to the extent the recipient of the PSA remains employed with the Company through the applicable vesting date in the first quarter of 2020.

Relative Total Shareholder Return Performance Share Awards

To further align our NEOs' compensation with our stockholders, approximately 20% of the 2019 target long-term incentive opportunity was awarded to our NEOs in the form of RTSR PSAs. The Committee believes that the RTSR PSAs promote stockholder alignment and create an unambiguous link between compensation of our NEOs to long-term value creation since the payout of the RTSR PSAs is directly linked to the Company's long-term total shareholder appreciation relative to the S&P 500 Index over a three year period. The RTSR PSAs cliff-vest upon the conclusion of a three-year performance period.

The Committee, based on input from its compensation consultant, reviewed potential benchmarks for the RTSR PSA and concluded that use of the S&P 500 Index was an appropriate benchmark given the broad-based nature of the index, the inclusion of Juniper Networks in the S&P 500 Index, and because the S&P 500 Index represents a robust, broad representation of the potential opportunity cost of investing in the Company from an investor's perspective.

The following graphic illustrates the payout for the RTSR PSAs. Participants can earn between 0% and 200% of the target number of RTSR PSAs. In the event that the Company's relative TSR over the three-year performance period is less than the 25th percentile of the S&P 500 Index, no RTSR PSAs will be earned or vest.



Restricted Stock Units

The Committee grants RSU awards for retention purposes as they provide payout opportunity to the NEOs only if they remain employed through the applicable vesting dates. The payout opportunity is directly linked with stockholder value and executive efforts over a multi-year time frame. Subject to continued service to the Company through the applicable vesting date, RSUs vest 34% on the first anniversary of the grant date and an additional 33% on each of the second and third anniversaries of the grant date.

In determining the number of RSU awards for NEOs, the Committee considered the realized value of incentive awards granted in the last few years and the retentive value of their outstanding equity awards. The Committee observed that in 2018 and 2017, no PSAs were banked, the performance goals for Bonus PSUs were not achieved, no AIP awards were earned under the terms of the AIP, no price-vested RSUs vested, and that existing unvested awards may not provide sufficient "holding power". In light of such concerns, in 2019, the Committee increased the proportion of the RSU awarded to our NEOs relative to the number of PSA awarded to such NEOs, but limited the number of RSUs granted to our CEO to approximately 50% of his target equity for the reasons discussed above. In 2020, the Committee elected to limit the number of RSUs granted to all NEOs to approximately 50% of their target equity with the remainder being granted in the form of PSAs as they believed that this mix both provided sufficient retentive value and would provide further incentives for driving long-term performance and stockholder value creation.

Section 4 — Other Compensation Policies and Information

Benefits and Perquisites

Because the Committee's philosophy is to emphasize pay-for-performance, the Company provides only very limited benefits and perquisites to our NEOs. The NEOs are provided the same health and welfare benefits and on the same basis that are generally available to employees broadly. In addition, NEOs are eligible to participate in the Deferred Compensation Plan and Executive Wellness Program described below. The Committee believes that the benefits programs are reasonable and consistent with its overall compensation program to better enable the Company to attract and retain talent.

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Deferred Compensation Plan

In June 2008, the Company adopted and implemented a deferred compensation plan for U.S. employees and intended for senior management. All NEOs are eligible to participate in the deferred compensation plan. The Company implemented this plan in order to offer benefits that are competitive with companies with which we compete for talent. We believe that this is a standard benefit plan also offered by many companies within our Peer Group. This plan allows participants to elect to defer a certain amount of compensation and related taxation on such amounts into one or more investment choices.

Participants are not taxed on the compensation deferred into these investments until distribution of invested funds to the participant at a future date, which may be upon termination of employment with the Company or a designated "in-service" date elected by the participant. The deferred compensation plan is intended to comply with Section 409A of the Code. In 2019, Messrs. Athreya and Martin participated in this plan.

Executive Wellness Program

Under the Executive Wellness Program, eligible executives receive additional benefits focused on health care screening and wellness. The maximum value of this benefit is limited to \$10,000 per year for each eligible executive.

The Committee believes that promoting the health and wellness of its executives may result in a number of benefits to the Company, including increased productivity, lower absentee rate and increased organizational stability, among others.

Severance Benefits

In addition to compensation designed to reward employees for service and performance, the Committee, in consultation with our compensation consultant, approved severance and change of control benefits for certain employees, including the NEOs, as described further below. Our severance and change of control arrangements are designed to be generally consistent with the pay practices of our Peer Group. The Committee, with input from its compensation consultant, annually reviews the terms and conditions of our severance and change of control arrangements for our executive officers and will make adjustments when and to the extent it deems appropriate.

Basic Severance

In order to recruit executives to the Company and encourage retention of employees, the Committee believes it is appropriate and necessary to provide assurance of certain severance payments if the Company terminates the individual's employment without "cause" or if the individual terminates their employment for "good reason," each as described in their respective agreements. The Committee approved severance benefits for several members of senior management, including the NEOs. Under severance agreements with Messrs. Rahim, Miller, Athreya, Leelanivas and Martin, in the event the employee is terminated involuntarily by Juniper Networks without cause or the employee resigns for good reason, and, in either case, provided the employee executes a full release of claims, the employee will be entitled to receive the following severance benefits:

- an amount equal to 12 months of base salary, or 16.5 months of base salary with respect to Mr. Rahim, in each case as in effect immediately prior to the termination;
- in lieu of continuation of benefits (whether or not the individual elects COBRA), an amount equal to 12 times the monthly premium cost for coverage under COBRA based on the employee's benefit plan elections in place as of the date of termination; and
- (a) if such employee terminates after the end of a performance period for an annual bonus, but prior to the date of payment, an amount equal to the annual bonus based on actual performance for the performance period and (b) if such employee terminates during a performance period for an annual bonus after the performance metrics have been established, a pro-rated annual bonus for such fiscal year equal to the annual bonus the employee would have received based on actual performance for such fiscal year if the employee had remained employed for the entire fiscal year but pro-rated based on the number of days employed in such year.

All current severance agreements with our NEOs will expire per their term in January 2021.

The following table describes the potential payments that would have been provided to each of the NEOs in the event that such NEO was involuntarily terminated by Juniper Networks without cause or resigns for good reason outside of a change of control context on December 31, 2019.

Potential Severance Payments Upon Termination

Executive	Base Salary Component	Incentive Component ⁽¹⁾	Value of Accelerated Equity Awards	Value of Benefits	Total
Rami Rahim	\$1,375,000	\$700,000	N/A	\$30,939	\$2,105,939
Kenneth Miller	\$ 600,000	\$235,000	N/A	\$30,939	\$ 865,939
Manoj Leelanivas	\$ 570,000	\$224,000	N/A	\$30,939	\$ 824,939
Anand Athreya	\$ 500,000	\$192,000	N/A	\$30,939	\$ 722,939
Brian Martin	\$ 525,000	\$205,000	N/A	\$25,921	\$ 755,921

⁽¹⁾ The amount of the annual bonus for fiscal 2019 was determined by the Committee in 2020 following the completion of the performance period, and reflects the actual non-equity incentive compensation that such NEOs received with respect to fiscal 2019.

Change of Control Severance

The Committee considers maintaining a stable and effective management team to be essential to protecting and enhancing the best interests of the Company and its stockholders. To that end, the Committee recognizes that the possibility of a change of control may exist from time to time, and that this possibility, and the uncertainty and questions it may raise among management, may result in the departure or distraction of management to the detriment of the Company and its stockholders. Accordingly, the Committee decided to take appropriate steps to encourage the continued attention, dedication and continuity of members of the Company's management to their assigned duties without the distraction that may arise from the possibility of a change of control. As a result, following consultation with the Committee's compensation consultant, the Committee approved certain severance benefits for each of our NEOs, as well as for several members of senior management, in the event of certain employment terminations following a change of control. In approving these benefits the Committee, with input from its compensation consultant, considered a number of factors, including the prevalence of similar benefits adopted by other publicly traded companies.

All current change of control agreements with our NEOs will expire per their terms on the later of (i) January 2021 or (ii) the date when all of the obligations under the change of control agreement have been satisfied if the applicable NEO's termination occurred following a change of control and prior to January 2021. The Committee takes into account an executive's current role and the impact of a transaction on the role before renewing the agreements.

Provided the executive signs a release of claims and complies with certain post termination non-solicitation and non-competition obligations, all NEOs will receive change of control severance benefits if within 12-months following a change of control the executive is terminated without cause or the executive terminates his or her employment with the Company (or any parent or subsidiary of the Company) for good reason (both cause and good reason are defined in the agreement). These change of control severance benefits consist of:

- a cash payment equal to 150% (or 200% in the case of Mr. Rahim) of the executive's annual base salary and target bonus for the fiscal year in which the change of control or the executive's termination occurs, whichever is greater,
- acceleration of vesting of all of the executive's then unvested outstanding stock options, stock appreciation rights, performance shares, RSUs and other Company equity compensation awards that vest based on time, and with respect to equity compensation awards that vest wholly or in part based on factors other than time, such as performance (whether individual or based on external measures such as Company performance, market share, stock price, or otherwise): (i) any portion for which the measurement or performance period or performance measures have been completed and the resulting quantities have been determined or calculated, shall immediately vest and, if applicable, become exercisable (and any rights of repurchase by the Company or restriction on sale shall lapse), and (ii) the remaining portions shall immediately vest and, if applicable, become exercisable (and any rights of repurchase by the Company or restriction on sale shall lapse), in an amount equal to the number that would be calculated if the performance measures were achieved at the target level (provided that if there is no "target" level, then such amount shall equal 100% of the equity compensation awards that could vest with respect to that measurement period); and

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- in lieu of continuation of benefits (whether or not the individual elects COBRA), an amount equal to 12 times the monthly premium cost for coverage under COBRA based on the employee's benefit plan elections in place as of the date of termination.

Under the terms of our 2015 Equity Incentive Plan, in the event of certain corporate transactions, if the equity awards are not assumed or substituted by the successor entity involved in the corporate transaction, each NEO's equity awards will fully vest and terminate upon the consummation of the transaction. The potential value of the accelerated equity awards for each NEO in the event of such a corporate transaction in which the NEOs' equity awards are not assumed or substituted is described in "Value of Accelerated Equity Awards" column in the table below. In addition, our NEOs PSA award agreements provide that in the event that such equity awards are assumed or substituted, they will convert into time-based awards. The value of such assumed or substituted PSAs, along with the value of assumed or substituted RSU awards, is described in footnote 2 in the table below, which assumes that such assumption or substitution occurred on December 31, 2019.

Potential Payments Upon Termination in Connection with a Change of Control

The following table describes the potential payments that would have been provided for each of the NEOs upon termination of employment in connection with a change of control of Juniper Networks, as described above, assuming such termination and change of control both occurred on December 31, 2019.

Name ⁽¹⁾	Base Salary Severance Component	Incentive Compensation Severance Component	Benefits Severance Component	Value of Accelerated Equity Awards ⁽²⁾	Total
Rami Rahim	\$2,000,000	\$3,500,000	\$30,939	\$19,826,633	\$25,357,572
Kenneth Miller	\$ 900,000	\$ 900,000	\$30,939	\$ 6,011,567	\$ 7,842,506
Manoj Leelanivas	\$ 855,000	\$ 855,000	\$30,939	\$ 5,742,337	\$ 7,483,276
Anand Athreya	\$ 750,000	\$ 750,000	\$30,939	\$ 4,616,770	\$ 6,147,709
Brian Martin	\$ 787,500	\$ 787,500	\$25,921	\$ 5,021,318	\$ 6,622,239

⁽¹⁾ All NEOs are subject to a better-after-tax provision whereby Juniper Networks would either pay the NEO (i) the full amount of the NEO's severance benefits or, alternatively (ii) an amount of certain severance benefits otherwise payable to the NEO such that the severance benefits will not be subject to the tax imposed by Section 4999 of the Code, whichever produces the better after-tax result for the NEO. The amounts above do not reflect the impact of the better-after-tax provision.

⁽²⁾ The value of accelerated unvested equity awards are based on a per share price of \$24.63, which was the closing price as reported on December 31, 2019. With respect to the value shown in the column "Value of Accelerated Equity Awards", (a) for PSAs (or portions thereof) that are earned based on the achievement of annual financial performance during a three-year performance period, the equity value is calculated based on the sum of (i) earned, but unvested shares and (ii) target unearned and unvested shares, (b) for price vested RSUs, the equity value reflects target achievement of such awards, and (c) for PSAs (or portions thereof) that are earned based on the Company's TSR relative to the S&P 500 Index, the equity value reflects target achievement of such awards.

In the event that the equity awards for the NEOs were assumed or substituted by the successor entity to the Company and there is no qualifying termination of employment, the estimated value of the equity awards for the NEOs, assuming such transaction occurred on December 31, 2019, would be: \$12,604,673 (Mr. Rahim), \$4,037,645 (Mr. Miller), \$5,334,464 (Mr. Leelanivas), \$3,790,188 (Mr. Athreya) and \$3,365,443 (Mr. Martin). With respect to such values, (a) for PSAs (or portions thereof) that are earned based on the achievement of annual financial performance during a three-year performance period, the equity value is calculated based on the sum of (i) earned, but unvested shares and (ii) target unearned and unvested shares, (b) for price vested RSUs, the equity value is only included if \$24.63 is equal to or exceeds the average stock price value at which such award would vest pursuant to its terms, and (c) for PSAs (or portions thereof) that are earned based on the Company's TSR relative to the S&P 500 Index, the equity value is calculated based on relative TSR attainment as of December 31, 2019.

Equity Award Granting Policy

The Board has approved a policy for granting RSUs and other equity awards. All approvals of RSU grants and other equity awards are administered by the Board, the Compensation Committee or the the Stock Committee (which is comprised of our CEO and Chief Financial Officer). Pursuant to the policy, new hire and ad hoc promotional and adjustment grants to non-Section 16 officers are generally granted on the third Friday of each month, except as discussed below. Annual performance grants to non-Section 16 officers are generally approved by the Stock Committee in the manner and at the times described above. Grants in connection with acquisitions shall, unless a date is specified in the acquisition agreement, occur to the extent practical on a date on which equity awards to Company employees are made by the Stock Committee. Annual equity awards to Section 16 officers are generally scheduled to be approved at a meeting of the Committee in the first quarter after the fourth fiscal quarter earnings announcement. The annual

grants to Section 16 officers are also generally scheduled to be effective on the third Friday of the month if the meeting approving such grants occurs on or before such date. The exercise price of stock options granted will be the closing market price on the date of grant. The Company intends to grant RSUs and other equity awards in accordance with the foregoing policy without regard to the timing of the release of material non-public information, such as a positive or negative earnings announcement.

Notwithstanding the foregoing, (i) if the Company is advised by outside counsel that the granting of equity awards on a particular date or to particular recipients, or prior to the disclosure of certain non-public information, could reasonably be deemed to be a violation of applicable laws or regulations, such grants may be delayed until such time as the granting of those awards would be not reasonably expected to constitute a violation, (ii) if the making of a grant would cause the Company to exceed any granting limitation imposed by the Board or the Committee (such as an annual limit), the monthly grant shall be delayed until the first subsequent month in which the limitation would not be exceeded, and (iii) if the making of a grant would cause the Company to violate the terms of any agreement approved by the Board or one of its committees, such grant shall be delayed until it would not violate such agreement.

Equity Ownership Guidelines

The Company has adopted stock ownership guidelines to further align the interests of the Company's NEOs, certain former NEOs and non-employee directors with the interests of its stockholders and promote the Company's commitment to sound corporate governance. Please see the "Executive Officer and Director Stock Ownership Guidelines" section of this proxy statement for more information.

Insider Trading Policy

The Company's Insider Trading Policy applies to all employees and directors and prohibits the following transactions:

- *Short Sales.* Engaging in a "short sale" of the Company's securities.
- *Hedging Transactions.* Purchasing financial instruments (including prepaid variable forward contracts, equity swaps, collars and exchange funds) or otherwise engaging in transactions that are designed to or have the effect of hedging, offsetting or benefiting from any decrease in the market value of the Company's securities.
- *Margin Accounts and Pledges.* Borrowing against the Company's securities held in a margin account, or pledging the Company's securities as collateral for a loan, due to the fact that securities held in a margin account or securities pledged as collateral may be sold by the broker or lender without the customer's consent if the customer fails to meet a margin call or defaults on the loan, respectively.

The Company's Insider Trading Policy also prohibits any transactions in the Company's securities while in possession of material, non-public information.

No 280G Excise Tax Gross Ups


The Company has no executive officer contracts providing for excise tax gross ups.

Repayment of Certain Bonus and Incentive Payments

The Board has adopted a recoupment policy requiring the Company to seek repayment of certain incentive-based compensation, including both cash and equity compensation, from our executive officers, including our NEOs, in the event the Company is required to prepare an accounting restatement on an annual financial statement included in an Annual Report on Form 10-K due to the material noncompliance of the Company with any financial reporting requirements. In such event, if the Committee determines that (i) the amount of any incentive-based compensation that is earned, vested or received by an executive officer exceeds the amount of incentive-based compensation that would have been earned, vested or received by such executive officer had such incentive-based compensation been determined based on the restated financial results (the "erroneously awarded compensation"), and (ii) such executive officer engaged in fraud, intentional misconduct or intentional illegal conduct which, or such executive officer's gross negligence, materially contributed to the need for such an accounting restatement, then the Committee will seek to recover for the benefit of the Company the erroneously awarded compensation.

Notwithstanding the foregoing, the Committee will seek recovery only for erroneously awarded compensation earned, vested or received by an executive officer during the fiscal year in which the Company is required to prepare an accounting restatement and the three completed fiscal years (or any transition period that results from a change in the fiscal year of the Company within or immediately following such three completed fiscal years) preceding the date or

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dates that the Company is required to prepare an accounting restatement. The Committee may also, in its good faith judgment, determine not to seek recovery of any erroneously awarded compensation to the extent the Committee determines that (i) to do so would be unreasonable or (ii) it would be better for the Company not to do so.

The Impact of Favorable Accounting and Tax Treatment on Compensation Program Design

Section 162(m) of Code places a limit of \$1 million on the amount of compensation that we may deduct as a business expense in any year with respect to certain of our most highly paid executive officers. While the Committee considers the deductibility of compensation as one factor in determining executive compensation, the Committee retains the discretion to award compensation that is not deductible as it believes that it is in the best interests of our stockholders to maintain flexibility in our approach to executive compensation in order to structure a program that we consider to be the most effective in attracting, motivating and retaining key executives.

Accounting considerations also play a role in the design of our executive compensation program. Accounting rules require us to expense the grant date fair values of our equity awards (that is, the value of our equity awards based on U.S. GAAP), which reduces the amount of our reported profits under U.S. GAAP. Because of this stock-based expensing and the impact of dilution to our stockholders, we closely monitor the number, share amounts and the fair values of the equity awards that are granted each year.

The Company intends for all executive officer arrangements to be structured in a manner that does not result in any additional taxation under Section 409A of the Code; however, the Company cannot guarantee this result.

Compensation Risk Assessment

The Committee annually oversees the performance of a risk assessment of our compensation programs. In connection with its most recent comprehensive review of the design, administration and controls of our compensation programs, the Committee, in consultation with its compensation consultant, determined that the Company's compensation programs do not create risks that are reasonably likely to have a material adverse effect on the Company.

Compensation Committee Report

The following Compensation Committee Report shall not be deemed to be “soliciting material” and should not be deemed “filed” and shall not be deemed to be incorporated by reference in future filings with the SEC, except to the extent that the Company specifically incorporates it by reference into a document filed under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended.

The Compensation Committee has reviewed and discussed the Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K with management and, based on such review and discussions, the Compensation Committee recommended to the Board that the Compensation Discussion and Analysis be included in this proxy statement and incorporated by reference into the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

THE COMPENSATION COMMITTEE

Gary Daichendt (Chair)
Kevin DeNuccio
James Dolce

Compensation Committee Interlocks and Insider Participation

During fiscal 2019, the Compensation Committee consisted of Messrs. Daichendt, DeNuccio and Dolce. Mr. Daichendt is the chair of the Compensation Committee. Mr. Dolce was previously an officer of the Company from 2002 to 2006. None of our executive officers has served as a member of the board of directors or compensation committee of any other entity that has or had one or more executive officers who served as a member of the Compensation Committee during fiscal 2019. No member of this Compensation Committee had any relationship with the Company requiring disclosure under Item 404 of Regulation S-K.

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Summary Compensation Table

The following table sets forth certain information about the compensation of our NEOs for each of the last three years during which such individuals were NEOs. Our NEOs consist of (a) our Chief Executive Officer, (b) our Chief Financial Officer, and (c) our three other most highly compensated executive officers as of December 31, 2019.

Summary Compensation Table

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Stock Awards (\$) ⁽¹⁾	Non-Equity Incentive Plan Compensation (\$) ⁽²⁾	All Other Compensation (\$)	Total (\$)
Rami Rahim Chief Executive Officer	2019	1,000,000	0	9,417,291 ⁽³⁾	700,000	12,599 ⁽⁶⁾	11,129,890
	2018	1,000,000	787,500 ⁽⁶⁾	8,189,566 ⁽⁴⁾	0	7,260 ⁽⁷⁾	9,984,326
	2017	1,000,000	0	8,420,716 ⁽⁵⁾	0	7,937 ⁽⁶⁾	9,428,653
Kenneth Miller Executive Vice President, Chief Financial Officer	2019	587,500	0	3,167,958 ⁽³⁾	235,000	13,798 ⁽⁶⁾	4,004,256
	2018	575,000	258,750 ⁽⁶⁾	2,321,512 ⁽⁴⁾	0	7,260 ⁽⁷⁾	3,162,522
	2017	550,000	0	2,189,878 ⁽⁵⁾	0	10,930 ⁽⁶⁾	2,750,808
Manoj Leelanivas Executive Vice President, Chief Product Officer	2019	560,000	250,000 ⁽⁹⁾	2,181,018 ⁽³⁾	224,000	10,122 ⁽⁷⁾	3,225,140
	2018	422,917	250,000 ⁽⁹⁾	4,588,000	190,313	6,904 ⁽⁷⁾	5,458,133
Anand Athreya Executive Vice President, Chief Development Officer	2019	480,000	0	2,599,366 ⁽³⁾	192,000	14,138 ⁽⁷⁾	3,285,504
	2018	460,000	737,000 ⁽¹⁰⁾	1,917,675 ⁽⁴⁾	0	11,839 ⁽⁷⁾	3,126,514
	2017	436,376	0	1,766,224	0	9,410 ⁽⁷⁾	2,212,010
Brian Martin Senior Vice President General Counsel	2019	512,500	0	2,461,460 ⁽³⁾	205,000	18,696 ⁽⁷⁾	3,197,656

⁽¹⁾ Because 60% of the target number of shares associated with the fiscal 2019 PSAs are based on separate measurements of our financial performance for each year in the three-year performance period, ASC Topic 718 requires that the grant date fair value be calculated at the commencement of each separate year of the performance cycle when the respective performance measures are approved. As a result, for the fiscal 2019 PSAs, the "Stock Awards" column does not include the value of the PSAs based on the annual financial metric goals for the fiscal year ending December 31, 2020 ("fiscal 2020") or the fiscal year ending December 31, 2021 ("fiscal 2021"). Such amounts will be included as equity compensation in the Summary Compensation Table for fiscal 2020 and fiscal 2021, respectively, when the annual financial metric goals are established. In addition, 40% of the target number of shares associated with the fiscal 2019 PSAs are based on the Company's TSR relative to the S&P 500 Index over a three-year period. The grant date fair value for the market-related TSR component for fiscal 2019 PSA is included in the "Stock Awards" column for the year of grant.

In addition, the "Stock Awards" column for fiscal 2019 includes a portion of the value of the PSAs awarded in the fiscal year ended December 31, 2018 ("fiscal 2018"), and a portion of the value of the PSAs awarded in the fiscal year ended December 31, 2017 ("fiscal 2017") based on the annual financial metric goals established for those awards during fiscal 2019. The amounts included in the "Stock Awards" column of the Summary Compensation Table for fiscal 2019 related to the PSAs awarded in fiscal 2018 and/or 2017 in the aggregate are as follows: \$1,786,175 (Mr. Rahim), \$501,690 (Mr. Miller), \$287,413 (Mr. Athreya) and \$395,626 (Mr. Martin).

The assumptions used in the calculation of these amounts are set forth under Note 12, *Employee Benefit Plans* of the Notes to Consolidated Financial Statements included in Juniper Networks' Annual Report on Form 10-K for fiscal 2019 filed with the SEC on February 20, 2020.

⁽²⁾ Amounts reflect cash bonuses earned in fiscal 2019, fiscal 2018 and fiscal 2017, as applicable, but paid in 2020, 2019 and 2018, respectively, under the Executive Annual Incentive Plan for fiscal 2019, fiscal 2018 and fiscal 2017, respectively.

⁽³⁾ The amount shown includes the aggregate grant date fair value of the shares issuable for PSAs granted in fiscal 2019 at target achievement. The aggregate grant date fair values of the maximum number of shares issuable for such performance shares are: \$8,538,648 (Mr. Rahim), \$2,319,240 (Mr. Miller), \$1,315,858 (Leelanivas), \$1,890,684 (Mr. Athreya) and \$1,900,498 (Martin).

⁽⁴⁾ The amount shown includes the aggregate grant date fair value of the shares issuable for PSAs granted in fiscal 2018 at target achievement. The aggregate grant date fair values of the maximum number of shares issuable for such performance shares are: \$8,095,308 (Mr. Rahim), \$2,229,268 (Mr. Miller) and \$1,513,793 (Mr. Athreya).

⁽⁵⁾ The amount shown includes the aggregate grant date fair value of the shares issuable for PSAs granted in fiscal 2017 at target achievement. The aggregate grant date fair values of the maximum number of shares issuable for such performance shares are: \$5,029,661 (Mr. Rahim) and \$862,521 (Mr. Miller).

⁽⁶⁾ Amount consists of costs related to the standard employee benefit portion paid by the Company for life insurance premiums, matching contributions paid under the Company's 401(k) plan and costs borne by the Company associated with a guest attending a sales conference and related tax gross-up.

⁽⁷⁾ Amount consists of costs related to the standard employee benefit portion paid by the Company for life insurance premiums and matching contributions paid under the Company's 401(k) plan.

⁽⁸⁾ Amount reflects the non-equity incentive compensation amount earned by Messrs. Rahim and Miller, as applicable, pursuant to the terms of the 2018 Executive Annual Incentive Plan, as determined by the Compensation Committee, without giving effect to the cash offset resulting from the issuance of the Bonus PSUs. Inclusion of the cash offset resulting from the issuance of the Bonus PSUs would have resulted in no cash payout under the 2018 Executive Annual Incentive Plan. The Compensation Committee awarded this amount in recognition of the fact that the Bonus PSUs did not vest pursuant to their terms.

⁽⁹⁾ Amount reflects a hiring bonus paid by the Company for Mr. Leelanivas. The bonus paid out 50% in 2018 and 50% in 2019.

⁽¹⁰⁾ Amount includes a special bonus award of \$530,000 paid to Mr. Athreya on November 30, 2018 in conjunction with his promotion to Executive Vice President, Chief Development Officer in August 2017. In addition, the amount reflects the amount earned by Mr. Athreya pursuant to the terms of the 2018 Executive Annual Incentive Plan, as determined by the Compensation Committee, without giving effect to the cash offset resulting from the issuance of the Bonus PSUs. Inclusion of the cash offset resulting from the issuance of the Bonus PSUs would have resulted in no cash payout under the 2018 Executive Annual Incentive Plan. The Compensation Committee awarded this amount in recognition of the fact that the Bonus PSUs did not vest pursuant to their terms.

Grants of Plan-Based Awards for Fiscal 2019

The following table shows all plan-based awards granted to our NEOs during fiscal 2019.

Name	Type of Award	Grant Date	Approval Date	Estimated Future Payouts Under Non-Equity Incentive Plan Awards ⁽¹⁾			Estimated Future Payouts Under Equity Incentive Plan Awards ⁽²⁾			All Other Stock Awards: Number of Shares of Stock or Units (#) ⁽³⁾	Grant Date Fair Value of Stock Awards (\$) ⁽⁴⁾
				Threshold (\$)	Target (\$)	Maximum (\$)	Threshold (#)	Target (#)	Maximum (#)		
Rami Rahim	AIP	—		—	875,000	2,625,000					
	RSUs	3/15/2019	3/8/2019				—		156,250	3,962,500	
	PSAs	3/15/2019	3/8/2019				46,875	93,750	187,500	2,483,125	
	Bonus PSUs	3/15/2019	3/8/2019				—	45,763	—	1,185,491	
Kenneth Miller	AIP	—		—	293,750	881,250					
	RSUs	3/15/2019	3/8/2019				—		63,500	1,610,360	
	PSAs	3/15/2019	3/8/2019				12,420	24,840	49,680	657,929	
	Bonus PSUs	3/15/2019	3/8/2019				—	15,636	—	397,979	
Manoj Leelanivas	AIP	—		—	280,000	840,000					
	RSUs	3/15/2019	3/8/2019				—		45,100	1,143,736	
	PSAs	3/15/2019	3/8/2019				12,420	24,840	49,680	657,929	
	Bonus PSUs	3/15/2019	3/8/2019					14,644		379,353	
Anand Athreya	AIP	—		—	240,000	720,000					
	RSUs	3/15/2019	3/8/2019				—		52,400	1,328,864	
	PSAs	3/15/2019	3/8/2019				12,420	24,840	49,680	657,929	
	Bonus PSUs	3/15/2019	3/8/2019				—	12,552	—	325,160	
Brian Martin	AIP	—		—	256,250	768,750					
	RSUs	3/15/2019	3/8/2019				—		45,900	1,164,024	
	PSA	3/15/2019	3/8/2019				10,470	20,940	41,880	554,631	
	Bonus PSUs	3/15/2019	3/8/2019					13,402		347,179	

⁽¹⁾ Amounts reflect potential cash bonuses payable under the Company's 2019 Executive Annual Incentive Plan described in "Compensation Discussion and Analysis" above. Actual payments to each of the NEOs pursuant to the 2019 Executive Annual Incentive Plan are included in the "Summary Compensation Table." The AIP does not provide for any threshold performance goals or payout amounts.

⁽²⁾ Amounts reflect the number of shares that may be earned under PSAs (including RTSR PSAs) and Bonus PSUs granted in fiscal 2019 under the 2015 Plan, and with respect to the PSAs, the number of shares that may be earned under PSAs if the threshold, target and maximum performance goals are achieved, as described in "Compensation Discussion and Analysis" above. Bonus PSUs do not provide for any threshold performance goals or payout amounts. If the Company fails to achieve the threshold performance metric, no shares will be earned or "banked" under the PSAs (including the RTSR PSAs).

⁽³⁾ Each service-based RSU award listed in this column was granted under the 2015 Plan, as described in "Compensation Discussion and Analysis" above.

⁽⁴⁾ Represents the aggregate grant date fair value of equity grants in fiscal 2019 computed in accordance with ASC Topic 718, including the target number of shares issuable for PSAs in 2019, Bonus PSUs and service-based RSUs. Excludes the grant date fair value for the portion of the fiscal 2018 PSAs and fiscal 2017 PSAs that will be earned based on the annual financial metric goals for the fiscal year ending December 31, 2020 because these PSAs were not granted in fiscal 2019. The amounts included in the "Stock Awards" column of the Summary Compensation Table for fiscal 2019 related to the PSAs awarded in fiscal 2018 and/or 2017 in the aggregate are as follows: \$1,786,175 (Mr. Rahim), \$501,690 (Mr. Miller), \$287,413 (Mr. Athreya) and \$395,626 (Mr. Martin).

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Outstanding Equity Awards at Fiscal 2019 Year-End

The following table shows all outstanding equity awards held by our NEOs at December 31, 2019.

Name	Stock Awards ⁽¹⁾			
	Number of Shares or Units of Stock That Have Not Vested(#)	Market Value of Shares or Units of Stock That Have Not Vested(\$) ⁽²⁾	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested(#)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested(\$) ⁽²⁾
Rami Rahim	23,861 ⁽³⁾	\$ 587,696		
	30,221 ⁽⁴⁾	\$ 744,343	67,804 ⁽⁴⁾	\$1,670,013
	24,375 ⁽⁵⁾	\$ 600,356	93,750 ⁽⁵⁾	\$2,309,063
			80,828 ⁽⁷⁾	\$1,990,794
			91,772 ⁽⁸⁾	\$2,260,344
	45,763 ⁽⁶⁾	\$1,127,143		
	31,202 ⁽⁹⁾	\$ 768,505		
	76,715 ⁽¹⁰⁾	\$1,889,490		
	156,250 ⁽¹¹⁾	\$3,848,438		
Kenneth Miller	6,864 ⁽³⁾	\$ 169,060		
	8,320 ⁽⁴⁾	\$ 204,922	18,666 ⁽⁴⁾	\$ 459,744
	6,458 ⁽⁵⁾	\$ 159,061	24,840 ⁽⁵⁾	\$ 611,809
			21,183 ⁽⁷⁾	\$ 521,737
			26,400 ⁽⁸⁾	\$ 650,232
	15,363 ⁽⁶⁾	\$ 378,391		
	8,976 ⁽⁹⁾	\$ 221,079		
	21,120 ⁽¹⁰⁾	\$ 520,186		
	63,500 ⁽¹¹⁾	\$1,564,005		
Manoj Leelanivas	132,000 ⁽¹²⁾	\$3,251,160		
	6,458 ⁽⁵⁾	\$ 159,061	24,840 ⁽⁵⁾	611,809
	14,644 ⁽⁶⁾	\$ 360,682		
	45,100 ⁽¹¹⁾	\$1,110,813		
Anand Athreya	8840 ⁽⁴⁾	\$ 217,729	19,833 ⁽⁴⁾	\$ 488,487
	6458 ⁽⁵⁾	\$ 159,061	24,840 ⁽⁵⁾	\$ 611,809
	12,552 ⁽⁶⁾	\$ 309,156		
	18,987 ⁽¹³⁾	\$ 467,649		
	22,440 ⁽¹⁰⁾	\$ 552,697		
	52,400 ⁽¹¹⁾	\$1,290,612		
Brian Martin	4,719 ⁽³⁾	\$ 116,229		
	7,280 ⁽⁴⁾	\$ 179,306	16,333 ⁽⁴⁾	\$ 402,282
	5,444 ⁽⁵⁾	\$ 134,086	20,940 ⁽⁵⁾	\$ 515,752
			21,120 ⁽⁷⁾	\$ 520,186
			18,150 ⁽⁸⁾	\$ 447,035
	13,402 ⁽⁶⁾	\$ 330,091		
	7,031 ⁽¹⁴⁾	\$ 173,174		
	6,171 ⁽⁹⁾	\$ 151,992		
	18,480 ⁽¹⁰⁾	\$ 455,162		
	45,900 ⁽¹¹⁾	\$1,130,517		

⁽¹⁾ The number of shares and the payout value for the PSAs (which include the RTSR PSAs), Bonus PSUs and price vested RSUs set forth in the table reflect the target payout under such awards, unless otherwise indicated.

⁽²⁾ The closing price of Juniper common stock on 12/31/2019 was \$24.63

⁽³⁾ The PSA was granted on 2/17/2017. The number of shares that are ultimately received under the award depends on the achievement of performance objectives for each of fiscal 2017, fiscal 2018 and fiscal 2019. The shares reflected in the "Number of Shares or Units of Stock That Have Not Vested" column represents the amount of shares "banked" (i.e., for which the performance condition has already been determined by the Compensation Committee (or a subcommittee)) for prior

- periods. The award vested in the first quarter of 2020, subject to continuous service through the vesting date.
- (4) The PSA was granted on 3/16/2018. The number of shares that are ultimately received under the award depends on the achievement of (i) performance objectives for fiscal 2018, fiscal 2019 and fiscal 2020 and (ii) the Company's relative total shareholder return from 2018 through 2020. The shares reflected in the "Number of Shares or Units of Stock That Have Not Vested" column represents the amount of shares "banked" (i.e., for which the performance condition has already been determined by the Compensation Committee (or a subcommittee)) for prior periods. The shares reflected in the "Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested" column represents (i) with respect to shares that vest based on annual performance objectives, target payout of the shares for which the performance goals were not determined as of December 31, 2019 and (ii) with respect to shares that vest based on the Company's relative total shareholder return, the threshold payout since relative TSR performance for the second year of the three-year performance period did not meet the target goal. The award vests in the first quarter of 2021, subject to continuous service through the vesting date.
- (5) The PSA was granted on 3/15/2019. The number of shares that are ultimately received under the award depends on the achievement of (i) performance objectives for fiscal 2019, fiscal 2020 and fiscal 2021 and (ii) the Company's relative total shareholder return from 2019 through 2021. The shares reflected in the "Number of Shares or Units of Stock That Have Not Vested" column represents the amount of shares "banked" (i.e., for which the performance condition has already been determined by the Compensation Committee (or a subcommittee)) for prior periods. The shares reflected in the "Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested" column represents (i) with respect to shares that vest based on annual performance objectives, target payout of the shares for which the performance goals were not determined as of December 31, 2019 and (ii) with respect to shares that vest based on the Company's relative total shareholder return, the threshold payout since relative TSR performance for the first year of the three-year performance period did not meet the target goal. The award vests in the first quarter of 2022, subject to continuous service through the vesting date.
- (6) The Bonus PSU was granted on 3/15/2019. The award vests 50% on 2/15/2020 and 50% on 2/15/2021, subject to continuous service through the applicable vesting date, if the performance objectives for fiscal 2019 are achieved.
- (7) The price vested RSU award was granted on 2/19/2016. The exact number of shares issuable will be determined during a 4-year period commencing on 1/1/2017, and subject to (i) the average closing market price of the Company's common stock being equal to or exceeding specific stock prices measured over a period of 60 consecutive trading days and (ii) continuous service through the applicable vesting date.
- (8) The price vested RSU award was granted on 2/17/2017. The exact number of shares issuable will be determined during a 4-year period commencing on 1/1/2018, and subject to (i) the average closing market price of the Company's common stock being equal to or exceeding specific stock prices measured over a period of 60 consecutive trading days and (ii) continuous service through the applicable vesting date.
- (9) The RSU award was granted on 2/19/2017. The RSU vests 34% on the one-year anniversary and 33% on the two year and three-year anniversary of the grant date, subject to continuous service through the applicable vesting date.
- (10) The RSU award was granted on 2/17/2018. The RSU vests 34% on the one-year anniversary and 33% on the two year and three-year anniversary of the grant date, subject to continuous service through the applicable vesting date.
- (11) The RSU award was granted on 3/15/2019. The RSU vests 34% on the one-year anniversary and 33% on the two year and three-year anniversary of the grant date, subject to continuous service through the applicable vesting date.
- (12) The RSU award was granted on 4/20/2018. The RSU vests 34% on the one-year anniversary and 33% on the two year and three-year anniversary of the grant date, subject to continuous service through the applicable vesting date.
- (13) The RSU award was granted on 3/17/2017. The RSU vests 34% on the one-year anniversary and 33% on the two year and three-year anniversary of the grant date, subject to continuous service through the applicable vesting date.
- (14) The Bonus PSU was granted on 3/16/2018. The award vested 50% on 2/16/2019 and will vest 50% on 2/16/2020, subject to continuous service through the applicable vesting date, if the performance objectives for fiscal 2018 are achieved.

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Stock Vested for Fiscal 2019

The following table shows all stock awards vested and value realized upon vesting by our NEOs during fiscal 2019. Our NEOs did not have any options outstanding during fiscal 2019.

Name	Stock Awards	
	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting (\$) ⁽¹⁾
Rami Rahim	111,754	\$3,020,527
Kenneth Miller	36,218	\$ 985,463
Manoj Leelanivas	68,000	\$1,904,680
Anand Athreya	46,155	\$1,231,308
Brian Martin	33,442	\$ 904,497

⁽¹⁾ The value realized upon vesting is calculated by multiplying the number of shares vested by the closing price of Juniper Networks' common stock on the vest date (or, in the event the vest date occurs on a holiday or weekend, the closing price of Juniper Networks' common stock on the immediately preceding trading day).

Non-Qualified Deferred Compensation

We adopted a non-qualified deferred compensation (the "NQDC") plan in 2008, which is an unfunded and unsecured deferred compensation arrangement. Under the NQDC plan, eligible employees, including each of the NEOs, may elect to defer a portion of their compensation. Such amounts are credited to a bookkeeping account maintained on behalf of the participant. Amounts credited to each participant under the NQDC are periodically adjusted for earnings and/or losses at a rate that is equal to one or more of the measurement funds selected by the NQDC plan administrator and elected by a participant. We do not contribute to the NQDC plan on behalf of participants, or match the deferrals made by participants. Accordingly, amounts payable under the NQDC plan generally are entirely determined by participant contributions and fund elections.

Employee participants in the NQDC plan may elect to contribute 1% to 50% of their base salary and 1% to 100% of other specified compensation, including commissions and bonuses. Generally, participants may elect the payment of benefits to begin on a specified date or upon termination of employment. Payment of cash deferrals may be made in the form of a lump sum or annual installments, subject to certain requirements. All distributions are made in cash.

The following table sets forth information concerning contributions, earnings, and withdrawals/distributions during fiscal 2019 under the NQDC plan for each of our NEOs who participates in the NQDC.

Name	Executive Contributions in Last FY (\$) ⁽¹⁾	Registrant Contributions in Last FY (\$)	Aggregate Earnings in Last FY (\$) ⁽²⁾	Aggregate Withdrawals/ Distributions (\$)	Aggregate Balance at Last FYE (\$) ⁽³⁾
Rami Rahim	—	—	—	—	—
Kenneth Miller	—	—	—	—	—
Manoj Leelanivas	—	—	—	—	—
Anand Athreya	\$103,500	—	\$15,003	—	\$118,503
Brian Martin	—	—	\$ 9,241	—	\$ 38,605

⁽¹⁾ The executive contributions were included in the "Salary" column of the "Summary Compensation Table" for fiscal 2019.

⁽²⁾ None of the earnings in this column are included in the "Summary Compensation Table" because they are not preferential or above market.

⁽³⁾ No amounts were previously reported as compensation in the "Summary Compensation Table" for fiscal years prior to 2019.

Pay Ratio

We determined that, based on reasonable estimates, the median of the annual total compensation of all of our employees, except our CEO, was \$129,616 for 2019. The annual total compensation of our CEO was \$11,129,890 for 2019 as reflected in the “*Summary Compensation Table*” above. Accordingly, for 2019, our reasonable estimate of the ratio of the annual total compensation of our CEO to the median of the annual total compensation of all of our other employees was 86:1.

We identified our median employee based on the 2019 target total direct compensation for all individuals (other than our CEO) who were employed by the Company on December 31, 2019, the last day of our fiscal year. “Target total direct compensation” for this purpose consisted of each employee’s actual salary or base wages earned in 2019, his or her target non-equity incentive opportunity for 2019, and the fair market value of his or her equity incentive awards granted in 2019. For purposes of this analysis, we converted all employee compensation to U.S. dollars. In our analysis, we did not annualize the compensation of any permanent employees that were not employed by the Company for all of 2019, nor did we exclude any individuals that were employed by the Company on December 31, 2019.

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Compensation Consultant Disclosure

During 2019, the Compensation Committee engaged Compensia as its advisor to provide analysis, advice and guidance on executive compensation. As the Compensation Committee's consultant, Compensia reported to the Compensation Committee, made recommendations directly to the Compensation Committee, attended all Compensation Committee meetings in person or by phone, and attended portions of the Compensation Committee's executive sessions without the involvement of management as required by the Compensation Committee and to support the Compensation Committee's independent decision-making.

In advising the Compensation Committee, it is necessary for the consultant advisor to interact with management to gather information and support the Compensation Committee in an effective manner, but the Compensation Committee has adopted protocols that require the approval of the Compensation Committee or its chairperson for such interactions. These protocols are included in Compensia's engagement letters. The Compensation Committee also determines the appropriate forum for receiving consultant recommendations. Where the Compensation Committee deems appropriate, management invitees are present to provide context for the recommendations. This approach helps enable the Compensation Committee to make independent decisions about executive compensation after taking into consideration both the compensation consultant's recommendations and management's perspectives.

The Compensation Committee's compensation consultant performed the following services related to executive compensation at the request of the Compensation Committee in 2019:

- Advised on target award levels within the 2019 annual and long-term incentive programs for executive officers and senior management;
- Provided input into the evaluation process by the Board of our Chief Executive Officer;
- Advised the Compensation Committee in determining pay actions for the Chief Executive Officer in February 2019;
- Assessed and recommended revisions to the Peer Group for collecting competitive pay data;
- Evaluated the competitive positioning of the Company's executive officers' base salaries, annual incentive and long-term incentive compensation relative to the Peer Group (used in our evaluation of 2019 pay actions);
- Provided advice on the design of the Company's 2019 and 2020 annual and long-term incentive plans;
- Assessed the competitiveness of the Company's compensation practices for non-employee directors relative to compensation at the Peer Group;
- Provided advice on the Company's overall equity plan usage relative to the practices of the Peer Group;
- Reviewed and provided input on our Compensation Discussion and Analysis and compensation risk assessment process; and
- Provided regular, ongoing updates on regulatory and market developments related to executive pay.

Compensia does not provide any other services to the Company, and therefore the consultant did not receive any fees for additional services from the Company.

Independence Disclosure

The Compensation Committee considered Compensia's independence in light of the SEC rules and NYSE listing standards. At the Compensation Committee's request, Compensia provided information addressing the independence of the individual compensation advisor and consulting firm, including the following factors: (1) any other services provided by the consulting firm to the Company; (2) fees paid by the Company as a percentage of the consulting firm's total revenue; (3) policies and procedures adopted by the consulting firm to prevent conflicts of interest; (4) any business or personal relationships between the individual compensation advisor and a member of the Compensation Committee; (5) any Company stock owned by the individual compensation advisor; and (6) any business or personal relationships between our executive officers and the individual compensation advisor or consulting firm. The Compensation Committee assessed these factors and concluded that Compensia was independent under the SEC rules and NYSE listing standards.

Equity Compensation Plan Information

The following table provides information as of December 31, 2019 about our common stock that may be issued under the Company's equity compensation plans, including option plans and employee stock purchase plans. The table does not include information with respect to shares subject to outstanding awards assumed by the Company in connection with acquisitions of the companies that originally granted those awards.

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in the First Column)
Equity compensation plans approved by security holders ⁽¹⁾	14,588,902 ⁽²⁾	0 ⁽³⁾	22,901,929 ⁽⁴⁾
Equity compensation plans not approved by security holders	—	—	—
Total ⁽⁵⁾	14,588,902	\$0.00 ⁽³⁾	22,901,929

- ⁽¹⁾ Includes the 2015 Plan, the 2006 Equity Incentive Plan ("2006 Plan") and the 2008 Employee Stock Purchase Plan ("2008 ESPP"). The 2006 Plan was terminated effective May 19, 2015. Outstanding equity awards granted under the 2006 Plan prior to May 19, 2015 remain subject to the terms of the 2006 Plan.
- ⁽²⁾ Includes shares subject to any equity award that were outstanding as of December 31, 2019 that were issued under the 2006 Plan and the 2015 Plan. The number of PSAs included assumes achievement at target. With respect to certain PSAs, the maximum number of shares issuable equals 200% of target. Excludes purchase rights granted under the 2008 ESPP.
- ⁽³⁾ RSUs and PSAs, which do not have an exercise price, as well as purchase rights accruing under the 2008 ESPP, are excluded in the calculation of weighted-average exercise price.
- ⁽⁴⁾ As of December 31, 2019, an aggregate of (i) 16,105,622 shares of common stock were available for issuance under the 2015 Plan and (ii) 6,279,610 shares of common stock were available for issuance under the 2008 ESPP, including 1,378,615 shares that were purchased during the purchase period under the 2008 ESPP commencing on August 1, 2019 and ending on January 31, 2020. Under the terms of the 2015 Plan, any shares subject to outstanding awards under the 2006 Plan and Amended and Restated 1996 Stock Plan that were outstanding on May 19, 2015, and that subsequently expire, are cancelled or otherwise terminate, up to a maximum of an additional 29,000,000 shares, will become available for issuance under the 2015 Plan. No participant will be permitted to purchase during any twelve (12) month period more than 6,000 shares of our common stock under the 2008 ESPP.
- ⁽⁵⁾ This table does not include equity awards that have been assumed by the Company in connection with the acquisition of other companies. As of December 31, 2019, the following assumed equity awards were outstanding: 911,004 shares issuable upon exercise of outstanding options, 2,181,482 shares subject to RSUs and 725,955 shares subject to restricted stock awards. The weighted average exercise price of such outstanding options was \$4.52 per share. No additional equity awards may be granted under any assumed arrangement.

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Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The following table sets forth information, as of March 19, 2020 (except where another date is indicated), concerning:

- beneficial owners of more than 5% of Juniper Networks' common stock;
- beneficial ownership by Juniper Networks directors and director nominees and the NEOs included in the "Summary Compensation Table" contained in this proxy statement; and
- beneficial ownership by all current Juniper Networks directors and current Juniper Networks executive officers as a group.

The information provided in the table is based on Juniper Networks' records, information filed with the SEC and information provided to Juniper Networks, except where otherwise noted.

The number of shares beneficially owned by each entity, person, director or executive officer is determined under rules of the SEC, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under such rules, beneficial ownership includes any shares as to which the individual has the sole or shared voting power or investment power and also any shares that the individual has the right to acquire as of May 18, 2020 (60 days after March 19, 2020) through the exercise of any stock option or other right. Unless otherwise indicated, each person has sole voting and investment power (or shares such powers with his or her spouse) with respect to the shares set forth in the following table. In addition, unless otherwise indicated, all persons named below can be reached at Juniper Networks, Inc., 1133 Innovation Way, Sunnyvale, California 94089.

Beneficial Ownership Table

Name and Address of Beneficial Owner	Amount and Nature of Beneficial Ownership ⁽¹⁾	Percent of Class ⁽¹⁾
Dodge & Cox 555 California Street, 40th Floor, San Francisco, CA 94014	49,167,696 ⁽²⁾	14.85%
The Vanguard Group 100 Vanguard Blvd., Malvern, PA 19355	39,454,273 ⁽³⁾	11.92%
BlackRock, Inc. 55 East 52nd Street, New York, NY 10055	28,466,337 ⁽⁴⁾	8.6%
Anand Athreya	88,429	*
Gary Daichendt	55,146 ⁽⁶⁾	*
Anne DelSanto	10,326 ⁽⁶⁾	*
Kevin DeNuccio	25,146 ⁽⁶⁾	*
James Dolce	46,583 ⁽⁶⁾	*
Christine Gorjanc	8,713 ⁽⁶⁾	*
Janet Haugen	8,713 ⁽⁶⁾	*
Scott Kriens	2,366,377 ⁽⁷⁾	*
Manoj Leelanivas	99,333 ⁽⁸⁾	*
Brian Martin	54,077	*
Rahul Merchant	46,083 ⁽⁶⁾	*
Kenneth Miller	99,245	*
Rami Rahim	748,639 ⁽⁵⁾	*
William Stensrud	162,107 ⁽⁹⁾	*
All Directors and Executive Officers as a Group (15 persons)	3,818,917 ⁽⁸⁾	1.2%

* Represents holdings of less than one percent.

⁽¹⁾ The percentages are calculated using 331,011,744 outstanding shares of the Company's common stock on March 19, 2020, as adjusted pursuant to Rule 13d-3(d)(1)(i). Pursuant to Rule 13d-3(d)(1) of the Exchange Act, shares beneficially owned by a person or group includes shares of common stock that such person or group has the right to acquire within 60 days after March 19, 2020, which includes, but is not limited to, shares subject to RSUs or performance share awards that will vest within 60 days of March 19, 2020.

- (2) Based on information reported, as of December 31, 2019, on Schedule 13G/A filed with the SEC on February 13, 2020 by Dodge & Cox ("D&C"). According to its Schedule 13G/A, D&C reported having the sole power to vote or direct the vote over 46,980,181 shares and dispositive power over all shares beneficially owned.
- (3) Based on information reported, as of December 31, 2019, on Schedule 13G/A filed with the SEC on February 12, 2020 by The Vanguard Group and certain of its subsidiaries (collectively, "Vanguard"). According to its Schedule 13G/A, Vanguard reported having the sole power to vote or direct the vote over 532,389 shares, the shared power to vote or direct the vote over 204,527 share, the sole power to dispose of or to direct the disposition of 38,778,687 shares and the shared power to dispose or to direct the disposition of 675,586 shares.
- (4) Based on information reported, as of December 31, 2019, on Schedule 13G/A filed with the SEC on February 5, 2020 by BlackRock, Inc. and certain of its subsidiaries (collectively, "BlackRock"). According to its Schedule 13G/A, BlackRock reported having the sole power to vote or direct the vote over 24,193,248 shares and dispositive power over all shares beneficially owned.
- (5) Includes 748,639 shares held by the Rahim Family Trust, of which Mr. Rahim and his spouse are the trustees.
- (6) Includes 8,713 RSUs that are scheduled to vest within 60 days of March 19, 2020.
- (7) Includes 30,896 shares held by the Kriens 1996 Trust, of which Mr. Kriens and his spouse are the trustees, 2,000,000 shares held by the 2020 Kriens Charitable Remainder Unitrust, of which Mr. Kriens and his spouse are the trustees, 80,000 shares held by KDI Trust LP, and 8,713 RSUs that are scheduled to vest within 60 days of March 19, 2020.
- (8) Includes 66,000 RSUs that are scheduled to vest within 60 days of March 19, 2020.
- (9) Includes 153,394 shares held in a trust of which Mr. Stensrud is the trustee, and 8,713 RSUs that are scheduled to vest within 60 days of March 19, 2020.

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Executive Officer and Director Stock Ownership Guidelines

The Company has adopted stock ownership guidelines to further align the interests of the NEOs, certain former NEOs and non-employee directors with the interests of its stockholders and to promote the Company's commitment to sound corporate governance. The Board of Directors amended the ownership guidelines in November 2018 to further align these interests.

The ownership guidelines applicable to NEOs are determined as a multiple of the officer's base salary. The Company's Chief Executive Officer is required to hold shares of Juniper Networks common stock with a value equal to at least six (6) times his or her annual base salary. The other NEOs are required to hold shares of Juniper Networks common stock with a value equal to three (3) times his or her annual base salary. The base salary guideline for each person will be re-calculated annually, and will be based on applicable base salary in effect on December 31 of each year. NEOs are required to achieve the applicable level of ownership within five (5) years from the date the stock ownership guidelines become applicable to such individual. Each NEO is further required to retain at least 50% of the net shares (i.e., after taking into account any shares the Company sold or withheld to satisfy such NEO's tax withholding obligations) acquired from the Company until the minimum ownership requirement is achieved.

Once a person has been designated as an NEO, the person will be subject to these guidelines until he or she is no longer an officer or director of the Company, or until he or she has ceased to be identified as an NEO in the Company's annual proxy statement for three consecutive years.

The Company's Chief Executive Officer is also required to hold an amount equal to 100% of the net shares (i.e., after taking into account any shares the Company sold or withheld to satisfy the Chief Executive Officer's tax withholding obligations) acquired from the Company with respect to all equity awards granted to him or her for at least 12 months after the vesting of such equity awards.

Outside directors are required to hold shares of Juniper Networks common stock with a value equal to five (5) times the amount of the annual cash retainer paid to outside directors for service on the Board (excluding additional committee retainers, if any). This ownership guideline was initially calculated using the annual cash retainer for service as a director (but not including additional retainers associated with committee or Chair service) as of the date the person first became subject to these guidelines as an outside director. The ownership guidelines are initially based on the applicable annual cash retainer for service as a director as of December 31, 2019, and are re-calculated annually thereafter based on the applicable annual cash retainer in effect on December 31 of each year. Outside directors are required to achieve the applicable level of ownership within five (5) years from the date the person first became a non-employee member of the Board.

Shares of our common stock that count toward the satisfaction of the ownership guidelines include shares owned outright by the NEO or director or his or her immediate family members residing in the same household and shares held in trust for the benefit of the NEO or director or his or her family. The value of a share is measured on December 31 of each year as the greater of (i) the average closing price over the 12 months preceding the date of calculation or (ii) the purchase price actually paid by the person for such share of Company common stock.

As of the record date, all individuals subject to the stock ownership guidelines were in compliance with the requirements in the guidelines. A complete copy of the Company's stock ownership guidelines is available at the Investor Relations Center on our website at <http://investor.juniper.net/investor-relations/default.aspx>.

Delinquent Section 16(a) Reports

Section 16(a) of the Exchange Act requires our directors, executive officers and holders of more than 10% of Juniper Networks common stock to file with the SEC reports regarding their ownership and changes in ownership of our securities, and to furnish copies of such reports to the Company. As a matter of practice, we assist our officers and directors in preparing initial ownership reports and reporting ownership changes, and typically file those reports on their behalf. Based solely on our review of such forms in our possession and the written representations our officers and directors, we believe that during 2019, all Section 16(a) filing requirements were satisfied, except that a Form 4 reporting the sale of 5,300 shares of common stock by Mr. Rahim was inadvertently filed one day late due to an administrative oversight.

Certain Relationships and Related Transactions

Our Board has adopted a written policy, which we refer to as our Related Person Transaction Policy, for the review of any transaction, arrangement or relationship in which the Company or any of its subsidiaries was, is or will be a participant, the amount involved will or may be expected to exceed \$120,000 and one of our executive officers, directors, director nominees or 5% stockholders (or their immediate family members or certain related entities), each of whom we refer to as a "related person," has or will have a direct or indirect material interest.

Anyone seeking approval of a potential related person transaction must provide notice to our General Counsel of the facts and circumstances involved. If our General Counsel determines that the proposed transaction is or could reasonably be a related person transaction, such transaction will be submitted to our Audit Committee. Our Audit Committee will review and approve, ratify or disapprove of all related person transactions and will consider all material factors it deems applicable or appropriate in making a determination. No related person transaction will be approved or ratified unless it is, overall, in or not inconsistent with the best interests of the Company.

Notwithstanding the foregoing, transactions specifically excluded by the instructions to Item 404(a) of Regulation S-K, the SEC's related person transaction disclosure rule, as such rule may be amended from time to time, are not deemed related person transactions under our Related Person Transaction Policy (although they may require approval under other policies we have in effect, including our Worldwide Code of Business Conduct and Ethics).

During fiscal 2019, the Company received approximately \$0.65 million in revenue from sales of its products and services to the Vanguard Group, a beneficial owner of more than 5% of the Company's common stock. The sales were made in the ordinary course of business.

To our knowledge, other than as set forth above, since the beginning of fiscal 2019, Juniper Networks has not been a participant in a transaction in which any related person of Juniper Networks had or will have a direct or indirect material interest, as contemplated by Item 404(a) of Regulation S-K.

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General Information

Questions and Answers about the Proxy Materials and the Annual Meeting

Why am I receiving these materials?

The Board of Juniper Networks has made these materials available to you on the Internet or, upon your request, has delivered printed versions of these materials to you by mail or email, in connection with the Board's solicitation of proxies for use at Juniper Networks' annual meeting of stockholders, which will be held on May 14, 2020. As a Juniper Networks stockholder as of March 19, 2020 (the "Record Date"), you are invited to attend the annual meeting and are entitled to and requested to vote on the items of business described in this proxy statement.

What is included in these materials?

These materials include (i) our proxy statement for the annual meeting and (ii) our Annual Report on Form 10-K for fiscal 2019, which includes our audited consolidated financial statements.

If you requested printed versions of these materials by mail, these materials also include the proxy card or voting instruction card for the annual meeting.

Why did I receive a one-page notice in the mail regarding the Internet availability of proxy materials instead of a full set of proxy materials?

Pursuant to rules adopted by the SEC, we have elected to provide access to our proxy materials over the Internet. Accordingly, on or about April 2, 2020, we are sending a Notice of Internet Availability of Proxy Materials, which we refer to as the Notice, to our stockholders of record and beneficial owners as of the Record Date. All stockholders will have the ability to access the proxy materials on the website referred to in the Notice (www.proxyvote.com). You may also request to receive a set of the proxy materials by mail or electronically by email. Instructions on how to access the proxy materials over the Internet or to request a printed copy may be found in the Notice.

How can I get electronic access to the proxy materials?

The Notice will provide you with instructions regarding how to:

- View our proxy materials for the annual meeting on the Internet; and
- Instruct us to send future proxy materials to you electronically by email or in paper copy by mail.

Choosing to access our proxy materials on the Internet or to receive future proxy materials by email will save us the cost of printing and mailing documents to you and will reduce the impact of our annual meetings on the environment. If you choose to receive future proxy materials by email, you will receive an email next year with instructions containing a link to those materials and a link to the proxy voting site. Your election to receive proxy materials by email will remain in effect until you terminate it.

How may I obtain Juniper Networks' Annual Report on Form 10-K?

Stockholders may request a free copy of our Annual Report on Form 10-K for fiscal 2019 with a written request to our principal executive offices at Juniper Networks, Inc., Attn: Investor Relations, 1133 Innovation Way, Sunnyvale, CA 94089 or at investor-relations@juniper.net. We will also furnish any exhibit to the Annual Report on Form 10-K for fiscal 2019 if specifically requested in writing. A copy of our Annual Report on Form 10-K for fiscal 2019 is also available with our proxy materials at www.proxyvote.com. In addition, you can access a copy on the website of the SEC at www.sec.gov.

How may I obtain a separate set of proxy materials?

As a result of Juniper Networks' adoption of "householding," if you share an address with another stockholder, you may receive only one Notice (or other stockholder communications, including our proxy materials) unless you have provided contrary instructions. Juniper Networks will deliver promptly upon written or oral request a separate Notice (or other stockholder communications, including our proxy materials), now or in the future, to any stockholder at a shared address to which a single copy of these documents was delivered. To request a separate copy, contact Juniper Networks' Investor Relations Department at Juniper Networks, Inc., Attn: Investor Relations, 1133 Innovation Way, Sunnyvale, CA 94089 or at investor-relations@juniper.net.

Similarly, if you share an address with another stockholder and have received multiple copies of the Notice (or other stockholder communications, including our proxy materials), you may write or call us at the above address and phone number to request delivery of a single copy of these documents.

What items of business will be voted on at the annual meeting?

The items of business scheduled to be voted on at the annual meeting are:

- To elect ten directors to hold office until the next annual meeting of stockholders and until their respective successors have been elected and qualified;
- To ratify the appointment of Ernst & Young LLP as Juniper Networks' independent registered public accounting firm for the fiscal year ending December 31, 2020;
- To hold a non-binding advisory vote regarding executive compensation;
- To approve the amendment and restatement of the Juniper Networks, Inc. 2008 Employee Stock Purchase Plan to increase the number of shares of common stock reserved for issuance thereunder by 8,000,000; and
- To consider such other business as may properly come before the annual meeting.

How does the Board recommend that I vote?

Our Board recommends that you vote your shares:

- "FOR" each of the director nominees to the Board;
- "FOR" the ratification of the appointment of Ernst & Young LLP as Juniper Networks' independent registered public accounting firm for the fiscal year ending December 31, 2020
- "FOR" the approval of our executive compensation; and
- "FOR" the approval to amend and restate the Juniper Networks, Inc. 2008 Employee Stock Purchase Plan.

What shares can I vote?

Each share of common stock issued and outstanding as of the close of business on March 19, 2020, the Record Date, is entitled to vote on all items being voted upon at the annual meeting. You may vote all shares owned by you as of the Record Date, including (i) shares held directly in your name as the *stockholder of record* and (ii) shares held for you as the *beneficial owner* (i.e., in street name) through a broker, trustee or other nominee such as a bank. More information on how to vote these shares is contained in this proxy statement. On the Record Date, we had approximately 331,011,744 shares of common stock issued and outstanding.

What is the difference between holding shares as a stockholder of record and as a beneficial owner?

Most Juniper Networks stockholders hold their shares through a broker or other nominee rather than directly in their own name. As summarized below, there are some distinctions between shares held of record and those owned beneficially, which may affect how you can vote your shares.

Stockholder of Record — If your shares are registered directly in your name with Juniper Networks' transfer agent, EQ Shareowner Services, you are considered, with respect to those shares, the stockholder of record, and the Notice or proxy statement was sent directly to you by Juniper Networks. As the stockholder of record, you have the right to grant your voting proxy directly to Juniper Networks as described in the Notice and this proxy statement or to vote in person at the annual meeting.

Beneficial Owner — If your shares are held in a brokerage account, by a trustee or by another nominee, you are considered the beneficial owner of shares held in street name, and the Notice or proxy statement was forwarded to you by your broker or nominee. As the beneficial owner, you have the right to direct your broker, trustee or nominee on how to vote and are also invited to attend the annual meeting. Please see **"How can I attend the annual meeting?"** for details on the information you must bring with you in order to attend the annual meeting as a beneficial owner.

Since a beneficial owner is not the stockholder of record, your broker, trustee or nominee has provided voting instructions or a voting instruction card to you to use in directing the broker, trustee or nominee on how to vote your shares.

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How can I attend the annual meeting?

You are entitled to attend the annual meeting only if you were a Juniper Networks stockholder as of the close of business on March 19, 2020, the Record Date. You should be prepared to present valid government-issued photo identification for admittance. In addition, if you are a *stockholder of record*, your name will be verified against the list of stockholders of record on the record date prior to your being admitted to the annual meeting. If you are a *beneficial owner* and not a *stockholder of record* because you hold shares through a broker, trustee or nominee (i.e., in street name), you should provide proof of beneficial ownership as of the Record Date, such as your account statement showing that you are the beneficial owner of the shares as of the Record Date, a copy of any voting instruction card provided by your broker, trustee or nominee, or other similar evidence of ownership. If you do not provide valid government-issued photo identification or comply with the other procedures outlined above upon request, you will not be admitted to the annual meeting.

The annual meeting is scheduled to be held on May 14, 2020 at our corporate headquarters located at 1133 Innovation Way, Building A, Aristotle Conference Room, Sunnyvale, CA 94089. The annual meeting will begin promptly at 8:00 a.m., Pacific Time. Check-in will begin at 7:30 a.m., and you should allow ample time for the check-in procedures.

As part of our effort to maintain a safe and healthy environment at our annual meeting, we are closely monitoring statements issued by the World Health Organization and the Centers for Disease Control and Prevention regarding the COVID-19 outbreak. For that reason, we reserve the right to reconsider the date, time, and/or means of convening the annual meeting, including solely by means of remote communications. If we take this step, we will announce the decision to do so in advance, and details on how to participate will be issued by press release, posted on our website, and filed with the SEC as additional proxy materials. We also encourage attendees to review guidance from public health authorities on this issue.

How can I vote my shares in person at the annual meeting?

Shares held in your name as the *stockholder of record* may be voted in person at the annual meeting. Shares held beneficially in street name may be voted in person only if you obtain a legal proxy from the broker, trustee or nominee that holds your shares giving you the right to vote the shares. *Even if you plan to attend the annual meeting, you should also submit your proxy or voting instructions as described below so that your vote will be counted if you later decide not to attend the meeting.*

How can I vote my shares without attending the annual meeting?

Whether you hold shares directly as the *stockholder of record* or beneficially in street name, you may direct how your shares are voted without attending the meeting. If you are a *stockholder of record*, you may vote by submitting a proxy by any of the methods specified below. If you hold shares beneficially in street name, you may vote by submitting voting instructions to your broker, trustee or nominee. For directions on how to vote, please refer to the instructions in the Notice or proxy card or, for shares held beneficially in street name, the voting instructions provided by your broker, trustee or nominee.

By Internet — Stockholders of record with Internet access may submit proxies by following the “Vote by Internet” instructions on their proxy cards or the Notice and by following the voting instructions on the website. If you hold your shares in street name, please check the Notice or the voting instruction card provided by your broker, trustee or nominee for Internet voting availability and instructions.

By Telephone — Stockholders of record who live in the United States or Canada may submit proxies by following the “Vote by Phone” instructions on their proxy cards or by following the voting instructions provided by email or over the Internet. If you hold your shares in street name, please check the voting instructions provided by your broker, trustee or nominee for telephone voting availability and instructions.

By Mail — Stockholders of record who receive proxy materials by mail may submit proxies by completing, signing and dating their proxy cards and mailing them in the accompanying pre-addressed envelopes. Stockholders who hold shares beneficially in street name and who receive voting materials by mail from their brokers, trustees or nominees may vote by mail by completing, signing and dating the voting instruction cards provided and mailing them in the accompanying pre-addressed envelopes.

Can I change my vote or otherwise revoke my proxy?

You may change your vote at any time prior to the vote at the annual meeting. If you are the stockholder of record, you may change your vote by granting a new proxy by telephone, over the Internet or by submitting a properly signed proxy card bearing a later date (which automatically revokes the earlier proxy). You may also revoke your proxy by providing a written notice of revocation to Juniper Networks' Corporate Secretary at Juniper Networks, Inc., ATTN: Corporate Secretary, 1133 Innovation Way, Sunnyvale, California 94089 prior to your shares being voted, or by attending the annual meeting and voting in person. Attendance at the annual meeting without any other action will not cause your previously granted proxy to be revoked. For shares you hold beneficially in street name, you may change your vote by submitting new voting instructions to your broker, trustee or nominee, or, if you have obtained a legal proxy from your broker or nominee giving you the right to vote your shares, by attending the annual meeting and voting in person.

How many shares must be present or represented to conduct business at the annual meeting?

In order for business to be conducted at the annual meeting, a quorum must be present. The presence in person or by proxy of the holders of a majority of shares of common stock issued and outstanding and entitled to vote as of the Record Date will constitute a quorum at the annual meeting. Both abstentions and broker non-votes will be counted for the purpose of determining the presence of a quorum.

Will my shares be voted if I do not vote as described in the Notice?

If your shares are held in street name, your broker may, under certain circumstances, vote your shares. Certain brokerage firms have authority to vote clients' unvoted shares on certain "routine" matters. If you do not give voting instructions to your broker, your broker may either (1) vote your shares on "routine" matters or (2) leave your shares unvoted. The proposal related to the ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2020 is considered a "routine" matter. None of the other proposals are considered "routine" matters, and therefore your broker will not be able to vote on these proposals without your instructions. If you are a stockholder of record and do not submit a proxy or vote at the annual meeting, your shares will not be voted.

If you provide specific instructions with regard to certain items, your shares will be voted as you instruct on such items. If you sign your proxy card or voting instruction card or vote by telephone or over the Internet without giving specific instructions, your shares will be voted in accordance with the recommendations of the Board, and in the discretion of the proxy holders as to any other matters that may properly come before the annual meeting.

What are broker non-votes?

If you hold shares beneficially in street name and do not provide your broker with voting instructions, your shares may constitute "broker non-votes." Generally, broker non-votes occur on a matter when a broker is not permitted to vote on that matter without instructions from the beneficial owner.

What is the vote required to approve each of the proposals?

Assuming the existence of a quorum at the annual meeting:

- Each of the ten director nominees will be elected if he or she receives the affirmative vote of a majority of the votes cast with respect to the director nominee at the annual meeting (meaning the number of shares voted "FOR" a director nominee must exceed the number of shares voted "AGAINST" that director nominee).
- Approval of the ratification of the appointment of the independent registered public accounting firm, the non-binding advisory vote on our executive compensation, and the amendment and restatement of the 2008 Employee Stock Purchase Plan each requires the affirmative "FOR" vote of a majority of the shares of common stock present in person or represented by proxy and entitled to vote at the meeting. The vote on approval of our executive compensation is non-binding on the Company and the Board. However, the Compensation Committee, which is responsible for designing and administering the Company's executive compensation programs, values the opinions expressed by our stockholders and will take the outcome of the vote under advisement in evaluating our executive compensation principles, design and practices.
- *Broker Non-Votes*: For purposes of all proposals, broker non-votes will not affect the outcome of the vote, assuming that a quorum is obtained.

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- **Abstentions:** Abstentions will have the same effect as a vote “AGAINST” the approval of the ratification of the appointment of the independent registered public accounting firm, the non-binding advisory vote on executive compensation, and the amendment and restatement of the 2008 Employee Stock Purchase Plan. Abstentions will not affect the vote on the election of directors.

What happens if additional matters are presented at the annual meeting?

Other than the four items of business described in this proxy statement, we are not aware of any other business to be acted upon at the annual meeting. If you grant a proxy, the persons named as proxy holders, Kenneth Miller and Brian Martin, will have the discretion to vote your shares on any additional matters properly presented for a vote at the annual meeting. If for any unforeseen reason any of our director nominees is not available as a candidate for director, the persons named as proxy holders will vote your proxy for such other candidate or candidates as may be nominated by the Board.

Who will bear the cost of soliciting votes for the annual meeting?

Juniper Networks is making this solicitation and will pay the entire cost of preparing, assembling, printing, mailing and distributing these materials and soliciting votes. If you access the proxy materials and/or vote over the Internet, you are responsible for Internet access charges you may incur. If you choose to vote by telephone, you are responsible for telephone charges you may incur. In addition to the mailing of these materials, the solicitation of proxies or votes may be made in person, by telephone or by electronic communication by our directors, officers and employees, who will not receive any additional compensation for such solicitation activities. We also have hired Innisfree M&A Incorporated to assist us in the distribution of proxy materials and the solicitation of votes described above. We will pay Innisfree M&A Incorporated a fee of \$20,000, plus expenses. Upon request, we will also reimburse brokerage houses and other custodians, nominees and fiduciaries for forwarding proxy and solicitation materials to stockholders.

Where can I find the voting results of the annual meeting?

We intend to announce voting results from the annual meeting in a current report on Form 8-K within the time period prescribed by SEC rules.

What is the deadline to propose actions for consideration or to nominate individuals to serve as directors at the 2020 annual meeting of stockholders?

Although the deadline for submitting proposals or director nominations for consideration at the 2020 annual meeting of stockholders has passed, you may submit proposals and director nominations for consideration at future stockholder meetings. For further information, see the section entitled “*Stockholder Proposals and Nominations*” below.

Stockholder Proposals and Nominations

Requirements for stockholder proposals to be considered for inclusion in the Company’s proxy materials. For a stockholder proposal to be considered for inclusion in Juniper Networks’ proxy statement for the 2021 annual meeting of stockholders, the written proposal must be received by the Corporate Secretary of Juniper Networks at our principal executive offices no later than December 3, 2020. If the date of the 2021 annual meeting of stockholders is moved more than 30 days before or after the anniversary date of the 2020 annual meeting, the deadline for inclusion of proposals in Juniper Networks’ proxy statement for the 2021 annual meeting of stockholders will be a reasonable time before Juniper Networks begins to print and mail its proxy materials for the 2021 annual meeting of stockholders. All such proposals also will need to comply with SEC regulations under Rule 14a-8 under the Exchange Act, which lists the requirements regarding the inclusion of stockholder proposals in company-sponsored proxy materials.

Proxy Access. Any stockholder (or group of up to 20 stockholders) meeting the Company’s continuous ownership requirements of three percent (3%) or more of our common stock for at least three years prior to such nomination who wishes to nominate a candidate or candidates for election in connection with our 2021 annual meeting and requires the Company to include such nominees in the proxy statement and form of proxy, must submit a notice to the Corporate Secretary at the principal executive offices of the Company no later than November 3, 2020 and no earlier than December 3, 2020 (i.e., no later than the 120th day and no earlier than the 150th day before the one-year anniversary of the date on which the Company first mailed its proxy materials for the Company’s 2020 annual meeting of stockholders). If the date of the 2021 annual meeting is advanced by more than 30 days prior to or delayed by more

than 60 days after the one-year anniversary of 2020 annual meeting, then, for the notice to be timely delivered, it must be received by the secretary not earlier than the close of business on the 120th day prior to the 2021 annual meeting and not later than the close of business on the later of (i) the 90th day prior to the 2021 annual meeting or (ii) the tenth day following the day on which public announcement of the 2021 annual meeting is first made by Juniper Networks.

Requirements for other stockholder proposals and director nominations. Notice of any proposal that a stockholder intends to present at the 2021 annual meeting of stockholders, but does not intend to have included in the Company's proxy statement and form of proxy relating to the 2021 annual meeting of stockholders, as well as any director nominations, must be timely delivered to the Corporate Secretary in accordance with the bylaws of the Company, which require that the proper notice be received by the Corporate Secretary not more than 75 days and not less than 45 days prior to the one year anniversary of the date Juniper Networks first mailed its proxy materials or a notice of availability of proxy materials (whichever is earlier) to stockholders in connection with the previous year's annual meeting of stockholders. In addition, to be in proper form, a stockholder's notice to the Corporate Secretary must set forth the information required by the Company's bylaws.

For the 2021 annual meeting of stockholders, the notice must be received no earlier than January 17, 2021 and no later than February 16, 2021. However, if the date of the 2021 annual meeting is advanced more than 30 days before or more than 60 days after the anniversary date of this year's annual meeting, then for notice to be timely, the notice must be received by the Corporate Secretary not earlier than the 120th day prior to the 2021 annual meeting and not later than the close of business on the later of the 90th day prior to the 2021 annual meeting or the tenth day following the day on which public announcement of the date of the 2021 annual meeting is first made by Juniper Networks. In no event will the public announcement of an adjournment or postponement of an annual meeting of stockholders or the announcement thereof commence a new time period for the giving of a stockholder's notice as provided above.

Recommendation of Director Candidates. The Nominating and Corporate Governance Committee will consider recommendations of director candidates from Qualifying Stockholders. A "Qualifying Stockholder" is a stockholder that has owned for a period of one year prior to the date of the submission of the recommendation through the time of submission of the recommendation at least 1% of the total common stock of the Company outstanding as of the last day of the calendar month preceding the submission. A Qualifying Stockholder that desires to recommend a candidate for election to the Board must direct the recommendation in writing to the Corporate Secretary, and must include the candidate's name, home and business contact information, detailed biographical data and qualifications, information regarding any relationships between the candidate and the Company within the last three years, written evidence that the candidate is willing to serve as a director of the Company if nominated and elected and evidence of the nominating person's ownership of Company common stock.

Corporate Secretary. Stockholder proposals and director nominations must be delivered to the Corporate Secretary via mail to Juniper Networks, Inc., ATTN: Corporate Secretary, 1133 Innovation Way, Sunnyvale, CA 94089.

Copy of Bylaws. You may contact the Corporate Secretary at our principal executive offices for a copy of the relevant bylaw provisions regarding the requirements for making stockholder proposals and nominating director candidates.

Forward-Looking Statements

This proxy statement contains forward-looking statements within the meaning of section 27A of the Securities Act, as amended, and section 21E of the Exchange Act. Words such as "may," "will," "should," "likely," "anticipates," "expects," "intends," "plans," "projects," "believes," "estimates" and similar expressions are used to identify these forward-looking statements. Statements that refer to or are based on projections, forecasts, uncertain events or assumptions also identify forward-looking statements, including, among other things, statements regarding expected or future equity usage, burn rate or shares outstanding, intended exemptions for executive compensation under the Code, expected use and enforcement of the Company's compensation recoupment policies, anticipated future stockholder engagement efforts, expected reductions in our energy consumption, carbon footprint, and resource use in our facilities, and our expectation that our products will continue to meet some of the strictest environmental standards in the industry.

These statements involve a number of risks, uncertainties and other factors that could cause actual results to differ materially from those expressed or implied. For a more detailed discussion of these factors, see the information under "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our most recent Form 10-K and 10-Q filed with the SEC. Our forward-looking statements speak only as of the date of this proxy statement or as of the date they are made, and we undertake no obligation to update them.

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Annex A

JUNIPER NETWORKS, INC. 2008 EMPLOYEE STOCK PURCHASE PLAN As amended and restated as of _____, 2020

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, appendices or sub-plans adopted by the Board or Committee designed to achieve tax, securities law or other Company compliance objectives for Eligible Employees (as defined below) of Designated Non-423 Subsidiaries (as defined below) in particular locations outside the United States. Such references to the Plan include the Section 423(b) and the Non-Section 423(b) Plan components.

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 U.S. 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.
- (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 Non-423 Subsidiary" means any Designated Subsidiary that shall have been designated by the Administrator in its sole discretion as participating in the Non-Section 423(b) Plan.
- (k) "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.
- (l) "Director" means a member of the Board.
- (m) "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.
- (n) "Employee" means any individual who is a common law employee of an Employer.
- (o) "Employer" means any one or all of the Company and its Designated Subsidiaries.
- (p) "Exchange Act" means the U.S. Securities Exchange Act of 1934, as amended, including the rules and regulations promulgated thereunder.
- (q) "Exercise Date" means the last day of each Purchase Period (as defined below).
- (r) "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.
- (s) "Fiscal Year" means the fiscal year of the Company.
- (t) "New Exercise Date" means a new Exercise Date implemented by shortening any Offering Period then in progress.
- (u) "Offering Date" means the first Trading Day of each Offering Period.

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(v) "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.

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

(x) "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.

(y) "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.

(z) "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.

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

(bb) "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.

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 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.

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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 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. If a participant transfers employment from the Company or any Designated Subsidiary participating in the Section 423 Component to any Designated Subsidiary participating in the Non-Section 423 Component, such transfer shall not be treated as a termination of employment, but the participant shall immediately cease to participate in the Section 423 Component; however, any contributions made for the Offering Period in which such transfer occurs shall be transferred to the Non-Section 423 Component, and such participant shall immediately join the then-current Offering under the Non-Section 423 Component upon the same terms and conditions in effect for the participant's participation in the Section 423 Component, except for such modifications otherwise applicable for participants in such Offering Period. A participant who transfers employment from any Designated Subsidiary participating in the Non-Section 423 Component to the Company or any Designated Subsidiary participating in the Section 423 Component shall not be treated as terminating the participant's employment and shall remain a participant in the Non-Section 423 Component until the earlier of (i) the end of the current Offering Period under the Non-Section 423 Component, or (ii) the Offering Date of the first Offering Period in which the participant is eligible to participate following such transfer. Notwithstanding the foregoing, the Administrator may establish different rules to govern transfers of employment between companies participating in the Section 423 Component and the Non-Section 423 Component, consistent with the applicable requirements of Section 423 of the Code.

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 forty-three million (43,000,000) 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.

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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, payment of interest, 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, data privacy security, withholding procedures and handling of stock certificates which vary with local requirements.

The Administrator may also adopt rules, procedures, appendices 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 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 and subject to Applicable Law, 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.

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.

Continues on next page ►

(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. 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.

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, 2019

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	Trading Symbol	Name of each exchange on which registered
Common Stock, par value \$0.00001 per share	JNPR	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 every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

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

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company Emerging growth 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 voting common stock held by non-affiliates of the registrant was approximately \$9,077,000,000 as of June 28, 2019, the last business day of the registrant's most recently completed second fiscal quarter (based on the closing sales price for the common stock on the New York Stock Exchange on such date).

As of February 13, 2020, there were 330,527,200 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 2020 Annual Meeting of Stockholders, which is expected to be filed not later than 120 days after the registrant's fiscal year ended December 31, 2019.

Juniper Networks, Inc.
Form 10-K

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Forward-Looking Statements

This Annual Report on Form 10-K, which we refer to as the Report, including “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 regarding future events and the future results of Juniper Networks, Inc., which we refer to as “we,” “us,” or the “Company,” that are based on our current expectations, estimates, forecasts, and projections about our business, our results of operations, the industry in which we operate and the beliefs and assumptions of our management. All statements other than statement of historical facts are statements that could be deemed to be forward-looking statements. Words such as “expects,” “anticipates,” “targets,” “goals,” “projects,” “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 and improved operating efficiency 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 organize and manage our business by major functional departments on a consolidated basis as one operating segment. 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, Service Provider, and Enterprise who view the network as critical to their success. We believe our silicon, systems, and software represent innovations that transform the economics and experience of networking, helping our customers achieve superior performance, greater choice, and flexibility, while reducing overall total cost of ownership.

Further, we intend to expand our software business by introducing new software solutions to our product portfolio that simplify the operation of networks, and allow our customers across our key verticals flexibility in consumption and deployment. Our acquisition of Mist Systems, or Mist, in 2019 accelerated our ability to execute this belief in cloud-managed, artificial intelligence, or AI-enabled enterprise networking operations through a combination of cloud-based intelligence, enterprise-grade access points, and EX series switches. Machine learning technology simplifies wireless and wired operations and delivers a more agile cloud services platform.

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

Strategy

We deliver highly scalable, reliable, secure, and cost-effective networks, while transforming the network's agility, efficiency, and value through automation.

We believe the network needs for our customers in our Cloud, Service Provider, and Enterprise verticals are converging as these customers recognize the need for high-performance networks and are adopting cloud architectures for their infrastructure and service delivery, such as large public and private data centers and service provider edge data centers, for improved agility and greater levels of operating efficiency. We believe this industry trend presents an opportunity for Juniper Networks, and we have focused our strategy on enabling our customers' transition to cloud architectures through the following strategic priorities:

Power Public and Private Cloud Data Centers

We are focused on continuing to power public and private cloud data centers with high performance infrastructure. These data centers are the core of cloud transformation by enabling service delivery in a multicloud environment, which is a combination of public cloud, private cloud, and Software-as-a-Service, or SaaS delivery. We are a recognized leader in data center networking innovation in both software and hardware solutions. Our Junos Operating System, or Junos OS, application-specific integrated circuits, or ASIC, technology, and management and automation software investments across routing, switching, and security will continue to be key elements to maintaining our technology leadership and transforming the economics and experience of our public and private cloud customers. In 2019, we introduced our next-generation operating system, Junos OS Evolved. It has the same command-line interface, the same applications and features, the same management and automation tools as Junos OS, but its infrastructure is entirely modernized, which enables higher availability, accelerated deployment, greater innovation and improved operational efficiencies.

Our Contrail Networking provides dynamic end-to-end networking policy and control for any cloud, any workload, and any deployment, from a single user interface. It translates abstract workflows into specific policies, simplifying the orchestration of virtual overlay connectivity across all environments.

Connect Users and Devices Securely to the Cloud and to Each Other

In developing our solutions, we strive to design and build best-in-class products and solutions for core, edge, and metro networking infrastructure for connecting user and devices securely to the cloud and to each other. Cloud providers and Service Providers have deployed our product offerings in their wide area networks, or WAN, such as our highly efficient Internet Protocol, or IP, transport PTX product which can cost effectively manage incredible capacity from their end users to the data centers from which they deliver value to those customers. We also offer a robust portfolio of software-defined networking, or SDN-enabled MX series routing platforms that provide system capacity, density, security, and performance with longevity. MX Series routers are the key to digital transformation for Service Providers, Cloud providers, and Enterprises in the cloud era. Our SDN Controller for the WAN, NorthStar enables granular visibility and control of IP/Multiprotocol Label Switching, or IP/MPLS flows for large networks. We are committed to continued investment in cost effective and high-performance IP transport platforms and automation software, which forms the basis of these high-performance networks.

Build and Manage Distributed Clouds

Our Service Provider customers are investing in the build-out of high-performance networks and the transformation of existing legacy infrastructure to distributed cloud environments, which resides in multiple, distributed data centers in order to place applications and services closer to end users, such as enabling managed security and low-latency applications. We are committed to this transformation as our Service Provider customers rearchitect their infrastructure to enable next generation mobile network build-outs, or 5G, and Internet of Things, or IoT, service delivery close to their end users. We believe our history of experience in both cloud and WAN architecture positions us well to partner with our Service Provider customers in their strategic transformation initiatives. Our Enterprise customers are moving services from their enterprise edge to the distributed edge. We believe the next generation of WAN for Enterprises is about rearchitecting to metro-based cloud hubs that can also host routing and security services, transform costs, and provide cloud performance.

Cloud-Delivered Enterprise

Enterprises are consuming more value-as-a-service, where value is delivered in the form of cloud-based software and services. We have introduced cloud management and security products which enable enterprises to consume cloud infrastructure and services securely. We believe the transition to SaaS presents an opportunity for Juniper to come to market with innovative network and security solutions for our Enterprise customers, which facilitate their transition to cloud architectures.

We believe our understanding of high-performance networking technology, cloud architecture, and our strategy, positions us to capitalize on the industry transition to more automated, cost-efficient, scalable networks. Our acquisition of Mist in 2019 accelerated our ability to execute this belief in cloud-managed AI-enabled enterprise networking operations.

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, Service Provider, and Enterprise.

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.

The following is an overview of the trends affecting the market in which we operate by each of our customer verticals. We believe the networking needs for each of our customers will eventually result in cloud-based network architectures for improved agility and greater levels of operating efficiency.

Cloud

Our Cloud vertical includes companies that are heavily reliant on the cloud for their business model's success. Customers in the Cloud vertical can include cloud service providers, such as the largest public cloud providers, which we refer to as hyperscalers, and Tier-2 cloud providers, as well as enterprises that provide SaaS; infrastructure-as-a-service; or platform-as-a-service.

Cloud providers continue to grow as more organizations take advantage of public infrastructure to run their business. As their businesses grow, we expect they will continue to invest in their networks, which dictates the quality and experience of the products and the services they deliver to their end-customers. Further, as cloud providers begin to early adopt new network technologies, such as the transition to 400-gigabit Ethernet, or 400GbE, this should present further opportunities for Juniper across our portfolio as our cloud customers value high-performance, highly compact, power efficient infrastructures, which we support and continue to develop.

In addition, SaaS continues to be an important factor for cloud providers as their customers, such as enterprises, prefer to consume and procure product and service offerings via SaaS models. As a result, we believe that SaaS providers will invest in high performance infrastructure because the quality of experience has proven just as important competitively as software features and functions. Lastly, as a result of new regulations and the need for lower latency and high-performance networking, cloud providers are transitioning to regional network build-outs or distributed cloud environments to address the increasing demand for services, data privacy, data protection, and consumer rights.

As Cloud 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 customers, helping them develop high-performance and lower total cost of ownership networking solutions to support their business.

Service Provider

Our Service Provider 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.

Service Provider customers recognize the need for high-performance networks and leveraging the cloud to reduce costs from their network operations. This is dictating a change in business models and their underlying infrastructure, which we believe requires investment 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.

We expect that Network Function Virtualization, or NFV, and SDN, will be critical elements to enable our Service Provider customers the flexibility to support enhanced mobile video and dynamic new service deployments. We are engaging with these customers to transition their operations to essentially next-generation cloud operations as 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. 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.

In addition to reducing operating costs, Service Providers are seeking to create new or additional revenue opportunities to support their evolving business models. These customers are preparing for 5G, which we expect to begin to occur over the next few years, and IoT, which we believe will give rise to new services like connected cars, smart cities, robotic manufacturing, and agricultural transformation. 5G and IoT will require a highly distributed cloud data center architecture from which services are delivered to the end users and will involve a great degree of analytics and embedded security. We expect this trend will present further opportunities for Juniper with our focus on delivering a strong portfolio of network virtualization and software-based orchestration solutions, which position us to deliver on the automation and agility requirements needs of Service Providers.

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 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 Enterprise customers are able to deploy our solutions as a powerful component in delivering the advanced network capabilities needed for their leading-edge applications.

We believe that as our Enterprise customers continue to transition their workloads to the cloud, they continue to seek greater flexibility in how they consume networking and security services, such as pay-per-use models. Additionally, Enterprises are deploying multicloud architectures which require end-to-end solutions for managing, orchestrating, and securing distributed cloud resources as a single pool of resources. Also, we are increasingly seeing a convergence of networking and security, resulting in security becoming an embedded capability in each and every solution that we offer to our customers.

High-performance enterprises require IP networks that are global, distributed, and always available. We are innovating in key technology areas to meet the needs of our Enterprise customers whether they plan to move to a public cloud architecture or hybrid cloud architecture (which is a mix of public and private cloud, as well as a growing number of SaaS applications).

In 2019, 2018, and 2017, 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 and virtual network functions, or VNF) such as firewall, network orchestration, and automation to provide a range of hardware and software solutions in high-performance, secure networking. We have invested in the development of silicon photonics to provide our customers with performance programmability, and streaming telemetry while driving down the cost per bit.

Further, our intent is to expand our software business by introducing new software solutions to our product portfolio that simplify the operation of networks, and allow our customers across our key verticals, flexibility in consumption and deployment. Our software offerings include subscriptions, SaaS, and perpetual licenses. We believe our software and related services revenues as

a percentage of total revenues will increase over time as we introduce new software solutions designed to better monetize the value of software functionality in our offerings.

Significant Product Development Projects and Solutions

In 2019, we continued to execute on our product and solutions strategy and announced several new innovations, including metro, edge, and core innovations to accelerate Service Providers' 5G transformation. Our Metro Fabric line expansion includes one and three rack unit ACX700 Universal Metro Routers. We announced a new edge MPC11E line card in the MX2000 Series 5G Universal Routing Platform, delivering an increase in line card and system capacity using our Penta Silicon chip. We also announced our new Triton Silicon enabling end-to-end secure connectivity at scale with 400GbE, native Media Access Control Security that will be used in the PTX10008 and PTX10016 Universal Chassis. These new solutions will help service providers with their infrastructure transformation to 5G.

Also, we introduced our next-generation operating system, Junos OS Evolved. It has the same command-line interface, the same applications and features, the same management and automation tools as Junos OS, but its infrastructure is entirely modernized, which enables higher availability, accelerated deployment, greater innovation and improved operational efficiencies.

Moreover, we announced a cloud-managed version of our SD-WAN solution. Our Contrail Service Orchestration now gives enterprises a simple way to manage and secure their WAN infrastructure and Branch LAN and Wi-Fi networks. We also released our PTX10003 router, and our QFX5220 switch, which are both 400GbE ready.

The following is an overview of our principal product families and service offerings in 2019:

Routing Products

- *ACX Series:* Our ACX Series Universal Access Routers cost-effectively address current operator challenges to rapidly deploy new high-bandwidth services. The ACX Series is well positioned to address the growing metro Ethernet and mobile backhaul needs of our customers, as we expect 5G mobile network build-outs to begin to occur over the next few years. 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. The MX Series platforms utilize our custom 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 deliver high throughput at a low cost per bit, optimized for the Service Provider core as well as the scale-out architectures of Cloud Providers. The PTX Series is built on our custom silicon and utilizes a forwarding architecture that is focused on optimizing IP/MPLS, and Ethernet. This ensures high density and scalability, high availability, and network simplification.
- *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 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 NFX security family, a network services platform that can operate as a secure, on-premises device running software defined WAN, or SD-WAN, and multiple virtual services, from Juniper and third parties, simultaneously.
- *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.

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 environments, providing a foundation for the fast, secure, and reliable delivery of applications able to support strategic business processes.

- *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.
- *Mist Access Points*: Our access points provide wireless access and performance, which is automatically optimized through reinforcement learning algorithms. Our access points have a dynamic virtual Bluetooth low energy element antenna array for accurate and scalable location services.

Security Products

- *SRX Series Services Gateways for the Data Center and Network Backbone*: Our mid-range, high-end and virtual SRX Series platforms 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. Our high-end SRX5800 platform is suited for service provider, large enterprise, and public sector networks. The upgrade to our high-end SRX firewall offering with our Services Process Card 3, or SPC3, with our Advanced Security Acceleration line card enhances the SRX5800 to deliver power for demanding use cases, including high-end data centers, IoT, and 5G.
- *Branch SRX, Security Policy and Management*: The Branch SRX family provides an integrated firewall and next-generation firewall, or NGFW, capabilities. 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 NGFW 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*: Our Advanced Threat Prevention portfolio consists of Sky ATP, a cloud-based service and Juniper ATP, or JATP, a premises-based solution. These products are designed to use both static and dynamic analysis with machine learning to find unknown threat signatures (zero-day attacks).

Services

In addition to our products, we offer maintenance and support, professional, and educational services. We utilize a multi-tiered support model to deliver services that leverage the capabilities of our own direct resources, channels partners, and other third-party organizations.

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, 2019, we employed 1,802 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 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 Evolved. We believe Junos OS Evolved is fundamentally differentiated from other network operating systems not only in its design, but also in its development capabilities. The advantages of Junos OS Evolved include:

- A 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;
- A common modular software architecture that scales across all Junos-based platforms;
- A central database which is used by not only Junos native applications but also external applications using application programming interfaces, or APIs; and
- A fully distributed general-purpose software infrastructure that leverages all the compute resources on the network element.

Junos OS Evolved is designed to improve the availability, performance, and security of business applications running across the network. Junos OS Evolved 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.

Orchestration and Monitoring

As many of our customers continue moving to programmable and automated network operations, managing, orchestrating, and securing that complex journey can be a challenge. Network automation is the process of automating the configuration, management, testing, deployment, and operations of physical and virtual devices within a network. We believe the keys to achieving success with network and security automation includes:

- Architecting networking systems with strong APIs, analytics, and autonomous control; and
- Automating operations to become more reliable in the context of IT systems, teams, processes, and network operation and security operation workflows.

We are committed to providing solutions to help our customers to optimize their programmable and automated networking operations 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 Enterprise Multicloud and Contrail Edge Cloud provide packaged solutions designed for Enterprise multicloud and Service Provider Edge environments, respectively. Contrail’s approach is to support multiple cloud and hardware vendors, various types of workloads, and both existing and new deployments.
- *Contrail Insights*: Contrail Insights (formerly known as 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 to provide comprehensive visualization, smart analytics, and the ability to manage automatic remediation for service assurance.
- *Marvis Actions and AI-driven Virtual Network Assistant*: Our Marvis Actions and AI-driven Virtual Network Assistant identifies the root cause of issues across the information technology, or IT, domains and automatically resolves many issues. It recommends actions for those connected systems outside of the Mist domain, while offering a real-time network health dashboard that reports issues from configuration to troubleshooting.

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, 2019, we employed 3,777 people in our worldwide research and development, or 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 secure high-performance networks and cloud environments. We continue to expand the functionality of our products to improve performance, reliability and scalability, and 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.

Sales and Marketing

As of December 31, 2019, we employed 2,704 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, is based on both vertical markets and geographic regions.

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 Service Provider 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 sales arrangements are governed either by customer purchase orders along with acknowledgment of our standard order terms, or by direct master purchase agreements. The direct master purchase agreements 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, software 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, implementing, and supporting 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 Service Provider customers also resell our products or services to their customers or purchase our products or services for the purpose of providing managed or cloud-based services to their customers.
- Strategic worldwide reseller relationships with established Juniper alliances, comprised of Nippon Telegraph and Telephone Corporation; 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, 2019, we employed 340 people in worldwide manufacturing and operations who manage our supply chain including relationships with our contract manufacturers, original design manufacturers, component suppliers, warehousing and logistics service providers.

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, 2019, 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 are responsible for all phases of manufacturing from prototypes to full production including 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 to ensure that our products 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, resellers, or end-customers. 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 or original design 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 charges for excess or obsolete materials.

Our contracts with our contract manufacturers and original design manufacturers 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 components; 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. To ensure the security and integrity of Juniper products during manufacture, assembly and distribution, we have implemented a supply chain risk management framework as part of our overall Brand Integrity Management System. This framework encompasses all aspects of the supply chain as well as enhanced elements specific to security issues applicable to Juniper products and our customers.

By working collaboratively with our suppliers and as members of coalitions such as Responsible Business Alliance, Responsible Minerals Initiative, and the Carbon Disclosure Project, or CDP, Supply Chain program, 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. Our business partner code of conduct expresses support for and is aligned with the Ten Principles of the United Nations Global Compact and 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 master sales agreements either with our distributors, resellers, or end-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, 2019 and December 31, 2018, our total product backlog was approximately \$341.1 million and \$344.3 million, respectively. Our product backlog consists of confirmed orders for products scheduled to be shipped to our distributors, resellers, or end-customers, generally within the next six months. Backlog 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 of the fiscal year. 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 solutions that combine high performance networking with cloud technologies. 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 Technologies, 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, there can be no assurance that new products, enhancements or business strategies will achieve widespread market acceptance.

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, or EU, 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 supports a circular economy model for environmental sustainability and 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. For example, the Juniper Certified Pre-Owned program offers a broad range of refurbished high-performance network solutions from Juniper's current line and end-of-production hardware portfolios with available Juniper-backed warranty and support services.

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 and part of our continued focus on improving the energy efficiency per gigabit of throughput, our MX10008 and MX10016 products redefine per-slot economics, enabling customers to do more with less while simplifying network design and reducing operating expenses, by consuming 0.6W per Gigabit of throughput. We also released a new line card, MPC11E, using the Penta silicon in 2019, which reduces the power consumption by 40% compared to our earlier generation line card. 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 and 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 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.

Patents

As of December 31, 2019, we had over 3,700 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.

Licenses

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.

Trademarks

JUNIPER NETWORKS, JUNIPER, the Juniper Networks logo, JUNOS, and CONTRAIL 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.

Employees

As of December 31, 2019, we had 9,419 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	49	Chief Executive Officer and Director
Anand Athreya	56	Executive Vice President, Chief Development Officer
Manoj Leelanivas	50	Executive Vice President, Chief Product Officer
Brian Martin	58	Senior Vice President, General Counsel and Secretary
Kenneth B. Miller	49	Executive Vice President, Chief Financial Officer
Thomas A. Austin	52	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. 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 Executive Vice President and Chief Development Officer in August 2017. In this role, he is responsible for Juniper's Engineering organization. Since joining Juniper, 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, a maker of routers and routing technology, where he served as Director of Software Engineering. Prior to that, he was Vice President of Engineering at Malibu Networks, a supplier of fixed wireless networking based broadband solutions, Assistant Vice President of Product Management and Strategy at Tiara Networks, a provider of broadband access systems, and held engineering roles at Novell, a software and services company. Mr. Athreya received his bachelor of science degree in Electrical Engineering from Bangalore University, a master of science 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.

MANOJ LEELANIVAS joined Juniper in March 2018 as Executive Vice President, Chief Product Officer. In this role, Mr. Leelanivas leads all aspects of product strategy and direction for Juniper and helps to align products with our go-to-market strategies

and execution, including marketing operations. From June 2013 to September 2017, Mr. Leelanivas was President and Chief Executive Officer of Cyphort, an innovator in scale-out security analytics technology, that was acquired by Juniper in September 2017. From March 1999 to May 2013, he held several key product management positions at Juniper, including Executive Vice President of Advanced Technologies Sales for data center. Mr. Leelanivas holds a bachelor of technology in Computer Engineering from the National Institute of Technology Karnataka, a master of science degree in Computer Science from the University of Kentucky, and is a graduate of the Stanford University Executive Business Program.

BRIAN MARTIN joined Juniper in October 2015 as Senior Vice President, General Counsel and Secretary. From January 2018 to October 2018, Mr. Martin also assumed the role of interim Chief Human Resources Officer ("CHRO") while the Company continued 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"), a manufacturer of computer workstations, servers, software, and services for networks, 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 of science 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. Mr. Miller served as our interim Chief Accounting Officer while the Company continued to search for a full-time Chief Accounting Officer from February 23, 2019 to September 2019. 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.

THOMAS A. AUSTIN joined Juniper in September 2019 as our Vice President, Corporate Controller and Chief Accounting Officer. From September 2016 until July 2019, Mr. Austin served as the Vice President of Corporate Finance at Dell Technologies, Inc., a multinational information technology company. From September 2008 until September 2016, Mr. Austin served as the Vice President of Corporate Finance at EMC Corporation, a multinational information technology company. EMC Corporation was acquired by Dell Technologies in September 2016. From January 2001 through July 2008, Mr. Austin served as the Chief Financial Officer and Treasurer at Arbor Networks, Inc., a network security company. Prior to joining Arbor Networks, Mr. Austin served as a controller for several companies. He began his career in public accounting at PricewaterhouseCoopers, a registered public accounting firm. Mr. Austin holds a bachelor of science degree in Public Accountancy from Providence College and an MBA from Babson College. Mr. Austin is also an adjunct professor of Finance at Providence College School of Business.

Available Information

We file our annual reports on Form 10-K, quarterly reports on Form 10-Q, and current reports on Form 8-K with 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> or by sending an e-mail message to Juniper Networks Investor Relations at 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:

- unpredictable ordering patterns and limited or reduced visibility into our customers' spending plans and associated revenue;
- changes in customer mix;
- changes in the demand for our products and services;
- 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, including the impact of tariffs;
- current and potential customer, partner and supplier consolidation and concentration;
- price and product competition;
- long sales, qualification and implementation cycles;
- success in new and evolving markets and emerging technologies;
- ineffective legal protection of our intellectual property rights in certain countries;
- 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;
- ability of our customers, channel partners, contract manufacturers and suppliers to purchase, market, sell, manufacture or supply our products (or components of our products) and services;
- financial stability of our customers, including the solvency of private sector customers and statutory authority for government customers to purchase goods and services;
- 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;
- seasonality; and
- other factors beyond our control such as the effects of climate change, natural disasters, and pandemics as well as the fear of exposure to a widespread health epidemic, such as the outbreak of a respiratory illness caused by the 2019 novel coronavirus first identified in Wuhan, Hubei Province, China and recently named by the World Health Organization (WHO) as ("COVID-19"), resulting in the WHO declaring a global emergency on January 30, 2020.

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, but not limited to, 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, manufacturing or logistics costs, issues with product or service quality (including the quality of our components), regulatory impacts, tariffs 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 the factors described above, 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 some prior periods, our operating results have been below our guidance, our long-term financial model or the expectations of securities

analysts or investors, which has at times coincided with a decline in the price of our common stock. This may happen again in the future, in which case the price of our common stock may decline. 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.

We expect our product and service gross margins to vary, both in the near-term and in the long-term, 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 availability, quality or efficiencies, increased costs due to changes in component pricing or charges incurred due to inaccurately forecasting product demand, warranty related issues, the impact of tariffs, or our introduction of new products and enhancements or entry into new markets with different pricing and cost structures. For example, in fiscal year 2019, our gross margin was relatively flat as compared to fiscal year 2018. In fiscal year 2018, our margins decreased as compared to fiscal year 2017, primarily due to lower net revenues and product mix. 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. 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, while 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, across each customer vertical, depends on sales to a limited number of customers and distribution partners. 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., Vodafone India's acquisition of Idea Cellular Ltd. and T-Mobile US, Inc.'s proposed acquisition of Sprint Corp., which was recently approved by the U.S. Justice Department.) and that consolidation trend has continued. Certain telecommunications companies have also moved towards vertical consolidation through acquisitions of media and content companies, such as Verizon's acquisition of Yahoo, AT&T's acquisition of Time Warner, and Comcast's acquisition of Sky. 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.

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. 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 2017, 2018, and 2019, we initiated restructuring plans to realign our workforce as a result of organizational and leadership changes, align our execution priorities, increase operational efficiencies, and to consolidate facilities which resulted in restructuring charges in each of these years. Some of our expenses related to such efforts 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, which 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, Arista, and Huawei. In the security market, we face intense competition from Cisco and Palo Alto Networks, as well as companies such as Check Point, 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. 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 vertical integration, 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 deliveries and/or our reliance on revenue from sales of certain 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.

Due to the cost, complexity and custom nature of configurations required by our customers, we generally build our network equipment 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. Similarly, if we were to take actions to encourage customers to place orders or accept deliveries earlier than anticipated, our ability to meet our expected revenues in future quarters could be adversely affected.

In addition, services revenue accounts for a significant portion of our revenue, comprising 35%, 33%, and 31% of total revenue in fiscal year 2019, 2018, and 2017, 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 as services are delivered and 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 derived from the recognition of deferred revenue from contracts entered into during previous fiscal quarters. Consequently, any fluctuation in such new or renewed contracts in any one fiscal quarter may not be fully or immediately reflected in revenue and could negatively affect our revenue in future fiscal quarters. Accordingly, the effect of significant downturns in new or renewed sales of certain software products, 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 based on our 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.

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 customers that depend on the continued growth of IP services to deploy our products in their networks and IP infrastructures. 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. Any reduction or suspension of spending on IP infrastructure is difficult to predict, and can make it more difficult to accurately 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.

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 WAN infrastructures towards software-defined WAN has been receiving considerable attention. In our view, it will take several years to see the full impact of software-defined 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 does not 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 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 possibility that our strategy could erode our revenue and gross margins;
- the impact on our financial results of longer periods of revenue recognition for certain types of software products 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 and original design 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 and original design manufacturers (each of which is a third-party manufacturer for numerous companies) to manufacture our products. Although we have contracts with our contract manufacturers and original design 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 and original design manufacturer relationships. Therefore, if we fail to effectively manage our contract manufacturer and original design manufacturer relationships, which could include failing to provide accurate forecasts of our requirements, or if one or more of them experiences delays, disruptions, or quality control problems in their manufacturing operations, or if we had to change or add additional contract manufacturers, original design 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, original design manufacturers, or the introduction of new products by us would increase the complexity of our supply chain management. Moreover, a significant 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 import tariffs, disruptions to our supply chain, pandemics, regional climate-related events, or regional conflicts. For example, in 2018, the United States imposed a tariff on certain networking products imported from China and in 2019, the United States increased the tariffs on these networking products and expanded the list of products subject to the tariff. Certain products that we import into and sell within the United States are included on the list of products subject to these tariffs. We have incurred increased costs due to our efforts to attempt to mitigate the impact of the tariffs. In some cases, the tariffs have been passed on and may continue to be passed on to customers resulting in higher prices for our customers, which may have reduced, or may continue to reduce, customer demand for our products or increased cost of goods sold. Similarly, many of the products that we source from China are transported by air cargo from Hong Kong, which has experienced recent political demonstrations that have resulted in cancellations or delays in flights in and out of Hong Kong. If these demonstrations and their impact on air shipments continue, we could experience delays in product deliveries or be required to change our shipping practices. In addition, increased costs of production or delays in production caused by any relocation of contract manufacturing facilities or delays in product deliveries could impact the global competitiveness of our products. Each of these factors could adversely affect our business, financial condition and results of operations. Further, the Chinese government has recently imposed certain restrictions on the movement of people and goods, including the temporary closure of factories, businesses, schools, and public spaces, to limit the spread of COVID-19 in and around Wuhan and may extend these restrictions to other affected regions. While our products are not manufactured in Wuhan, any delay in production or delivery of our products or components made in China by our suppliers due to an extended closure of our supplier's plants or other restrictions imposed to limit the spread of COVID-19 could adversely impact our business. In addition, a number of countries have either closed their borders completely or implemented immigration restrictions for visitors traveling from China.

We are dependent on sole source and limited source suppliers, including for 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 for many 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, we have experienced industry-wide supply constraints related to power management components. In addition, some components used in our networking solutions have in the past and may in the future experience extended lead times and higher pricing, given the demand in the market. Any future spike in growth in our business, the use of certain components we share in common with other companies, in IT spending or 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, we may not be able to secure enough components at reasonable prices or of acceptable quality to build and deliver products in a timely manner, and our revenues, gross margins and customer relationships could suffer. Additionally, if certain components that we receive from our suppliers have defects or other quality issues, we may have to replace or repair such components, and we could be subject to claims based on warranty, product liability, epidemic or delivery failures that could lead to significant expenses. We maintain product liability insurance, but there is no guarantee that such insurance will be available or adequate to protect against all such claims. 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, revenue charges that impact our gross margins, and/or warranty or other claims or 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 ("Altera"), and Cisco has announced its intent to acquire Acacia Communications, Inc. 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 which may impact our gross margins. In addition, our suppliers may determine not to continue a business relationship with us for other reasons that may be beyond our control or may seek to impose significant price increases. Any disruptions to our supply chain or significant increase in components cost 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, an extended closure of or any slowdown at our supplier's plants or shipping delays due to efforts to limit the spread of COVID-19, increases in wages that drive up prices, the imposition of regulations, quotas or embargoes on components, labor stoppages, transportation failures affecting the supply chain and shipment of materials and finished goods, third-party interference in the integrity of the products sourced through the supply chain, the unavailability of raw materials, severe weather conditions, adverse effects of climate change, natural disasters, civil unrest, military conflicts, geopolitical developments, war or terrorism and disruptions in utility and other services.

The development of alternate sources for 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, supply interruption or significant price increase 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 components and products would adversely affect our business.

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, 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. Given that 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. This could increase costs or delay or interrupt manufacturing of our products, resulting in delays in shipments and deferral or loss of revenues and could negatively impact 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 employees, contractors, 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 attacks and attempted intrusions, including recent attempts, on their and their vendors' networks and systems by a wide range of actors, including but not limited to nation states, criminal enterprises, and terrorist organizations, 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 subject or vulnerable in the future to breaches or attacks by computer programmers, hackers or sophisticated nation-state and nation-state supported actors or breaches due to employee error or wrongful conduct, malfeasance, or other disruptions. If any breach or attack compromises our networks or those of our vendors', creates system disruptions or slowdowns or exploits security vulnerabilities of our products, the information stored on our networks or those of our customers,

suppliers or business partners could be accessed and modified, publicly disclosed, lost, destroyed or stolen, and we may be subject to liability to our customers, suppliers, business partners and others, including regulatory entities, and suffer reputational and financial harm. In addition, hardware, components and software (including 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, or be exploited to gain unauthorized access to our or our customers' systems or information we maintain. 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. Furthermore, third parties may attempt to exfiltrate data through the introduction into the Information and Communications Technology supply chain of malicious products and components that are designed to defeat or circumvent encryption and other cybersecurity measures, and if successful, such actions could diminish customer trust in our products, harm our business reputation, and adversely affect our business and financial condition.

When vulnerabilities are discovered, we evaluate the risk, apply patches or take other remediation actions and notify customers, business partners, and suppliers as appropriate. All of this requires significant resources and 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 regularly and 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 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, Nippon Telegraph and Telephone Corporation 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. 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 at the time we sell products to our distributors. If these sales are made based on inaccurate or untimely information, the amount or timing of our revenues could be adversely impacted. Further, our distributors may increase orders during periods of product shortages, cancel orders if their inventory is too high, or delay orders in anticipation of new products. They also may adjust their orders in response to the supply of our products and the products of our competitors that are available to them, and in response to seasonal fluctuations in end-user demand.

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 as well as the interfaces between our systems and the systems of such third parties. Dependence on outsourced information technology and other administrative functions may impair our ability to operate effectively.

Some of our business processes depend upon our IT systems, the systems and processes of third parties, and the interfaces between the two. For example, on December 31, 2018, we entered into a Master Services Agreement and certain Statements of Work with IBM pursuant to which we have outsourced significant portions of our IT and other administrative functions. These cloud providers, third party providers, and off-site facilities are vulnerable to damage, interruption, including performance problems from earthquakes, hurricanes, floods, fires, power loss, telecommunications failures, equipment failure, adverse events caused by operator error, cybersecurity attacks and similar events. In addition, because we lease 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 business partners 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. Since IT is critical to our operations, any failure to perform on the part of our IT providers could impair our ability to operate effectively. In addition to the risks outlined above, problems with any of the third parties we rely on for our IT systems could result in liabilities to our customers and business partners, lower revenue and unexecuted efficiencies, and impact our results of operations and our stock price.

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, we acquired Mist Systems in 2019, HTBase in 2018 and Cyphort in 2017. Acquisitions involve numerous risks, including, but not limited to, problems combining the purchased operations, technologies or products, unanticipated costs, liabilities, litigation, and 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 where competitors in such markets have stronger market positions, initial dependence on unfamiliar supply chains or relatively small supply partners, failure of our due diligence processes to identify significant problems, liabilities or other challenges of an acquired company or technology, and the potential loss of key employees, customers, distributors, vendors and other business partners of the companies we acquire.

There can be no assurance that we will be able to integrate successfully any businesses, products, technologies, or personnel that we might acquire or that the transaction will advance our business strategy. 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, operate or integrate any acquired business or if we are unable to efficiently operate as a combined organization, including through the use of common information and communication systems, operating procedures, financial controls, and human resources practices, we could be required to write-down investments and 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 (both known and unknown), 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.

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 and may become subject to various lawsuits. We have been served with lawsuits related to employment matters, commercial transactions

and patent infringement, as well as securities laws. In addition, certain U.S. governmental agencies previously conducted investigations into possible violations by the Company of the U.S. Foreign Corrupt Practices Act, or the FCPA, which ultimately resulted in the Company entering into a settlement with the SEC that involved the Company making a payment of \$11.8 million in August 2019.

Generally, we cannot predict the duration, scope, outcome or consequences of litigation and government investigations. In connection with any limitation or government investigations, we may agree to settle the matter, we may be required to pay damages and incur other remedies, which may be material, and we may suffer reputational harm. In addition, if we fail to comply with the terms of any settlement agreement, we could face more substantial penalties. 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.

As we seek to sell more products directly to telecommunications, cable and cloud service provider companies and other large customers, we may be required to agree to terms and conditions that could have an adverse effect on our business or impact the amount of revenues to be recognized.

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. As we seek to sell more products directly 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, these types of customers 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 impact the amount of 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 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.

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 country-specific safety, conformance or security certification criteria or in-country test requirements. Other regulations that may negatively impact our business include local content or local manufacturing requirements most commonly applicable for government, state-owned enterprise or regulated industry procurements. 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 an 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 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. 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 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 jurisdictions 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, or 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. 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. Similarly, while there are currently few laws or regulations that apply directly to access to or commerce on IP networks, 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 their need for Internet telecommunications equipment and services. At the same time, several states have enacted their own laws and regulations governing certain aspects of fixed and wireless networks in the manner of the 2015 FCC regulations. These laws and regulations enacted by the states are or will be subject to legal challenges from the federal government and/or regulated providers.

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, such as the Internet of Things (IoT) security law (SB-327) which became enforceable in 2020, 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, in particular, could negatively affect our revenues and operating results.

The United States and various foreign governments have imposed controls and restrictions on the export of, among other things, certain telecommunications products and components, particularly those 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, like those of Russia and China, 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 several years, U.S. government officials have had concerns with the security of products and services from certain telecommunications and video providers based in China. As a result, Congress has enacted bans on the use of the covered equipment and services in federal networks and even in the networks of subcontractors to the federal government.

In 2019, the U.S. Department of Commerce, or Commerce Department, proposed a rule that would subject to government review the acquisition or use of information and communication technology, or ICT, goods and services from entities owned by, controlled by, or subject to the jurisdiction of a foreign adversary. The proposal would be retroactive and apply to transactions dating back to May 15, 2019. If implemented as proposed, the rule could subject acquisition of components, modules, other parts, and any services to lengthy government review processes. This would introduce significant uncertainty into our supply chain planning as we would not be certain which potential acquisitions the government would permit and which it would reject.

Increasingly, governments have begun using export and import controls not only to further national security objectives but also to protect local industries and restrict proliferation of locally developed “emerging or foundational technology.” For example, in 2018 the U.S. enacted the Export Control Reform Act, which expands the power of the Commerce Department to use export controls to protect domestic industry and to restrict the export of emerging and foundational technologies not currently subject to controls. In furtherance of that law, on November 19, 2018, the Commerce Department sought public comment on how to define emerging technologies. Our ability to market and sell our products overseas may be impacted by such export controls, if and when they are imposed.

In addition, the U.S. and other governments have especially broad sanctions and embargoes prohibiting provision of goods or services to certain countries, and territories, and to certain sanctioned governments, legal entities and individuals. Some of these restrictions have been imposed not just to protect national security but also to protect domestic industries and to achieve political aims. For instance, the Commerce Department in 2018 added to its Entity List, a Chinese semiconductor manufacturer on the express basis that it threatens the viability of U.S. competitors; the Entity List traditionally is used to restrict exports to end users that pose a security risk. Particularly far reaching and complex are restrictions imposed by the U.S. and EU on exports to Russia and, in particular, to the disputed region of Crimea. We have implemented systems to detect and prevent sales into these restricted countries or to prohibited entities or individuals, but there can be no assurance that our third party, downstream resellers and distributors will abide by these restrictions or have processes in place to ensure compliance, especially where local government regulation might prohibit adherence to such restrictions.

Certain governments also impose special local content, certification, testing, source code review, escrow and governmental recovery of private encryption keys, or other cybersecurity feature requirements to protect network equipment and software procured by or for the government. Similar requirements also may be imposed in procurements by state owned entities (“SOE’s”) or even private companies forming part of “critical network infrastructure” or supporting sensitive industries. For example, China, Vietnam and India have promulgated cybersecurity regulations affecting networking products that may impair our ability to profitably market and sell our products there. China, in particular, is expected to require implementation of non-standard Chinese encryption algorithms in products sold into certain government, SOE, critical infrastructure and sensitive industry (such as financial institutions) markets. In the U.S., there are new restrictions on the use of certain Chinese-origin components or systems either (1) in items sold to the U.S. government or (2) in the internal networks of government contractors and subcontractors (even if those

networks are not used for government-related projects). The U.S. government also might restrict or ban the use of certain Chinese-origin components and systems in next generation mobile communications networks (e.g. 5G).

In addition, governments sometimes impose additional taxes on certain imported products. For example, the United States and Chinese governments each have imposed tariffs on certain products originating from the other country. In 2018, the United States imposed tariffs on a large variety of products of China origin. As a result, beginning September 24, 2018, a large portion of Juniper products manufactured in China became subject to a 10% tariff on importation into the U.S. pursuant to the U.S. government's List 3 tariff proceeding. The U.S. President announced on May 5, 2019, that the rate would increase to 25% on May 10, 2019 due to the lack of negotiation progress. On August 1, 2019, the President stated his intent to increase the List 3 tariff to 30%, which he announced would occur on October 15, 2019; this planned increase to 30% has been postponed indefinitely. Similarly, in July 2019, the U.S. President reiterated his readiness to impose tariffs on all remaining Chinese imports (List 4 tariff proceeding) if U.S.-China negotiations remained unresolved. In August 2019, he announced that he would impose a 15% tariff on List 4 imports effective September 1, 2019. Pursuant to a U.S.-China trade deal signed in mid-January, the List 3 rate will remain at 25% but the List 4 rate will decrease from 15% to 7.5%, effective February 14, 2020.

Depending upon their duration and implementation, as well as our ability to mitigate their impact, these tariffs could materially affect our business, including in the form of increased cost of goods sold, increased pricing for customers, and reduced sales.

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 wide variety of provincial, 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. Further, our legal and regulatory obligations in foreign jurisdictions are subject to unexpected changes, including the potential for regulatory or other governmental entities to enact new or additional laws or regulations, to issue rulings that invalidate prior laws or regulations, or to increase penalties significantly. 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, the General Data Protection Regulation ("GDPR"), which became effective in May 2018, imposes more stringent data protection requirements, and provides for significantly greater penalties for noncompliance, than the EU laws that previously applied. Additionally, California recently enacted legislation, the California Consumer Privacy Act ("CCPA"), which became effective January 1, 2020. The CCPA requires, among other things, covered companies to provide new disclosures to California consumers, and allow such consumers new abilities to opt-out of certain sales of personal information. Final regulations by the California Attorney General are expected to be published later this year.

It remains unclear the extent or timing of any modifications that will be made to the CCPA, or how such modifications will be interpreted. The effects of the CCPA potentially are significant and may require us to modify our data processing practices and policies and to incur substantial costs and expenses in an effort to comply. We may also be subject to additional obligations relating to personal data by contract that industry standards apply to our practices. Further, other states have also expanded their data protection laws. Additionally, the Federal Trade Commission and many state attorneys general are interpreting federal and state consumer protection laws to impose standards for the online collection, use, dissemination, and security of data. In addition, we may be or become subject to data localization laws mandating that data collected in a foreign country be processed and stored within that country.

Our actual or perceived failure to comply with applicable laws and regulations or other obligations to which we may be subject relating to personal data, or to protect personal data from unauthorized access, use, or other processing, could result in enforcement actions and regulatory investigations against us, claims for damages by customers and other affected individuals, fines, damage to our reputation, and loss of goodwill, any of which could have a material adverse effect on our operations, financial performance, and business. Further, evolving and changing definitions of personal data and personal information, within the EU, the U.S., U.K., and elsewhere, including the classification of IP addresses, machine identification information, location data, and other information, may limit or inhibit our ability to operate or expand our business, including limiting business relationships and partnerships that may involve the sharing or uses of data, and may require significant costs, resources, and efforts in order to comply.

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

Our future success and ability to maintain a technology leadership position 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 with technological and creative skills, in particular engineers in very specialized technical areas who have the expertise necessary to develop new products and develop enhancements for our current products, and provide reliable product maintenance, 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. There can be no assurance that others will not develop technologies that are similar or superior to our technology.

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 made immigration reform 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 purchased intangible assets.

As of December 31, 2019, our goodwill was \$3,337.1 million, and our purchased intangible assets were \$185.8 million. 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. When the carrying value of a reporting unit's goodwill exceeds its implied fair value of goodwill, or whenever events or changes in circumstances indicate that the carrying amount of an intangible asset might not be recoverable, 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. We have in the past recorded goodwill impairment charges. 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.

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. For example, on November 12, 2019, in *Altera Corp. v. Commissioner*, the Ninth Circuit Court of Appeals denied Altera Corporation's petition for rehearing en banc of its case, following the Ninth Circuit's decision against Altera issued on June 7, 2019 (the "2019 Opinion"). The 2019 Opinion required related parties in an intercompany cost-sharing arrangement to share expenses related to share-based compensation. Altera appealed this decision to the U.S. Supreme Court on February 10, 2020. Pending final resolution of the Altera case, the Company's position on cost-sharing of share-based compensation remains unchanged. If the final judicial decision is not in favor of Altera, we expect our effective tax rate and current income tax payable to be higher. We are monitoring this case and any impact the final resolution may have on our financial statements. In addition, the Tax Act made significant changes to the taxation of U.S. business entities that may have a meaningful impact to our provision for income taxes. These changes included 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 required significant judgments and estimates that are based on current interpretations of the Tax Act. The U.S. Department of the Treasury continues to issue regulations that affect various components of the Act. Our future effective tax rate may be impacted by changes in interpretation of the regulations, as well as additional legislation and guidance regarding the Act.

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 generally 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 value-added resellers 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 in trade controls, economic sanctions, or other international trade regulations, which may affect our ability to import or export our products to or from various countries;
- laws that restrict sales of products that are developed, manufactured, or incorporate components or assemblies from certain countries to specific customers (e.g., U.S. federal government departments and agencies) and industry segments, or for particular uses or more generally;
- varying and potentially conflicting laws and regulations;
- political uncertainty, including demonstrations, that could have an impact on product delivery from and into the China region;
- fluctuations in local economies;
- wage inflation or a tightening of the labor market;
- tax policies that could have a business impact;
- import tariffs imposed by the United States and reciprocal tariffs imposed 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 or a pandemic, such as COVID-19 in Greater China, a region of importance to our supply chain and our end market sales, 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 U.K.'s formal exit from the EU on January 31, 2020, commonly referred to as Brexit, has caused, and may continue to cause, uncertainty in the global markets. The U.K. is expected to enter a transition period until December 31, 2020 permitting negotiation of a free trade deal between the US and U.K. The consequences for the economies of the U.K. and EU member states as a result of the U.K.'s withdrawal from the EU remain unknown and unpredictable. Any impact from Brexit on the Company will depend, in part, on the outcome of tariff, trade and other negotiations. 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 are also reviewing 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 withdrawal are still developing and we are in the process of assessing the impact the withdrawal may have on our business as more information becomes available, including, but not limited to changes to U.K. immigration policy that may affect our ability to attract and retain talent in EMEA. Nevertheless, because we conduct business in the EU and the U.K., any of the effects of Brexit, including those we cannot anticipate, could have a material adverse effect on our business, business opportunities, operating results, financial condition and cash flows. The lack of certainty given the pending EU-U.K. negotiations creates the risk that, notwithstanding that we have devoted significant resources to preparing for the impact of Brexit, we may not be adequately prepared for an unforeseen outcome.

Our business is also impacted by the negotiation and implementation of free trade agreements between the United States and other nations. Such agreements can reduce barriers to international trade and thus the cost of conducting business overseas. For instance, the United States reached a new trilateral trade agreement with the Governments of Canada and Mexico to replace the North American Free Trade Agreement (NAFTA). The United States and Mexico have ratified the agreement, with Canada expected to follow suit in the coming months. Even after ratification, the three nations must meet various obligations before the agreement takes effect.

Many of the products that we have manufactured in China are transported by air cargo from Hong Kong. Recently, there have been political demonstrations in Hong Kong that have resulted in cancellations or delays in flights in and out of China. If these demonstrations and their impact on air shipments continue, we could experience delays in product deliveries from China or be required to change our shipping practices, which could adversely impact our business.

Further, the spread of COVID-19 from China has affected the manufacturing and shipment of goods. In January 2020, the Chinese government imposed certain restrictions on movement of people and goods to limit the spread of COVID-19 in and around Wuhan. While our products are not manufactured in Wuhan, any delay in production or delivery of our products or components made by our suppliers due to an extended closure of our supplier's plants as a result of efforts to limit the spread of COVID-19 in China could adversely impact our business. In addition, several airlines have canceled flights to and from China, affecting the ability to obtain components needed for manufacturing elsewhere. The United States also imposed flights rules at the beginning of February that redirect flights carrying passengers who have visited China to one of seven U.S. airports. This applies even for flights not originating in China. If any of our products are shipped as cargo on such flights, they could be diverted to those airports.

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. In addition, any theft or unauthorized use or publication of our intellectual property and other confidential business information could harm our competitive position.

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.

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.

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 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. 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 rely on the availability and performance of information technology services provided by third parties, including IBM which will manage a significant portion of our systems.

Under the terms of our recent Master Services Agreement and certain Statements of Work, IBM provides us with a broad range of information technology services, such as applications, including support, development and maintenance; infrastructure management and support, including for servers storage and network devices; and end user support including service desk. Our businesses are dependent on the services provided and systems operated for us by IBM and its third-party providers. The failure of one or more of these entities to meet our performance standards and expectations, including with respect to data security, may have a material adverse effect on our business, results of operations or financial condition.

Our success is dependent on our ability to maintain effective relationships with IBM and other third-party technology and service providers as well as the ability of IBM and any other third-party providers to perform as expected. We may terminate our agreement

with IBM and any and all Statements of Work at any time on short notice for cause, convenience, certain specific performance failures, a breach of warranties by IBM, failure to transform, changes in law, force majeure, or a change in the control of either IBM or us. Depending on the type and timing of a termination, we may be required to pay certain termination amounts to IBM. IBM's only right to terminate the Master Services Agreement is based on our failure to comply with certain terms applying to disputed payments.

This arrangement is subject to various risks, some of which are not within our control. These risks include, but are not limited to, disruption in services and the failure to protect the security and integrity of our data under the terms of the agreement. We are unable to provide assurances that some or all of these risks will not occur. Failure to effectively mitigate these risks, if they occur, could have a material adverse effect on our operations and financial results. In addition, we could face significant additional costs or business disruption if our arrangement with IBM is terminated or impaired and we cannot find alternative IT services or support on commercially reasonable terms or on a timely basis or if we are unable to hire new employees in order to return these services in-house.

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 sufficient 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, 2019, we had \$1,700.0 million in aggregate principal amount of senior notes, which we refer to collectively as the Notes. In April 2019, we entered into a new 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, subject to the lenders' approval. The credit agreement will terminate in April 2024, at which point all amounts borrowed must be repaid (subject to two one-year maturity extension options). As of December 31, 2019, no amounts were outstanding under the Revolving Credit Facility.

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 indenture that governs 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 (provided that if a material acquisition has been consummated, we are permitted to maintain a leverage ratio no greater than 3.5x for up to four quarters) 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, which could result in an event of default under our other debt instruments. 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. 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.

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 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, provided 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.

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.

In January 2018, we announced that our Board of Directors approved a new \$2.0 billion buyback authorization, which replaced our prior authorization and in October 2019, the Board authorized the repurchase of up to an additional \$1.0 billion of common stock under the 2018 Stock Repurchase Program. 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 and equity securities are subject to risks, which may cause losses and affect the liquidity of these investments.

At December 31, 2019, we had \$1,215.8 million in cash and cash equivalents and \$1,327.8 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, time deposits, U.S. government agency securities, and U.S. government securities. We also have \$189.8 million in other long-term assets for our investments in privately-held companies. Certain of our 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.

Changes in the method of determining the London Interbank Offered Rate, or LIBOR, or the replacement of LIBOR with an alternative reference rate, may adversely affect our financial condition and results of operations.

Certain of our financial obligations and instruments, including our credit facility, Pulse note, supplier finance programs, and floating rate notes that we have invested in, as well as interest rate swaps that we use as fair value hedges of our fixed-rate 2041 Notes, are or may be made at variable interest rates that use LIBOR (or metrics derived from or related to LIBOR) as a benchmark for establishing the interest rate. On July 27, 2017, the United Kingdom's Financial Conduct Authority announced that it intends to stop persuading or compelling banks to submit LIBOR rates after 2021. These reforms may cause LIBOR to perform differently than in the past or to disappear entirely. These reforms may also result in new methods of calculating LIBOR to be established, or alternative reference rates to be established. For example, the Federal Reserve Bank of New York has begun publishing a Secured Overnight Funding Rate, or SOFR, which is intended to replace U.S. dollar LIBOR, and central banks in several other jurisdictions have also announced plans for alternative reference rates for other currencies. The potential consequences of these actions cannot be fully predicted and could have an adverse impact on the market value for or value of LIBOR-linked securities, loans, and other financial obligations or extensions of credit held by or due to us. Changes in market interest rates may influence our financing costs, returns on financial investments and the valuation of derivative contracts and could reduce our earnings and cash flows. In addition, any transition process may involve, among other things, increased volatility or illiquidity in markets for instruments that rely on LIBOR, reductions in the value of certain instruments or the effectiveness of related transactions such as hedges, increased borrowing costs, uncertainty under applicable documentation, or difficult and costly consent processes. This could materially and adversely affect our results of operations, cash flows, and liquidity.

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 fluctuate.

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, liabilities 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. From time to time, economic weakness has contributed to extreme price and volume fluctuations in global stock markets that have also reduced the market price of many technology company stocks, including ours. 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 is located on 80 acres of owned land in Sunnyvale, California and includes approximately 0.7 million square feet of owned buildings.

In addition, we 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, 2019, we leased approximately 1.7 million square feet worldwide, with approximately 35% in North America. The respective operating leases expire at various times through November 2029. 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

Market Information

The principal market in which our common stock is traded is the New York Stock Exchange, or NYSE, under the symbol JNPR.

Stockholders

As of February 13, 2020, there were 649 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 \$0.19 per share each quarter, totaling \$260.1 million during the year ended December 31, 2019. In January 2020, we declared a quarterly cash dividend of \$0.20 per share of common stock to be paid on March 23, 2020 to stockholders of record as of the close of business on March 2, 2020. 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 April 1, 2019, we issued 725,955 shares of our common stock as consideration to three individuals in connection with the Mist acquisition in the second quarter of 2019.

On December 6, 2019, we issued 107,514 shares of our common stock as consideration to an individual in connection with the acquisition of AppFormix in 2016.

The issuance of the above securities was 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, 2019 (in millions, except per share amounts):

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs ⁽²⁾	Maximum Dollar Value of Shares that May Still Be Purchased Under the Plans or Programs ⁽²⁾
October 1 - October 31, 2019 ⁽¹⁾	6.4	\$ 25.15	6.4	\$ 1,700.0
November 1 - November 30, 2019	—	\$ —	—	\$ 1,700.0
December 1 - December 31, 2019	—	\$ —	—	\$ 1,700.0
Total	6.4	\$ —	6.4	

⁽¹⁾ As part of the 2018 Stock Repurchase Program, on October 28, 2019, the Company entered into an ASR, to repurchase an aggregate of approximately \$200.0 million of the Company's outstanding common stock. The Company made an up-front payment of \$200.0 million pursuant to the ASR and received and retired an initial 6.4 million shares of the Company's common stock for an aggregate price of \$160.0 million. See Note 18, *Subsequent Events*, in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report for a discussion of the Company's ASR completion subsequent to December 31, 2019.

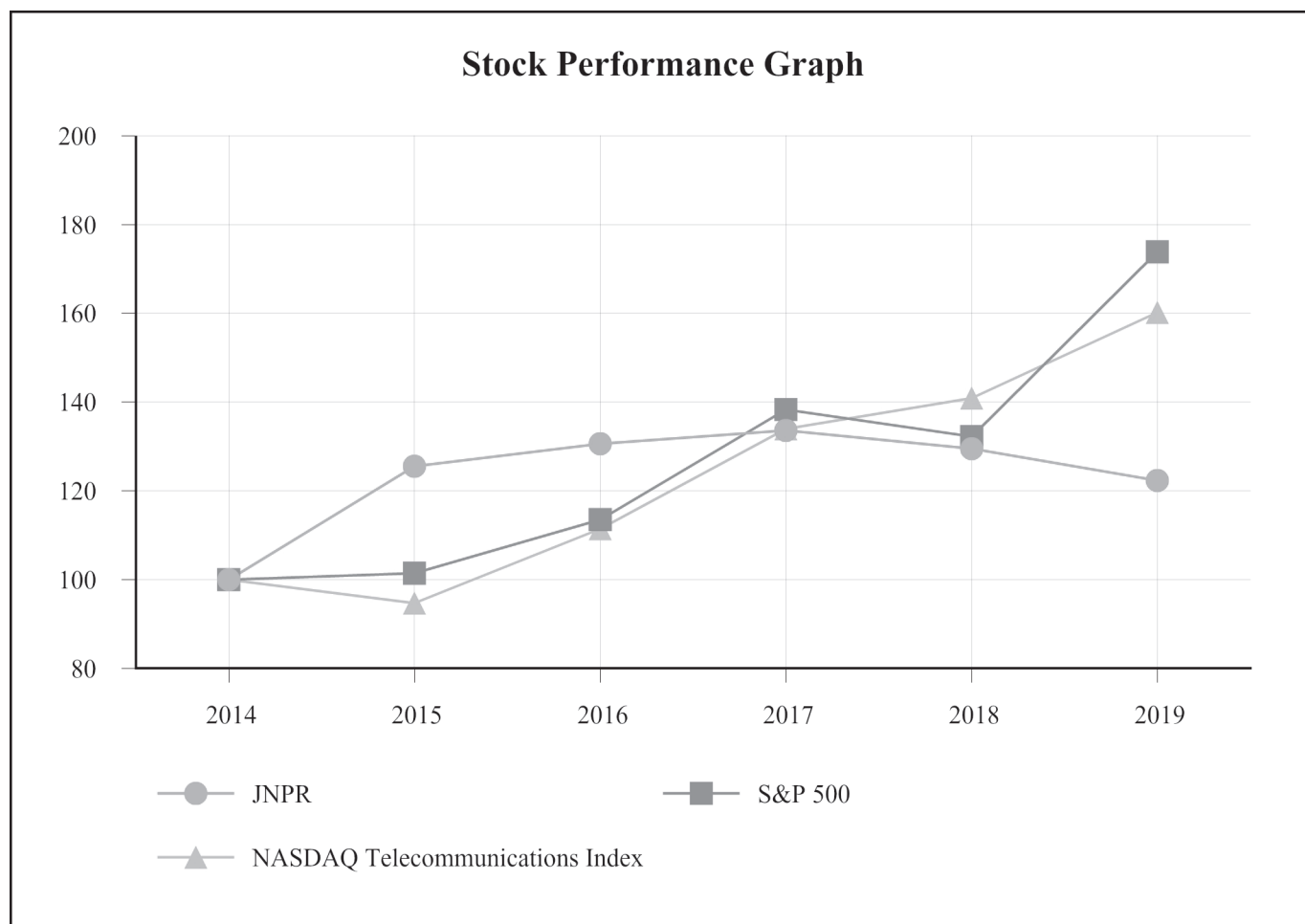
⁽²⁾ Shares were repurchased during the periods set forth in the table above under our stock repurchase program, which had been approved by the Board and authorized us to purchase an aggregate of up to \$3.0 billion of our common stock. Future share repurchases under our capital return plan will be subject to a review of the circumstances in place at that time and will be made from time to time in private transactions or open market purchases as permitted by securities laws and other legal requirements. This program may be discontinued at any time. See Note 18, *Subsequent Events*, for discussion of the Company's ASR completion and stock repurchase activity subsequent to December 31, 2019. For the majority of restricted stock units granted to executive officers of the Company, the number of shares issued on the date the restricted stock units vest is net of shares withheld to meet applicable tax withholding requirements. Although these withheld shares are not issued or considered common stock repurchases under our stock repurchase program and therefore are not included in the preceding

table, they are treated as common stock repurchases in our financial statements as they reduce the number of shares that would have been issued upon vesting, see Note 11, *Equity*, in Notes to Consolidated Financial Statements in Item 8 of Part II of this Report.

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, 2014, in each of Juniper Networks' common stock, the Standard & Poor's 500 Stock Index ("S&P 500"), and the NASDAQ Telecommunications Index. Total stockholder return assumes reinvestment of all dividends.



	As of December 31,					
	2014	2015	2016	2017	2018	2019
JNPR	\$ 100.00	\$ 125.51	\$ 130.64	\$ 133.63	\$ 129.54	\$ 122.25
S&P 500	\$ 100.00	\$ 101.37	\$ 113.49	\$ 138.26	\$ 132.19	\$ 173.80
NASDAQ Telecommunications Index	\$ 100.00	\$ 94.70	\$ 111.36	\$ 133.88	\$ 140.93	\$ 160.17

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, 2019, see *Notes to Consolidated Financial Statements* in Item 8 of Part II of this Report.

Consolidated Statements of Operations Data

	Years Ended December 31,				
	2019	2018 ⁽¹⁾	2017 ⁽²⁾	2016	2015
	(In millions)				
Net revenues	\$ 4,445.4	\$ 4,647.5	\$ 5,027.2	\$ 4,990.1	\$ 4,857.8
Gross margin	2,616.8	2,741.2	3,072.1	3,104.5	3,078.6
Operating income	442.2	572.2	848.1	889.7	912.0
Net income	\$ 345.0	\$ 566.9	\$ 306.2	\$ 592.7	\$ 633.7

⁽¹⁾ Fiscal year 2018 includes a tax benefit of \$133.0 million related to a lapse in the statute of limitations and tax accounting method changes related to deferred revenue.

⁽²⁾ 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.

Per Common Share Data

	Years Ended December 31,				
	2019	2018	2017	2016	2015
Net income per share:					
Basic	\$ 1.01	\$ 1.62	\$ 0.81	\$ 1.55	\$ 1.62
Diluted	\$ 0.99	\$ 1.60	\$ 0.80	\$ 1.53	\$ 1.59
Cash dividends declared per share of common stock	\$ 0.76	\$ 0.72	\$ 0.40	\$ 0.40	\$ 0.40

Consolidated Balance Sheet Data

	As of December 31,				
	2019	2018	2017	2016	2015
	(In millions)				
Cash, cash equivalents, and investments	\$ 2,543.6	\$ 3,758.1	\$ 4,021.0	\$ 3,657.3	\$ 3,192.2
Working capital	1,665.9	2,739.3	2,446.3	2,236.0	1,110.5
Goodwill	3,337.1	3,108.8	3,096.2	3,081.7	2,981.3
Total assets ⁽¹⁾⁽²⁾	8,837.7	9,363.3	9,833.8	9,656.5	8,607.9
Total debt ⁽¹⁾	1,683.9	2,139.0	2,136.3	2,133.7	1,937.4
Total long-term liabilities (excluding long-term debt) ⁽²⁾⁽³⁾	999.3	908.5	1,278.4	824.4	594.1
Total stockholders' equity ⁽⁴⁾⁽⁵⁾	\$ 4,610.6	\$ 4,823.2	\$ 4,680.9	\$ 4,962.5	\$ 4,574.4

⁽¹⁾ 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.

⁽²⁾ Fiscal year 2019 reflects the impact of the adoption of the new lease accounting standard under the modified retrospective approach.

⁽³⁾ Fiscal year 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.

⁽⁴⁾ Fiscal year 2017 includes the adoption of ASU No. 2016-09 (Topic 718) *Compensation—Stock Compensation: Improvements to Employee Share-Based Payment Accounting*, which simplified several aspects of the accounting for share-based payment transactions, including the accounting for forfeitures, among other things. We 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.

⁽⁵⁾ Fiscal year 2018 includes the adoption of ASU No. 2014-09 (Topic 606) *Revenue from Contracts with Customers*, which provides guidance for revenue recognition that superseded the revenue recognition requirements in Accounting Standards Codification Topic 605, *Revenue Recognition* and most industry specific guidance. We adopted the standard under the modified retrospective approach, applying the amendments to prospective reporting periods. Upon adoption, we recorded a cumulative effect adjustment of \$324.7 million, which decreased the January 1, 2018 opening accumulated deficit balance on the Consolidated Balance Sheet primarily due to the application of the new guidance in the areas of distributor sales, software and related services revenue, variable consideration, revenue allocation, and contract acquisition costs.

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

The following discussion should be read with the Business in Item 1 of Part I and 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

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,			
	2019	2018	\$ Change	% Change
Net revenues	\$ 4,445.4	\$ 4,647.5	\$ (202.1)	(4)%
Gross margin	\$ 2,616.8	\$ 2,741.2	\$ (124.4)	(5)%
<i>Percentage of net revenues</i>	58.9%	59.0%		
Operating income	\$ 442.2	\$ 572.2	\$ (130.0)	(23)%
<i>Percentage of net revenues</i>	9.9%	12.3%		
Net income	\$ 345.0	\$ 566.9	\$ (221.9)	(39)%
<i>Percentage of net revenues</i>	7.8%	12.2%		
Net income per share				
Basic	\$ 1.01	\$ 1.62	\$ (0.61)	(38)%
Diluted	\$ 0.99	\$ 1.60	\$ (0.61)	(38)%
Operating cash flows	\$ 528.9	\$ 861.1	\$ (332.2)	(39)%
Stock repurchase plan activity	\$ 550.0	\$ 750.0	\$ (200.0)	(27)%
Cash dividends declared per common stock	\$ 0.76	\$ 0.72	\$ 0.04	6 %
DSO ^(*)	66	58	8	14 %
Deferred revenue	\$ 1,223.4	\$ 1,213.6	\$ 9.8	1 %
Product deferred revenue	\$ 132.6	\$ 144.4	\$ (11.8)	(8)%
Service deferred revenue	\$ 1,090.8	\$ 1,069.2	\$ 21.6	2 %

^(*) DSO is for the fourth quarter ended December 31, 2019, and 2018.

- Net Revenues:* The net revenues decreased primarily due to the Service Provider vertical, partially offset by growth in Enterprise and Cloud. We believe the decline in the Service Provider vertical is due to continued business challenges facing some of our largest Service Provider customers. Our Cloud vertical has returned to year-over-year growth. Certain large Cloud customers were transitioning their network architecture as they continued to add capacity. The transition from purchasing our MX product family to our PTX product family contributed to the decline in our net revenues as the PTX product family has a lower average selling price compared to the MX product family. We believe the MX to PTX transition is largely behind us. Nevertheless, we are focused on the Cloud vertical as well as the transition to 400-gig Ethernet, or 400G, which we believe will present further opportunities for Juniper across our portfolio as our Cloud customers value high-performance, highly compact, power efficient infrastructures, which we support and continue to develop. Our Enterprise vertical grew year-over-year, primarily due to services and to a lesser extent, routing and security, partially offset by a decline in switching. Service net revenues increased primarily due to strong renewal and attach rates of support contracts.
- Gross Margin:* The gross margin as a percentage of net revenues decreased primarily due to lower product revenues, higher amortization of intangible assets associated with the acquisition of Mist, customer and product mix, and to a lesser extent, China tariffs, partially offset by higher service revenues and lower service delivery costs.
- Operating Margin:* The operating income as a percentage of net revenues decreased primarily due to the drivers described in the gross margin discussion above, and higher restructuring costs during the first half of 2019 that we did not incur during the same period in 2018. The decrease in operating margin was partially offset by lower personnel-related and share-based compensation expenses.

- *Operating Cash Flows:* Net cash provided by operations decreased primarily due to lower invoicing activity, partially offset by a decrease in cash paid for income taxes and a decrease in payments to suppliers.
- *Capital Return:* We continue to return capital to our stockholders. During the second quarter of 2019, we entered into an accelerated share repurchase program, or ASR, of \$300.0 million. The ASR resulted in a total settlement of 11.6 million shares. During the fourth quarter of 2019, we entered into another ASR to repurchase an aggregate of \$200.0 million shares. Under the ASR, we made an up-front payment of \$200.0 million and received an initial delivery of 6.4 million shares for an aggregate price of \$160.0 million. Upon completion of the ASR in the first quarter of 2020, we received an additional 1.8 million shares from the financial institution. These 1.8 million shares will be retired in the first quarter of 2020. The completion of the ASR resulted in a total settlement of 8.2 million shares of our common stock at a volume weighted average repurchase price, less an agreed upon discount, of \$24.44 per share. During 2019, we also paid quarterly dividends of \$0.19 per share, for an aggregate amount of \$260.1 million.
- *DSO:* DSO is calculated as the ratio of ending accounts receivable, net of allowances, divided by average daily net revenues for the preceding 90 days. DSO increased, primarily due to higher accounts receivable resulting from higher overall invoicing volume.
- *Deferred Revenue:* Total deferred revenue increased, primarily due to the timing of the delivery of contractual commitments.

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 and Purchased Intangible Assets:* 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. The purchase price of an acquired entity is allocated between intangible assets and the net tangible assets of the acquired business with the residual of the purchase price recorded as goodwill. The determination of the value of the intangible assets acquired involves certain judgments and estimates. Critical estimates 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. These estimates are based upon a number of factors, including historical experience, market conditions, and information obtained from the management of the acquired company. These judgments can include, but are not limited to, the cash flows that an asset is expected to generate in future periods and the appropriate weighted average cost of capital.

Goodwill represents the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recorded. We evaluate goodwill for impairment on an annual basis, as of November 1st, 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 the operating segment, by first performing a qualitative assessment to determine whether it is more likely than not that the fair value of the reporting unit is less than its carrying value. If the reporting unit does not pass the qualitative assessment, then the reporting unit's carrying value is compared to its fair value. If the fair value of the reporting unit exceeds the carrying value of the reporting unit, goodwill is not impaired and no further testing is required. If the fair value of the reporting unit does not exceed the carrying value, we perform

the second step of the impairment test. Goodwill is considered impaired if the carrying value of the reporting unit exceeds its fair value. The fair values of the reporting units are estimated using market and discounted cash flow approaches. The discounted cash flow approach uses expected future operating results. The market approach uses comparable company information to determine revenue and earnings multiples to value our reporting units. Failure to achieve these expected results or market multiples may cause a future impairment of goodwill of our reporting units.

We conducted our annual impairment test of goodwill during the fourth quarters of 2019 and 2018. As of December 31, 2019, we determined that no impairment of the carrying value of goodwill for any reporting units was required. See Note 7, *Goodwill and Purchased Intangible Assets*, in Notes to the Consolidated Financial Statements in Item 8 of Part II of this Report for additional information regarding our Goodwill and Purchased Intangible Assets.

- *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, 2019 and December 31, 2018, our net inventory balances were \$94.2 million and \$82.0 million, respectively.

We establish a liability for non-cancelable, non-returnable purchase commitments with our contract manufacturers for quantities in excess of our demand forecasts or obsolete materials charges for components purchased by 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, 2019 and December 31, 2018, our contract manufacturer liabilities were \$28.6 million and \$30.4 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:* 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 non-standard terms and conditions and include promises to transfer multiple goods or services. As a result, significant interpretation and judgment are sometimes required to determine the appropriate accounting for these transactions, including: (1) whether performance obligations are considered distinct that should be accounted for separately versus together, how the price should be allocated among the performance obligations, and when to recognize revenue for each performance obligation; (2) developing an estimate of the stand-alone selling price, or SSP, of each distinct performance obligation; (3) combining contracts that may impact the allocation of the transaction price between product and services; and (4) estimating and accounting for variable consideration, including rights of return, rebates, price protection, expected penalties or other price concessions as a reduction of the transaction price.

Our estimates of SSP for each performance obligation require judgment that considers multiple factors, including, but not limited to, historical discounting trends for products and services, pricing practices in different geographies and through different sales channels, gross margin objectives, internal costs, competitor pricing strategies, and industry technology lifecycles. Our estimates for rights of return, rebates, and price protection are based on historical sales returns and price protection credits, specific criteria outlined in customer contracts or rebate agreements, and other factors known at the time. Our estimates for expected penalties and other price concessions are based on historical trends and expectations regarding future incurrence.

Changes in judgments with respect to these assumptions and estimates could impact the timing or amount of revenue recognition.

- *Income Taxes:* We are subject to income taxes in the United States and numerous foreign jurisdictions. Significant judgment is required in evaluating our uncertain tax positions and determining our taxes. Although we believe our reserves are reasonable, no assurance can be given that the final tax outcome of these matters will not be different from

that which is reflected in our historical income tax provisions and accruals. We adjust these reserves in light of changing facts and circumstances, such as the closing of a tax audit or the refinement of an estimate. To the extent that the final tax outcome of these matters is different than the amounts recorded, such differences will affect the provision for income taxes in the period in which such determination is made.

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

Our provision for income taxes is subject to volatility and could be adversely affected by earnings being lower than anticipated in countries that have lower tax rates and higher than anticipated in countries that have higher tax rates; by changes in the valuation of our deferred tax assets and liabilities; by expiration of, or lapses in the research and development, or 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 are involved in various lawsuits, claims, investigations, and proceedings, including those involving our IP, commercial, securities and employment matters, which arise in the ordinary course of business. 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

A discussion regarding our financial condition and results of operations for the fiscal year ended December 31, 2019 compared to 2018 is presented below. A discussion regarding our financial condition and results of operations for fiscal year ended December 31, 2018 compared to 2017 can be found under Item 7 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, filed with the SEC on February 22, 2019, which is available on the SEC's website at www.sec.gov and our Investor Relations website at <http://investor.juniper.net>.

Revenues

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

	Years Ended December 31,			
	2019	2018	\$ Change	% Change
Routing	\$ 1,623.2	\$ 1,839.7	\$ (216.5)	(12)%
Switching	901.0	934.4	(33.4)	(4)%
Security	343.5	333.0	10.5	3 %
Total Product	2,867.7	3,107.1	(239.4)	(8)%
<i>Percentage of net revenues</i>	64.5%	66.9%		
Total Service	1,577.7	1,540.4	37.3	2 %
<i>Percentage of net revenues</i>	35.5%	33.1%		
Total net revenues	<u>\$ 4,445.4</u>	<u>\$ 4,647.5</u>	<u>\$ (202.1)</u>	(4)%
Cloud	\$ 1,059.8	\$ 1,049.9	\$ 9.9	1 %
<i>Percentage of net revenues</i>	23.8%	22.6%		
Service Provider	1,827.8	2,066.7	(238.9)	(12)%
<i>Percentage of net revenues</i>	41.1%	44.5%		
Enterprise	1,557.8	1,530.9	26.9	2 %
<i>Percentage of net revenues</i>	35.1%	32.9%		
Total net revenues	<u>\$ 4,445.4</u>	<u>\$ 4,647.5</u>	<u>\$ (202.1)</u>	(4)%
Americas:				
United States	\$ 2,299.8	\$ 2,339.1	\$ (39.3)	(2)%
Other	218.2	202.1	16.1	8 %
Total Americas	2,518.0	2,541.2	(23.2)	(1)%
<i>Percentage of net revenues</i>	56.7%	54.7%		
EMEA	1,215.3	1,290.8	(75.5)	(6)%
<i>Percentage of net revenues</i>	27.3%	27.8%		
APAC	712.1	815.5	(103.4)	(13)%
<i>Percentage of net revenues</i>	16.0%	17.5%		
Total net revenues	<u>\$ 4,445.4</u>	<u>\$ 4,647.5</u>	<u>\$ (202.1)</u>	(4)%

Product net revenues decreased primarily due to lower Routing revenues from our Service Provider vertical and to a lesser extent, Cloud, partially offset by growth in Enterprise.

Routing revenue decreased primarily driven by Service Provider and Cloud verticals from lower net revenues in our MX product family, partially offset by growth in our PTX product family as a result of the MX to PTX transition primarily from our Cloud vertical.

Switching revenue decreased primarily driven by Service Provider and to a lesser extent, Enterprise, partially offset by Cloud. The decrease was a result of lower net revenues from our QFX and EX product families.

Security revenue increased primarily driven by Service Provider, and to a lesser extent, Enterprise, partially offset by Cloud. The year-over-year growth was primarily driven by the growth in Mid-Range SRX.

Service net revenues increased primarily due to strong renewal and attach rates of support contracts.

Customer

No customer accounted for greater than 10% of our net revenues during the years ended December 31, 2019, and 2018.

Gross Margins

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

	Years Ended December 31,			
	2019	2018	\$ Change	% Change
Product gross margin	\$ 1,640.7	\$ 1,829.9	\$ (189.2)	(10)%
<i>Percentage of product revenues</i>	57.2%	58.9%		
Service gross margin	976.1	911.3	64.8	7 %
<i>Percentage of service revenues</i>	61.9%	59.2%		
Total gross margin	\$ 2,616.8	\$ 2,741.2	\$ (124.4)	(5)%
<i>Percentage of net revenues</i>	58.9%	59.0%		

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, component and logistics 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, the mix of distribution channels through which our products and services are sold, and import tariffs. For example, the United States imposed a tariff on networking products imported from China, which includes certain products that we import into and sell within the United States. For more information on the potential impact of tariffs on our business, see the “Risk Factors” section of Item 1A of Part I of this Report.

Product gross margin

Product gross margin as a percentage of product revenues decreased primarily due to higher amortization of intangible assets associated with the acquisition of Mist, customer and product mix, and to a lesser extent, China tariffs, partially offset by improvements in our cost structure. We continue to undertake specific efforts to address certain factors impacting our product gross margin. These efforts include performance and quality improvements through engineering to increase value across our products; optimizing our supply chain and service business; pricing management; and increasing software and solution sales.

Service gross margin

Service gross margin as a percentage of service net revenues increased primarily due to higher revenue and lower service delivery costs.

Operating Expenses

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

	Years Ended December 31,			
	2019	2018	\$ Change	% Change
Research and development	\$ 955.7	\$ 1,003.2	\$ (47.5)	(5)%
<i>Percentage of net revenues</i>	<i>21.5%</i>	<i>21.6%</i>		
Sales and marketing	939.3	927.4	11.9	1 %
<i>Percentage of net revenues</i>	<i>21.1%</i>	<i>19.9%</i>		
General and administrative	244.3	231.1	13.2	6 %
<i>Percentage of net revenues</i>	<i>5.5%</i>	<i>5.0%</i>		
Restructuring charges	35.3	7.3	28.0	384 %
<i>Percentage of net revenues</i>	<i>0.8%</i>	<i>0.2%</i>		
Total operating expenses	<u>\$ 2,174.6</u>	<u>\$ 2,169.0</u>	<u>\$ 5.6</u>	<u>— %</u>
<i>Percentage of net revenues</i>	<i>48.9%</i>	<i>46.7%</i>		

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 9,419, and 9,283 employees as of December 31, 2019, and 2018, respectively. Our headcount increased by 136 employees, or 1% primarily due to the acquisition of Mist, and from hiring for our sales transformation efforts earlier this year. Our headcount increase was partially offset by our restructuring plan initiated in the first quarter of 2019 designed to realign our workforce with our sales strategy, improve productivity, and enhance cost efficiencies, which we refer to as the 2019 Restructuring Plan. During the second quarter of 2019, we amended the 2019 Restructuring Plan and undertook certain further actions that resulted in additional severance, additional facility consolidation, and contract termination costs.

Research and development

Research and development expense, or R&D, decreased \$47.5 million primarily due to lower personnel-related costs, including a decrease in share-based compensation expense of \$26.9 million, mainly driven by lower expense from certain performance share awards, or PSAs, where vesting is contingent upon the achievement of certain performance milestones. The decrease was also driven by lower facilities expense of \$11.5 million due to a facility closure during the third quarter of 2018. The decrease was partially offset by higher engineering costs of \$7.3 million due to increased investments in certain R&D projects.

Sales and marketing

Sales and marketing expense increased \$11.9 million primarily due to higher outside service costs of \$7.6 million related to consulting projects, higher share-based compensation of \$4.8 million, primarily from the acquisition of Mist during 2019, and from higher facilities expense of \$4.8 million. The increase was partially offset by lower personnel-related costs of \$16.2 million from restructuring actions in the first half of the year.

General and administrative

General and administrative expense increased \$13.2 million primarily from costs related to the acquisition of Mist Systems of \$16.6 million and from higher share-based compensation of \$8.3 million. In 2018, we established an accrual of \$12.0 million for the FCPA matter with the SEC, which was subsequently settled in 2019 for \$11.8 million.

Restructuring charges

Restructuring charges increased \$28.0 million primarily due to additional severance costs related to workforce reductions and contract termination costs recorded under the 2019 Restructuring Plan.

Other Expense, Net

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

	Years Ended December 31,			
	2019	2018	\$ Change	% Change
Interest income	\$ 79.1	\$ 72.7	\$ 6.4	9 %
Interest expense	(88.7)	(103.2)	14.5	(14)%
Loss on extinguishment of debt	(15.3)	—	(15.3)	N/M
Loss on investments, net	(3.8)	(7.4)	3.6	(49)%
Other	0.9	(1.6)	2.5	(156)%
Total other expense, net	<u>\$ (27.8)</u>	<u>\$ (39.5)</u>	<u>\$ 11.7</u>	<u>(30)%</u>
<i>Percentage of net revenues</i>	<i>(0.6)%</i>	<i>(0.8)%</i>		

N/M - percentage is not meaningful.

Interest income primarily includes interest earned on our cash, cash equivalents, investments, and a 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. Loss on extinguishment of debt resulted from the early repayment of senior notes due 2020 and 2021. Loss on investments, net, primarily includes losses from the sale of investments in public and privately-held companies, and any observable changes in fair value and impairment charges recorded on these investments. Other typically consists of foreign exchange gains and losses and other non-operational income and expense items.

Interest Income

Interest income increased \$6.4 million, primarily due to higher interest income related to our fixed income investment portfolio, as a result of higher yields.

Interest Expense

Interest expense decreased \$14.5 million primarily due to a reduction in total debt primarily from the repayment in February 2019, of our 3.125% senior notes for an aggregate principal amount of \$350.0 million, and from the repayment in August 2019, of our 3.300% and 4.600% senior notes due in 2020 and 2021, respectively, for an aggregate principal amount of \$600.0 million. The decrease in interest expense was partially offset by the issuance of our 3.75% senior notes due 2029 for an aggregate principal amount of \$500.0 million in August 2019.

Loss on Extinguishment of Debt

During the year ended December 31, 2019, we incurred a call premium related to the early repayment of our 2020 and 2021 Senior Notes, conversely there were no such charges recorded in 2018.

Loss on Investments, Net

During the year ended December 31, 2019, our loss on investments decreased primarily related to certain equity investments in privately-held companies.

Income Tax Provision (Benefit)

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

	Years Ended December 31,			
	2019	2018	\$ Change	% Change
Income tax provision (benefit)	\$ 69.4	\$ (34.2)	\$ 103.6	(303)%
<i>Effective tax rate (benefit)</i>	16.7%	(6.4)%		

The effective tax rate for fiscal year 2019 was higher than 2018, primarily due to the net difference in discrete items unique to fiscal year 2019 compared to fiscal year 2018. In 2019, our effective rate included a \$25.4 million benefit, including interest, related to the recognition of previously unrecognized tax benefits pursuant to the resolution of a tax audit and a \$7.5 million benefit, including interest, for a lapse in statute of limitations. The 2018 rate reflected a \$67.6 million benefit, including interest, related to a lapse in statute of limitations, a \$33.2 million benefit as a result of filing a change in tax accounting method for the recognition of deferred product revenue, and a \$32.2 million benefit resulting from a tax accounting method change related to foreign deferred service revenue.

For a complete reconciliation of our effective tax rate to the U.S. federal statutory rate of 21% and further explanation of our income tax provision, see Note 14, *Income Taxes*, in the Notes to Consolidated Financial Statements in Item 8 of Part II of this Report.

On June 7, 2019, the Ninth Circuit Court of Appeals, or the Court, issued an opinion in *Altera Corp. v. Commissioner* requiring related parties in an intercompany cost-sharing arrangement to share expenses related to share-based compensation. Altera appealed this decision to the U.S. Supreme Court on February 10, 2020. Pending final resolution of the Altera case, the Company's position on cost-sharing of share-based compensation remains unchanged. We will continue to monitor ongoing developments and potential financial statement impacts. If a judicial decision against Altera had been finalized in the reporting period, our effective tax rate for 2019 would have been higher.

Our effective tax rate may fluctuate significantly on a quarterly basis and may 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 may 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 I, "Risk Factors" of this Report for a description of relevant risks which may adversely affect our results.

As a result of recommendations by the 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 in regards to transfer pricing. Consequently, we expect global tax authorities to increasingly challenge our cost sharing and other intercompany arrangements, and the related sourcing of taxable profits in global jurisdictions.

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,			
	2019	2018	\$ Change	% Change
Working capital	\$ 1,665.9	\$ 2,739.3	\$ (1,073.4)	(39)%
Cash and cash equivalents	\$ 1,215.8	\$ 2,489.0	\$ (1,273.2)	(51)%
Short-term investments	738.0	1,070.1	(332.1)	(31)%
Long-term investments	589.8	199.0	390.8	196 %
Total cash, cash equivalents, and investments	2,543.6	3,758.1	(1,214.5)	(32)%
Short-term portion of long-term debt	—	349.9	(349.9)	(100)%
Long-term debt	1,683.9	1,789.1	(105.2)	(6)%
Cash, cash equivalents, and investments, net of debt	\$ 859.7	\$ 1,619.1	\$ (759.4)	(47)%

Summary of Cash Flows

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

	Years Ended December 31,			
	2019	2018	\$ Change	% Change
Net cash provided by operating activities	\$ 528.9	\$ 861.1	\$ (332.2)	(39)%
Net cash (used in) provided by investing activities	\$ (528.2)	\$ 564.8	\$ (1,093.0)	(194)%
Net cash used in financing activities	\$ (1,228.8)	\$ (968.6)	\$ (260.2)	27 %

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, payments for suppliers and other general operating expenses, as well as payments related to taxes, interest, and facilities.

Net cash provided by operations decreased primarily due to lower revenues and lower collections, partially offset by lower cash payments for income taxes and to suppliers.

Investing Activities

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

Net cash used in investing activities was \$528.2 million in 2019, compared to net cash provided by investing activities of \$564.8 million in 2018. In 2019, the payment for the acquisition of Mist was \$270.9 million and net purchases of investments was \$140.4 million. In 2018, net proceeds from sales, maturities and redemptions of investments was \$771.3 million, primarily to fund the stock repurchases discussed below.

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.

Net cash used in financing activities increased in 2019, compared to 2018. The 2019 payments were primarily comprised of \$454.8 million net repayments of debt, payments of \$550.0 million under the 2018 Stock Repurchase Program and \$260.1 million payments of dividends. The 2018 payments were primarily comprised of \$750.0 million under the 2018 Stock Repurchase Program and \$249.3 million payments of dividends.

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 ⁽¹⁾	Amount	Amount
2019	\$ 0.76	\$ 260.1	20.1	\$ 25.36	\$ 550.0	\$ 810.1
2018	\$ 0.72	\$ 249.3	29.3	\$ 25.62	\$ 750.0	\$ 999.3
2017	\$ 0.40	\$ 150.4	26.1	\$ 27.61	\$ 719.7	\$ 870.1

⁽¹⁾ \$25.36 average price per share for 2019 excludes the \$40.0 million covered by the forward contract discussed below.

In January 2018, our Board of Directors, which we refer to as the Board, approved a \$2.0 billion share repurchase program, which we refer to as the 2018 Stock Repurchase Program. In October 2019, the Board authorized a \$1.0 billion increase to the 2018 Stock Repurchase Program for a total of \$3.0 billion.

As part of the 2018 Stock Repurchase Program, in February 2018 and April 2019, we entered into two accelerated share repurchase programs (the "ASR") and repurchased \$750.0 million and \$300.0 million of our common stock, respectively. The aggregate number of shares ultimately repurchased of 29.3 million and 11.6 million shares of our common stock, respectively, was determined based on a volume weighted average repurchase price, less an agreed upon discount, of \$25.62 and \$25.79 per share, respectively. The shares we received were retired and accounted for as a reduction to stockholder's equity in the Consolidated Balance Sheets, and treated as a repurchase of common stock for purposes of calculating earnings per share.

As part of the 2018 Stock Repurchase Program, on October 28, 2019, we entered into an additional ASR with a financial institution to repurchase an aggregate of \$200.0 million of our outstanding common stock. We made an up-front payment of \$200.0 million pursuant to the ASR and received and retired an initial 6.4 million shares of our common stock for an aggregate price of \$160.0 million based on the market price of \$25.15 per share of our common stock on the date of the transaction. The initial shares received by us were retired, accounted for as a reduction to stockholder's equity in the Consolidated Balance Sheets, and treated as a repurchase of common stock for purposes of calculating earnings per share. The forward contract for the remaining \$40.0 million is considered indexed to our common stock and met all of the applicable criteria for equity classification.

During the first quarter of 2020, the ASR was completed and we received an additional 1.8 million shares from the financial institution. These 1.8 million shares will be retired in the first quarter of 2020. The completion of the ASR resulted in a total settlement of 8.2 million shares of our common stock at a volume weighted average repurchase price, less an agreed upon discount, of \$24.44 per share.

During the fiscal year ended December 31, 2019, we also repurchased 2.1 million shares of our common stock in the open market for an aggregate purchase price of \$50.0 million at an average price of \$23.63 per share, under the 2018 Stock Repurchase Program.

As of December 31, 2019, there was \$1.7 billion of authorized funds remaining under the 2018 Stock Repurchase Program.

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. See Note 11, *Equity*, in the Notes to Consolidated Financial Statements in Item 8 of Part II of this Report for further discussion of our share purchase program.

In addition, any future dividends, and the establishment of record and payment dates, are subject to approval by the Board or an authorized committee thereof. See Note 18, *Subsequent Event*, in the Notes to Consolidated Financial Statements in Item 8 of Part II of this Report for discussion of our dividend declaration subsequent to December 31, 2019.

Off-Balance Sheet Arrangements

As of December 31, 2019 and 2018, 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, 2019 and the effect such obligations are expected to have on our liquidity and cash flow in future periods (in millions):

	Payments Due by Period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Operating leases ⁽¹⁾	\$ 226.0	\$ 49.3	\$ 81.6	\$ 57.4	\$ 37.7
Purchase commitments with contract manufacturers and suppliers ⁽¹⁾	1,471.5	794.3	450.8	226.4	—
Long-term debt ⁽²⁾	1,700.0	—	—	500.0	1,200.0
Interest payment on long-term debt ⁽²⁾	872.8	78.7	156.2	144.9	493.0
Tax liability related to the Tax Act ⁽³⁾	245.2	—	—	138.8	106.4
Other contractual obligations ⁽¹⁾	113.8	42.0	49.8	20.6	1.4
Total	\$ 4,629.3	\$ 964.3	\$ 738.4	\$ 1,088.1	\$ 1,838.5

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

⁽²⁾ 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.

⁽³⁾ 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 Cuts and Jobs Act of 2017 (“Tax Act”).

As of December 31, 2019, we had \$127.4 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

We had an unsecured revolving credit facility that was due to expire in June 2019 (the “Prior Revolving Credit Facility”), which enabled borrowings of up to \$500.0 million, with the option to increase the amount of the credit facility by up to an additional \$200.0 million, subject to the lenders' approval. In April 2019, we entered into a new credit agreement with certain institutional lenders that provides for a five-year \$500.0 million unsecured revolving credit facility (the “Revolving Credit Facility”), with an option to increase the Revolving Credit Facility by up to an additional \$200.0 million, subject to the lenders' approval. The Prior Revolving Credit Facility was terminated concurrently with our entering into the Revolving Credit Facility. The Revolving Credit Facility will terminate in April 2024, subject to two one-year maturity extension options, on the terms and conditions as set forth in the credit agreement (the “Credit Agreement”). As of December 31, 2019, we were in compliance with all covenants in the Credit Agreement, and no amounts were outstanding.

Guarantees

We have financial guarantees consisting of guarantees of product and service performance and standby letters of credit for certain lease facilities and insurance programs of \$30.6 million and \$23.1 million, as of December 31, 2019 and December 31, 2018, 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. Since the enactment of the Tax Act, we have repatriated a significant amount of cash, cash equivalents, and investments from outside of the U.S., and plan to continue to repatriate on an ongoing basis. 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 2019, 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. 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; an increase in manufacturing or component costs; 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

Interest Expense Risk - Available-for-Sale Fixed Income Securities

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, 2019 and 2018 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, 2019	+ 50 BPS	+ 100 BPS	+ 150 BPS
Available-for-sale fixed income securities	\$ 1,630.4	\$ 1,625.2	\$ 1,620.1	\$ 1,614.9	\$ 1,609.7	\$ 1,604.5	\$ 1,599.3

	- 150 BPS	- 100 BPS	- 50 BPS	Fair Value as of December 31, 2018	+ 50 BPS	+ 100 BPS	+ 150 BPS
Available-for-sale fixed income securities	\$ 2,210.6	\$ 2,208.0	\$ 2,205.4	\$ 2,202.8	\$ 2,200.3	\$ 2,197.7	\$ 2,195.1

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 to four months.

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 79% 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 twenty-four 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 0.9% and 0.1% for years ended December 31, 2019 and December 31, 2018, respectively. See Note 6, *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, 2019 and as of December 31, 2018, 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, 2019 and December 31, 2018, 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, 2019 and December 31, 2018 by less than 1.5% and by less than 1.1%, respectively.

Equity Price Risk

We have also invested in privately-held companies. Depending on the nature of these investments, some can be carried at cost, adjusted for changes from observable transactions for identical or similar investments of the same issuer, less impairment, and others can be carried at fair value. The carrying values of our investments in privately-held companies were \$189.8 million and \$90.4 million as of December 31, 2019 and December 31, 2018, respectively. The privately-held companies in which we invest can still be considered to be 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.
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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, 2019 and 2018, 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, 2019, 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, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, 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, 2019, 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 20, 2020 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.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Identification of distinct performance obligations in revenue contracts

Description of the matter	As described in Note 2 to the consolidated financial statements, the Company’s contracts with customers sometimes contain multiple performance obligations, which are accounted for separately if they are distinct. In such cases, the transaction price is then allocated to the distinct performance obligations on a relative standalone selling price basis and revenue is recognized when control of the distinct performance obligation is transferred. For example, product revenue is recognized at the time of hardware shipment or delivery of software license, and support revenue is recognized over time as the services are performed.
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Auditing the Company’s revenue recognition was challenging, specifically related to the effort required to identify and determine the distinct performance obligations and the associated timing of revenue recognition. For example, there were nonstandard terms and conditions that required judgment to determine the distinct performance obligations and the impact on the timing of revenue recognition.

How we addressed the matter in our audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's revenue recognition process, including controls to identify and determine the distinct performance obligations and the timing of revenue recognition.

Among the procedures we performed to test the identification and determination of the distinct performance obligations and the timing of revenue recognition, we read the executed contract and purchase order to understand the contract, identified the performance obligation(s), determined the distinct performance obligations, and evaluated the timing and amount of revenue recognized for a sample of individual sales transactions. We evaluated the accuracy of the Company's contract summary documentation, specifically related to the identification and determination of distinct performance obligations and the timing of revenue recognition.

Accounting for acquisitions

Description of the matter

During 2019, the Company completed the acquisition of Mist Systems, Inc. ("Mist") for consideration of \$359.2 million, as disclosed in Note 3 to the consolidated financial statements. The transaction was accounted for as a business combination.

Auditing the Company's accounting for its acquisition of Mist was complex due to the significant estimation uncertainty in the Company's determination of the fair value of identified intangible assets of \$102 million, which principally consisted of existing technology (\$81 million) and customer relationships (\$15 million). The significant estimation uncertainty was primarily due to the sensitivity of the respective fair values to underlying assumptions about the future performance of the acquired business and the limited historical data and market data on which those assumptions were based. The Company used a discounted cash flow model to measure the existing technology and customer relationship intangible assets. The significant assumptions used to estimate the value of the intangible assets included discount rates and certain assumptions that form the basis of the forecasted results (e.g., revenue growth rates, market share and technology migration curves). These significant assumptions are forward looking and could be affected by future economic and market conditions.

How we addressed the matter in our audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's accounting for acquisitions. This included testing controls over the estimation process supporting the recognition and measurement of the technology and customer relationships intangible assets, including the valuation models and underlying assumptions used to develop such estimates.

To test the estimated fair value of the technology and customer relationships intangible assets, we performed audit procedures that included, among others, evaluating the Company's selection of the valuation methodology, evaluating the methods and significant assumptions used by the Company, and evaluating the completeness and accuracy of the underlying data supporting the significant assumptions and estimates. For example, we compared the significant assumptions to current industry, market and economic trends and to the Company's budgets and forecasts. We involved our valuation specialists to assist with our evaluation of the methodology used by the Company and significant assumptions included in the fair value estimates.

/s/ Ernst & Young LLP

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

February 20, 2020

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, 2019, 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, 2019, based on the COSO criteria.

As indicated in the accompanying Management's Report on Internal Control Over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Mist Systems, Inc., which is included in the 2019 consolidated financial statements of the Company and constituted less than 4.1% of total assets and net assets, respectively as of December 31, 2019, and less than 1% of net revenues and net income, respectively, for the year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of Mist Systems, Inc.

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, 2019 and 2018, 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, 2019, and the related notes and the financial statement schedule listed in the Index at Item 15(a)2 and our report dated February 20, 2020, 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 20, 2020

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, 2019, based on the framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control - Integrated Framework* as published in 2013. Management has excluded from its assessment, the internal control over financial reporting of Mist Systems, Inc., which is included in the December 31, 2019 Consolidated Financial Statements, and constituted less than 4.1% of total assets and net assets, respectively as of December 31, 2019, and less than 1% of net revenues and net income for the year then ended. Based on that assessment, management concluded that, as of December 31, 2019, 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, 2019 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, 2019.

Juniper Networks, Inc.

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

	Years Ended December 31,		
	2019	2018	2017
Net revenues:			
Product	\$ 2,867.7	\$ 3,107.1	\$ 3,446.2
Service	1,577.7	1,540.4	1,581.0
Total net revenues	4,445.4	4,647.5	5,027.2
Cost of revenues:			
Product	1,227.0	1,277.2	1,360.9
Service	601.6	629.1	594.2
Total cost of revenues	1,828.6	1,906.3	1,955.1
Gross margin	2,616.8	2,741.2	3,072.1
Operating expenses:			
Research and development	955.7	1,003.2	980.7
Sales and marketing	939.3	927.4	950.2
General and administrative	244.3	231.1	227.5
Restructuring charges	35.3	7.3	65.6
Total operating expenses	2,174.6	2,169.0	2,224.0
Operating income	442.2	572.2	848.1
Other expense, net	(27.8)	(39.5)	(36.3)
Income before income taxes	414.4	532.7	811.8
Income tax provision (benefit)	69.4	(34.2)	505.6
Net income	\$ 345.0	\$ 566.9	\$ 306.2
Net income per share:			
Basic	\$ 1.01	\$ 1.62	\$ 0.81
Diluted	\$ 0.99	\$ 1.60	\$ 0.80
Shares used in computing net income per share:			
Basic	343.2	349.0	377.7
Diluted	348.2	354.4	384.2

See accompanying Notes to Consolidated Financial Statements

Juniper Networks, Inc.

**Consolidated Statements of Comprehensive Income
(In millions)**

	Years Ended December 31,		
	2019	2018	2017
Net income	\$ 345.0	\$ 566.9	\$ 306.2
Other comprehensive (loss) income, net of tax:			
Available-for-sale debt securities:			
Change in net unrealized gains and losses, net of tax (provision) benefit of (\$1.0), \$1.0, and (\$4.0) for 2019, 2018, and 2017, respectively	4.6	0.6	4.5
Net realized (gains) losses reclassified into net income, net of tax provisions of \$0.1, zero, and \$0.9 for 2019, 2018, and 2017, respectively	(0.4)	0.9	(2.1)
Net change on available-for-sale debt securities, net of tax	4.2	1.5	2.4
Cash flow hedges:			
Change in net unrealized gains and losses, net of tax (provision) benefit of (\$2.6), \$2.3, and (\$4.4) for 2019, 2018, and 2017, respectively	(8.9)	(6.4)	15.7
Net realized losses (gains) reclassified into net income, net of tax provisions of \$1.7, \$0.3, and \$2.4 for 2019, 2018, and 2017, respectively	5.5	(1.2)	(5.2)
Net change on cash flow hedges, net of tax	(3.4)	(7.6)	10.5
Change in foreign currency translation adjustments	(1.1)	(12.4)	19.0
Other comprehensive (loss) income, net of tax	(0.3)	(18.5)	31.9
Comprehensive income	\$ 344.7	\$ 548.4	\$ 338.1

See accompanying Notes to Consolidated Financial Statements

Juniper Networks, Inc.

Consolidated Balance Sheets
(In millions, except par values)

	December 31, 2019	December 31, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 1,215.8	\$ 2,489.0
Short-term investments	738.0	1,070.1
Accounts receivable, net of allowance for doubtful accounts of \$5.5 and \$4.9 as of December 31, 2019 and 2018, respectively	879.7	754.6
Prepaid expenses and other current assets	376.3	268.1
Total current assets	3,209.8	4,581.8
Property and equipment, net	830.9	951.7
Operating lease assets	169.7	—
Long-term investments	589.8	199.0
Purchased intangible assets, net	185.8	118.5
Goodwill	3,337.1	3,108.8
Other long-term assets	514.6	403.5
Total assets	\$ 8,837.7	\$ 9,363.3
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 219.5	\$ 208.8
Accrued compensation	229.0	221.0
Deferred revenue	812.9	829.3
Short-term portion of long-term debt	—	349.9
Other accrued liabilities	282.5	233.5
Total current liabilities	1,543.9	1,842.5
Long-term debt	1,683.9	1,789.1
Long-term deferred revenue	410.5	384.3
Long-term income taxes payable	372.6	404.4
Long-term operating lease liabilities	158.1	—
Other long-term liabilities	58.1	119.8
Total liabilities	4,227.1	4,540.1
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; 335.9 shares and 346.4 shares issued and outstanding as of December 31, 2019 and 2018, respectively	—	—
Additional paid-in capital	7,370.5	7,672.8
Accumulated other comprehensive loss	(18.5)	(18.2)
Accumulated deficit	(2,741.4)	(2,831.4)
Total stockholders' equity	4,610.6	4,823.2
Total liabilities and stockholders' equity	\$ 8,837.7	\$ 9,363.3

See accompanying Notes to Consolidated Financial Statements

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

	Years Ended December 31,		
	2019	2018	2017
Cash flows from operating activities:			
Net income	\$ 345.0	\$ 566.9	\$ 306.2
Adjustments to reconcile net income to net cash provided by operating activities:			
Share-based compensation expense	202.2	217.1	187.5
Depreciation, amortization, and accretion	210.3	210.5	225.6
Operating lease assets expense	42.0	—	—
Loss on extinguishment of debt	15.3	—	—
Deferred income taxes	2.9	42.6	(139.6)
Other	3.5	9.6	(14.5)
Changes in operating assets and liabilities, net of acquisitions:			
Accounts receivable, net	(118.1)	96.3	203.8
Prepaid expenses and other assets	(100.7)	(70.9)	43.0
Accounts payable	6.4	3.5	(10.1)
Accrued compensation	6.5	41.4	(42.8)
Income taxes payable	(40.5)	(269.2)	447.3
Other accrued liabilities	(46.8)	(11.4)	(2.1)
Deferred revenue	0.9	24.7	55.0
Net cash provided by operating activities	<u>528.9</u>	<u>861.1</u>	<u>1,259.3</u>
Cash flows from investing activities:			
Purchases of property and equipment	(109.6)	(147.4)	(151.2)
Purchases of available-for-sale debt securities	(3,209.8)	(1,228.5)	(1,882.9)
Proceeds from sales of available-for-sale debt securities	1,520.0	1,070.2	944.0
Proceeds from maturities and redemptions of available-for-sale debt securities	1,642.3	910.2	741.6
Purchases of equity securities	(107.1)	(17.5)	(14.9)
Proceeds from sales of equity securities	14.2	36.9	12.4
Proceeds from Pulse note receivable	—	—	75.0
Payments for business acquisitions, net of cash and cash equivalents acquired	(270.9)	(16.4)	(27.0)
Subsequent payments related to acquisitions in prior years	(7.3)	(42.7)	—
Net cash (used in) provided by investing activities	<u>(528.2)</u>	<u>564.8</u>	<u>(303.0)</u>
Cash flows from financing activities:			
Repurchase and retirement of common stock	(554.9)	(756.6)	(725.8)
Proceeds from issuance of common stock	55.6	56.9	64.5
Payment of dividends	(260.1)	(249.3)	(150.4)
Payment of debt	(950.0)	—	—
Issuance of debt, net	495.2	—	—
Payment for debt extinguishment costs	(14.6)	—	—
Change in customer financing arrangement	—	(16.9)	16.9
Other	—	(2.7)	—
Net cash used in financing activities	<u>(1,228.8)</u>	<u>(968.6)</u>	<u>(794.8)</u>
Effect of foreign currency exchange rates on cash, cash equivalents, and restricted cash	(1.2)	(10.6)	17.0
Net increase in cash, cash equivalents, and restricted cash	<u>(1,229.3)</u>	<u>446.7</u>	<u>178.5</u>
Cash, cash equivalents, and restricted cash at beginning of period	2,505.8	2,059.1	1,880.6
Cash, cash equivalents, and restricted cash at end of period	<u>\$ 1,276.5</u>	<u>\$ 2,505.8</u>	<u>\$ 2,059.1</u>
Supplemental disclosures of cash flow information:			
Cash paid for interest, net of amounts capitalized	\$ 90.6	\$ 94.0	\$ 93.9
Cash paid for income taxes, net	\$ 98.8	\$ 181.0	\$ 193.5

See accompanying Notes to Consolidated Financial Statements

Juniper Networks, Inc.

Consolidated Statements of Changes in Stockholders' Equity
(In millions, except per share amounts)

	Shares	Common Stock and Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
Balance at December 31, 2016	381.1	\$ 8,281.6	\$ (37.3)	\$ (3,281.8)	\$ 4,962.5
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 (\$0.40 per share of common stock)	—	(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
Balance at December 31, 2017	365.5	8,042.1	(5.4)	(3,355.8)	4,680.9
Net income	—	—	—	566.9	566.9
Other comprehensive loss, net	—	—	(18.5)	—	(18.5)
Issuance of common stock	10.4	56.9	—	—	56.9
Repurchase and retirement of common stock	(29.5)	(395.1)	—	(361.5)	(756.6)
Share-based compensation expense	—	218.2	—	—	218.2
Payment of cash dividends (\$0.72 per share of common stock)	—	(249.3)	—	—	(249.3)
Cumulative adjustment upon adoption of ASU 2014-09 ("Topic 606"), net	—	—	—	324.7	324.7
Reclassification of tax effects upon adoption of ASU 2018-02 ("Topic 220"), net	—	—	5.7	(5.7)	—
Balance at December 31, 2018	346.4	7,672.8	(18.2)	(2,831.4)	4,823.2
Net income	—	—	—	345.0	345.0
Other comprehensive loss, net	—	—	(0.3)	—	(0.3)
Issuance of common stock	9.8	55.6	—	—	55.6
Common stock assumed upon business combination	—	4.6	—	—	4.6
Repurchase and retirement of common stock	(20.3)	(264.6)	—	(250.3)	(514.9)
Purchase of forward contract under accelerated share repurchase program ("ASR")	—	(40.0)	—	—	(40.0)
Share-based compensation expense	—	202.2	—	—	202.2
Payments of cash dividends (\$0.76 per share of common stock)	—	(260.1)	—	—	(260.1)
Cumulative adjustment upon adoption of ASU 2017-12 ("Topic 815"), net	—	—	—	0.1	0.1
Cumulative adjustment upon adoption of ASU 2016-02 ("Topic 842"), net	—	—	—	(4.8)	(4.8)
Balance at December 31, 2019	335.9	\$ 7,370.5	\$ (18.5)	\$ (2,741.4)	\$ 4,610.6

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 and improved operating efficiency through automation. The Company sells high-performance routing, switching, and security networking products and service offerings to customers within its verticals: Cloud, Service Provider, and Enterprise who view the network as critical to their success.

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.

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

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 with original maturities of three months or less from Juniper's purchase date are classified as cash equivalents.

Investments in Available-for-Sale Debt Securities

The Company's investments in debt securities are classified as available-for-sale and include the Company's fixed income securities and investments in privately-held companies, consisting of debt and redeemable preferred stock securities. Fixed income securities 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.

Fixed income securities primarily consist of asset-backed securities, certificate of deposits, commercial paper, corporate debt securities, time deposits, foreign government debt securities, U.S. government agency securities, and U.S. treasury securities. The Company periodically evaluates these 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 the near-term prospects of the investee. If the Company determines that the decline in an investment's value is other than temporary, the difference is recognized as an impairment loss in its Consolidated Statements of Operations.

The Company's privately-held debt and redeemable preferred stock securities are included in other long-term assets in the Consolidated Balance Sheets and are recorded at fair value. Fair value is reassessed when the Company is made aware of information indicating a change in the enterprise value of the investee, including known acquisition offers, subsequent funding rounds, and investee's plans for liquidation. The Company periodically evaluates these securities for indicators of impairment, including the inability to recover a portion of or the entire carrying amount of the investment, the inability of the investee to sustain earnings, the reduction in or termination of financial commitment to the investee from other investors, the intention to sell the investment, and whether it is more likely than not that the Company will be required to sell the investment before recovery of the entire amortized cost basis. 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.

Investments in Equity Securities

The Company's investments in equity securities with readily determinable fair values consist of money market funds, the non-qualified compensation plan ("NQDC") that is invested in mutual funds, and investments in public companies. These investments are measured at fair value with changes in fair value recognized in the Consolidated Statements of Operations.

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

Equity securities without readily determinable fair values include the Company's investments in privately-held companies consisting of non-redeemable preferred stock and common stock securities. The Company accounts for these securities at cost, adjusted for changes from observable transactions for identical or similar investments of the same issuer, less impairments. Fair value of these equity securities is reassessed when the Company identifies observable price changes indicating that an adjustment upward or downward to the carrying value is necessary. Any observable changes in fair value are recognized in earnings as of the date that the observable transaction took place, rather than the current reporting date. In addition, the Company periodically evaluates equity securities without readily determinable fair values to determine if impairment charges are required by evaluating whether an event or change in circumstance has occurred that may have a significant adverse effect on the fair value of the investment. A qualitative assessment is performed each reporting period to assess whether there are any impairment indicators, including, but not limited to, significant deterioration in the investee's earnings performance; credit rating; asset quality or business prospects; adverse change in the regulatory, economic, or technological environment; change in the general market condition of the geographic area or industry; acquisition offers; and the ability to continue as a going concern. If such indicators are present, the Company estimates the fair value of impaired investments and recognizes an impairment loss in the Consolidated Statement of Operations equal to the difference between the carrying value and fair value.

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.

Derivative Instruments

The Company uses derivative instruments, primarily foreign currency forward and interest rate swap contracts, to hedge certain foreign currency and interest rate exposures. 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, which are carried at fair value with 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. 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.

The Company uses interest rate swaps to convert certain of our fixed interest rate notes to floating interest rates based on the London InterBank Offered Rate (LIBOR). All interest rate swaps will expire within ten years or less. The Company recognizes the change in fair value of the derivative instrument, as well as the offsetting change in the fair value of the hedged item, in Other expense, net in the Consolidated Statements of Operations in the period of change. These derivatives are classified in the Consolidated Statements of Cash Flows in the same section as the underlying item.

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. In addition, the Company purchases and holds inventory to provide adequate component supplies over the life of the underlying products. 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.

Leases

The Company determines if an arrangement is a lease at inception. The Company evaluates classification of leases as either operating or finance at commencement and, as necessary, at modification. As of December 31, 2019, the Company did not have any finance leases. Operating leases are included in operating lease right-of-use ("ROU") assets, other accrued liabilities, and operating lease liabilities on the Company's Consolidated Balance Sheets. ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent its obligation to make lease payments arising from the lease.

Operating lease ROU assets and liabilities are recognized on the commencement date based on the present value of lease payments over the lease term. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. We use the incremental borrowing rate on January 1, 2019 for operating leases that commenced prior to that date. The operating lease ROU asset also includes any lease payments made prior to lease commencement and excludes lease incentives. Variable lease payments not dependent on an index or a rate, are expensed as incurred and are not included within the ROU asset and lease liability calculation. Variable lease payments primarily include reimbursements of costs incurred by lessors for common area maintenance and utilities. The Company's lease terms are the noncancelable period, including any rent-free periods provided by the lessor, and include options to extend or terminate the lease when it is reasonably certain that it will exercise that option. At lease inception, and in subsequent periods as necessary, the Company estimates the lease term based on its assessment of extension and termination options that are reasonably certain to be exercised. Lease costs are recognized on a straight-line basis over the lease term.

The Company does not separate non-lease components from lease components for all underlying classes of assets. In addition, the Company does not recognize ROU assets and lease liabilities for short-term leases, which have a lease term of twelve months or less and do not include an option to purchase the underlying asset that the Company is reasonably certain to exercise. Lease cost for short-term leases is recognized on a straight-line basis over the lease term.

Property and Equipment

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

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

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

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

Business Combinations

The purchase price of an acquired entity is allocated to tangible assets, liabilities, and intangible assets, including in-process research and development (IPR&D) based on their estimated fair values with the residual of the purchase price recorded as goodwill. The determination of the value of the intangible assets acquired involves certain estimates, such as expected future cash flows, which include consideration of future growth rates and margins, attrition rates, future changes in technology, discount rates, and the expected use of the acquired assets. These factors are also considered in determining the useful life of the acquired intangible assets. IPR&D is initially capitalized at fair value as an intangible asset with an indefinite life and assessed for impairment thereafter. When an IPR&D project is completed, the IPR&D is reclassified as an amortizable purchased intangible asset and amortized over the asset's estimated useful life. Acquisition related expenses are recognized separately from business combination and are expensed as incurred. The Company's Consolidated Financial Statements include the operating results of acquired businesses from the date of each acquisition.

Goodwill and Intangible Assets

Goodwill is tested for impairment annually during the fourth quarter or more frequently if certain circumstances indicate the carrying value of goodwill is impaired. Goodwill is tested for impairment at the reporting unit level. A qualitative assessment is first performed 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 discounted cash flow and the market approaches. Goodwill is considered impaired if the carrying value of the reporting unit exceeds its fair value. An impairment loss is recognized to the extent that the carrying amount of goodwill exceeds the asset's implied fair value. We conducted our annual impairment test of goodwill during the fourth quarters of 2019 and 2018 and determined that no adjustment to the carrying value of goodwill for any reporting units was required.

Intangible assets consist of existing technology, customer relationships, and trade name, which are amortized over the period of estimated benefit using the straight-line method and estimated useful lives of 4 or 5 years. Other intangible assets acquired in a business combination related to 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.

Impairment of Long-lived Assets

Long-lived assets, such as property, plant, and equipment, ROU assets, 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.

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. Warranty reserve is reported within other accrued liabilities in the Consolidated Balance Sheets.

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.

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.

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 remeasures monetary assets and monetary liabilities in non-functional currencies and records the resulting foreign exchange transaction gains and losses in other expense, net in the Consolidated Statements of Operations.

Revenue Recognition

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 by following a five-step process, (1) identify the contract with a customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price, and (5) recognize revenue when or as the Company satisfies a performance obligation, as further described below.

Identify the contract with a customer. The Company generally considers a sales contract and/or agreement with an approved purchase order as a customer contract provided that collection is considered probable, which is assessed based on the creditworthiness of the customer as determined by credit checks, payment histories, and/or other circumstances. The Company combines contracts with a customer if contracts are negotiated with a single commercial substance or contain price dependencies.

Identify the performance obligations in the contract. Product performance obligations include hardware and software licenses and service performance obligations include hardware maintenance, software post-contract support, training, and professional services. Certain software licenses and related post-contract support are combined into a single performance obligation when the maintenance updates are critical to the continued delivery of the software functionality.

Determine the transaction price. The transaction price for the Company's contracts with its customers consists of both fixed and variable consideration provided it is probable that a significant reversal of revenue will not occur when the uncertainty related to variable consideration is resolved. Fixed consideration includes amounts to be contractually billed to the customer while variable consideration includes estimates for rights of return, rebates, and price protection, which are based on historical sales returns and price protection credits, specific criteria outlined in rebate agreements, and other factors known at the time. The Company generally invoices customers for hardware, software licenses and related maintenance arrangements at time of delivery, and professional services either upfront or upon meeting certain milestones. Customer invoices are generally due within 30 to 90 days after issuance. The Company's contracts with customers typically do not include significant financing components as the period between the transfer of performance obligations and timing of payment are generally within one year.

Allocate the transaction price to the performance obligations in the contract. For contracts that contain multiple performance obligations, the Company allocates the transaction price to the performance obligations on a relative standalone selling price basis. Standalone selling prices are based on multiple factors including, but not limited to historical discounting trends for products and services, pricing practices in different geographies and through different sales channels, gross margin objectives, internal costs, competitor pricing strategies, and industry technology lifecycles.

Recognize revenue when or as the Company satisfies a performance obligation. Revenue for hardware and certain software licenses, are recognized at a point in time, which is generally upon shipment or delivery. Certain software licenses combined with post-contract support are recognized over time on a ratable basis over the term of the license. Revenue for maintenance and software post-contract support is recognized over time on a ratable basis over the contract term. Revenue from training and professional services is recognized over time as services are completed or ratably over the contractual period of generally one year or less.

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

Deferred product revenue represents unrecognized revenue related to undelivered product commitments and other shipments that have not met revenue recognition criteria. 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.

Revenue is recognized net of any taxes collected, which are subsequently remitted to governmental authorities.

Deferred Commissions

Sales commissions earned by the Company's sales force are considered incremental and recoverable costs of obtaining a contract with a customer. These costs are recorded as prepaid expenses or other longer assets and are deferred and then amortized over a period of benefit which is typically over the term of the customer contracts. Amortization expense is included in sales and marketing expenses in the accompanying Consolidated Statements of Operations.

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 \$14.6 million, \$20.0 million, and \$19.9 million, for 2019, 2018, and 2017, respectively.

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, share-based compensation expense is amortized on a straight-line basis for each separate vesting portion of the awards. 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 ESPP purchase rights. 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 ESPP. The expected life of ESPP purchase rights 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

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

Carlo model is affected by the Company's stock price, comparative market-based returns, 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 basis 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. The Company accounts for the current impacts of U.S. tax on certain foreign subsidiaries income, which is referred to as Global Intangible Low-Taxed Income in the year earned.

Concentrations of Risk

Financial instruments that subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents, investments, derivatives, 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 typically 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, 2019, 2018, and 2017, 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 original 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 Standards

Cloud Computing Arrangement: On January 1, 2019, the Company early adopted FASB ASU No. 2018-15 (Subtopic 350-40) *Intangibles — Goodwill and Other-Internal-Use Software: Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*, which provides guidance on a customer's accounting for implementation, set-up, and other upfront costs incurred in a cloud computing arrangement that is hosted by a service contract. The Company adopted the standard under the prospective approach. The adoption did not have a material impact on the Consolidated Financial Statements.

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

Derivatives and Hedging: On January 1, 2019, the Company adopted FASB ASU No. 2017-12 (Topic 815) *Derivatives and Hedging — Targeted Improvements to Accounting for Hedging Activities*, and an amendment thereafter, which expands an entity's ability to hedge financial and nonfinancial risk components and amends how companies assess effectiveness as well as changes to the presentation and disclosure requirements. The Company adopted the standard under the modified retrospective approach, and its amendment and presentation and disclosure requirements on a prospective basis. The adoption did not have a material impact on the Consolidated Financial Statements. See Note 6, *Derivative Instruments* for additional disclosures required upon adopting the standard.

Amortization on Purchased Callable Debt Securities: On January 1, 2019, the Company adopted FASB 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 standard will not impact debt securities held at a discount. The Company adopted the standard under the modified retrospective approach. The adoption did not have a material impact on the Consolidated Financial Statements.

Leases: On January 1, 2019, the Company adopted FASB ASU No. 2016-02, *Leases* (Topic 842), and the related subsequent amendments ("ASC 842"), which require recognition by the lessees of right-of-use ("ROU") assets and lease liabilities for most leases on the Company's Consolidated Balance Sheets. The Company adopted the new standard under the modified retrospective approach and recorded a cumulative-effect adjustment to the opening balance of accumulated deficit as of the effective date. Under the modified retrospective method, financial results reported in periods prior to 2019 are unchanged. The Company elected the package of practical expedients, which did not require the reassessment of existing leases under the new guidance. The Company also elected not to separate non-lease components from lease components and to not recognize ROU assets and lease liabilities for short-term leases.

The cumulative effect of the adjustments made to the Company's Consolidated Balance Sheet as of the adoption date is detailed as follows (in millions):

	December 31, 2018		January 1, 2019	
	As reported	Adjustments due to ASC 842	As adjusted	
Assets:				
Prepaid expenses and other current assets	\$ 268.1	\$ (1.4)	\$ 266.7	
Property and equipment, net	951.7	(42.9)	908.8	
Operating lease assets	—	192.5	192.5	
Other long-term assets	403.5	1.3	404.8	
Total assets	\$ 9,363.3	\$ 149.5	\$ 9,512.8	
Liabilities:				
Other accrued liabilities	\$ 233.5	\$ 35.6	\$ 269.1	
Long-term operating lease liabilities	—	185.5	185.5	
Other long-term liabilities	119.8	(66.7)	53.1	
Total liabilities	\$ 4,540.1	\$ 154.4	\$ 4,694.5	
Stockholders' equity:				
Accumulated deficit	\$ (2,831.4)	\$ (4.9)	\$ (2,836.3)	

The adoption of the standard had no impact on the Company's Consolidated Statements of Operations and Consolidated Statements of Cash Flows or debt-covenant compliance under its current agreements. See Note 16, *Commitments and Contingencies*, for additional disclosures required upon adopting the standard.

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

Recent Accounting Standards Not Yet Adopted

Simplifying the Accounting for Income Taxes: In December 2019, the FASB issued ASU No. 2019-12 (Topic 740) *Income Taxes — Simplifying the Accounting for Income Taxes*, which enhances and simplifies various aspects of the income tax accounting guidance related to intraperiod tax allocation exception to the incremental approach, interim-period accounting for enacted change in tax law, and the year-to-date loss limitation in interim period tax accounting. This ASU is to be applied on a prospective basis with the exception of certain amendments that are to be applied on either a retrospective or modified retrospective basis. The new standard is effective for interim and annual periods beginning after December 15, 2020, with early adoption permitted. The Company is currently evaluating the impact of adoption on its Consolidated Financial Statements.

Fair Value Measurement: In August 2018, the FASB issued ASU No. 2018-13 (Topic 820) *Disclosure Framework — Changes to the Disclosure Requirements for Fair Value Measurement*, which eliminates, adds, and modifies certain disclosure requirements for fair value measurements under ASC 820. This ASU is to be applied on a prospective basis for certain modified or new disclosure requirements, and all other amendments in the standard are to be applied on a retrospective basis. The new standard is effective for interim and annual periods beginning after December 15, 2019. The Company does not expect the adoption to have a material impact on its 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 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. The Company does not expect the adoption to have a material impact on its Consolidated Financial Statements.

Credit Losses on Financial Instruments: In June 2016, the FASB issued ASU 2016-13 "*Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*", which was further clarified by FASB through issuance of additional related ASUs, requires the measurement and recognition of expected credit losses for financial assets held at amortized cost. ASU 2016-13 replaces the existing incurred loss impairment model with an expected loss model which requires the use of forward-looking information to calculate credit loss estimates. It also eliminates the concept of other-than-temporary impairment and requires credit losses related to available-for-sale debt securities to be recorded through an allowance for credit losses rather than as a reduction in the amortized cost basis of the securities. These changes will result in earlier recognition of credit losses. The Company will adopt ASU 2016-13 effective January 1, 2020 on a modified retrospective basis with the cumulative effect of adoption recorded as an adjustment to retained earnings. Upon adoption, we will implement new credit loss models and update processes and accounting controls. The Company does not expect the adoption of the new standard to have a significant impact on the Company's Consolidated Financial Statements.

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

Note 3. Business Combinations

The Company acquired Mist Systems, Inc. ("Mist") in 2019; HTBase Corporation ("HTBase") in 2018; and Cyphort Inc. ("Cyphort") in 2017. 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 goodwill recognized for these acquisitions was primarily attributable to expected synergies and is not deductible for U.S. federal income tax purposes.

2019 Acquisition

Mist

On April 1, 2019, the Company acquired 100% ownership of Mist Systems, Inc. ("Mist") for \$359.2 million. The purchase consideration consisted of cash of \$354.5 million and approximately \$4.6 million in share-based awards attributable to services prior to the acquisition. The acquisition of Mist, a company that provides cloud-managed wireless networks powered by artificial intelligence, is expected to enhance Juniper's enterprise networking portfolio by combining Mist's next-generation Wireless LAN platform with Juniper's wired LAN, SD-WAN, and security solutions to deliver integrated end-to-end user and IT experiences.

Under the terms of the acquisition agreement with Mist, 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 \$38.5 million, which will be expensed as share-based compensation over the remaining service period.

2018 Acquisition

HTBase

On December 7, 2018, the Company acquired 100% of the equity of HTBase for \$19.6 million of cash. The acquisition of HTBase, a software company that has developed a unique and disruptive platform for software-defined enterprise multicloud, is expected to accelerate Juniper's leadership in multicloud and function with the compute orchestration capabilities of Contrail Enterprise Multicloud.

Prior to the acquisition, the Company had an outstanding promissory note and bridge notes totaling \$1.6 million, measured at fair value, which were effectively settled upon acquisition.

Under the terms of the acquisition agreement with HTBase, the Company granted certain share-based awards to continuing employees in substitution of awards held by such 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.

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.

Acquisition Costs

The Company recognized \$16.6 million, \$4.4 million, and \$2.1 million of acquisition-related costs during the years ended December 31, 2019, December 31, 2018, and December 31, 2017, respectively. These acquisition-related costs were expensed in the period incurred within general and administrative expense in the Company's Consolidated Statements of Operations.

The following table summarizes the fair values of the assets acquired and liabilities assumed at the acquisition dates (in millions):

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

	<u>2019</u>	<u>2018</u>	<u>2017</u>
	<u>Mist</u>	<u>HTBase</u>	<u>Cyphort</u>
Net tangible assets acquired/(liabilities) assumed	\$ 28.3	\$ (1.0)	\$ 1.4
Intangible assets	102.0	7.8	15.4
Goodwill	228.9	14.4	16.7
Total	<u>\$ 359.2</u>	<u>\$ 21.2</u>	<u>\$ 33.5</u>

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):

	<u>2019</u>		<u>2018</u>		<u>2017</u>	
	<u>Mist</u>		<u>HTBase</u>		<u>Cyphort</u>	
	Weighted Average Estimated Useful Life (In Years)	Amount	Weighted Average Estimated Useful Life (In Years)	Amount	Weighted Average Estimated Useful Life (In Years)	Amount
Intangible assets:						
Existing technology	5	\$ 81.0	4	\$ 7.8	5	\$ 15.4
Customer relationships	5	15.0	—	—	—	—
Trade name	5	6.0	—	—	—	—
Total intangible assets acquired		<u>\$ 102.0</u>		<u>\$ 7.8</u>		<u>\$ 15.4</u>

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

Note 4. Cash Equivalents and Investments

Investments in Available-for-Sale Debt Securities

The following table summarizes the Company's unrealized gains and losses and fair value of investments designated as available-for-sale debt securities as of December 31, 2019 and December 31, 2018 (in millions):

	As of December 31, 2019				As of December 31, 2018			
	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	\$ 81.3	\$ 0.1	\$ —	\$ 81.4	\$ 46.8	\$ —	\$ (0.3)	\$ 46.5
Certificates of deposit	38.6	—	—	38.6	152.9	—	—	152.9
Commercial paper	168.2	—	—	168.2	393.6	—	—	393.6
Corporate debt securities	604.9	0.7	(0.1)	605.5	416.1	—	(3.1)	413.0
Foreign government debt securities	11.4	—	—	11.4	20.0	—	(0.1)	19.9
Time deposits	226.3	—	—	226.3	278.6	—	—	278.6
U.S. government agency securities	89.0	—	—	89.0	87.2	—	(0.2)	87.0
U.S. government securities	394.3	0.3	(0.1)	394.5	811.8	—	(0.5)	811.3
Total fixed income securities	1,614.0	1.1	(0.2)	1,614.9	2,207.0	—	(4.2)	2,202.8
Privately-held debt and redeemable preferred stock securities	19.1	37.4	—	56.5	16.6	37.4	—	54.0
Total available-for-sale debt securities	\$ 1,633.1	\$ 38.5	\$ (0.2)	\$ 1,671.4	\$ 2,223.6	\$ 37.4	\$ (4.2)	\$ 2,256.8
Reported as:								
Cash equivalents	\$ 290.9	\$ —	\$ —	\$ 290.9	\$ 936.5	\$ —	\$ —	\$ 936.5
Short-term investments	733.7	0.5	—	734.2	1,069.2	—	(1.9)	1,067.3
Long-term investments	589.4	0.6	(0.2)	589.8	201.3	—	(2.3)	199.0
Other long-term assets	19.1	37.4	—	56.5	16.6	37.4	—	54.0
Total	\$ 1,633.1	\$ 38.5	\$ (0.2)	\$ 1,671.4	\$ 2,223.6	\$ 37.4	\$ (4.2)	\$ 2,256.8

The following table presents the contractual maturities of the Company's total fixed income securities as of December 31, 2019 (in millions):

	Amortized Cost	Estimated Fair Value
Due in less than one year	\$ 1,024.6	\$ 1,025.1
Due between one and five years	589.4	589.8
Total	\$ 1,614.0	\$ 1,614.9

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

The following tables present the Company's total fixed income securities that were in an unrealized loss position as of December 31, 2019 and December 31, 2018 (in millions):

	As of December 31, 2019					
	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	\$ 21.6	\$ —	\$ 5.2	\$ —	\$ 26.8	\$ —
Corporate debt securities	142.6	(0.1)	2.1	—	144.7	(0.1)
Foreign government debt securities	4.0	—	4.0	—	8.0	—
U.S. government agency securities	20.0	—	—	—	20.0	—
U.S. government securities	71.6	(0.1)	—	—	71.6	(0.1)
Total fixed income securities	<u>\$ 259.8</u>	<u>\$ (0.2)</u>	<u>\$ 11.3</u>	<u>\$ —</u>	<u>\$ 271.1</u>	<u>\$ (0.2)</u>

	As of December 31, 2018					
	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	\$ 3.1	\$ —	\$ 43.0	\$ (0.3)	\$ 46.1	\$ (0.3)
Corporate debt securities	72.6	(0.1)	330.7	(3.0)	403.3	(3.1)
Foreign government debt securities	1.5	—	18.4	(0.1)	19.9	(0.1)
U.S. government agency securities	2.0	—	45.2	(0.2)	47.2	(0.2)
U.S. government securities	344.0	—	63.5	(0.5)	407.5	(0.5)
Total fixed income securities	<u>\$ 423.2</u>	<u>\$ (0.1)</u>	<u>\$ 500.8</u>	<u>\$ (4.1)</u>	<u>\$ 924.0</u>	<u>\$ (4.2)</u>

For available-for-sale debt securities that have unrealized losses, the Company assesses impairment by evaluating various factors, including 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, 2019, the Company had 179 investments in unrealized loss positions. The gross unrealized losses related to these investments were primarily due to changes in market interest rates. The Company does not intend to sell these investments and does not believe that it is more likely than not it will be required to sell any of these investments before recovery of the entire amortized cost basis, therefore the Company has determined that no other-than-temporary impairments associated with credit losses were required to be recognized during the years ended December 31, 2019, 2018, and 2017.

During the years ended December 31, 2019, 2018, and 2017, there were no material gross realized gains or losses from available-for-sale debt securities.

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

Investments in Equity Securities

The following table presents the Company's investments in equity securities as of December 31, 2019 and 2018 (in millions):

	As of December 31,	
	2019	2018
Equity investments with readily determinable fair value		
Money market funds	\$ 446.4	\$ 996.9
Mutual funds	26.8	24.3
Publicly-traded equity securities	3.8	2.8
Equity investments without readily determinable fair value	133.3	36.4
Total equity securities	<u>\$ 610.3</u>	<u>\$ 1,060.4</u>
Reported as:		
Cash equivalents	\$ 442.3	\$ 985.3
Short-term investments	3.8	2.8
Prepaid expenses and other current assets	4.1	10.9
Other long-term assets	160.1	61.4
Total	<u>\$ 610.3</u>	<u>\$ 1,060.4</u>

In October 2019, the Company invested \$89.9 million for a 13.7% equity ownership of a privately-held company. The investment was accounted for under the measurement alternative approach, at cost. The investment was classified in other long-term assets on the Consolidated Balance Sheets.

During the years ended December 31, 2019, 2018, and 2017, there were no material unrealized gains or losses recognized for equity investments.

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 2015 and 2019; (ii) amounts held under the Company's short-term disability plan in California; and (iii) amounts under the NQDC plan for senior-level employees. Restricted investments are designated as equity investments. As of December 31, 2019, the carrying value of restricted cash and investments was \$91.6 million, of which \$64.6 million was included in prepaid expenses and other current assets and \$27.0 million was included in other long-term assets on the Consolidated Balance Sheets.

The following table provides a reconciliation of cash, cash equivalents, and restricted cash included in the Consolidated Balance Sheets as of December 31, 2019 and December 31, 2018 (in millions):

	As of December 31,	
	2019	2018
Cash and cash equivalents	\$ 1,215.8	\$ 2,489.0
Restricted cash included in Prepaid expenses and other current assets	60.7	16.8
Total cash, cash equivalents, and restricted cash	<u>\$ 1,276.5</u>	<u>\$ 2,505.8</u>

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 provides 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, 2019				Fair Value Measurements at December 31, 2018			
	Quoted Prices in Active Markets For Identical Assets (Level 1)	Significant Other Observable Remaining Inputs (Level 2)	Significant Other Unobservable Remaining Inputs (Level 3)	Total	Quoted Prices in Active Markets For Identical Assets (Level 1)	Significant Other Observable Remaining Inputs (Level 2)	Significant Other Unobservable Remaining Inputs (Level 3)	Total
Assets:								
Available-for-sale debt securities:								
Asset-backed securities	\$ —	\$ 81.4	\$ —	\$ 81.4	\$ —	\$ 46.5	\$ —	\$ 46.5
Certificates of deposit	—	38.6	—	38.6	—	152.9	—	152.9
Commercial paper	—	168.2	—	168.2	—	393.6	—	393.6
Corporate debt securities	—	605.5	—	605.5	—	413.0	—	413.0
Foreign government debt securities	—	11.4	—	11.4	—	19.9	—	19.9
Time deposits	—	226.3	—	226.3	—	278.6	—	278.6
U.S. government agency securities	—	89.0	—	89.0	—	87.0	—	87.0
U.S. government securities	318.9	75.6	—	394.5	352.8	458.5	—	811.3
Privately-held debt and redeemable preferred stock securities	—	—	56.5	56.5	—	—	54.0	54.0
Total available-for-sale debt securities	318.9	1,296.0	56.5	1,671.4	352.8	1,850.0	54.0	2,256.8
Equity securities:								
Money market funds	446.4	—	—	446.4	996.9	—	—	996.9
Mutual funds	26.8	—	—	26.8	24.3	—	—	24.3
Publicly-traded equity securities	3.8	—	—	3.8	2.8	—	—	2.8
Total equity securities	477.0	—	—	477.0	1,024.0	—	—	1,024.0
Derivative assets:								
Foreign exchange contracts	—	2.5	—	2.5	—	5.3	—	5.3
Total derivative assets	—	2.5	—	2.5	—	5.3	—	5.3
Total assets measured at fair value on a recurring basis	\$ 795.9	\$ 1,298.5	\$ 56.5	\$ 2,150.9	\$ 1,376.8	\$ 1,855.3	\$ 54.0	\$ 3,286.1
Liabilities:								
Derivative liabilities:								
Foreign exchange contracts	\$ —	\$ (6.8)	\$ —	\$ (6.8)	\$ —	\$ (7.1)	\$ —	\$ (7.1)
Interest rate swap contracts	—	(3.1)	—	(3.1)	—	—	—	—
Total derivative liabilities	—	(9.9)	—	(9.9)	—	(7.1)	—	(7.1)
Total liabilities measured at fair value on a recurring basis	\$ —	\$ (9.9)	\$ —	\$ (9.9)	\$ —	\$ (7.1)	\$ —	\$ (7.1)
Total assets, reported as:								
Cash equivalents	\$ 442.3	\$ 290.9	\$ —	\$ 733.2	\$ 1,025.2	\$ 896.6	\$ —	\$ 1,921.8
Short-term investments	188.8	549.2	—	738.0	297.5	772.6	—	1,070.1
Long-term investments	133.9	455.9	—	589.8	18.2	180.8	—	199.0
Prepaid expenses and other current assets	4.1	2.5	—	6.6	10.8	5.3	—	16.1
Other long-term assets	26.8	—	56.5	83.3	25.1	—	54.0	79.1
Total assets measured at fair value on a recurring basis	\$ 795.9	\$ 1,298.5	\$ 56.5	\$ 2,150.9	\$ 1,376.8	\$ 1,855.3	\$ 54.0	\$ 3,286.1

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

	Fair Value Measurements at December 31, 2019				Fair Value Measurements at December 31, 2018			
	Quoted Prices in Active Markets For Identical Assets (Level 1)	Significant Other Observable Remaining Inputs (Level 2)	Significant Other Unobservable Remaining Inputs (Level 3)	Total	Quoted Prices in Active Markets For Identical Assets (Level 1)	Significant Other Observable Remaining Inputs (Level 2)	Significant Other Unobservable Remaining Inputs (Level 3)	Total
Total liabilities, reported as:								
Other accrued liabilities	\$ —	\$ (6.8)	\$ —	\$ (6.8)	\$ —	\$ (7.1)	\$ —	\$ (7.1)
Other long-term liabilities	—	(3.1)	—	(3.1)	—	—	—	—
Total liabilities measured at fair value on a recurring basis	\$ —	\$ (9.9)	\$ —	\$ (9.9)	\$ —	\$ (7.1)	\$ —	\$ (7.1)

The Company's Level 2 available-for-sale debt 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, 2019 and 2018, the Company had no transfers between levels of the fair value hierarchy of its assets or liabilities measured at fair value.

The Company's privately-held debt and redeemable preferred stock securities are classified as Level 3 assets due to the lack of observable inputs to determine fair value. The Company estimates the fair value of its privately-held debt and redeemable preferred stock securities on a recurring basis using an analysis of the financial condition and near-term prospects of the investee, including recent financing activities and the investee's capital structure. During the year ended December 31, 2019, there were no material activities related to privately-held debt and redeemable preferred stock.

Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis

The Company's investments in equity securities without readily determinable fair value are classified as Level 3 assets due to the lack of observable inputs to determine fair value. The Company estimates the fair value on a nonrecurring basis using an analysis of the financial condition and near-term prospects of the investee, including recent financing activities and the investee's capital structure. As of December 31, 2019, there have been no upward or material downward adjustments for price changes to the equity securities without readily determinable fair value.

Certain of the Company's assets, including intangible assets and goodwill, are measured at fair value on a nonrecurring basis, when they are deemed to be other-than temporarily impaired. There were no impairment charges recognized during the years ended December 31, 2019, 2018, and 2017.

As of December 31, 2019 and 2018, 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, 2019 and December 31, 2018, the estimated fair value of the Company's total outstanding debt in the Consolidated Balance Sheets was \$1,852.1 million and \$2,158.7 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"), along with the accumulated interest paid in kind, of \$78.9 million and \$69.0 million approximates its fair value as of December 31, 2019 and December 31, 2018, respectively. Notes receivable are generally classified as Level 3 asset due to the lack of observable inputs to determine fair value. The carrying value of a contract manufacturer deposit of \$46.0 million, reported within other long-term assets in the Consolidated Balance Sheets approximates its fair value as of December 31, 2019. See Note 8, *Other Financial Information*, for further information on the Pulse Note and contract manufacturer deposit.

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

Note 6. Derivative Instruments

The notional amount of the Company's derivative instruments is summarized as follows (in millions):

	As of December 31,	
	2019	2018
Designated derivatives:		
Cash flow hedges	\$ 484.0	\$ 497.7
Interest rate swap contracts	300.0	—
Total designated derivatives	\$ 784.0	\$ 497.7
Non-designated derivatives	162.9	158.7
Total	\$ 946.9	\$ 656.4

The fair value of derivative instruments on the Consolidated Balance Sheets was as follows:

	Balance Sheet Location	As of December 31,	
		2019	2018
Derivative assets:			
Derivatives designated as hedging instruments:			
Foreign currency contracts as cash flow hedges	Other current assets	\$ 2.2	\$ 5.2
Foreign currency contracts as cash flow hedges	Other long-term assets	0.3	—
Total derivatives designated as hedging instruments		\$ 2.5	\$ 5.2
Derivatives not designated as hedging instruments	Other current assets	—	0.1
Total derivative assets		\$ 2.5	\$ 5.3
Derivative liabilities:			
Derivatives designated as hedging instruments:			
Foreign currency contracts as cash flow hedges	Other accrued liabilities	\$ 6.6	\$ 6.6
Interest rate swap designated as fair value hedges	Other long-term liabilities	3.1	—
Total derivatives designated as hedging instruments		\$ 9.7	\$ 6.6
Derivatives not designated as hedging instruments	Other accrued liabilities	0.2	0.5
Total derivative liabilities		\$ 9.9	\$ 7.1

Designated Derivatives

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. Cash flow hedge derivatives typically have maturities of twenty-four months or less. As of December 31, 2019, an estimated \$4.4 million of unrealized net loss within accumulated other comprehensive loss is expected to be reclassified into earnings within the next twelve months.

In 2019, the Company entered into interest rate swaps with an aggregate notional amount of \$300.0 million designated as fair value hedges of our fixed-rate 2041 Notes. These swaps convert the fixed interest rates of the notes to floating interest rates based on the London InterBank Offered Rate (LIBOR). All of the interest rate swaps will expire within ten years or less.

Effect of Derivative Instruments on the Consolidated Statements of Operations

For foreign currency forward contracts, the Company recognized unrealized losses of \$6.3 million and \$8.7 million, and an unrealized gain of \$20.2 million in accumulated other comprehensive loss for the effective portion of its derivative instruments during the years ended December 31, 2019, 2018, and 2017, respectively. The Company reclassified a loss of \$3.8 million and gains of \$0.9 million and \$7.6 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, 2019, 2018, and 2017, respectively.

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

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 to four months. 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 \$3.6 million, \$7.6 million and \$1.8 million during the years ended December 31, 2019, 2018, and 2017, respectively.

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 Company's goodwill activity was as follows (in millions):

	Total
December 31, 2017	\$ 3,096.2
Additions due to business combination	14.4
Other ^(*)	(1.8)
December 31, 2018	3,108.8
Additions due to business combination	228.3
December 31, 2019	\$ 3,337.1

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

In the fourth quarter of 2019, the Company performed its annual goodwill impairment test for the three reporting units: Routing, Switching, and Security. There was no goodwill impairment during the years ended December 31, 2019, 2018, and 2017.

Purchased Intangible Assets

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

	As of December 31, 2019				As of December 31, 2018			
	Gross	Accumulated Amortization	Accumulated Impairments and Other Charges	Net	Gross	Accumulated Amortization	Accumulated Impairments and Other Charges	Net
Finite-lived intangible assets:								
Technologies and patents	\$ 729.1	\$ (564.0)	\$ (49.9)	\$ 115.2	\$ 648.1	\$ (534.0)	\$ (49.9)	\$ 64.2
Customer contracts, support agreements, and related relationships	98.6	(79.3)	(2.8)	16.5	83.6	(75.5)	(2.8)	5.3
Trade names and other	7.9	(2.8)	—	5.1	2.0	(2.0)	—	—
Total	835.6	(646.1)	(52.7)	136.8	733.7	(611.5)	(52.7)	69.5
Indefinite-lived intangible assets:								
IPR&D	49.0	—	—	49.0	49.0	—	—	49.0
Total purchased intangible assets	\$ 884.6	\$ (646.1)	\$ (52.7)	\$ 185.8	\$ 782.7	\$ (611.5)	\$ (52.7)	\$ 118.5

Amortization expense related to purchased intangible assets with finite lives was \$34.7 million, \$17.4 million, and \$17.5 million for the years ended December 31, 2019, 2018, and 2017, respectively. There were no impairment charges related to purchased intangible assets during the years ended December 31, 2019, 2018, and 2017.

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

As of December 31, 2019, 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>
2020	\$ 39.5
2021	35.3
2022	30.0
2023	25.7
2024	6.3
Thereafter	—
Total	<u>\$ 136.8</u>

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

Note 8. Other Financial Information

Inventory

Total inventory consisted of the following (in millions):

	As of December 31,	
	2019	2018
Production and service materials	\$ 69.0	\$ 60.6
Finished goods	25.2	21.4
Inventory	<u>\$ 94.2</u>	<u>\$ 82.0</u>
Reported as:		
Prepaid expenses and other current assets	\$ 90.6	\$ 80.6
Other long-term assets	3.6	1.4
Total	<u>\$ 94.2</u>	<u>\$ 82.0</u>

Property and Equipment, Net

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

	As of December 31,	
	2019	2018
Computers and equipment	\$ 1,041.4	\$ 1,100.0
Software	228.6	223.3
Leasehold improvements	216.9	235.2
Furniture and fixtures	48.3	48.6
Building and building improvements	255.0	254.3
Land and land improvements	243.5	243.2
Construction-in-process	12.9	19.5
Property and equipment, gross	2,046.6	2,124.1
Accumulated depreciation	(1,215.7)	(1,172.4)
Property and equipment, net	<u>\$ 830.9</u>	<u>\$ 951.7</u>

Depreciation expense was \$184.0 million, \$193.2 million, and \$202.8 million in 2019, 2018, and 2017, respectively.

Notes Receivable and Deposit

Total outstanding notes receivable and deposit, net of issuance costs, reported within other long-term assets in the Consolidated Balance Sheets were as follows (in millions):

	As of December 31,	
	2019	2018
Pulse Note (including accumulated interest paid in kind)	\$ 78.9	\$ 69.0
Contract manufacturer deposit (non-interest bearing)	46.0	23.9
Total	<u>\$ 124.9</u>	<u>\$ 92.9</u>

In connection with the sale of its Junos Pulse product portfolio in 2014, the Company was issued a non-contingent interest-bearing promissory note of \$125.0 million. In 2017, the Company received payment of \$75.0 million and the outstanding interest due. The maturity date of the Pulse Note was extended to September 30, 2022 under the terms of an amended agreement. The amended agreement also provided that interest due on the note be paid in kind by increasing the principal amount and interest rate on the Pulse Note. The outstanding balance of the Pulse Note was classified as a long-term asset based on expected collection beyond twelve months from the Consolidated Balance Sheet date.

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

In 2018, the Company paid a deposit of \$25.0 million to a contract manufacturer in exchange for improved pricing and savings on inventory carrying charges. The deposit was recorded at the face value of \$25.0 million, less an unamortized discount of \$1.1 million, calculated based on an imputed interest rate of 4.8%, that will be amortized over the term of the deposit to interest income along with a corresponding amount to cost of revenues. In 2019, the Company paid an additional non-interest bearing deposit of \$23.6 million, for a total balance of \$48.6 million, less an unamortized discount of \$2.6 million, calculated based on an imputed interest rate of 5.0% as of December 31, 2019. The deposit is due on demand in the first quarter of 2021 and was classified as other long-term assets on the Consolidated Balance Sheets.

Interest income on the notes receivable 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. Interest income recognized was \$10.4 million, \$8.4 million, and \$8.3 million, during the years ended December 31, 2019, 2018, and 2017, respectively.

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 as of December 31, 2019, 2018, and 2017.

Warranties

Changes in the Company's warranty reserve were as follows (in millions):

	As of December 31,	
	2019	2018
Beginning balance	\$ 28.0	\$ 27.4
Provisions made during the period, net	39.0	30.7
Actual costs incurred during the period	(35.6)	(30.1)
Ending balance	<u>\$ 31.4</u>	<u>\$ 28.0</u>

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,	
	2019	2018
Deferred revenue:		
Undelivered product commitments and other product deferrals	\$ 141.7	\$ 163.3
Deferred gross product revenue	141.7	163.3
Deferred cost of product revenue	(9.1)	(18.9)
Deferred product revenue, net	132.6	144.4
Deferred gross service revenue	1,090.8	1,071.8
Deferred cost of service revenue	—	(2.6)
Deferred service revenue, net	1,090.8	1,069.2
Total	<u>\$ 1,223.4</u>	<u>\$ 1,213.6</u>
Reported as:		
Current	\$ 812.9	\$ 829.3
Long-term	410.5	384.3
Total	<u>\$ 1,223.4</u>	<u>\$ 1,213.6</u>

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

Revenue

See Note 13, *Segments*, for disaggregated revenue by product and service, customer vertical, and geographic region.

Product revenue of \$68.6 million included in deferred revenue at January 1, 2019 was recognized during the year ended December 31, 2019. Service revenue of \$706.8 million included in deferred revenue at January 1, 2019 was recognized during the year ended December 31, 2019.

The following table summarizes the transaction price for contracts that have not yet been recognized as revenue as of December 31, 2019 and when the Company expects to recognize the amounts as revenue (in millions):

	Revenue Recognition Expected by Period			
	Total	Less than 1 year	1-3 years	More than 3 years
Product	\$ 141.7	\$ 118.6	\$ 19.9	\$ 3.2
Service ^(*)	1,103.6	706.7	328.3	68.6
Total	<u>\$ 1,245.3</u>	<u>\$ 825.3</u>	<u>\$ 348.2</u>	<u>\$ 71.8</u>

^(*) Represents unearned service revenue allocated to the performance obligations not delivered or partially delivered as of December 31, 2019. The unearned service revenue are comprised of deferred revenue and unbilled revenue.

Deferred Commissions

Deferred commissions were \$24.1 million and \$33.7 million as of December 31, 2019 and 2018, respectively. During the years ended December 31, 2019 and 2018, amortization expense for the deferred commissions were \$130.9 million and \$144.2 million, respectively, and there were no impairment charges recognized.

Other Expense, Net

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

	Years Ended December 31,		
	2019	2018	2017
Interest income	\$ 79.1	\$ 72.7	\$ 53.0
Interest expense	(88.7)	(103.2)	(101.2)
Loss on extinguishment of debt	(15.3)	—	—
(Loss) gain on investments, net	(3.8)	(7.4)	14.6
Other	0.9	(1.6)	(2.7)
Other expense, net	<u>\$ (27.8)</u>	<u>\$ (39.5)</u>	<u>\$ (36.3)</u>

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. Loss on extinguishment of debt resulted from the early repayment of senior notes due 2020 and 2021. (Loss) gain on investments, net, primarily includes (Loss) gains from the sale of investments in public and privately-held companies, and any observable changes in fair value and 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 Charges

The following table presents restructuring charges included in the Consolidated Statements of Operations (in millions):

	Years Ended December 31,		
	2019	2018	2017
Severance	\$ 21.5	\$ 8.3	\$ 57.7
Facility consolidations	2.1	—	—
Contract terminations	11.7	(1.0)	7.9
Total	\$ 35.3	\$ 7.3	\$ 65.6
Reported as:			
Restructuring charges	\$ 35.3	\$ 7.3	\$ 65.6
Total	\$ 35.3	\$ 7.3	\$ 65.6

2019 Restructuring Plan

In 2019, the Company initiated a restructuring plan (the "2019 Restructuring Plan") designed to realign its workforce with the Company's sales strategy, improve productivity, and enhance cost efficiencies, which resulted in severance, facility consolidation, and contract termination costs that were recorded to restructuring charges in the Consolidated Statement of Operations. The 2019 Restructuring Plan was substantially completed as of December 31, 2019.

Prior Restructuring Activities

In 2018, the Company initiated a restructuring plan (the "2018 Restructuring Plan") to realign its workforce as a result of organizational and leadership changes. The 2018 Restructuring Plan consisted of severance and contract termination costs that were recorded to restructuring charges in the Consolidated Statement of Operations.

In 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 in the Consolidated Statement of Operations.

Restructuring Liabilities

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 associated with the 2019 Restructuring Plan and prior year plans (in millions):

	December 31, 2018	Charges/ (Benefits)	Cash Payments	Other	December 31, 2019
Severance	\$ 1.1	\$ 21.5	\$ (21.9)	\$ —	\$ 0.7
Facility consolidations	—	2.1	(0.1)	(2.0)	—
Contract terminations	—	11.7	(11.5)	(0.2)	—
Total	\$ 1.1	\$ 35.3	\$ (33.5)	\$ (2.2)	\$ 0.7

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

Note 10. Debt and Financing

Debt

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

	As of December 31, 2019			
	Issuance date	Maturity Date	Amount	Effective Interest Rates
Senior Notes ("Notes"):				
4.500% fixed-rate notes ⁽¹⁾ ("2024 Notes")	March 2014	March 2024	\$ 350.0	4.63%
4.500% fixed-rate notes ⁽¹⁾ ("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%
3.750% fixed-rate notes ("2029 Notes")	August 2019	August 2029	500.0	3.86%
5.950% fixed-rate notes ("2041 Notes")	March 2011	March 2041	400.0	6.03%
Total Notes			1,700.0	
Unaccrued discount and debt issuance costs			(13.0)	
Hedge accounting fair value adjustments ⁽²⁾			(3.1)	
Total			<u>\$ 1,683.9</u>	

⁽¹⁾ 2024 Notes issued in March 2014 and February 2016 form a single series and are fully fungible.

⁽²⁾ Represents the fair value adjustments for interest rate swap contracts with an aggregate notional amount of \$300.0 million designated as fair value hedges of our fixed-rate 2041 Notes. See Note 6, *Derivative Instruments*, for a discussion of the Company's interest rate swaps.

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, 2019, the Company's aggregate debt maturities based on outstanding principal were as follows (in millions):

Years Ending December 31,	Amount
2020	\$ —
2021	—
2022	—
2023	—
2024	500.0
Thereafter	1,200.0
Total	<u>\$ 1,700.0</u>

In August 2019, the Company issued \$500.0 million aggregate principal amount of 3.75% senior notes due 2029. The net proceeds from the issuance of the 2029 Notes, together with cash on hand, were used for the repayment of \$600.0 million aggregate principal amount of the Company's 3.30% senior notes due 2020 and 4.60% senior notes due 2021. The repayments were made in August and September 2019. The repayments resulted in a loss on extinguishment of debt of \$15.3 million, which was recorded under other expense, net within the Consolidated Statements of Operations.

The Company may redeem the 2025 Notes and the 2029 Notes, either in whole or in part, at any time three months prior to the maturity date of the 2025 Notes, and three months prior to the maturity date of the 2029 Notes, respectively, at a redemption price equal to the greater of (i) 100% of the aggregate principal amount of the 2025 Notes and the 2029 Notes to be redeemed or (ii) the sum of the present values of the remaining scheduled payments discounted at the Treasury rate plus 37.5 basis points for the 2025 Notes, or the Treasury rate plus 35.0 basis points for the 2029 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 March 15, 2025, in the case of the 2025 Notes, and at any time on or after March 15, 2029, in the case of the 2029 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 2025 Notes and the 2029 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

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

equal to the greater of (i) 100% of the aggregate principal amount of the Notes to be redeemed or (ii) the sum of the present values of the remaining scheduled payments discounted to the redemption date, plus, in either case, accrued and unpaid interest, if any.

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

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

As of December 31, 2019, the Company was in compliance with all covenants in the indentures governing the Notes.

Revolving Credit Facility

In April 2019, the Company entered into a new credit agreement (the "Credit Agreement") with certain institutional lenders that provides for a five-year \$500.0 million unsecured revolving credit facility (the "Revolving Credit Facility"), with an option to increase the Revolving Credit Facility by up to an additional \$200.0 million, subject to the lenders' approval. Proceeds of loans made under the Revolving Credit Facility may be used by the Company for working capital and general corporate purposes. The Revolving Credit Facility will terminate in April 2024, subject to two one-year maturity extension options, on the terms and conditions as set forth in the credit agreement. As of December 31, 2019, there were no amounts outstanding under the Revolving Credit Facility.

Borrowings under the Revolving Credit Facility will bear interest, at either (i) a floating rate per annum equal to the base rate plus a margin of between 0.00% and 0.375%, 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 0.910% and 1.375%, 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 0.500% 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.

The Revolving Credit Facility requires the Company to maintain a leverage ratio no greater than 3.0x (provided that if a material acquisition has been consummated, the Company is permitted to maintain a leverage ratio no greater than 3.5x for up to four quarters) and an interest coverage ratio no less than 3.0x during the term of the credit facility.

As of December 31, 2019, the Company had 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 \$64.0 million, \$122.8 million and \$169.4 million during the years ended December 31, 2019, 2018, and 2017, respectively. The Company received cash proceeds from financing providers of \$69.7 million, \$123.2 million, and \$169.3 million during the years ended December 31, 2019, 2018, and 2017, respectively. As of December 31, 2019 and December 31, 2018, the amounts owed by the financing providers were \$5.3 million and \$17.2 million, respectively, which were recorded in accounts receivable on the Company's Consolidated Balance Sheets.

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Notes to Consolidated Financial Statements (Continued)

Note 11. Equity

The following table summarizes dividends paid, stock repurchases and retirements under the Company's stock repurchase programs, and stock repurchases for tax withholdings (in millions, except per share amounts):

Year	Dividends		Stock Repurchases				Total
	Per Share	Amount	Shares	Average price per share ⁽¹⁾	Amount ⁽²⁾	Tax Withholding Amount	Amount
2019	\$ 0.76	\$ 260.1	20.1	\$ 25.36	\$ 550.0	\$ 5.0	\$ 815.1
2018	\$ 0.72	\$ 249.3	29.3	\$ 25.62	\$ 750.0	\$ 6.6	\$ 1,005.9
2017	\$ 0.40	\$ 150.4	26.1	\$ 27.61	\$ 719.7	\$ 6.1	\$ 876.2

⁽¹⁾ \$25.36 average price per share for 2019 excludes the \$40.0 million covered by the forward contract discussed below.

⁽²⁾ 2019 and 2018 shares were repurchased under the 2018 Stock Repurchase Program. 2017 shares were repurchased under the 2014 Stock Repurchase Program.

Cash Dividends on Shares of Common Stock

During 2019, the Company declared four quarterly cash dividends of \$0.19 per share on its common stock on January 29, 2019, April 25, 2019, July 25, 2019 and October 24, 2019, respectively, which were paid on March 22, 2019, June 24, 2019, September 25, 2019 and December 23, 2019, respectively, to stockholders of record as of the close of business on March 1, 2019, June 3, 2019, September 4, 2019, and December 2, 2019, 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 or an authorized committee thereof. See Note 18, *Subsequent Events*, for discussion of the Company's dividend declaration subsequent to December 31, 2019.

Stock Repurchase Activities

In January 2018, the Board approved a \$2.0 billion share repurchase program ("2018 Stock Repurchase Program"). In October 2019, the Board authorized a \$1.0 billion increase to the 2018 Stock Repurchase Program for a total of \$3.0 billion. The 2018 Stock Repurchase Program replaces the previous authorization approved by the Board in 2014 ("2014 Stock Repurchase Program").

As part of the 2018 Stock Repurchase Program, in February 2018 and April 2019, the Company entered into two accelerated share repurchase programs ("ASR") and repurchased \$750.0 million and \$300.0 million of the Company's common stock, respectively. The aggregate number of shares ultimately repurchased of 29.3 million and 11.6 million shares of the Company's common stock was determined based on a volume weighted average repurchase price, less an agreed upon discount, of \$25.62 and \$25.79 per share, respectively. The shares received by the Company were retired, accounted for as a reduction to stockholder's equity in the Consolidated Balance Sheets, and treated as a repurchase of common stock for purposes of calculating earnings per share.

As part of the 2018 Stock Repurchase Program, in October 2019, the Company entered into an ASR with a financial institution to repurchase an aggregate of \$200.0 million of the Company's outstanding common stock. The Company made an up-front payment of \$200.0 million pursuant to the ASR and received and retired an initial 6.4 million shares of the Company's common stock for an aggregate price of \$160.0 million based on the market price of \$25.15 per share of the Company's common stock on the date of the transaction. The initial shares received by the Company were retired, accounted for as a reduction to stockholder's equity in the Consolidated Balance Sheets, and treated as a repurchase of common stock for purposes of calculating earnings per share. The forward contract for the remaining \$40.0 million is considered indexed to the Company's common stock and met all of the applicable criteria for equity classification. See Note 18, *Subsequent Events*, for a discussion of the Company's ASR completion subsequent to December 31, 2019.

During the fiscal year ended December 31, 2019, the Company also repurchased 2.1 million shares of its common stock in the open market for an aggregate purchase price of \$50.0 million at an average price of \$23.63 per share, under the 2018 Stock Repurchase Program.

As of December 31, 2019, there were \$1.7 billion of authorized funds remaining under the 2018 Stock Repurchase Program. See Note 18, *Subsequent Events*, for a discussion of the Company's stock repurchase activity subsequent to December 31, 2019.

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

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.

Accumulated Other Comprehensive Loss, Net of Tax

The components of accumulated other comprehensive loss, net of related taxes, for the years ended December 31, 2019, 2018, and 2017 were as follows (in millions):

	Unrealized Gains/Losses on Available-for- Sale Debt Securities ⁽¹⁾	Unrealized Gains/Losses on Cash Flow Hedges ⁽²⁾	Foreign Currency Translation Adjustments	Total
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)
Other comprehensive income (loss) before reclassifications	0.6	(6.4)	(12.4)	(18.2)
Amount reclassified from accumulated other comprehensive income (loss)	0.9	(1.2)	—	(0.3)
Other comprehensive income (loss), net	1.5	(7.6)	(12.4)	(18.5)
Reclassification of tax effects upon adoption of ASU 2018-02	5.0	0.7	—	5.7
Balance as of December 31, 2018	\$ 25.5	\$ (0.9)	\$ (42.8)	\$ (18.2)
Other comprehensive income (loss) before reclassifications	4.6	(8.9)	(1.1)	(5.4)
Amount reclassified from accumulated other comprehensive income (loss)	(0.4)	5.5	—	5.1
Other comprehensive income (loss), net	4.2	(3.4)	(1.1)	(0.3)
Balance as of December 31, 2019	\$ 29.7	\$ (4.3)	\$ (43.9)	\$ (18.5)

⁽¹⁾ The reclassifications out of accumulated other comprehensive loss during the years ended December 31, 2019, 2018, and 2017 for realized gains on available-for-sale debt securities were not material, and were included in other expense, net, in the Consolidated Statements of Operations.

⁽²⁾ The reclassifications out of accumulated other comprehensive loss during the years ended December 31, 2019, 2018, and 2017 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.

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

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 or substituted stock options, RSUs, RSAs, and PSAs granted under the stock plans of the acquired companies. Such awards were converted into or replaced with 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, and in May 2019, the Company's stockholders approved an additional 3.7 million shares of common stock for issuance under the 2015 Plan. As of December 31, 2019, an aggregate of 13.7 million shares were subject to outstanding equity awards under the 2015 Plan and the 2006 Plan. As of December 31, 2019, 16.6 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. The ESPP permits eligible employees to acquire shares of the Company's common stock at a 15% discount (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. The ESPP provides 24 month offering periods with four 6-month purchase periods. A new 24-month offering period will commence every six months thereafter. The purchase price for the Company's common stock under the ESPP is 85% of the lower of the fair market value of the shares at (1) the beginning of the applicable 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, 2019, approximately 28.7 million shares have been issued and 6.3 million shares remain available for future issuance under the ESPP.

During 2019, 2018, and 2017, the Company completed the acquisitions of Mist, HTBase, and Cyphort. In connection with these acquisitions, the Company assumed or substituted an aggregate of 2.2 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, 2019, approximately 3.8 million shares of common stock were outstanding under all awards assumed or substituted through the Company's acquisitions.

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

RSU, RSA, and PSA Activities

RSUs and RSAs generally vest over three 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, 2019 (in millions, except per share amounts and years):

	Outstanding RSUs, RSAs, and PSAs ⁽⁴⁾			
	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, 2018	17.4	\$ 25.32		
RSUs granted ⁽¹⁾	7.6	25.06		
RSUs assumed upon the acquisition of Mist ⁽¹⁾	0.1	25.81		
RSAs assumed upon the acquisition of Mist ⁽¹⁾	0.7	27.20		
PSAs granted ⁽²⁾	2.1	25.30		
RSUs vested ⁽³⁾	(5.5)	25.99		
RSAs vested ⁽³⁾	(0.2)	25.32		
PSAs vested ⁽³⁾	(0.9)	25.13		
RSUs canceled	(2.3)	25.97		
RSAs canceled	(0.1)	27.65		
PSAs canceled	(1.4)	21.53		
Balance at December 31, 2019	<u>17.5</u>	\$ 25.30	1.1	\$ 430.9
As of December 31, 2019				
Vested and expected-to-vest RSUs, RSAs, and PSAs	16.2	\$ 25.32	1.1	\$ 399.2

⁽¹⁾ The weighted-average grant-date fair value of RSUs, RSAs, and PSAs granted and assumed or substituted during 2019, 2018, and 2017 was \$25.26, \$25.33, and \$27.53, respectively. The grant date fair value of RSUs and PSAs was reduced by the present value of 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. During 2019, the Company declared a quarterly cash dividend of \$0.19 per share of common stock on January 29, 2019, April 25, 2019, July 25, 2019 and October 24, 2019.

⁽²⁾ Includes performance-based and market-based RSUs granted under the 2015 Plan according to their terms. 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 performance-based conditions 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 zero to 1.0 million shares. The aggregate number of shares subject to market-based conditions that would be issued if market criteria are achieved at target is 0.2 million shares. Depending on achievement of such market criteria, the range of shares that could be issued under these awards is zero to 0.4 million shares.

⁽³⁾ Total fair value of RSUs, RSAs, and PSAs vested during 2019, 2018, and 2017 was \$170.0 million, \$200.5 million, and \$187.3 million, respectively.

⁽⁴⁾ 0.9 million shares of PSAs were modified in 2019, which relate to PSAs granted in 2018 and PSAs assumed by the Company in connection with acquisitions consummated in 2016. Compensation cost resulting from the modifications totaled \$21.2 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 (in millions):

	<u>Number of Shares</u>
Balance as of December 31, 2018	21.9
Additional shares authorized	3.7
RSUs and PSAs granted ⁽¹⁾	(15.5)
RSUs and PSAs canceled ⁽¹⁾⁽²⁾	6.5
Balance as of December 31, 2019	<u>16.6</u>

⁽¹⁾ In May 2019, the 2015 Plan was amended, and the amendment removed the fungible share adjustment used to determine shares available for issuance. Under the original terms of the 2015 Plan, 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 were counted against shares authorized under the plan as two and one-tenth shares of common stock for each share subject to such award. Pursuant to the amendment, beginning on May 14, 2019, each share award granted under the 2015 Plan reduces the share reserve by one share and all share awards granted on May 14, 2019 and thereafter that are later forfeited, canceled or terminated are returned to the share reserve in the same manner. The number of shares subject to PSAs granted represents the maximum number of shares that may be issued pursuant to the award over its full term.

⁽²⁾ 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 the amount of such canceled or expired options, RSUs or PSAs, as applicable, up to a maximum of 29.0 million additional shares of common stock, pursuant to the terms of the 2015 Plan.

Employee Stock Purchase Plan

During 2019, 2018, and 2017, employees purchased 2.4 million, 2.5 million and 2.7 million shares of common stock through the ESPP at an average exercise price of \$22.04, \$22.31, and \$20.83 per share, respectively.

Valuation Assumptions

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

	<u>Years Ended December 31,</u>		
	<u>2019</u>	<u>2018</u>	<u>2017</u>
ESPP:			
Volatility	27%	29%	25%
Risk-free interest rate	2.1%	1.9%	0.9%
Expected life (years)	1.2	1.2	0.5
Dividend yield	2.9%	2.7%	1.5%
Weighted-average fair value per share	\$6.65	\$6.93	\$6.04
Market-based RSUs:			
Volatility	25%	28%	30%
Risk-free interest rate	2.4%	2.4%	1.9%
Dividend yield	2.8%	2.6%	1.4%
Weighted-average fair value per share	\$27.32	\$28.39	\$19.30

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,		
	2019	2018	2017
Cost of revenues - Product	\$ 5.7	\$ 6.3	\$ 4.6
Cost of revenues - Service	17.3	18.0	17.5
Research and development	94.0	120.6	86.6
Sales and marketing	56.0	51.1	55.6
General and administrative	29.2	21.1	23.2
Total	<u>\$ 202.2</u>	<u>\$ 217.1</u>	<u>\$ 187.5</u>

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

	Years Ended December 31,		
	2019	2018	2017
Stock options	\$ 7.7	\$ 0.4	\$ 0.5
RSUs, RSAs, and PSAs	176.5	198.2	171.3
ESPP	18.0	18.5	15.7
Total	<u>\$ 202.2</u>	<u>\$ 217.1</u>	<u>\$ 187.5</u>

For the years ended December 31, 2019, 2018 and 2017, 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 \$29.6 million, \$33.8 million, and \$29.1 million, respectively.

For the years ended December 31, 2019, 2018 and 2017, the realized tax benefit related to awards vested or exercised during the period was \$30.6 million, \$38.9 million and \$64.1 million, respectively. These amounts do not include the indirect effects of stock-based awards, which primarily relate to the research and development tax credit.

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

As of December 31, 2019, the total unrecognized compensation cost related to unvested share-based awards was \$280.7 million to be recognized over a weighted-average period of 1.6 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 \$20.2 million, \$20.2 million, and \$21.1 million during 2019, 2018, and 2017, 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, 2019, the liability of the Company to the plan participants was \$26.8 million, of which \$4.1 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 \$26.8 million correlating to the deferred compensation obligations, of which \$4.1 million was included within prepaid expenses and other current assets and \$22.7 million was included within other long-term assets on the Consolidated Balance Sheets. As of December 31, 2018, the liability of the Company was \$24.3 million, of which \$3.6 million was included within other accrued liabilities and \$20.7 million was included in other long-term liabilities on the Consolidated Balance Sheets. The Company had investments of \$24.3 million correlating to the deferred compensation obligations, of which \$3.6 million was included within prepaid expenses and other current assets and \$20.7 million was included within other long-term assets on the Consolidated Balance Sheets.

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

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,		
	2019	2018	2017
Routing	\$ 1,623.2	\$ 1,839.7	\$ 2,189.5
Switching	901.0	934.4	963.4
Security	343.5	333.0	293.3
Total product	2,867.7	3,107.1	3,446.2
Total service	1,577.7	1,540.4	1,581.0
Total	<u>\$ 4,445.4</u>	<u>\$ 4,647.5</u>	<u>\$ 5,027.2</u>

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

	Years Ended December 31,		
	2019	2018	2017
Cloud	\$ 1,059.8	\$ 1,049.9	\$ 1,310.7
Service Provider	1,827.8	2,066.7	2,319.4
Enterprise	1,557.8	1,530.9	1,397.1
Total	<u>\$ 4,445.4</u>	<u>\$ 4,647.5</u>	<u>\$ 5,027.2</u>

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

	Years Ended December 31,		
	2019	2018	2017
Americas:			
United States	\$ 2,299.8	\$ 2,339.1	\$ 2,712.6
Other	218.2	202.1	234.6
Total Americas	2,518.0	2,541.2	2,947.2
Europe, Middle East, and Africa	1,215.3	1,290.8	1,195.8
Asia Pacific	712.1	815.5	884.2
Total	<u>\$ 4,445.4</u>	<u>\$ 4,647.5</u>	<u>\$ 5,027.2</u>

During the years ended December 31, 2019, 2018, and 2017, no customer accounted for greater than 10% of the Company's net revenues.

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

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

	As of December 31,	
	2019	2018
United States	\$ 815.9	\$ 941.7
International	200.8	128.5
Property and equipment, net and purchased intangible assets, net	<u>\$ 1,016.7</u>	<u>\$ 1,070.2</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, 2019 and December 31, 2018, were attributable to U.S. operations.

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

Note 14. Income Taxes

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

	Years Ended December 31,		
	2019	2018	2017
Domestic	\$ 296.2	\$ 160.6	\$ 474.2
Foreign	118.2	372.1	337.6
Total pretax income	<u>\$ 414.4</u>	<u>\$ 532.7</u>	<u>\$ 811.8</u>

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

	Years Ended December 31,		
	2019	2018	2017
Current provision (benefit):			
Federal	\$ 6.2	\$ (126.1)	\$ 594.3
States	14.4	9.0	13.9
Foreign	48.5	38.9	45.4
Total current provision (benefit)	<u>69.1</u>	<u>(78.2)</u>	<u>653.6</u>
Deferred provision (benefit):			
Federal	0.8	36.6	(128.7)
States	2.8	2.2	(17.7)
Foreign	(3.3)	5.2	(1.6)
Total deferred provision (benefit)	<u>0.3</u>	<u>44.0</u>	<u>(148.0)</u>
Total provision (benefit) for income taxes	<u>\$ 69.4</u>	<u>\$ (34.2)</u>	<u>\$ 505.6</u>

The provision (benefit) for income taxes differs from the amount computed by applying the federal statutory rate of 21% for 2019, 21% for 2018, and 35% for 2017, respectively, to pretax income as follows (in millions):

	Years Ended December 31,		
	2019	2018	2017
Expected provision at statutory rate	\$ 87.0	\$ 111.9	\$ 284.1
State taxes, net of federal benefit	9.4	7.4	12.0
Foreign income at different tax rates	1.8	(12.8)	(46.4)
R&D tax credits	(18.8)	(22.1)	(15.1)
Share-based compensation	3.8	4.7	—
Non-deductible compensation	3.3	1.9	1.6
Temporary differences not currently benefited	12.9	—	—
Recognition of previously unrecognized tax benefits	(25.4)	—	—
Lapses in federal statutes of limitations	(7.5)	(67.6)	—
Tax accounting method changes	—	(65.4)	—
Release of valuation allowance	—	—	(1.7)
Domestic production activities	—	—	(12.4)
Impact of the U.S. Tax Cuts and Jobs Act	—	2.8	289.5
Other	2.9	5.0	(6.0)
Total (benefit) provision for income taxes	<u>\$ 69.4</u>	<u>\$ (34.2)</u>	<u>\$ 505.6</u>

In 2019, the Company recorded a \$25.4 million benefit, including interest, related to the recognition of previously unrecognized tax benefits pursuant to the resolution of a tax audit and a \$7.5 million benefit, including interest, for a lapse in statute of limitations.

In 2018, the Company recorded a \$67.6 million benefit, including interest, related to a lapse in statute of limitations relative to tax years 2010 through 2014, a \$33.2 million benefit as a result of filing a change in accounting method for the tax recognition of

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

deferred product revenue, and a \$33.2 million benefit resulting from a tax accounting method change related to foreign deferred service revenue.

The Tax Cuts and Jobs Act ("Tax Act") was enacted on December 22, 2017. The Tax Act introduced significant changes to U.S. income tax law. Effective January 1, 2018, the Tax Act reduced the U.S. federal corporate income tax rate from 35% to 21%, created a minimum tax on foreign earnings and imposed a one-time transition tax on accumulated foreign earnings through December 31, 2017. In 2017, the Company recorded provisional amounts for the effects of the Tax Act of \$289.5 million primarily related to net taxes on accumulated foreign earnings and the re-measurement of the Company's deferred tax assets at the revised U.S. statutory rate. In the fourth quarter of 2018, the Company completed its analysis to determine the effect of the Tax Act and recorded immaterial adjustments as of December 31, 2018.

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,	
	2019	2018
Deferred tax assets:		
Net operating loss carry-forwards	\$ 27.7	\$ 12.9
Research and other credit carry-forwards	236.7	220.0
Deferred revenue	40.0	37.7
Share-based compensation	24.3	26.1
Cost sharing adjustment	—	12.2
Reserves and accruals not currently deductible	55.8	62.7
Operating lease liabilities	48.3	—
Other	12.0	13.2
Total deferred tax assets	444.8	384.8
Valuation allowance	(249.4)	(233.7)
Deferred tax assets, net of valuation allowance	195.4	151.1
Deferred tax liabilities:		
Property and equipment basis differences	(39.2)	(40.6)
Purchased intangibles	(27.8)	(13.7)
Unremitted foreign earnings	(23.7)	(26.4)
Deferred compensation and other	(8.7)	(8.9)
Operating lease assets	(41.1)	—
Total deferred tax liabilities	(140.5)	(89.6)
Net deferred tax assets	\$ 54.9	\$ 61.5

As of December 31, 2019 and 2018, the Company had a valuation allowance on its U.S. domestic deferred tax assets of approximately \$249.4 million and \$233.7 million, respectively. The balance at December 31, 2019 consisted of approximately \$221.6 million, \$20.2 million and \$3.1 million against the Company's California, Massachusetts and Canadian 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 for which the Company recorded a valuation allowance of approximately \$4.5 million related to losses that are capital in nature and may carry forward to offset future capital gains only. The valuation allowance increased in 2019 and 2018 by \$15.7 million and \$19.2 million, respectively, primarily related to the change in California, Massachusetts and Canadian R&D tax credits.

As of December 31, 2019, the Company had federal and California net operating loss carry-forwards of approximately \$101.2 million and \$134.0 million, respectively. The California net operating loss carry-forwards of \$134.0 million are expected to expire unused. The Company also had federal and California tax credit carry-forwards of approximately \$4.7 million and \$262.5 million, respectively. Unused net operating loss carry-forwards will expire at various dates beginning in the year 2020. The California tax credit carry-forwards will carry forward indefinitely.

The Company provides deferred tax liabilities for all tax consequences associated with the undistributed earnings that are expected to be repatriated to subsidiaries' parent unless the subsidiaries' earnings are considered indefinitely reinvested. The Company has

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

made no provision for deferred taxes on approximately \$35.8 million of cumulative undistributed earnings of certain foreign subsidiaries through December 31, 2019. These earnings are considered indefinitely invested in operations of the subsidiaries, as the Company intends to utilize these amounts to fund future expansion of its operations. If these earnings were distributed to the parent, the Company would be subject to additional taxes of approximately \$7.1 million.

As of December 31, 2019, 2018, and 2017, the total amount of gross unrecognized tax benefits was \$151.3 million, \$178.1 million, and \$264.5 million, respectively. As of December 31, 2019, approximately \$150.9 million of the \$151.3 million gross unrecognized tax benefits, if recognized, would affect the effective tax rate.

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

	Years Ended December 31,		
	2019	2018	2017
Balance at beginning of year	\$ 178.1	\$ 264.5	\$ 223.1
Tax positions related to current year:			
Additions	5.9	4.3	64.6
Tax positions related to prior years:			
Additions	0.8	12.7	1.8
Reductions	(3.3)	(33.8)	(16.6)
Settlements	(22.5)	(2.6)	(4.0)
Lapses in statutes of limitations	(7.7)	(67.0)	(4.4)
Balance at end of year	<u>\$ 151.3</u>	<u>\$ 178.1</u>	<u>\$ 264.5</u>

As of December 31, 2019, 2018, and 2017, the Company had accrued interest and penalties related to unrecognized tax benefits of \$29.9 million, \$33.8 million, and \$40.7 million, respectively, to other long-term liabilities in the Consolidated Balance Sheets. Due to the changes in the level of gross unrecognized tax benefits, the Company recognized a benefit for net interest and penalties of \$2.8 million, \$5.2 million and an expense of \$8.5 million in its Consolidated Statements of Operations during the years ended December 31, 2019, 2018, and 2017, respectively. The Company recognizes interest and penalties related to unrecognized tax benefits as a component of income tax expense.

In December 2019, the Internal Revenue Service and the Company concluded the appeals process for the 2007 through 2009 tax years. As a result, the Company released \$30.9 million of previously unrecognized tax benefits, including \$8.4 million in interest and penalties.

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 a range of approximately \$9.6 million to \$24.6 million within the next twelve months due to the completion of tax review cycles in various tax jurisdictions and lapses of applicable statutes of limitation.

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 2009.

The Company is currently under examination by the India tax authorities for the 2009 through 2015 tax years. The examinations by the India tax authorities are ongoing. The Company regularly assesses the likelihood of an adverse outcome resulting from such examinations. As of December 31, 2019, the Company believes the resolution of the audits is unlikely to have a material effect on its consolidated financial condition or results of operations.

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

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

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,		
	2019	2018	2017
Numerator:			
Net income	\$ 345.0	\$ 566.9	\$ 306.2
Denominator:			
Weighted-average shares used to compute basic net income per share	343.2	349.0	377.7
Dilutive effect of employee stock awards	5.0	5.4	6.5
Weighted-average shares used to compute diluted net income per share	348.2	354.4	384.2
Net income per share:			
Basic	\$ 1.01	\$ 1.62	\$ 0.81
Diluted	\$ 0.99	\$ 1.60	\$ 0.80
Anti-dilutive shares	4.7	3.9	1.1

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

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. These obligations primarily result from contracts entered into for the acquisition of software development services and product development. For obligations with cancellation provisions, the amounts included in the preceding table were limited to the non-cancelable portion of the agreement terms or the minimum cancellation fee.

The following table summarizes the Company's unconditional purchase obligations for each of the next five years and thereafter as of December 31, 2019 (in millions):

<u>Years Ending December 31,</u>	<u>Unconditional Purchase Obligations</u>
2020	\$ 42.0
2021	28.8
2022	21.0
2023	13.7
2024	6.9
Thereafter	1.4
Total	\$ 113.8

In December 2018, the Company entered into a Master Services Agreement and certain Statements of Work, (collectively, the "Agreement") with International Business Machines Corporation ("IBM") pursuant to which the Company will outsource significant portions of its IT and other administrative functions following a transition period. Under the Agreement, IBM will provide the Company a broad range of IT services such as applications, including support, development and maintenance; infrastructure management and support, including for servers, storage and network devices; and end user support including service desk. The Agreement has an initial term through 2026 over which period the Company will pay IBM a combination of fixed and variable fees, fluctuating based on the Company's actual need for the services utilized. As of December 31, 2019, the Company expects to pay IBM approximately \$300.0 million. The table above does not include fees payable to IBM under the contract as the Company is unable to make a reasonably reliable estimate of the amount of the payments related to this contract due to uncertainties in the usage of the services.

In December 2019, the Company entered into a 15-year Energy Services Agreement with a Supplier to purchase energy and environmental attributes generated from a third-party fuel cell systems, which will be installed, operated, and maintained by the Supplier on the Company's premises. The Company will pay Supplier service fees that will fluctuate based on the actual amount of electricity delivered to the Company during a given operational year. As of December 31, 2019, the Company expects to pay Supplier approximately \$29.0 million over a 15-year period. The table above does not include fees payable to this Supplier due to uncertainties associated with system outputs.

Leases

The Company leases its facilities and certain equipment under non-cancelable operating leases that have remaining lease terms of 1 to 10 years and 1 to 4 years, respectively. Each leased facility is subject to an individual lease or sublease, which could provide various options to extend or terminate the lease agreement. Facilities are primarily comprised of corporate offices, data centers, and R&D facilities. Equipment includes vehicles and various office equipment. The Company also has variable lease payments that are primarily comprised of common area maintenance and utility charges. The Company's lease agreements do not contain any residual value guarantees or restrictive covenants.

The components of lease costs and other information related to leases were as follows (in millions, except years and percentages):

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

	December 31, 2019
Operating lease cost	\$ 50.3
Variable lease cost	12.6
Total lease cost	<u>\$ 62.9</u>
Operating cash outflows from operating leases	\$ 49.6
ROU assets obtained in exchange for new operating lease liabilities	\$ 14.0
Weighted average remaining lease term (years)	5.5
Weighted average discount rate	3.9%

As of December 31, 2019, future operating lease payments for each of the next five years and thereafter is as follows (in millions):

<u>Years Ending December 31,</u>	<u>Amount</u>
2020	\$ 49.3
2021	45.3
2022	36.3
2023	30.6
2024	26.8
Thereafter	37.7
Total lease payments	<u>226.0</u>
Less: interest	(25.6)
Total	<u>\$ 200.4</u>
<u>Balance Sheet Information</u>	
Other accrued liabilities	42.3
Long-term operating lease liabilities	158.1
Total	<u>\$ 200.4</u>

As of December 31, 2018, prior to the adoption of ASC 842, future minimum payments under non-cancelable operating and other lease arrangements for each of the next five years and thereafter were as follows (in millions):

<u>Years Ending December 31,</u>	<u>Leases</u>	
	<u>Operating Leases</u>	<u>Other Lease Arrangement ^(*)</u>
2019	\$ 33.7	\$ 13.1
2020	30.7	13.3
2021	24.3	13.6
2022	17.0	13.9
2023	14.3	14.2
Thereafter	26.3	32.9
Total	<u>\$ 146.3</u>	<u>\$ 101.0</u>

(*) Represents a build-to-suit lease arrangement entered into in July 2015.

Rent expense for 2018 and 2017 was approximately \$39.0 million and \$39.3 million, respectively. Rent expense in prior years was recognized in accordance with ASC 840, *Leases*, using the straight-line method over the term of a lease.

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

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. The following table summarizes the Company's purchase commitments for each of the next five years and thereafter as of December 31, 2019 (in millions):

<u>Years Ending December 31,</u>	<u>Purchase Commitments</u>
2020	\$ 794.3
2021	230.7
2022	220.1
2023	226.4
Thereafter	—
Total	<u>\$ 1,471.5</u>

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, 2019, the Company had accrued \$28.6 million based on its estimate of such charges.

Debt and Interest Payment on Debt

As of December 31, 2019, the Company held total outstanding debt consisting of the Notes with a carrying value of \$1,683.9 million. See Note 10, *Debt and Financing*, for further discussion of the Company's long-term debt and expected future principal maturities.

Tax Liability

In the fourth quarter of 2018, the Company completed its analysis to determine the effect of the Tax Act and recorded immaterial adjustments as of December 31, 2018. The Company has elected to pay its transition tax, net of applicable tax refunds, over the eight-year period provided in the Tax Act. The long-term income taxes payable of \$245.2 million represents the remaining balance of the Company's transition tax obligation.

As of December 31, 2019, the Company had \$127.4 million included in long-term income taxes payable on 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, 2019 and 2018, the Company recorded \$9.0 million and \$11.9 million, respectively, 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 \$30.6 million and \$23.1 million, as of December 31, 2019 and December 31, 2018, respectively.

Legal Proceedings

The Company is involved in 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 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

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

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.

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

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, 2019 and December 31, 2018 (in millions, except per share amounts):

	Year Ended December 31, 2019				Year Ended December 31, 2018			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Net revenues	\$ 1,001.7	\$ 1,102.5	\$ 1,133.1	\$ 1,208.1	\$ 1,082.6	\$ 1,204.1	\$ 1,179.8	\$ 1,181.0
Gross margin	582.3	636.8	678.4	719.3	618.4	700.9	711.0	710.9
Income before income taxes	44.5	77.8	118.1	174.0	41.4	150.9	152.0	188.4
Net income ⁽¹⁾	\$ 31.1	\$ 46.2	\$ 99.3	\$ 168.4	\$ 34.4	\$ 116.5	\$ 223.8	\$ 192.2
Net income per share: ⁽²⁾								
Basic	\$ 0.09	\$ 0.13	\$ 0.29	\$ 0.50	\$ 0.10	\$ 0.33	\$ 0.65	\$ 0.56
Diluted	\$ 0.09	\$ 0.13	\$ 0.29	\$ 0.49	\$ 0.10	\$ 0.33	\$ 0.64	\$ 0.55

⁽¹⁾ Net income for the third and fourth quarters of 2018 include a lower statutory tax rate due to the Tax Act and tax benefits related to items unique to 2018. See Note 14, *Income Taxes*, for further discussion.

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

Note 18. Subsequent Events

Dividend Declaration

On January 27, 2020, the Company announced that the Board declared a quarterly cash dividend of \$0.20 per share of common stock to be paid on March 23, 2020 to stockholders of record as of the close of business on March 2, 2020.

Stock Repurchase Activities

During the first quarter of 2020, the ASR was completed and the Company received an additional 1.8 million shares from the financial institution. These 1.8 million shares will be retired in the first quarter of 2020. The completion of the ASR resulted in a total settlement of 8.2 million shares of the Company's common stock at a volume weighted average repurchase price, less an agreed upon discount, of \$24.44 per share.

Subsequent to December 31, 2019, through the date of filing of this Report (the "filing date"), the Company also repurchased 7.6 million shares of its common stock in the open market, for an aggregate purchase price of \$179.8 million at an average price of \$23.68 per share, under the 2018 Stock Repurchase Program. Repurchases of approximately 6.7 million shares were settled prior to the filing of this Report and the remaining shares will be settled after the filing date. The Company has an aggregate of \$1.5 billion of authorized funds remaining under the Stock Repurchase Program as of the filing date.

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 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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 2020 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 “Delinquent Section 16(a) Reports” 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 and 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, 2019, 2018, and 2017
(In millions)

Allowance for Doubtful Accounts	Balance at Beginning of Year	Charged to (Reversed from) Costs and Expenses	Write-offs, Net of Recoveries	Balance at End of Year
2019	\$ 4.9	\$ 1.7	\$ (1.1)	\$ 5.5
2018	\$ 5.7	\$ (0.8)	\$ —	\$ 4.9
2017	\$ 7.6	\$ (2.0)	\$ 0.1	\$ 5.7

Sales Return Reserve	Balance at Beginning of Year	Additions			Balance at End of Year
		Charged as a Reduction in Revenues	Charged to Other Accounts	Used	
2019	\$ 32.7	\$ 59.5	\$ —	\$ (67.4)	\$ 24.8
2018 ^(*)	\$ 44.5	\$ 70.7	\$ —	\$ (82.5)	\$ 32.7
2017	\$ 71.4	\$ 25.0	\$ 65.9	\$ (107.1)	\$ 55.2

^(*) Upon adoption of Topic 606, the Company recorded a reduction of \$10.7 million as part of the cumulative effect adjustment to the January 1, 2018 opening accumulated deficit balance on the Consolidated Balance Sheet.

All other schedules have been omitted as the required information is not applicable or the information is presented in the Consolidated Financial Statements or notes thereto under Item 8 herein.

3. Exhibits

Exhibit No.	Exhibit	Incorporated by Reference			
		Filing	Exhibit No.	File No.	File Date
3.1	<u>Restated Certificate of Incorporation of Juniper Networks, Inc. and Certificate of Amendment</u>	S-8	4.1	333-218344	5/30/2017
3.2	<u>Amended and Restated Bylaws of Juniper Networks, Inc.</u>	8-K	3.2	001-34501	5/30/2017
4.1	<u>Description of Juniper Networks, Inc. Registered Securities*</u>				
4.2	<u>Indenture, dated March 3, 2011, by and between Juniper Networks, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee</u>	8-K	4.1	001-34501	3/4/2011
4.3	<u>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</u>	8-K	4.8	001-34501	3/4/2011
4.4	<u>Second Supplemental Indenture, dated March 4, 2014, by and between Juniper Networks, Inc. and The Bank of New York</u>	8-K	4.1	001-34501	3/4/2014
4.5	<u>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</u>	8-K	4.1	001-34501	3/10/2015
4.6	<u>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</u>	8-K	4.2	001-34501	2/29/2016
4.7	<u>Sixth Supplemental Indenture, dated August 26, 2019, by and between Juniper Networks, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee</u>	8-K	4.1	001-34501	8/26/2019
4.8	<u>Form of Note for Juniper Networks, Inc.'s 5.950% Senior Notes due 2041</u>	8-K	4.8	001-34501	3/4/2011
4.9	<u>Form of Note for Juniper Networks, Inc.'s 4.500% Senior Notes due 2024</u>	8-K	4.1	001-34501	3/4/2014
4.10	<u>Form of Note for Juniper Networks, Inc.'s 4.350% Senior Notes due 2025</u>	8-K	4.1	001-34501	3/10/2015
4.11	<u>Form of Note for Juniper Networks, Inc.'s 3.750% Senior Notes due 2029</u>	8-K	4.1	001-34501	8/26/2019
10.1	<u>Juniper Networks, Inc. 2006 Equity Incentive Plan, as amended October 2, 2014+</u>	10-Q	10.9	001-34501	11/10/2014
10.2	<u>Form of Notice of Grant and Performance Share Agreement for the Juniper Networks, Inc. 2006 Equity Incentive Plan+</u>	10-K	10.21	000-26339	2/29/2008
10.3	<u>Amended and Restated Juniper Networks, Inc. Performance Bonus Plan, effective January 1, 2017+</u>	8-K	10.1	001-34501	5/27/2016
10.4	<u>Juniper Networks, Inc. Deferred Compensation Plan+</u>	S-8	4.4	333-151669	6/16/2008
10.5	<u>Amended and Restated Juniper Networks, Inc. 2015 Equity Incentive Plan+</u>	10-Q	10.4	001-34501	8/7/2019
10.6	<u>Mist Systems, Inc. 2014 Equity Incentive Plan+</u>	S-8	99.1	001-34501	4/2/2019
10.7	<u>Amended and Restated Juniper Networks, Inc. 2008 Employee Stock Purchase Plan+</u>	10-K	10.19	001-34501	2/23/2018
10.8	<u>Form of Restricted Stock Unit Agreement effective as of May 19, 2015+</u>	8-K	10.2	001-34501	5/20/2015
10.9	<u>Form of Performance Share Agreement effective as of May 19, 2015+</u>	8-K	10.3	001-34501	5/20/2015
10.10	<u>Form of Indemnification Agreement entered into by Juniper Networks, Inc. with each of its directors, officers and certain employees, approved for use on August 9, 2018+</u>	8-K	10.1	001-34501	8/10/2018
10.11	<u>Form of Stock Option Agreement effective as of May 19, 2015+</u>	8-K	10.4	001-34501	5/20/2015
10.12	<u>Amended and Restated Juniper Networks, Inc. Form of Restricted Stock Unit Agreement effective as of December 1, 2019*+</u>				
10.13	<u>Amended and Restated Juniper Networks, Inc. Form of Performance Share Agreement effective as of December 1, 2019*+</u>				
10.14	<u>Form of Severance Agreement for Certain Officers, approved for use on August 29, 2017+</u>	8-K	10.2	001-34501	8/31/2017
10.15	<u>Form of Change of Control Agreement for Certain Officers, approved for use on August 29, 2017+</u>	8-K	10.1	001-34501	8/31/2017

Exhibit No.	Exhibit	Incorporated by Reference			
		Filing	Exhibit No.	File No.	File Date
10.16	<u>Settlement, Release and Cross-License Agreement, dated May 27, 2014, by and between Juniper Networks, Inc. and Palo Alto Networks, Inc.</u>	8-K	10.1	001-34501	5/29/2014
10.17	<u>Credit Agreement, dated as of April 25, 2019, by and among Juniper Networks, Inc., the lenders from time to time thereto and Citibank, N.A., as administrative agent</u>	10-Q	10.1	001-34501	5/9/2019
10.18	<u>Master Services Agreement, dated December 31, 2018, between Juniper Networks, Inc. and International Business Machines Corporation, as amended on January 4, 2019†</u>	10-K	10.29	001-34501	2/22/2019
10.19	<u>Employment Letter Agreement, dated July 30, 2019, between Juniper Networks, Inc. and Thomas A. Austin+</u>	10-Q	10.1	001-34501	11/6/2019
10.20	<u>Form of Executive Compensation Recovery Agreement for Certain Officers, approved for use in November 2015+</u>	10-K	10.60	001-34501	2/29/2016
21.1	<u>Subsidiaries of the Company*</u>				
23.1	<u>Consent of Independent Registered Public Accounting Firm*</u>				
31.1	<u>Certification of Chief Executive Officer pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934*</u>				
31.2	<u>Certification of Chief Financial Officer pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934*</u>				
32.1	<u>Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**</u>				
32.2	<u>Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**</u>				
101	The following materials from Juniper Networks Inc.'s Annual Report on Form 10-K for the year ended December 31, 2019, formatted in iXBRL (inline 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*				
104	The cover page from the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2019, formatted in Inline XBRL (included in Exhibit 101)*				

* Filed herewith

** Furnished herewith

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

† Portions of this exhibit (indicated by asterisks) have been omitted pursuant to a request for confidential treatment that has been separately filed with the Securities and Exchange Commission.

(b) Exhibits

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

(c) None

ITEM 16. Form 10-K Summary

Not applicable.

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 20, 2020 By: /s/ Kenneth B. Miller

Kenneth B. Miller

Executive Vice President, Chief Financial Officer
(Duly Authorized Officer and Principal Financial Officer)

February 20, 2020 By: /s/ Thomas A. Austin

Thomas A. Austin

Vice President, Corporate Controller and Chief Accounting Officer
(Duly Authorized Officer and Principal Accounting Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ Rami Rahim</u> Rami Rahim	Chief Executive Officer and Director (Principal Executive Officer)	February 20, 2020
<u>/s/ Kenneth B. Miller</u> Kenneth B. Miller	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 20, 2020
<u>/s/ Thomas A. Austin</u> Thomas A. Austin	Vice President, Corporate Controller and Chief Accounting Officer (Principal Accounting Officer)	February 20, 2020
<u>/s/ Scott Kriens</u> Scott Kriens	Chairman of the Board	February 20, 2020
<u>/s/ Gary Daichendt</u> Gary Daichendt	Director	February 20, 2020
<u>/s/ Anne T. DelSanto</u> Anne T. DelSanto	Director	February 20, 2020
<u>/s/ Kevin DeNuccio</u> Kevin DeNuccio	Director	February 20, 2020
<u>/s/ James Dolce</u> James Dolce	Director	February 20, 2020
<u>/s/ Christine M. Gorjanc</u> Christine M. Gorjanc	Director	February 20, 2020
<u>/s/ Janet B. Haugen</u> Janet B. Haugen	Director	February 20, 2020
<u>/s/ Rahul Merchant</u> Rahul Merchant	Director	February 20, 2020
<u>/s/ William R. Stensrud</u> William R. Stensrud	Director	February 20, 2020

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Juniper Networks, Inc. — Investor Information

Transfer Agent and Registrar

Stockholders of record with questions concerning their stock holdings or dividends, or with address changes should contact:

EQ Shareowner Services

PO Box 64874
St Paul, MN 55164-0874
Phone: 1-800-468-9716

Stock Exchange

Juniper Networks common stock is listed for trading on the New York Stock Exchange under the ticker symbol **JNPR**.

Financial Information and Reports

The Company routinely issues press releases and quarterly and annual financial reports, which can be found on our website. A copy of the Juniper Networks 2019 Annual Report on Form 10-K filed with the Securities and Exchange Commission will be furnished to stockholders without charge upon request to the Company at Juniper Networks, Inc., Attn: Investor Relations, 1133 Innovation Way, Sunnyvale, CA 94089 or at investor-relations@juniper.net. We will also furnish any exhibit to the Annual Report on Form 10-K for fiscal 2019 if specifically requested in writing. A copy of our Annual Report on Form 10-K for fiscal 2019 is also available with our proxy materials at www.proxyvote.com. In addition, you can access a copy on the website of the SEC at www.sec.gov.

Website Addresses

Corporate Home Page:
www.juniper.net
Investor Relations:
investor.juniper.net

Independent Registered Public Accounting Firm

Ernst & Young LLP
303 Almaden Blvd.
San Jose, CA 95110

Our Leadership Team

Rami Rahim — Chief Executive Officer and Director
Anand Athreya — Executive Vice President, Chief Development Officer
Thomas Austin — Vice President, Corporate Controller, and Chief Accounting Officer
Manoj Leelanivas — Executive Vice President, Chief Product Officer
Brian Martin — Senior Vice President, General Counsel, and Secretary
Kenneth Miller — Executive Vice President, Chief Financial Officer

Our Board of Directors

Gary Daichendt — Private Investor, Managing Member of Theory R Properties LLC
Anne DelSanto — Limited Partner, Operator Collective
Kevin DeNuccio — Former Executive Chairman, SevOne, Inc.
James Dolce — Chief Executive Officer and Director, Lookout, Inc.
Christine Gorjanc — Chief Financial Officer, Arlo Technologies, Inc.
Janet Haugen — Former Senior Vice President and Chief Financial Officer, Unisys Corporation
Scott Kriens — Chairman of the Board, Juniper Networks, Inc.
Rahul Merchant — Senior Executive Vice President and Head of Client Services, TIAA-CREF
Rami Rahim — Chief Executive Officer and Director, Juniper Networks, Inc.



Juniper Networks
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Sunnyvale, CA 94089
www.juniper.net
NYSE: JNPR