

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

FORM 10-Q

(Mark One)

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

For the quarterly period ended October 31, 2018

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 001-35594

PALO ALTO NETWORKS, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

20-2530195

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

3000 Tannery Way

Santa Clara, California 95054

(Address of principal executive office, including zip code)

(408) 753-4000

(Registrant's telephone number, including area code)

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 filing 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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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 Exchange Act). Yes No

The number of shares outstanding of the registrant's common stock as of November 20, 2018 was 94,880,870.

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PART I

ITEM 1. FINANCIAL STATEMENTS

PALO ALTO NETWORKS, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited, in millions, except per share data)

	October 31, 2018	July 31, 2018 (As Adjusted)
Assets		
Current assets:		
Cash and cash equivalents	\$ 1,784.4	\$ 2,506.9
Short-term investments	1,419.4	896.5
Accounts receivable, net of allowance for doubtful accounts of \$1.2 at October 31, 2018 and July 31, 2018	382.3	467.0
Prepaid expenses and other current assets	229.1	268.1
Total current assets	3,815.2	4,138.5
Property and equipment, net	276.5	273.1
Long-term investments	565.5	547.5
Goodwill	636.4	522.8
Intangible assets, net	186.2	140.8
Other assets	321.7	326.2
Total assets	\$ 5,801.5	\$ 5,948.9
Liabilities, temporary equity, and stockholders' equity		
Current liabilities:		
Accounts payable	\$ 43.0	\$ 49.4
Accrued compensation	99.4	163.7
Accrued and other liabilities	163.6	124.6
Deferred revenue	1,269.8	1,213.6
Convertible senior notes, net	239.9	550.4
Total current liabilities	1,815.7	2,101.7
Convertible senior notes, net	1,384.5	1,369.7
Long-term deferred revenue	1,114.6	1,065.7
Other long-term liabilities	226.8	229.6
Commitments and contingencies (Note 10)		
Temporary equity	6.9	21.9
Stockholders' equity:		
Preferred stock; \$0.0001 par value; 100.0 shares authorized; none issued and outstanding at October 31, 2018 and July 31, 2018	—	—
Common stock and additional paid-in capital; \$0.0001 par value; 1,000.0 shares authorized; 94.7 and 93.6 shares issued and outstanding at October 31, 2018 and July 31, 2018, respectively	2,129.3	1,967.4
Accumulated other comprehensive loss	(19.0)	(16.4)
Accumulated deficit	(857.3)	(790.7)
Total stockholders' equity	1,253.0	1,160.3
Total liabilities, temporary equity, and stockholders' equity	\$ 5,801.5	\$ 5,948.9

See notes to condensed consolidated financial statements.

PALO ALTO NETWORKS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited, in millions, except per share data)

	Three Months Ended	
	October 31,	
	2018	2017
	(As Adjusted)	
Revenue:		
Product	\$ 240.5	\$ 184.8
Subscription and support	415.5	317.0
Total revenue	656.0	501.8
Cost of revenue:		
Product	73.2	57.6
Subscription and support	110.3	83.7
Total cost of revenue	183.5	141.3
Total gross profit	472.5	360.5
Operating expenses:		
Research and development	113.4	94.2
Sales and marketing	314.6	254.1
General and administrative	76.6	65.7
Total operating expenses	504.6	414.0
Operating loss	(32.1)	(53.5)
Interest expense	(22.7)	(6.3)
Other income, net	13.0	4.8
Loss before income taxes	(41.8)	(55.0)
Provision for (benefit from) income taxes	(3.5)	8.2
Net loss	\$ (38.3)	\$ (63.2)
Net loss per share, basic and diluted	\$ (0.41)	\$ (0.70)
Weighted-average shares used to compute net loss per share, basic and diluted	93.8	90.9

See notes to condensed consolidated financial statements.

PALO ALTO NETWORKS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(Unaudited, in millions)

	Three Months Ended	
	October 31,	
	2018	2017
		(As Adjusted)
Net loss	\$ (38.3)	\$ (63.2)
Other comprehensive income (loss), net of tax:		
Change in unrealized gains (losses) on investments	0.9	(1.9)
Change in unrealized gains (losses) on cash flow hedges	(3.5)	(1.7)
Other comprehensive loss	(2.6)	(3.6)
Comprehensive loss	<u>\$ (40.9)</u>	<u>\$ (66.8)</u>

See notes to condensed consolidated financial statements.

PALO ALTO NETWORKS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited, in millions)

	Three Months Ended	
	October 31,	
	2018	2017
	(As Adjusted)	
Cash flows from operating activities		
Net loss	\$ (38.3)	\$ (63.2)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Share-based compensation for equity-based awards	136.9	125.7
Depreciation and amortization	32.5	21.3
Cease-use loss related to facility exit	—	15.4
Amortization of deferred contract costs	41.1	28.1
Amortization of debt discount and debt issuance costs	19.4	6.3
Amortization of investment premiums, net of accretion of purchase discounts	(2.4)	0.5
Loss on conversions of convertible senior notes	2.2	—
Repayments of convertible senior notes attributable to debt discount	(52.3)	—
Changes in operating assets and liabilities, net of effects of acquisitions:		
Accounts receivable, net	86.6	80.3
Prepaid expenses and other assets	(22.6)	(39.0)
Accounts payable	(0.8)	4.2
Accrued compensation	(65.0)	(43.0)
Accrued and other liabilities	12.5	43.8
Deferred revenue	102.5	93.6
Net cash provided by operating activities	252.3	274.0
Cash flows from investing activities		
Purchases of investments	(741.0)	(226.8)
Proceeds from sales of investments	2.5	—
Proceeds from maturities of investments	214.5	206.6
Business acquisitions, net of cash acquired	(154.8)	—
Purchases of property, equipment, and other assets	(34.3)	(32.2)
Net cash used in investing activities	(713.1)	(52.4)
Cash flows from financing activities		
Repayments of convertible senior notes attributable to principal and equity component	(275.0)	—
Payments for debt issuance costs	(3.6)	—
Repurchases of common stock	—	(134.1)
Proceeds from sales of shares through employee equity incentive plans	30.7	22.1
Payments for taxes related to net share settlement of equity awards	(13.9)	(11.4)
Net cash used in financing activities	(261.8)	(123.4)
Net increase (decrease) in cash, cash equivalents, and restricted cash	(722.6)	98.2
Cash, cash equivalents, and restricted cash—beginning of period	2,509.2	745.5
Cash, cash equivalents, and restricted cash—end of period	\$ 1,786.6	\$ 843.7
Reconciliation of cash, cash equivalents, and restricted cash to the condensed consolidated balance sheets		
Cash and cash equivalents	\$ 1,784.4	\$ 842.6
Restricted cash included in prepaid expenses and other current assets	1.0	0.5
Restricted cash included in other assets	1.2	0.6
Total cash, cash equivalents, and restricted cash	\$ 1,786.6	\$ 843.7
Non-cash investing and financing activities		
Property and equipment acquired through lease incentives	\$ —	\$ 37.8

See notes to condensed consolidated financial statements.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. Description of Business and Summary of Significant Accounting Policies

Description of Business

Palo Alto Networks, Inc. (the “Company,” “we,” “us,” or “our”), located in Santa Clara, California, was incorporated in March 2005 under the laws of the State of Delaware and commenced operations in April 2005. We offer a security operating platform that empowers enterprises, service providers, and government entities to secure their organizations by safely enabling applications and data running in their networks, on their endpoints, and in the cloud, and by preventing breaches that stem from targeted cyberattacks.

Basis of Presentation and Principles of Consolidation

The accompanying condensed consolidated financial statements have been prepared in conformity with U.S. generally accepted accounting principles (“GAAP”), consistent in all material respects with those applied in our Annual Report on Form 10-K for the fiscal year ended July 31, 2018, filed with the Securities and Exchange Commission (“SEC”) on September 13, 2018. Our condensed consolidated financial statements include our accounts and our wholly owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation.

Our condensed consolidated financial statements are unaudited, but include all adjustments of a normal recurring nature necessary for a fair presentation of our quarterly results. We have made estimates and judgments affecting the amounts reported in our condensed consolidated financial statements and the accompanying notes. The actual results that we experience may differ materially from our estimates.

Certain prior period amounts have been adjusted due to our retrospective adoption of new accounting guidance related to revenue from contracts with customers and new accounting guidance related to the presentation of restricted cash and cash equivalents in the statement of cash flows. Refer to “Recently Adopted Accounting Pronouncements” below for more information.

Our condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and related notes in our Annual Report on Form 10-K for the fiscal year ended July 31, 2018.

Summary of Significant Accounting Policies

There have been no material changes to our significant accounting policies as of and for the three months ended October 31, 2018, as compared to the significant accounting policies described in our Annual Report on Form 10-K for the fiscal year ended July 31, 2018, except for the change in our accounting policies for revenue recognition and deferred contract costs due to our adoption of new accounting guidance related to revenue from contracts with customers. Refer to “Recently Adopted Accounting Pronouncements” below, Note 2. Revenue, and Note 8. Deferred Contract Costs for more information.

Recently Adopted Accounting Pronouncements

Business Combinations - Definition of a Business

In January 2017, the Financial Accounting Standards Board (“FASB”) issued authoritative guidance clarifying the definition of a business to assist companies with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. We adopted this standard in our first quarter of fiscal 2019 on a prospective basis. The adoption of the standard did not have an impact on our condensed consolidated financial statements.

Statement of Cash Flows - Restricted Cash

In November 2016, the FASB issued authoritative guidance on the presentation of restricted cash or restricted cash equivalents in the statement of cash flows. Under the new standard, restricted cash or restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. We adopted this standard in our first quarter of fiscal 2019 on a retrospective basis. The adoption of the standard did not have a material impact on our condensed consolidated financial statements because our restricted cash balance has not been material.

Income Taxes - Intra-Entity Asset Transfers

In October 2016, the FASB issued authoritative guidance requiring the recognition of income tax consequences of an intra-entity transfer of an asset, other than inventory, when the transfer occurs. We adopted the standard in our first quarter of fiscal 2019 on a modified retrospective basis. As a result, we recorded the cumulative effect of the change as an increase to accumulated deficit of \$28.4 million, with a corresponding decrease to prepaid expenses and other current assets and other assets in our condensed

consolidated balance sheets as of August 1, 2018, the date of adoption. The cumulative effect adjustment represents the reclassification of unrecognized income tax effects from intra-entity transfers of assets other than inventory that occurred prior to the date of adoption.

Statement of Cash Flows - Classification of Certain Cash Receipts and Cash Payments

In August 2016, the FASB issued new authoritative guidance addressing eight specific cash flow issues with the objective of reducing the existing diversity in practice in how certain transactions are presented and classified in the statement of cash flows. We adopted this standard in our first quarter of fiscal 2019 on a retrospective basis. The adoption of the standard did not have an impact on our condensed consolidated financial statements.

Financial Instruments - Recognition and Measurement

In January 2016, the FASB issued authoritative guidance requiring equity instruments to be measured at fair value with changes in fair value recognized through net income. We adopted this standard in our first quarter of fiscal 2019 on a prospective basis for non-marketable equity securities and a modified retrospective basis for marketable equity investments. The adoption of the standard did not have an impact on our condensed consolidated financial statements.

Revenue Recognition

In May 2014, the FASB issued new authoritative guidance on revenue from contracts with customers. The new standard provides principles for recognizing revenue when control of promised goods or services is transferred to customers with the expected consideration in exchange for those goods or services, as well as guidance on the recognition of costs related to obtaining and fulfilling customer contracts. The standard also requires expanded disclosures about the nature, amount, timing, and uncertainty of revenues and cash flows arising from customer contracts, including significant judgments and changes in judgments, and assets recognized from costs incurred to obtain or fulfill a contract. We adopted the standard in our first quarter of fiscal 2019 using the full retrospective method.

The adoption of the new standard did not have a material impact on our condensed consolidated financial statements for the fiscal years ended July 31, 2018 and 2017, with the exception of the accounting for incremental costs to obtain customer contracts, which primarily consist of sales commissions, due to the longer period of amortization. Under the previous accounting guidance, we deferred and amortized these costs over the term of the related contract. Under the new standard, we defer and amortize these costs for initial contracts that are not commensurate with renewal commissions over a benefit period of five years, which is typically longer than the initial contract term.

The adoption of the standard using the full retrospective method required us to restate the prior periods presented in this Quarterly Report on Form 10-Q, with the cumulative effect of the change of \$168.2 million reflected in accumulated deficit as of August 1, 2017. In adopting the new standard, we have also applied a transition practical expedient and have not disclosed revenue expected to be recognized from remaining performance obligations for periods prior to August 1, 2018.

The following tables present the impact of the adoption of the standard on our previously reported results (in millions, except per share data):

	Three Months Ended October 31, 2017		
	As Previously Reported	Impact of Adoption	As Adjusted
Condensed Consolidated Statements of Operations			
Product revenue	\$ 186.5	\$ (1.7)	\$ 184.8
Subscription and support revenue	319.0	(2.0)	317.0
Total revenue	505.5	(3.7)	501.8
Total cost of revenue	141.4	(0.1)	141.3
Total operating expenses	418.4	(4.4)	414.0
Operating loss	(54.3)	0.8	(53.5)
Net loss	(64.0)	0.8	(63.2)
Net loss per share, basic and diluted	\$ (0.70)	\$ —	\$ (0.70)

	July 31, 2018		
	As Previously Reported	Impact of Adoption	As Adjusted
Condensed Consolidated Balance Sheet			
Accounts receivable, net	\$ 467.3	\$ (0.3)	\$ 467.0
Prepaid expenses and other current assets	261.3	6.8	268.1
Other assets	206.8	119.4	326.2
Accrued and other liabilities	107.0	17.6	124.6
Deferred revenue	1,268.9	(55.3)	1,213.6
Long-term deferred revenue	1,096.0	(30.3)	1,065.7
Accumulated deficit	\$ (984.6)	\$ 193.9	\$ (790.7)

The adoption of the standard did not impact net cash flows from operating, investing, or financing activities in our condensed consolidated statements of cash flows.

Recently Issued Accounting Pronouncements

Implementation Costs Incurred in a Cloud Computing Arrangement

In August 2018, the FASB issued new authoritative guidance on customer's accounting for implementation costs incurred in a cloud computing arrangement that is a service contract, which will require customers to apply internal-use software guidance to determine the implementation costs that are able to be capitalized. Capitalized implementation costs will be required to be amortized over the term of the arrangement, beginning when the module or component of the hosting arrangement is ready for its intended use. The standard is effective for us in our first quarter of fiscal 2021 and will be applied on either a prospective or retrospective basis. Early adoption is permitted. We are currently evaluating adoption timing and whether this standard will have a material impact on our condensed consolidated financial statements.

Financial Instruments - Credit Losses

In June 2016, the FASB issued new authoritative guidance on the accounting for credit losses on most financial assets and certain financial instruments. The standard replaces the existing incurred loss model with an expected credit loss model for financial assets measured at amortized cost, including trade receivables, and requires that credit losses on available-for-sale debt securities be presented as an allowance rather than as a write-down. The standard is effective for us in our first quarter of fiscal 2021 and will be applied on a modified retrospective basis. Early adoption is permitted beginning our first quarter of fiscal 2020. We are currently evaluating adoption timing and whether this standard will have a material impact on our condensed consolidated financial statements.

Leases

In February 2016, the FASB issued new authoritative guidance on lease accounting. Among its provisions, the standard requires lessees to recognize right-of-use assets and lease liabilities on the balance sheet for operating leases and also requires additional qualitative and quantitative disclosures about lease arrangements. The standard is effective for us in our first quarter of fiscal 2020 and will be applied on a modified retrospective basis, with the option to elect certain practical expedients. Early adoption is permitted; however, we plan to adopt the new standard in our first quarter of fiscal 2020. Upon adoption, we will recognize right-of-use assets and operating lease liabilities on our condensed consolidated balance sheets, which will increase our total assets and total liabilities. We are currently evaluating the accounting, transition, and disclosure requirements of this standard, including its impact on our accounting policies and processes.

2. Revenue

Revenue Recognition

Our revenue consists of product revenue and subscription and support revenue. Revenue is recognized when control of promised products, subscriptions and support services are transferred to customers with the expected consideration in exchange for those products and services. Depending on who the contract is with, our customers are either our channel partners or our end-customers.

We determine revenue recognition through the following steps:

- Identification of the contract, or contracts, with a customer.
- Identification of the performance obligations in the contract.

- Determination of the transaction price.
- Allocation of the transaction price to the performance obligations in the contract.
- Recognition of revenue when, or as, we satisfy a performance obligation.

Revenues are reported net of sales taxes. Shipping charges billed to channel partners are included in revenues and related costs are included in cost of revenue.

Product Revenue

Product revenue is derived primarily from sales of our appliances. Product revenue also includes revenue derived from software licenses of Panorama and the VM-Series. We recognize product revenue at the time of hardware shipment or delivery of software license.

Subscription and Support Revenue

Subscription and support revenue is derived primarily from sales of our subscription and support offerings. We recognize subscription and support revenue over time as the services are performed. Our contractual subscription and support contracts are typically one to five years.

Contracts with Multiple Performance Obligations

The majority of our contracts with our customers include various combinations of our products and subscriptions and support which are distinct and accounted for as separate performance obligations. We account for multiple agreements with a single customer as a single contract if the contractual terms and/or substance of those agreements indicate that they may be so closely related that they are, in effect, parts of a single contract. The amount of consideration we expect to receive in exchange for delivering on the contract is allocated to each performance obligation based on its relative standalone selling price. If a contract contains a single performance obligation, no allocation is required.

We establish standalone selling price using the prices charged for a deliverable when sold separately. If the standalone selling price is not observable through past transactions, we estimate the standalone selling price based on our pricing model and our go-to-market strategy, which include factors such as type of sales channel (reseller, distributor, or end-customer), the geographies in which our offerings were sold (domestic or international), and offering type (products, subscriptions, or support).

Deferred Revenue

We record deferred revenue when cash payments are received or due in advance of our performance. Our payment terms typically require payment within 30 to 45 days of the date we issue an invoice. The current portion of deferred revenue represents the amounts that are expected to be recognized as revenue within one year of the condensed consolidated balance sheet date. During the three months ended October 31, 2018, we recognized approximately \$370.0 million of revenue pertaining to amounts that were deferred as of July 31, 2018.

Remaining Performance Obligations

Revenue expected to be recognized from remaining performance obligations was \$2.5 billion as of October 31, 2018, of which we expect to recognize approximately \$1.3 billion over the next 12 months and the remainder thereafter.

Disaggregation of Revenue

The following table presents revenue by geographic theater (in millions):

	Three Months Ended October 31,	
	2018	2017 (As Adjusted)
Revenue:		
Americas		
United States	\$ 415.9	\$ 326.0
Other Americas	34.3	23.3
Total Americas	450.2	349.3
Europe, the Middle East, and Africa (“EMEA”)	127.7	94.7
Asia Pacific and Japan (“APAC”)	78.1	57.8
Total revenue	\$ 656.0	\$ 501.8

The following table presents revenue for groups of similar products and services (in millions):

	Three Months Ended October 31,	
	2018	2017 (As Adjusted)
Revenue:		
Product	\$ 240.5	\$ 184.8
Subscription and support		
Subscription	231.3	169.0
Support	184.2	148.0
Total subscription and support	415.5	317.0
Total revenue	\$ 656.0	\$ 501.8

3. Fair Value Measurements

We categorize assets and liabilities recorded or disclosed at fair value on our condensed consolidated balance sheets based upon the level of judgment associated with inputs used to measure their fair value. The categories are as follows:

- Level 1—Inputs are unadjusted quoted prices in active markets for identical assets or liabilities.
- Level 2—Inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the assets or liabilities, either directly or indirectly through market corroboration, for substantially the full term of the financial instruments.
- Level 3—Inputs are unobservable inputs based on our own assumptions used to measure assets and liabilities at fair value. The inputs require significant management judgment or estimation.

The following table presents the fair value of our financial assets and liabilities measured at fair value on a recurring basis using the above input categories as of October 31, 2018 and July 31, 2018 (in millions):

	October 31, 2018				July 31, 2018			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Cash equivalents:								
Money market funds	\$ 904.4	\$ —	\$ —	\$ 904.4	\$ 1,512.3	\$ —	\$ —	\$ 1,512.3
Commercial paper	—	5.0	—	5.0	—	52.0	—	52.0
Corporate debt securities	—	2.5	—	2.5	—	—	—	—
U.S. government and agency securities	—	210.3	—	210.3	—	397.3	—	397.3
Total cash equivalents	904.4	217.8	—	1,122.2	1,512.3	449.3	—	1,961.6
Short-term investments:								
Certificates of deposit	—	5.4	—	5.4	—	5.4	—	5.4
Non-U.S. government securities	—	20.0	—	20.0	—	20.0	—	20.0
Commercial paper	—	97.3	—	97.3	—	22.3	—	22.3
Corporate debt securities	—	188.9	—	188.9	—	139.8	—	139.8
U.S. government and agency securities	—	1,107.8	—	1,107.8	—	709.0	—	709.0
Total short-term investments	—	1,419.4	—	1,419.4	—	896.5	—	896.5
Long-term investments:								
Corporate debt securities	—	191.2	—	191.2	—	153.6	—	153.6
U.S. government and agency securities	—	374.3	—	374.3	—	393.9	—	393.9
Total long-term investments	—	565.5	—	565.5	—	547.5	—	547.5
Total assets measured at fair value	\$ 904.4	\$ 2,202.7	\$ —	\$ 3,107.1	\$ 1,512.3	\$ 1,893.3	\$ —	\$ 3,405.6
Accrued and other liabilities:								
Foreign currency forward contracts	\$ —	\$ 11.4	\$ —	\$ 11.4	\$ —	\$ 6.9	\$ —	\$ 6.9
Total accrued and other liabilities	—	11.4	—	11.4	—	6.9	—	6.9
Total liabilities measured at fair value	\$ —	\$ 11.4	\$ —	\$ 11.4	\$ —	\$ 6.9	\$ —	\$ 6.9

Refer to Note 9. Debt for the carrying amount and estimated fair value of our convertible senior notes as of October 31, 2018 and July 31, 2018.

4. Cash Equivalents and Investments

Available-for-sale Securities

The following tables summarize the amortized cost, unrealized gains and losses, and fair value of our available-for-sale securities as of October 31, 2018 and July 31, 2018 (in millions):

	October 31, 2018			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Cash equivalents:				
Commercial paper	\$ 5.0	\$ —	\$ —	\$ 5.0
Corporate debt securities	2.5	—	—	2.5
U.S. government and agency securities	210.3	—	—	210.3
Total available-for-sale cash equivalents	<u>\$ 217.8</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 217.8</u>
Investments:				
Certificates of deposit	\$ 5.4	\$ —	\$ —	\$ 5.4
Non-U.S. government securities	20.0	—	—	20.0
Commercial paper	97.3	—	—	97.3
Corporate debt securities	382.5	—	(2.4)	380.1
U.S. government and agency securities	1,489.0	—	(6.9)	1,482.1
Total available-for-sale investments	<u>\$ 1,994.2</u>	<u>\$ —</u>	<u>\$ (9.3)</u>	<u>\$ 1,984.9</u>

	July 31, 2018			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Cash equivalents:				
Commercial paper	\$ 52.0	\$ —	\$ —	\$ 52.0
U.S. government and agency securities	397.3	—	—	397.3
Total available-for-sale cash equivalents	<u>\$ 449.3</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 449.3</u>
Investments:				
Certificates of deposit	\$ 5.4	\$ —	\$ —	\$ 5.4
Non-U.S. government securities	20.0	—	—	20.0
Commercial paper	22.3	—	—	22.3
Corporate debt securities	295.9	—	(2.5)	293.4
U.S. government and agency securities	1,110.6	—	(7.7)	1,102.9
Total available-for-sale investments	<u>\$ 1,454.2</u>	<u>\$ —</u>	<u>\$ (10.2)</u>	<u>\$ 1,444.0</u>

Unrealized losses related to these securities are due to interest rate fluctuations as opposed to credit quality. In addition, we do not intend to sell and it is not likely that we would be required to sell these securities before recovery of their amortized cost basis, which may be at maturity. As a result, there were no other-than-temporary impairments for these securities at October 31, 2018 and July 31, 2018.

The following table summarizes the amortized cost and fair value of our available-for-sale securities as of October 31, 2018, by contractual years-to-maturity (in millions):

	Amortized Cost	Fair Value
Due within one year	\$ 1,640.9	\$ 1,637.2
Due between one and three years	571.1	565.5
Total	<u>\$ 2,212.0</u>	<u>\$ 2,202.7</u>

Marketable Equity Securities

Marketable equity securities consist of money market funds and are included in cash and cash equivalents in our condensed consolidated balance sheets. As of October 31, 2018 and July 31, 2018, the carrying value of our marketable equity securities were

\$904.4 million and \$1.5 billion, respectively. During the three months ended October 31, 2018 and 2017, there were no unrealized gains or losses recognized for these securities.

5. Derivative Instruments

As a global business, we are exposed to currency exchange rate risk. Substantially all of our revenue is transacted in U.S. dollars, however, a portion of our operating expenditures are incurred outside of the United States and are denominated in foreign currencies, making them subject to fluctuations in foreign currency exchange rates. We enter into foreign currency derivative contracts with maturities of 12 months or less which we designate as cash flow hedges to manage the foreign currency exchange rate risk associated with these expenditures.

These derivative contracts expose us to credit risk to the extent that the counterparties may be unable to meet the terms of the arrangement. We mitigate this credit risk by transacting with major financial institutions with high credit ratings and also enter into master netting arrangements, which permit net settlement of transactions with the same counterparty. We are not required to pledge, and are not entitled to receive, cash collateral related to these derivative instruments. We do not enter into derivative contracts for trading or speculative purposes.

Our derivative financial instruments are recorded at fair value, on a gross basis, as either assets or liabilities in our condensed consolidated balance sheets. Gains or losses related to our cash flow hedges are recorded as a component of accumulated other comprehensive income (loss) ("AOCI") in our condensed consolidated balance sheets and are reclassified into the financial statement line item associated with the underlying hedged transaction in our condensed consolidated statements of operations when the underlying hedged transaction is recognized in earnings. If it becomes probable that the hedged transaction will not occur, the cumulative unrealized gain or loss is reclassified immediately from AOCI into the financial statement line item associated with the underlying hedged transaction in our condensed consolidated statements of operations. Gains or losses related to non-designated derivative instruments are recognized in other income (expense), net in our condensed consolidated statements of operations for each period until the instrument matures, is terminated, is re-designated as a qualified cash flow hedge, or is sold. Derivatives designated as cash flow hedges are classified in our condensed consolidated statements of cash flows in the same manner as the underlying hedged transaction, primarily within cash flows from operating activities.

As of October 31, 2018 and July 31, 2018, the total notional amount of our outstanding foreign currency forward contracts was \$238.0 million and \$288.5 million, respectively. Refer to Note 3. Fair Value Measurements for the fair value of our derivative instruments as reported in our condensed consolidated balance sheets as of October 31, 2018.

During the three months ended October 31, 2018 and 2017, both unrealized gains and losses recognized in AOCI related to our cash flow hedges and amounts reclassified into earnings were not material. Unrealized losses in AOCI related to our cash flow hedges as of October 31, 2018 and 2017 were not material.

6. Acquisitions

RedLock Inc.

On October 12, 2018, we completed our acquisition of 100% of the voting equity interest of RedLock Inc. ("RedLock"), a privately-held cloud security company. The acquisition expands our security capabilities for the public cloud with the addition of RedLock's cloud security analytics technology. Total purchase consideration for the acquisition of RedLock was \$158.2 million, which consisted of \$155.0 million in cash paid upon closing and \$3.2 million in fair value of unvested equity awards attributable to services performed prior to the acquisition date.

As part of the acquisition, we assumed RedLock equity awards with a total fair value of \$57.4 million. Of the total fair value, a portion was allocated to the purchase consideration and the remainder was allocated to future services and will be expensed over the remaining service periods as share-based compensation.

We have accounted for this transaction as a business combination and allocated the purchase consideration to assets acquired and liabilities assumed based on preliminary estimated fair values, as presented in the following table (in millions):

	Amount
Goodwill	\$ 113.6
Identified intangible assets	54.8
Net liabilities assumed	(10.2)
Total	\$ 158.2

Goodwill generated from this business combination is primarily attributable to the assembled workforce and expected post-acquisition synergies from integrating RedLock's technology into our platform. The goodwill is not deductible for income tax purposes.

The following table presents details of the identified intangible assets acquired (in millions, except years):

	Fair Value	Estimated Useful Life
Developed technology	\$ 48.6	4 years
Customer relationships	5.3	8 years
Trade name and trademarks	0.9	6 months
Total	<u>\$ 54.8</u>	

RedLock's operating results are included in our condensed consolidated statements of operations from the date of acquisition. Pro forma results of operations have not been presented because the effect of the acquisition was not material to our condensed consolidated statements of operations.

Additional information, such as that related to income tax and other contingencies, existing as of the acquisition date but unknown to us may become known during the remainder of the measurement period, not to exceed 12 months from the acquisition date, which may result in changes to the amounts and allocations recorded.

7. Goodwill and Intangible Assets

Goodwill

The following table presents details of our goodwill during the three months ended October 31, 2018 (in millions):

	Amount
Balance as of July 31, 2018	\$ 522.8
Goodwill acquired	113.6
Balance as of October 31, 2018	<u>\$ 636.4</u>

Purchased Intangible Assets

The following table presents details of our purchased intangible assets as of October 31, 2018 and July 31, 2018 (in millions):

	October 31, 2018			July 31, 2018		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Intangible assets subject to amortization:						
Developed technology	\$ 203.3	\$ (45.3)	\$ 158.0	\$ 154.7	\$ (38.2)	\$ 116.5
Customer relationships	17.5	(1.7)	15.8	12.2	(1.2)	11.0
Acquired intellectual property	8.9	(4.7)	4.2	8.9	(4.5)	4.4
Trade name and trademarks	9.4	(2.0)	7.4	8.5	(0.4)	8.1
Other	2.2	(2.2)	—	2.2	(2.2)	—
Total intangible assets subject to amortization	<u>241.3</u>	<u>(55.9)</u>	<u>185.4</u>	<u>186.5</u>	<u>(46.5)</u>	<u>140.0</u>
Intangible assets not subject to amortization:						
In-process research and development	0.8	—	0.8	0.8	—	0.8
Total purchased intangible assets	<u>\$ 242.1</u>	<u>\$ (55.9)</u>	<u>\$ 186.2</u>	<u>\$ 187.3</u>	<u>\$ (46.5)</u>	<u>\$ 140.8</u>

We recognized amortization expense of \$9.4 million and \$2.7 million for the three months ended October 31, 2018 and 2017, respectively.

The following table summarizes estimated future amortization expense of our intangible assets as of October 31, 2018 (in millions):

	Amount
Fiscal years ending July 31:	
Remaining 2019	\$ 37.1
2020	39.4
2021	37.4
2022	32.9
2023	20.4
2024 and thereafter	18.2
Total future amortization expense	<u>\$ 185.4</u>

8. Deferred Contract Costs

We defer contract costs that are recoverable and incremental to obtaining customer sales contracts. Contract costs, which primarily consist of sales commissions, are amortized on a systematic basis that is consistent with the transfer to the customer of the goods or services to which the asset relates. Sales commissions paid for initial contracts are generally not commensurate with the commissions paid for renewal contracts, given the substantive difference in commission rates in proportion to their respective contract values. Sales commissions for initial contracts that are not commensurate are amortized over a benefit period of five years, consistent with the revenue recognition pattern of the performance obligations in the related contracts including expected renewals. The benefit period is determined by taking into consideration contract length, technology life, and other quantitative and qualitative factors. The expected renewals are estimated based on historical renewal trends. Sales commissions for initial contracts that are commensurate and sales commissions for renewal contracts are amortized over the related contractual period in proportion to the revenue recognized.

We classify deferred contract costs as short-term or long-term based on when we expect to recognize the expense. Short-term deferred contract costs are included in prepaid expenses and other current assets and long-term deferred contract costs are included in other assets in our condensed consolidated balance sheets. Deferred contract costs are periodically reviewed for impairment. The amortization of deferred contract costs is included in sales and marketing expense in our condensed consolidated statements of operations.

The following table presents details of our short-term and long-term deferred contract costs as of October 31, 2018 and July 31, 2018 (in millions):

	October 31, 2018	July 31, 2018
Short-term deferred contract costs	\$ 112.1	\$ 113.2
Long-term deferred contract costs	223.1	224.8
Total deferred contract costs	<u>\$ 335.2</u>	<u>\$ 338.0</u>

We recognized amortization expense for our deferred contract costs of \$41.1 million and \$28.1 million during the three months ended October 31, 2018 and 2017, respectively. We did not recognize any impairment losses on our deferred contract costs during the three months ended October 31, 2018 or 2017.

9. Debt

Convertible Senior Notes

In June 2014, we issued \$575.0 million aggregate principal amount of 0.0% Convertible Senior Notes due 2019 (the "2019 Notes") and in July 2018, we issued \$1.7 billion aggregate principal amount of 0.75% Convertible Senior Notes due 2023 (the "2023 Notes" and, together with the 2019 Notes, the "Notes"). The 2023 Notes bear interest at a fixed rate of 0.75% per year, payable semi-annually in arrears on January 1 and July 1 of each year, beginning on January 1, 2019. Each series of Notes is governed by an indenture between us, as the issuer, and U.S. Bank National Association, as Trustee (individually, each an "Indenture," and together, the "Indentures"). The Notes of each series are unsecured, unsubordinated obligations and the applicable Indenture governing each series of Notes does not contain any financial covenants or restrictions on the payments of dividends, the incurrence of indebtedness, or the issuance or repurchase of securities by us or any of our subsidiaries. The 2019 Notes and 2023 Notes mature on July 1, 2019 and July 1, 2023, respectively. We cannot redeem either series of Notes prior to the applicable maturity date.

The following table presents details of the Notes (number of shares in millions):

	Conversion Rate per \$1,000 Principal	Initial Conversion Price	Convertible Date	Initial Number of Shares
2019 Notes	9.0680	\$ 110.28	January 1, 2019	5.2
2023 Notes	3.7545	\$ 266.35	April 1, 2023	6.4

Holders of the Notes may surrender their Notes for conversion at their option at any time prior to the close of business on the business day immediately preceding their respective convertible dates only under the following circumstances:

- during any fiscal quarter commencing after the fiscal quarters ending on October 31, 2014 and October 31, 2018, for the 2019 Notes and 2023 Notes, respectively (and only during such fiscal quarter), if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding fiscal quarter is greater than or equal to 130% of the applicable conversion price for the respective Notes on each applicable trading day (the “sale price condition”);
- during the five business day period after any five consecutive trading day period (the “measurement period”) in which the trading price per \$1,000 principal amount of the applicable series of Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of our common stock and the applicable conversion rate for the respective Notes on each such trading day; or
- upon the occurrence of specified corporate events.

On or after the respective convertible date, holders may convert all or any portion of their Notes at any time prior to the close of business on the second scheduled trading day immediately preceding the applicable maturity date regardless of the foregoing conditions. Upon conversion, holders of the Notes of a series will receive cash equal to the aggregate principal amount of the Notes of such series to be converted, and, at our election, cash and/or shares of our common stock for any amounts in excess of the aggregate principal amount of the Notes of such series being converted.

The conversion price will be subject to adjustment in some events. Holders of the Notes of a series who convert their Notes of such series in connection with certain corporate events that constitute a “make-whole fundamental change” under the applicable Indenture are, under certain circumstances, entitled to an increase in the conversion rate for such series of Notes. Additionally, upon the occurrence of a corporate event that constitutes a “fundamental change” under the applicable Indenture, holders of the Notes of such series may require us to repurchase for cash all or a portion of the Notes of such series at a repurchase price equal to 100% of the principal amount of the Notes of such series plus accrued and unpaid interest to, but excluding, the fundamental change repurchase date.

The sale price condition was met for the 2019 Notes during the fiscal quarter ended July 31, 2018, and, as a result, holders were able to convert their 2019 Notes at any time during the fiscal quarter ended October 31, 2018. During the three months ended October 31, 2018, holders converted \$327.3 million in aggregate principal amount of the 2019 Notes, which we repaid in cash. We also issued 1.4 million shares of our common stock to the holders for the conversion value in excess of the principal amount. These shares were fully offset by shares received from the corresponding exercise of the associated note hedges. We allocated \$317.1 million of the cash consideration to the liability component of the converted 2019 Notes, which was calculated by measuring the fair value of a similar liability that did not have an associated convertible feature. We recorded a loss of \$2.2 million related to the settlement of the 2019 Notes converted, which represented the difference between the cash consideration allocated to the liability component and the net carrying amount of the liability component on the respective settlement dates. The loss was included in other income, net in our condensed consolidated statement of operations for the three months ended October 31, 2018. During the three months ended October 31, 2018, we also recorded a \$10.2 million net reduction to additional paid-in capital in our condensed consolidated balance sheets, reflecting the portion of the cash consideration allocated to the equity component.

The sale price condition continued to be met through the fiscal quarter ended October 31, 2018, and, as a result, holders may convert their 2019 Notes at any time prior to January 1, 2019 (the “2019 Notes Convertible Date”). On or after the 2019 Notes Convertible Date, holders may convert their 2019 Notes at any time prior to maturity, in accordance with the terms described above, regardless of the sale price condition. Accordingly, the net carrying amount of the 2019 Notes was classified as a current liability and the portion of the equity component representing the conversion option was classified as temporary equity in our condensed consolidated balance sheets as of October 31, 2018.

The sale price condition was not met for the 2023 Notes during the fiscal quarters ended October 31, 2018 and July 31, 2018. Since the 2023 Notes were not convertible, the net carrying amount of the 2023 Notes was classified as a long-term liability and the equity component was included in additional paid-in capital in our condensed consolidated balance sheets as of October 31, 2018.

As of October 31, 2018, \$247.7 million in aggregate principal amount of the 2019 Notes remained outstanding and all of the 2023 Notes remained outstanding. Subsequent to October 31, 2018, through the filing date of this Quarterly Report on Form 10-Q,

\$88.3 million in principal amount of the 2019 Notes was converted or had been submitted by the holders for conversion and will settle during the fiscal quarter ending January 31, 2019.

The following table sets forth the components of the Notes as of October 31, 2018 and July 31, 2018 (in millions):

	October 31, 2018			July 31, 2018		
	2019 Notes	2023 Notes	Total	2019 Notes	2023 Notes	Total
Liability component:						
Principal	\$ 247.7	\$ 1,693.0	\$ 1,940.7	\$ 575.0	\$ 1,693.0	\$ 2,268.0
Less: debt discount and debt issuance costs, net of amortization	7.8	308.5	316.3	24.6	323.3	347.9
Net carrying amount	<u>\$ 239.9</u>	<u>\$ 1,384.5</u>	<u>\$ 1,624.4</u>	<u>\$ 550.4</u>	<u>\$ 1,369.7</u>	<u>\$ 1,920.1</u>
Equity component (including amounts classified as temporary equity)	<u>\$ 47.3</u>	<u>\$ 315.0</u>	<u>\$ 362.3</u>	<u>\$ 109.8</u>	<u>\$ 315.0</u>	<u>\$ 424.8</u>

The total estimated fair value of the Notes was \$2.1 billion and \$2.7 billion at October 31, 2018 and July 31, 2018, respectively. The fair value was determined based on the closing trading price per \$100 of the Notes as of the last day of trading for the period. We consider the fair value of the Notes at October 31, 2018 and July 31, 2018 to be a Level 2 measurement. The fair value of the Notes is primarily affected by the trading price of our common stock and market interest rates. As of October 31, 2018, the if-converted value of the 2019 Notes exceeded its principal amount by \$220.2 million. Based on the closing price of our common stock on October 31, 2018, the if-converted value of the 2023 Notes was less than its principal amount.

The following table sets forth interest expense recognized related to the Notes (dollars in millions):

	Three Months Ended			Three Months Ended		
	October 31, 2018			October 31, 2017		
	2019 Notes	2023 Notes	Total	2019 Notes	2023 Notes	Total
Contractual interest expense	\$ —	\$ 3.2	\$ 3.2	\$ —	\$ —	\$ —
Amortization of debt discount	4.0	14.4	18.4	5.6	—	5.6
Amortization of debt issuance costs	0.5	0.5	1.0	0.7	—	0.7
Total interest expense recognized	<u>\$ 4.5</u>	<u>\$ 18.1</u>	<u>\$ 22.6</u>	<u>\$ 6.3</u>	<u>\$ —</u>	<u>\$ 6.3</u>
Effective interest rate of the liability component	<u>4.8%</u>	<u>5.2%</u>		<u>4.8%</u>	<u>—%</u>	

Note Hedges

To minimize the impact of potential economic dilution upon conversion of the Notes, we entered into separate convertible note hedge transactions (the “2019 Note Hedges,” with respect to the 2019 Notes, and the “2023 Note Hedges,” with respect to the 2023 Notes, and collectively, the “Note Hedges”) with respect to our common stock concurrent with the issuance of each series of Notes.

The following table presents details of the Note Hedges (in millions):

	Initial Number of Shares	Aggregate Purchase
2019 Note Hedges	5.2	\$ 111.0
2023 Note Hedges	6.4	\$ 332.0

The Note Hedges cover shares of our common stock at a strike price per share that corresponds to the initial applicable conversion price of the applicable series of Notes, which are also subject to adjustment, and are exercisable upon conversion of the applicable series of Notes. The Note Hedges will expire upon maturity of the applicable series of Notes. The Note Hedges are separate transactions and are not part of the terms of the applicable series of the Notes. Holders of the Notes of either series will not have any rights with respect to the Note Hedges. Any shares of our common stock receivable by us under the Note Hedges are excluded from the calculation of diluted earnings per share as they are antidilutive. The aggregate amounts paid for the Note Hedges are included in additional paid-in capital in our consolidated balance sheets.

As a result of the conversions of the 2019 Notes settled during the fiscal quarter ended October 31, 2018, we exercised the corresponding portion of our 2019 Note Hedges and received 1.4 million shares of common stock during the period.

Warrants

Separately, but concurrently with the issuance of each series of Notes, we entered into transactions whereby we sold warrants (the “2019 Warrants,” with respect to the 2019 Notes, and the “2023 Warrants,” with respect to the 2023 Notes, and collectively, the “Warrants”) to acquire shares of our common stock, subject to anti-dilution adjustments. The 2019 Warrants and 2023 Warrants are exercisable beginning October 2019 and October 2023, respectively.

The following table presents details of the Warrants (in millions, except per share data):

	Initial Number of Shares	Strike Price per Share	Aggregate Proceeds
2019 Warrants	5.2	\$ 137.85	\$ 78.3
2023 Warrants	6.4	\$ 417.80	\$ 145.4

The shares issuable under the Warrants will be included in the calculation of diluted earnings per share when the average market value per share of our common stock for the reporting period exceeds the applicable strike price for such series of Warrants. The Warrants are separate transactions and are not part of either series of Notes or Note Hedges and are not remeasured through earnings each reporting period. Holders of the Notes of either series will not have any rights with respect to the Warrants. The aggregate proceeds received from the sale of the Warrants are included in additional paid-in capital in our consolidated balance sheets.

Revolving Credit Facility

On September 4, 2018, we entered into a credit agreement (the “Credit Agreement”) with certain institutional lenders that provides for a \$400.0 million unsecured revolving credit facility (the “Credit Facility”), with an option to increase the amount of the Credit Facility by up to an additional \$350.0 million, subject to certain conditions. The Credit Facility matures on the earlier of (i) September 4, 2023 and (ii) the date that is 91 days prior to the stated maturity of our 2023 Notes if (a) any of the 2023 Notes are still outstanding and (b) our unrestricted cash and cash equivalents are less than the then outstanding principal amount of our 2023 Notes plus \$400.0 million.

The borrowings under the Credit Facility bear interest, at our option, at a base rate plus a spread of 0.00% to 0.75%, or an adjusted LIBO rate plus a spread of 1.00% to 1.75%, in each case with such spread being determined based on our leverage ratio. We are obligated to pay an ongoing commitment fee on undrawn amounts at a rate of 0.125% to 0.250%, depending on our leverage ratio. As of October 31, 2018, there were no amounts outstanding and we were in compliance with all covenants under the Credit Agreement.

10. Commitments and Contingencies

Leases

We lease our facilities under various non-cancelable operating leases, which expire through the year ending July 31, 2028.

In May 2015 and October 2015, we entered into a total of three lease agreements for approximately 941,000 square feet of corporate office space in Santa Clara, California, which serves as our new corporate headquarters. The leases contain rent holiday periods, scheduled rent increases, lease incentives, and renewal options which allow the lease terms to be extended beyond their expiration dates of July 2028 through July 2046. In September 2017, per the terms of the lease agreements, the landlords exercised their option to amend our lease payment schedules and eliminate our rent holiday periods, which increased our rental payments by \$24.4 million, \$11.8 million, and \$2.0 million for fiscal 2018, 2019, and 2020, respectively. In exchange, we received an upfront cash reimbursement of \$38.2 million during the three months ended October 31, 2017, which we have applied and will apply against the future additional rental payments when due. As amended, rental payments under the three lease agreements are approximately \$412.0 million over the lease term.

In May 2015, we also entered into a lease agreement for approximately 122,000 square feet of space in Santa Clara, California, to serve as an extension of our previous corporate headquarters. The lease contains scheduled rent increases, lease incentives, and renewal options which allow the lease term to be extended beyond the expiration date of April 2021 through July 2046. Rental payments under the lease agreement are approximately \$23.1 million over the lease term. In December 2017, we entered into an agreement to sublease this office space for the remaining lease term. Proceeds from this sublease will be approximately \$16.3 million over the sublease term.

In September 2012, we entered into two lease agreements for a total of approximately 300,000 square feet of space in Santa Clara, California, which served as our previous corporate headquarters through August 2017, when we relocated to our new corporate campus. The leases contain rent holiday periods and two separate five-year options to extend the lease term beyond their expiration dates of July 2023. Rental payments under these lease agreements are approximately \$94.3 million over the lease term. In August 2017, we exited our previous headquarter facilities and relocated to our new corporate campus, which resulted in the recognition of a cease-use loss of \$39.2 million as general and administrative expense in our consolidated statements of operations during the year ended July 31, 2018, and a corresponding liability in our consolidated balance sheets. During the three months ended October 31, 2018, we released \$2.5 million of the cease-use liability through rental payments. As of October 31, 2018, the remaining balance of the cease-use liability was \$26.6 million, which is expected to be paid through the end of the lease term in July 2023.

The following table presents details of the aggregate future non-cancelable minimum rental payments under our operating leases as of October 31, 2018 (in millions):

	Amount
Fiscal years ending July 31:	
Remaining 2019	\$ 50.4
2020	68.9
2021	64.1
2022	59.8
2023	58.5
2024 and thereafter	224.1
Committed gross lease payments	525.8
Less: proceeds from sublease rentals	12.8
Net operating lease obligation	<u>\$ 513.0</u>

Purchase Commitments

Manufacturing Purchase Commitments

Our electronics manufacturing service provider (“EMS provider”) procures components and assembles our products based on our forecasts. These forecasts are based on estimates of demand for our products primarily for the next 12 months, which are in turn based on historical trends and an analysis from our sales and product management organizations, adjusted for overall market conditions. In order to reduce manufacturing lead times and plan for adequate supply, we may issue non-cancelable orders for products and components to our manufacturing partners or component suppliers. As of October 31, 2018, our purchase commitments under such orders were \$155.6 million, excluding obligations under contracts that we can cancel without a significant penalty.

Other Purchase Commitments

In March 2018, we amended an agreement with a third-party provider for our use of certain cloud services through June 2020. Under the non-cancelable addendum, we are committed to a minimum purchase of \$14.0 million between April 2018 and March 2019 and \$8.0 million between April 2019 and March 2020. As of October 31, 2018, our purchase commitment under the addendum was \$8.0 million.

Litigation

We are subject to legal proceedings, claims, and litigation arising in the ordinary course of business, including intellectual property litigation. Such matters are subject to many uncertainties and outcomes are not predictable with assurance. We accrue for contingencies when we believe that a loss is probable and that we can reasonably estimate the amount of any such loss.

To the extent there is a reasonable possibility that a loss exceeding amounts already recognized may be incurred and the amount of such additional loss would be material, we will either disclose the estimated additional loss or state that such an estimate cannot be made. As of October 31, 2018, we have not recorded any significant accruals for loss contingencies associated with such legal proceedings, determined that an unfavorable outcome is probable or reasonably possible, or determined that the amount or range of any possible loss is reasonably estimable.

11. Stockholders' Equity

Share Repurchase Program

In August 2016, our board of directors authorized a \$500.0 million share repurchase program that is funded from available working capital. In February 2017, our board of directors authorized a \$500.0 million increase to our repurchase program, bringing the total authorization to \$1.0 billion. Repurchases may be made at management's discretion from time to time on the open market, through privately negotiated transactions, transactions structured through investment banking institutions, block purchase techniques, 10b5-1 trading plans, or a combination of the foregoing. The repurchase authorization will expire on December 31, 2018 and may be suspended or discontinued at any time.

There were no shares repurchased under the authorization during the three months ended October 31, 2018. As of October 31, 2018, \$330.0 million remained available for future share repurchases under the repurchase authorization.

12. Equity Award Plans

Share-Based Compensation Plans

RedLock Inc. 2015 Stock Plan

In connection with our acquisition of RedLock on October 12, 2018, we assumed RedLock's 2015 Stock Plan, as amended (the "RedLock Plan"), under which the assumed RedLock equity awards were granted. The assumed equity awards will be settled in shares of our common stock and will retain the terms and conditions under which they were originally granted; forfeited awards will not be returned to the RedLock Plan. No additional equity awards will be granted under the RedLock Plan. Refer to Note 6. Acquisitions for more information on the RedLock acquisition and the related equity awards assumed.

Stock Option Activities

The following table summarizes the stock option and performance stock option ("PSO") activity under our stock plans during the reporting period (in millions, except per share amounts):

	Stock Options Outstanding				PSOs Outstanding			
	Number of Shares	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value	Number of Shares	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Balance—July 31, 2018	1.1	\$ 13.29	3.1	\$ 199.8	1.1	\$ 198.50	7.0	\$ —
Granted	—	\$ —			2.2	\$ 193.51		
Exercised	(0.2)	\$ 13.51			—	\$ —		
Forfeited	—	\$ —			—	\$ —		
Balance—October 31, 2018	0.9	\$ 13.23	2.9	\$ 150.7	3.3	\$ 195.24	7.0	\$ —
Exercisable—October 31, 2018	0.9	\$ 13.23	2.9	\$ 150.7	—	\$ —	0.0	\$ —

In October 2018, we granted 2.2 million PSOs with both a market condition and a service condition to certain executives. The market condition requires the price of our common stock to equal or exceed \$297.75, \$397.00, \$496.25, and \$595.50 (the "stock price targets") during the four-, five-, six-, and seven-year periods following the date of grant, respectively. To the extent that the stock price targets have been met, one-fourth of the PSOs will vest on the anniversary date of the grant date for such PSOs, subject to continued service.

The aggregate fair value of the PSOs granted in October 2018 was \$130.0 million based on a weighted-average fair value of \$59.64 per share, which was estimated on the grant date using a Monte Carlo simulation model and the following assumptions: expected volatility of 35.6%, based on a combination of implied volatility from traded options on our common stock and the historical volatility of our common stock; dividend yield of 0.0%, based on our current expectations about our anticipated dividend policy; risk-free interest rates ranging from 3.1% to 3.2%, based on the implied yield available on U.S. Treasury zero-coupon issues with terms equal to the contractual terms of each tranche; and an expected term which takes into consideration the vesting term and the contractual term of the PSOs. We recognize share-based compensation expense for our PSOs on a straight-line basis over the requisite service period for each separately vesting portion of the award.

In November 2018, we granted PSOs and restricted stock units with a total value of \$34.5 million to our newly appointed president.

Restricted Stock Award (“RSA”), Performance-Based Stock Award (“PSA”), Restricted Stock Unit (“RSU”), and Performance-Based Stock Unit (“PSU”) Activities

The following table summarizes the RSA, PSA, RSU, and PSU activity under our stock plans during the reporting period (in millions, except per share amounts):

	RSAs and PSAs Outstanding		RSUs and PSUs Outstanding			
	Number of Shares	Weighted-Average Grant-Date Fair Value Per Share	Number of Shares	Weighted-Average Grant-Date Fair Value Per Share	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Balance—July 31, 2018	0.3	\$ 160.85	6.7	\$ 160.20	1.6	\$ 1,335.2
Granted ⁽¹⁾⁽²⁾	—	\$ —	1.6	\$ 198.48		
Vested	(0.1)	\$ 167.18	(0.6)	\$ 149.95		
Forfeited	—	\$ —	(0.2)	\$ 156.39		
Balance—October 31, 2018	0.2	\$ 157.84	7.5	\$ 169.81	1.6	\$ 1,367.9

- (1) For PSAs and PSUs, shares granted represents the aggregate maximum number of shares that may be earned and issued with respect to these awards over their full terms.
- (2) Includes 0.2 million RSUs granted under the assumed RedLock Plan with a weighted-average grant-date fair value of \$211.95 per share.

Our PSAs and PSUs vest over a period of four years from the date of grant. The actual number of PSAs and PSUs earned and eligible to vest are determined based on level of achievement against a pre-established billings target for the fiscal year in which the awards are granted. We recognize share-based compensation expense for our PSAs and PSUs on a straight-line basis over the requisite service period for each separately vesting portion of the award when it is probable that the performance condition will be achieved.

Share-Based Compensation

The following table summarizes share-based compensation included in costs and expenses (in millions):

	Three Months Ended	
	October 31,	
	2018	2017
Cost of product revenue	\$ 1.6	\$ 1.9
Cost of subscription and support revenue	17.5	15.9
Research and development	40.5	37.5
Sales and marketing	56.0	51.2
General and administrative	35.5	19.2
Total share-based compensation	\$ 151.1	\$ 125.7

In connection with our acquisition of RedLock, we accelerated the vesting of certain equity awards and as a result, we recorded \$14.2 million of share-based compensation within general and administrative expense during the three months ended October 31, 2018.

As of October 31, 2018, total compensation cost related to unvested share-based awards not yet recognized was \$1.4 billion. This cost is expected to be amortized over a weighted-average period of approximately 2.9 years. Future grants will increase the amount of compensation expense to be recorded in these periods.

13. Income Taxes

Our provision for income taxes for the three months ended October 31, 2018 reflects an effective tax rate of 8.4%. Our effective tax rate for the three months ended October 31, 2018 was positive as we recorded a benefit from income taxes on year to date losses. The key components of our income tax provision, excluding one-time items, primarily consist of foreign income taxes and withholding taxes. During the three months ended October 31, 2018, the effect of these key components were offset by a one-time tax benefit of \$9.4 million from a partial release of our valuation allowance related to the acquisition of RedLock Inc. Our effective tax

rate differs from the U.S. statutory tax rate primarily due to deductibility of our share-based compensation, foreign income at other than U.S. tax rates, and changes in our valuation allowance.

Our provision for income taxes for the three months ended October 31, 2017 reflects an effective tax rate of (14.9)%. Our effective tax rate for this period was negative as we recorded a provision for income taxes on year to date losses. The key components of our income tax provision primarily consisted of foreign income taxes, withholding taxes, and amortization of our deferred tax charges. Our effective tax rate differed from the U.S. statutory tax rate primarily due to changes in non-deductible share-based compensation, foreign income at other than U.S. tax rates, and charges in our valuation allowance.

In December 2017, the Tax Cuts and Jobs Act (“TCJA”) was enacted into law. The SEC staff and FASB previously issued guidance that allows companies to record provisional amounts for the effects of the TCJA during a measurement period not to extend beyond one year from the enactment date. As of October 31, 2018, we did not have any significant adjustments to our assessment performed as of July 31, 2018. We continue to analyze the tax effects of the TCJA, which are still subject to change during the measurement period, and anticipate further guidance on accounting interpretations from the FASB and application of the TCJA from the U.S. federal and state tax authorities.

14. Net Loss Per Share

Basic net loss per share is computed by dividing net loss by basic weighted-average shares outstanding during the period. Diluted net loss per share is computed by dividing net loss by diluted weighted-average shares outstanding, including potentially dilutive securities.

The following table presents the computation of basic and diluted net loss per share of common stock (in millions, except per share data):

	Three Months Ended	
	October 31,	
	2018	2017
		(As Adjusted)
Net loss	\$ (38.3)	\$ (63.2)
Weighted-average shares used to compute net loss per share, basic and diluted	93.8	90.9
Net loss per share, basic and diluted	\$ (0.41)	\$ (0.70)

The following securities were excluded from the computation of diluted net loss per share of common stock for the periods presented as their effect would have been antidilutive (in millions):

	Three Months Ended	
	October 31,	
	2018	2017
Convertible senior notes	8.6	5.2
Warrants related to the issuance of convertible senior notes	11.6	5.2
RSUs and PSUs	7.5	7.3
Options to purchase common stock, including PSOs	4.2	1.5
RSAs and PSAs	0.2	0.8
ESPP shares	0.1	0.1
Total	32.2	20.1

15. Other Income, Net

The following table sets forth the components of other income, net (in millions):

	Three Months Ended	
	October 31,	
	2018	2017
Interest income	\$ 15.4	\$ 5.1
Foreign currency exchange gains (losses), net	—	(0.6)
Other	(2.4)	0.3
Total other income, net	\$ 13.0	\$ 4.8

ITEM 2. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our condensed consolidated financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q. The following discussion and analysis contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements include, among other things: expectations regarding drivers of and factors affecting growth in our business; the performance advantages of our products and subscription and support offerings and the potential benefits to our customers; statements regarding trends in billings, our mix of product and subscription and support revenue, cost of revenue, gross margin, cash flows, operating expenses, including future share-based compensation expense, income taxes, including our ongoing assessment of the impact of the TCJA and any future adjustments, investment plans and liquidity; expectations regarding the seasonality and cyclicity of our revenues from quarter to quarter; expectations and intentions with respect to the products and technologies that we acquire and introduce, including through deployment of new capabilities via security applications developed by third parties; expected impact of the adoption of certain recent accounting pronouncements and the anticipated timing of adopting such standards; expected recurring revenues resulting from expected growth in our installed base and increased adoption of our products and cloud-based subscription services; the sufficiency of our existing cash and investments to meet our cash needs for the foreseeable future; our plans to use the upfront cash reimbursement received from our landlords against future rental payments; and other statements regarding our future operations, financial condition and prospects, and business strategies. Forward-looking statements generally can be identified by words such as “anticipates,” “believes,” “could,” “estimates,” “expects,” “intends,” “may,” “plans,” “predicts,” “projects,” “would,” “will be,” “will continue,” “will likely result,” and similar expressions. These forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties, which could cause our actual results to differ materially from those anticipated or implied by any forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in this Quarterly Report on Form 10-Q, and in particular, the risks discussed under the caption “Risk Factors” in Part II, Item 1A of this report and those discussed in other documents we file with the Securities and Exchange Commission (“SEC”). We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements, except as required by law. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements.

Our Management’s Discussion and Analysis of Financial Condition and Results of Operations (“MD&A”) is organized as follows:

- **Overview.** A discussion of our business and overall analysis of financial and other highlights in order to provide context for the remainder of MD&A.
- **Key Financial Metrics.** A summary of our generally accepted accounting principles (“GAAP”) and non-GAAP key financial metrics, which management monitors to evaluate our performance.
- **Results of Operations.** A discussion of the nature and trends in our financial results and an analysis of our financial results comparing the three months ended October 31, 2018 to the three months ended October 31, 2017.
- **Liquidity and Capital Resources.** An analysis of changes in our balance sheets and cash flows, and a discussion of our financial condition and our ability to meet cash needs.
- **Contractual Obligations and Commitments.** An overview of our contractual obligations, contingent liabilities, commitments, and off-balance sheet arrangements outstanding as of October 31, 2018, including expected payment schedules.
- **Critical Accounting Estimates.** A discussion of our accounting policies that require critical estimates, assumptions, and judgments.

- **Recent Accounting Pronouncements.** A discussion of expected impacts of impending accounting changes on financial information to be reported in the future.

Overview

We have pioneered the next generation of security through our innovative Security Operating Platform that empowers enterprises, service providers, and government entities to secure their organizations by safely enabling applications and data running in their networks, on their endpoints, and in the cloud, and by preventing breaches that stem from targeted cyberattacks. Our platform uses an innovative traffic classification engine that identifies network traffic by application, user, and content and provides consistent security across the network, endpoint, and cloud. Accordingly, our platform enables our end-customers to pursue transformative digital initiatives, like public cloud and mobility, that grow their business, while maintaining the visibility and control needed to protect their valued data and critical control systems. We believe the architecture of our platform offers superior performance compared to legacy approaches and reduces the total cost of ownership for organizations by simplifying their security operations and infrastructure and eliminating the need for multiple, stand-alone hardware and software security products, and consists of four primary security capabilities.

- Security for networks through our Next-Generation Firewalls, available as physical appliances, virtual appliances (called VM-Series), or a cloud-delivered service (called GlobalProtect cloud service) and Panorama management delivered as an appliance or as a virtual machine for the public or private cloud.
- Security for endpoints through our Traps advanced endpoint protection software, delivered as a light-weight software agent with cloud or on-premise management capabilities.
- Security for the cloud through our VM-Series for in-line protection of workloads in public and private clouds, Traps for host-based public cloud infrastructure protection, Evident for infrastructure monitoring and compliance in public clouds, and Aperture for protecting SaaS applications. These products are delivered as software or SaaS applications.
- Other security services, such as WildFire, Threat Prevention, URL Filtering, and GlobalProtect subscriptions that are delivered as attached software services to our appliances, as well as applications delivered in connection with our Application Framework, such as AutoFocus, Magnifier, and Logging Service that are delivered as SaaS applications.

For the first quarter of fiscal 2019 and 2018, total revenue was \$656.0 million and \$501.8 million, respectively, representing year-over-year growth of 30.7%. Our growth reflects the increased adoption of our hybrid SaaS revenue model, which consists of product, subscriptions, and support. We believe this model will enable us to benefit from recurring revenues as we continue to grow our installed end-customer base. As of October 31, 2018, we had end-customers in over 150 countries. Our end-customers represent a broad range of industries, including education, energy, financial services, government entities, healthcare, Internet and media, manufacturing, public sector, and telecommunications, and include some of the largest Fortune 100 and Global 2000 companies in the world. We maintain a field sales force that works closely with our channel partners in developing sales opportunities. We use a two-tiered, indirect fulfillment model whereby we sell our products, subscriptions, and support to our distributors, which, in turn, sell to our resellers, which then sell to our end-customers.

Our product revenue grew to \$240.5 million, or 36.7% of total revenue, for the first quarter of fiscal 2019, representing year-over-year growth of 30.1%. Product revenue is generated from sales of our appliances, primarily our Next-Generation Firewall, which is available in physical and virtualized form. Our Next-Generation Firewall incorporates our proprietary PAN-OS operating system, which provides a consistent set of capabilities across our entire product line. Our products are designed for different performance requirements throughout an organization, ranging from our PA-200, which is designed for enterprise remote offices, to our top-of-the-line PA-7080, which is especially suited for very large enterprise deployments and service provider customers. The same firewall functionality that is delivered in our physical appliances is also available in our VM-Series virtual firewalls, which secure virtualized and cloud-based computing environments.

Our subscription and support revenue grew to \$415.5 million, or 63.3% of total revenue, for the first quarter of fiscal 2019, representing year-over-year growth of 31.1%. Our subscriptions provide our end-customers with real-time access to the latest antivirus, intrusion prevention, web filtering, and modern malware prevention capabilities across the network, endpoints, and the cloud. When end-customers purchase our physical or virtual firewall appliances, they typically purchase support in order to receive ongoing security updates, upgrades, bug fixes, and repairs. In addition to the subscriptions purchased with these appliances, end-customers may also purchase other subscriptions on a per-user, per-endpoint, or capacity-based basis.

We continue to invest in innovation as we evolve and further extend the capabilities of our platform, as we believe that innovation and timely development of new features and products is essential to meeting the needs of our end-customers and improving our competitive position. For example, in October 2018, we acquired RedLock Inc. (“RedLock”), which expands our security capabilities for the public cloud with the addition of RedLock’s cloud security analytics technology.

We believe that the growth of our business and our short-term and long-term success are dependent upon many factors, including our ability to extend our technology leadership, grow our base of end-customers, expand deployment of our platform and

support offerings within existing end-customers, and focus on end-customer satisfaction. To manage any future growth effectively, we must continue to improve and expand our information technology and financial infrastructure, our operating and administrative systems and controls, and our ability to manage headcount, capital, and processes in an efficient manner. While these areas present significant opportunities for us, they also pose challenges and risks that we must successfully address in order to sustain the growth of our business and improve our operating results. For additional information regarding the challenges and risks we face, see the “Risk Factors” section in Part II, Item 1A of this Quarterly Report on Form 10-Q.

Key Financial Metrics

We monitor the key financial metrics set forth in the tables below to help us evaluate growth trends, establish budgets, measure the effectiveness of our sales and marketing efforts, and assess operational efficiencies. We discuss revenue, gross margin, and the components of operating loss and margin below under “—Results of Operations.”

	October 31, 2018	July 31, 2018
	(in millions)	
Total deferred revenue ⁽¹⁾	\$ 2,384.4	\$ 2,279.3
Cash, cash equivalents, and investments	\$ 3,769.3	\$ 3,950.9

- (1) The amount for fiscal 2018 has been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

	Three Months Ended October 31,	
	2018	2017 ⁽¹⁾
	(dollars in millions)	
Total revenue	\$ 656.0	\$ 501.8
Total revenue year-over-year percentage increase	30.7 %	26.0 %
Gross margin	72.0 %	71.8 %
Operating loss	\$ (32.1)	\$ (53.5)
Operating margin	(4.9)%	(10.7)%
Billings	\$ 758.5	\$ 595.4
Billings year-over-year percentage increase	27.4 %	24.6 %
Cash flow provided by operating activities	\$ 252.3	\$ 274.0
Free cash flow (non-GAAP)	\$ 218.0	\$ 241.8

- (1) These amounts have been adjusted due to our adoption of the new revenue recognition standard and new guidance related to the presentation of restricted cash and cash equivalents in the statement of cash flows. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

- **Deferred Revenue.** Our deferred revenue primarily consists of amounts that have been invoiced but have not been recognized as revenue as of the period end. The majority of our deferred revenue balance consists of subscription and support revenue that is recognized ratably over the contractual service period. We monitor our deferred revenue balance because it represents a significant portion of revenue to be recognized in future periods.
- **Billings.** We define billings as total revenue plus the change in total deferred revenue, net of acquired deferred revenue, during the period. We consider billings to be a key metric used by management to manage our business given our hybrid SaaS revenue model, and believe billings provides investors with an important indicator of the health and visibility of our business because it includes subscription and support revenue, which is recognized ratably over the contractual service period, and product revenue, which is recognized at the time of shipment, provided that all other conditions for revenue recognition have been met. We consider billings to be a useful metric for management and investors, particularly if we continue to experience increased sales of subscriptions and strong renewal rates for subscription and support offerings, and as we monitor our near-term cash flows. While we believe that billings provides useful information to investors and others in understanding and evaluating our operating results in the same manner as our management, it is important to note that other companies, including companies in our industry, may not use billings, may calculate billings differently,

may have different billing frequencies, or may use other financial measures to evaluate their performance, all of which could reduce the usefulness of billings as a comparative measure. We calculate billings in the following manner:

	Three Months Ended October 31,	
	2018	2017 ⁽¹⁾
	(in millions)	
Billings:		
Total revenue	\$ 656.0	\$ 501.8
Add: change in total deferred revenue, net of acquired deferred revenue	102.5	93.6
Billings	<u>\$ 758.5</u>	<u>\$ 595.4</u>

(1) These amounts have been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

- **Cash Flow Provided by Operating Activities.** We monitor cash flow provided by operating activities as a measure of our overall business performance. Our cash flow provided by operating activities is driven in large part by sales of our products and from up-front payments for subscription and support offerings. Monitoring cash flow provided by operating activities enables us to analyze our financial performance without the non-cash effects of certain items such as depreciation, amortization, and share-based compensation costs, thereby allowing us to better understand and manage the cash needs of our business.
- **Free Cash Flow (non-GAAP).** We define free cash flow, a non-GAAP financial measure, as cash provided by operating activities less purchases of property, equipment, and other assets. We consider free cash flow to be a profitability and liquidity measure that provides useful information to management and investors about the amount of cash generated by the business after necessary capital expenditures. A limitation of the utility of free cash flow as a measure of our financial performance and liquidity is that it does not represent the total increase or decrease in our cash balance for the period. In addition, it is important to note that other companies, including companies in our industry, may not use free cash flow, may calculate free cash flow in a different manner than we do, or may use other financial measures to evaluate their performance, all of which could reduce the usefulness of free cash flow as a comparative measure. A reconciliation of free cash flow to cash flow provided by operating activities, the most directly comparable financial measure calculated and presented in accordance with GAAP, is provided below:

	Three Months Ended October 31,	
	2018	2017
	(in millions)	
Free cash flow (non-GAAP):		
Net cash provided by operating activities ⁽¹⁾	\$ 252.3	\$ 274.0
Less: purchases of property, equipment, and other assets	34.3	32.2
Free cash flow (non-GAAP) ⁽¹⁾	<u>\$ 218.0</u>	<u>\$ 241.8</u>
Net cash used in investing activities	<u>\$ (713.1)</u>	<u>\$ (52.4)</u>
Net cash used in financing activities	<u>\$ (261.8)</u>	<u>\$ (123.4)</u>

(1) The amount for fiscal 2018 has been adjusted due to our adoption of new guidance related to the presentation of restricted cash and cash equivalents in the statement of cash flows. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

Results of Operations

The following table summarizes our results of operations for the periods presented and as a percentage of our total revenue for those periods based on our condensed consolidated statements of operations data. The period to period comparison of results is not necessarily indicative of results for future periods.

	Three Months Ended October 31,			
	2018		2017 ⁽¹⁾	
	Amount	% of Revenue	Amount	% of Revenue
(dollars in millions)				
Revenue:				
Product	\$ 240.5	36.7 %	\$ 184.8	36.8 %
Subscription and support	415.5	63.3 %	317.0	63.2 %
Total revenue	656.0	100.0 %	501.8	100.0 %
Cost of revenue:				
Product	73.2	11.2 %	57.6	11.5 %
Subscription and support	110.3	16.8 %	83.7	16.7 %
Total cost of revenue⁽²⁾	183.5	28.0 %	141.3	28.2 %
Total gross profit	472.5	72.0 %	360.5	71.8 %
Operating expenses:				
Research and development	113.4	17.3 %	94.2	18.8 %
Sales and marketing	314.6	47.9 %	254.1	50.6 %
General and administrative	76.6	11.7 %	65.7	13.1 %
Total operating expenses⁽²⁾	504.6	76.9 %	414.0	82.5 %
Operating loss	(32.1)	(4.9)%	(53.5)	(10.7)%
Interest expense	(22.7)	(3.5)%	(6.3)	(1.3)%
Other income, net	13.0	2.0 %	4.8	1.0 %
Loss before income taxes	(41.8)	(6.4)%	(55.0)	(11.0)%
Provision for (benefit from) income taxes	(3.5)	(0.6)%	8.2	1.6 %
Net loss	\$ (38.3)	(5.8)%	\$ (63.2)	(12.6)%

(1) Certain amounts have been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

(2) Includes share-based compensation as follows:

	Three Months Ended October 31,	
	2018	2017
	(in millions)	
Cost of product revenue	\$ 1.6	\$ 1.9
Cost of subscription and support revenue	17.5	15.9
Research and development	40.5	37.5
Sales and marketing	56.0	51.2
General and administrative	35.5	19.2
Total share-based compensation	\$ 151.1	\$ 125.7

Revenue

Our revenue consists of product revenue and subscription and support revenue. Revenue is recognized upon transfer of control of the corresponding promised products and subscriptions and support to our customers in an amount that reflects the consideration we expect to be entitled to in exchange for those products and subscriptions and support. We expect our revenue to vary from quarter to quarter based on seasonal and cyclical factors.

Product Revenue

Product revenue is derived primarily from sales of our appliances. Product revenue also includes revenue derived from software licenses of Panorama and the VM-Series. We recognize product revenue at the time of hardware shipment or delivery of software license.

	Three Months Ended October 31,			
	2018	2017 ⁽¹⁾	Change	
	Amount	Amount	Amount	%
	(dollars in millions)			
Product	\$ 240.5	\$ 184.8	\$ 55.7	30.1%

(1) This amount has been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

Product revenue increased for the three months ended October 31, 2018 compared to the three months ended October 31, 2017 due to increased demand for our appliances. The change in product revenue due to pricing was not significant.

Subscription and Support Revenue

Subscription and support revenue is derived primarily from sales of our subscription and support offerings. Our contractual subscription and support contracts are typically one to five years. We recognize revenue from subscriptions and support over time as the services are performed. As a percentage of total revenue, we expect our subscription and support revenue to vary from quarter to quarter and increase over the long term as we introduce new subscriptions, renew existing subscription and support contracts, and expand our installed end-customer base.

	Three Months Ended October 31,			
	2018	2017 ⁽¹⁾	Change	
	Amount	Amount	Amount	%
	(dollars in millions)			
Subscription	\$ 231.3	\$ 169.0	\$ 62.3	36.9%
Support	184.2	148.0	36.2	24.5%
Total subscription and support	\$ 415.5	\$ 317.0	\$ 98.5	31.1%

(1) These amounts have been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

Subscription and support revenue increased for the three months ended October 31, 2018 compared to the three months ended October 31, 2017. The increase was due to increased demand for our subscription and support offerings from both new and existing end-customers. The mix between subscription revenue and support revenue will fluctuate over time, depending on the introduction of new subscription offerings, renewals of support services, and our ability to increase sales to new and existing customers. The change in subscription and support revenue due to changes in pricing was not significant for either period.

Revenue by Geographic Theater

	Three Months Ended October 31,			
	2018	2017 ⁽¹⁾	Change	
	Amount	Amount	Amount	%
	(dollars in millions)			
Americas	\$ 450.2	\$ 349.3	\$ 100.9	28.9%
EMEA	127.7	94.7	33.0	34.8%
APAC	78.1	57.8	20.3	35.1%
Total revenue	\$ 656.0	\$ 501.8	\$ 154.2	30.7%

(1) These amounts have been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

With respect to geographic theaters, the Americas contributed the largest portion of the increase in revenue for the three months ended October 31, 2018 compared to the three months ended October 31, 2017, due to its larger and more established sales force compared to our other theaters. Revenue from both Europe, the Middle East, and Africa (“EMEA”) and Asia Pacific and Japan (“APAC”) increased for the three months ended October 31, 2018 compared to the three months ended October 31, 2017, due to our investment in increasing the size of our sales force and number of channel partners in these theaters.

Cost of Revenue

Our cost of revenue consists of cost of product revenue and cost of subscription and support revenue.

Cost of Product Revenue

Cost of product revenue primarily includes costs paid to our manufacturing partners. Our cost of product revenue also includes personnel costs, which consist of salaries, benefits, bonuses, share-based compensation, and travel and entertainment associated with our operations organization, amortization of intellectual property licenses, product testing costs, shipping costs, and allocated costs. Allocated costs consist of certain facilities, depreciation, benefits, recruiting, and information technology costs that we allocate based on headcount. We expect our cost of product revenue to increase as our product revenue increases.

	Three Months Ended October 31,			
	2018	2017	Change	
	Amount	Amount	Amount	%
	(dollars in millions)			
Cost of product revenue	\$ 73.2	\$ 57.6	\$ 15.6	27.1 %
Number of employees at period end	97	98	(1)	(1.0)%

Cost of product revenue increased for the three months ended October 31, 2018 compared to the three months ended October 31, 2017 primarily due to an increase in product unit volume.

Cost of Subscription and Support Revenue

Cost of subscription and support revenue includes personnel costs for our global customer support and technical operations organizations, customer support and repair costs, third-party professional services costs, data center and cloud hosting costs, amortization of acquired intangible assets, and allocated costs. We expect our cost of subscription and support revenue to increase as our installed end-customer base grows and adoption of our cloud-based subscription offerings increases.

	Three Months Ended October 31,				
	2018		2017		Change
	Amount	Amount	Amount	%	
	(dollars in millions)				
Cost of subscription and support revenue ⁽¹⁾	\$ 110.3	\$ 83.7	\$ 26.6	31.8%	
Number of employees at period end	985	778	207	26.6%	

(1) The amount for fiscal 2018 has been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

Cost of subscription and support revenue increased for the three months ended October 31, 2018 compared to the three months ended October 31, 2017, primarily due to an increase in personnel costs for our global customer support and technical operations organizations, which grew \$11.5 million to \$58.6 million for the three months ended October 31, 2018 compared to the three months ended October 31, 2017, primarily due to headcount growth. The remaining increase was primarily due to data center and cloud hosting costs to support the adoption of our cloud-based subscription offerings, costs to expand our customer service capabilities, and amortization of purchased intangible assets.

Gross Margin

Gross margin, or gross profit as a percentage of revenue, has been and will continue to be affected by a variety of factors, including the introduction of new products, manufacturing costs, the average sales price of our products, the mix of products sold, and the mix of revenue between product and subscription and support offerings. For sales of our products, our higher-end firewall products generally have higher gross margins than our lower-end firewall products within each product series. For sales of our subscription and support offerings, our subscription offerings typically have higher gross margins than our support offerings. We expect our gross margins to fluctuate over time depending on the factors described above.

	Three Months Ended October 31,			
	2018		2017 ⁽¹⁾	
	Amount	Gross Margin	Amount	Gross Margin
	(dollars in millions)			
Product	\$ 167.3	69.6%	\$ 127.2	68.8%
Subscription and support	305.2	73.5%	233.3	73.6%
Total gross profit	\$ 472.5	72.0%	\$ 360.5	71.8%

(1) These amounts have been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

Product gross margin increased for the three months ended October 31, 2018 compared to the three months ended October 31, 2017, due to increased leverage of our operations organization, partially offset by higher product costs related to our newly introduced appliances, which have lower product margins.

Subscription and support gross margin was flat for the three months ended October 31, 2018 compared to the three months ended October 31, 2017.

Operating Expenses

Our operating expenses consist of research and development, sales and marketing, and general and administrative expense. Personnel costs are the most significant component of operating expenses and consist of salaries, benefits, bonuses, share-based compensation, travel and entertainment, and with regard to sales and marketing expense, sales commissions. Our operating expenses also include allocated costs, which consist of certain facilities, depreciation, benefits, recruiting, and information technology costs that we allocate based on headcount. We expect operating expenses to increase in absolute dollars and decrease over the long term as a percentage of revenue as we continue to scale our business. As of October 31, 2018, we expect to recognize approximately \$1.4 billion of share-based compensation expense over a weighted-average period of approximately 2.9 years, excluding additional share-based compensation expense related to any future grants of share-based awards. Share-based compensation expense is generally recognized on a straight-line basis over the requisite service periods of the awards.

Research and Development

Research and development expense consists primarily of personnel costs. Research and development expense also includes prototype related expenses and allocated costs. We expect research and development expense to increase in absolute dollars as we continue to invest in our future products and services, although our research and development expense may fluctuate as a percentage of total revenue.

	Three Months Ended October 31,			
	2018	2017	Change	
	Amount	Amount	Amount	%
	(dollars in millions)			
Research and development	\$ 113.4	\$ 94.2	\$ 19.2	20.4%
Number of employees at period end	1,047	787	260	33.0%

Research and development expense increased for the three months ended October 31, 2018 compared to the three months ended October 31, 2017. The increase was primarily due to an increase in personnel costs, which grew \$15.6 million to \$93.3 million for the three months ended October 31, 2018 compared to the three months ended October 31, 2017, largely due to headcount growth. The remaining increase was primarily driven by an increase in allocated costs.

Sales and Marketing

Sales and marketing expense consists primarily of personnel costs, including commission expense. Sales and marketing expense also includes costs for market development programs, promotional and other marketing costs, professional services, and allocated costs. We continue to thoughtfully invest in headcount and have substantially grown our sales presence internationally. We expect sales and marketing expense to continue to increase in absolute dollars as we increase the size of our sales and marketing organizations to increase touch points with end-customers and to expand our international presence, although our sales and marketing expense may fluctuate as a percentage of total revenue.

	Three Months Ended October 31,			
	2018	2017	Change	
	Amount	Amount	Amount	%
	(dollars in millions)			
Sales and marketing ⁽¹⁾	\$ 314.6	\$ 254.1	\$ 60.5	23.8%
Number of employees at period end	2,826	2,466	360	14.6%

(1) The amount for fiscal 2018 has been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

Sales and marketing expense increased for the three months ended October 31, 2018 compared to the three months ended October 31, 2017. The increase was primarily due to an increase in personnel costs, which grew \$34.8 million to \$227.3 million for the three months ended October 31, 2018 compared to the three months ended October 31, 2017, largely due to headcount growth. The remaining increase was primarily driven by an increase in allocated costs and costs related to user conferences.

General and Administrative

General and administrative expense consists primarily of personnel costs for our executive, finance, human resources, legal, and information technology organizations, and professional services costs, which consist primarily of legal, auditing, accounting, and other consulting costs. General and administrative expense also includes certain non-recurring general expenses and impairment losses. Certain facilities, depreciation, benefits, recruiting, and information technology costs are allocated to other organizations based on headcount. We expect general and administrative expense to increase in absolute dollars due to additional costs associated with accounting, compliance, and insurance, although our general and administrative expense may fluctuate as a percentage of total revenue.

	Three Months Ended October 31,			
	2018	2017	Change	
	Amount	Amount	Amount	%
	(dollars in millions)			
General and administrative	\$ 76.6	\$ 65.7	\$ 10.9	16.6%
Number of employees at period end	690	578	112	19.4%

General and administrative expense increased for the three months ended October 31, 2018 compared to the three months ended October 31, 2017. The increase was driven by an increase in personnel costs, which grew \$17.9 million to \$52.8 million for the three months ended October 31, 2018 compared to the three months ended October 31, 2017, primarily due to expense related to the accelerated vesting of certain equity awards in connection with the RedLock acquisition of \$14.2 million. This increase was partially offset by a decrease due to the cease-use loss of \$15.4 million recognized on the lease of our previous headquarter facilities during the three months ended October 31, 2017. The remaining increase was primarily due to an increase in legal expenses during the three months ended October 31, 2018.

Interest Expense

Interest expense primarily consists of non-cash interest expense from the amortization of the debt discount and debt issuance costs related to our 2019 Notes and 2023 Notes, and also includes the contractual interest expense related to our 2023 Notes.

	Three Months Ended October 31,			
	2018	2017	Change	
	Amount	Amount	Amount	%
	(dollars in millions)			
Interest expense	\$ (22.7)	\$ (6.3)	\$ (16.4)	260.3%

Interest expense increased for the three months ended October 31, 2018 compared to the three months ended October 31, 2017, primarily due to interest expense recognized on the 2023 Notes issued in July 2018. We expect interest expense to increase in fiscal 2019 due to interest expense to be incurred on the 2023 Notes, partially offset by a reduction in interest expense on the 2019 Notes due to conversions before or upon maturity. Refer to Note 9. Debt in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information on the Notes.

Other Income, Net

Other income, net includes interest income earned on our cash, cash equivalents, and investments, foreign currency remeasurement gains and losses, and foreign currency transaction gains and losses.

	Three Months Ended October 31,			
	2018	2017	Change	
	Amount	Amount	Amount	%
	(dollars in millions)			
Other income, net	\$ 13.0	\$ 4.8	\$ 8.2	170.8%

Other income, net increased for the three months ended October 31, 2018 compared to the three months ended October 31, 2017, primarily driven by a \$10.3 million increase in interest income, largely due to higher cash, cash equivalents, and investments

balances and higher yields on these balances during the three months ended October 31, 2018 compared to the three months ended October 31, 2017. This increase was partially offset by a \$2.2 million loss recognized related to the settlement of the 2019 Notes converted during the three months ended October 31, 2018. Refer to Note 9. Debt in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information on the Notes.

Provision for (Benefit from) Income Taxes

Provision for (benefit from) income taxes consists primarily of income taxes in foreign jurisdictions in which we conduct business, withholding taxes, and U.S. state income taxes. We maintain a full valuation allowance for domestic and certain foreign deferred tax assets, including net operating loss carryforwards and certain domestic tax credits. In recent years, we reorganized our corporate structure and intercompany relationships to more closely align with the international nature of our business activities. Our corporate structure has caused, and may continue to cause, disproportionate relationships between our overall effective tax rate and other jurisdictional measures. To the extent we revisit our corporate structure, it may have an impact on our tax provision.

	Three Months Ended October 31,		Change	
	2018	2017	Amount	%
	(dollars in millions)			
Provision for (benefit from) income taxes	\$ (3.5)	\$ 8.2	\$ (11.7)	(142.7)%
Effective tax rate	8.4%	(14.9)%		

We recorded an income tax benefit for the three months ended October 31, 2018. Key components of our provision for income taxes, excluding one-time items, include foreign income taxes and withholding taxes. Our provision for income taxes decreased for the three months ended October 31, 2018 compared to the three months ended October 31, 2017, primarily due to a one-time tax benefit of \$9.4 million from a partial release of our valuation allowance related to the acquisition of RedLock Inc. and due to our adoption of new accounting guidance for intra-entity asset transfers, other than inventory.

In December 2017, the Tax Cuts and Jobs Act (“TCJA”) was enacted into law. Since the enactment of the TCJA, we have recognized provisional amounts for the related tax effects as components of income tax expense. As of October 31, 2018, we did not have any significant adjustments to our assessment performed as of July 31, 2018. Refer to Note 13. Income Taxes in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information on the TCJA.

Liquidity and Capital Resources

	October 31, 2018	July 31, 2018
	(in millions)	
Working capital ⁽¹⁾⁽²⁾	\$ 1,999.5	\$ 2,036.8
Cash, cash equivalents, and investments:		
Cash and cash equivalents	\$ 1,784.4	\$ 2,506.9
Investments	1,984.9	1,444.0
Total cash, cash equivalents, and investments	<u>\$ 3,769.3</u>	<u>\$ 3,950.9</u>

- (1) The amount for fiscal 2018 has been adjusted due to our adoption of the new revenue recognition standard. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.
- (2) The net carrying amount of the 0.0% Convertible Senior Notes due 2019 (the “2019 Notes”) was classified in current liabilities in our condensed consolidated balance sheets as of October 31, 2018 and July 31, 2018, respectively. Refer to Note 9. Debt in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

As of October 31, 2018, our total cash, cash equivalents, and investments of \$3.8 billion were held for general corporate purposes, of which approximately \$225.5 million was held outside of the United States. As of October 31, 2018, we had no unremitted earnings when evaluating our outside basis difference relating to our U.S. investment in foreign subsidiaries. However, there could be local withholding taxes payable due to various foreign countries if certain lower tier earnings are distributed. Withholding taxes that would be payable upon remittance of these lower tier earnings were not material as of October 31, 2018.

In June 2014, we issued 2019 Notes with an aggregate principal amount of \$575.0 million and in July 2018, we issued the 2023 Notes with an aggregate principal amount of \$1.7 billion. As of October 31, 2018, \$247.7 million of the 2019 Notes remained

outstanding and all of the 2023 Notes remained outstanding. The 2019 Notes and the 2023 Notes mature on July 1, 2019 and July 1, 2023, respectively; however, under certain circumstances, holders may surrender their Notes of a series for conversion prior to the applicable maturity dates. Upon conversion of the Notes of a series, we will pay cash equal to the aggregate principal amount of the Notes of such series to be converted, and, at our election, will pay or deliver cash and/or shares of our common stock for the amount of our conversion obligation in excess of the aggregate principal amount of the Notes of such series being converted. During the three months ended October 31, 2018, holders converted \$327.3 million in aggregate principal amount of the 2019 Notes, which we repaid in cash. We also issued 1.4 million shares of our common stock to the holders for the conversion value in excess of the principal amount of the 2019 Notes converted, which were fully offset by shares received from our exercise of the associated note hedges. Subsequent to October 31, 2018, through the filing date of this Quarterly Report on Form 10-Q, \$88.3 million in principal amount of the 2019 Notes was converted or had been submitted by the holders for conversion and will settle during the fiscal quarter ending January 31, 2019. Refer to Note 9. Debt in Part I, Item 1 of this Quarterly Report on Form 10-Q for information on the Notes.

In September 2018, we entered into a credit agreement (the "Credit Agreement") that provides for a \$400.0 million unsecured revolving credit facility (the "Credit Facility"), with an option to increase the amount of the credit facility up to an additional \$350.0 million, subject to certain conditions. As of October 31, 2018, there were no amounts outstanding, and we were in compliance with all covenants under the Credit Agreement. Refer to Note 9. Debt in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information on the Credit Agreement.

In August 2016, our board of directors authorized a \$500.0 million share repurchase program and, in February 2017, authorized a \$500.0 million increase to the repurchase program, bringing the total authorization to \$1.0 billion. Repurchases are funded from available working capital and may be made at management's discretion from time to time. The repurchase authorization will expire on December 31, 2018 and may be suspended or discontinued at any time. As of October 31, 2018, \$330.0 million was available for future share repurchases under the repurchase authorization. Refer to Note 11. Stockholders' Equity in Part I, Item 1 of this Quarterly Report on Form 10-Q for information on the repurchase authorization.

The following table summarizes our cash flows for the three months ended October 31, 2018 and 2017:

	Three Months Ended October 31,	
	2018	2017
	(in millions)	
Net cash provided by operating activities ⁽¹⁾	\$ 252.3	\$ 274.0
Net cash used in investing activities	(713.1)	(52.4)
Net cash used in financing activities	(261.8)	(123.4)
Net increase (decrease) in cash, cash equivalents, and restricted cash ⁽¹⁾	\$ (722.6)	\$ 98.2

(1) The amount for fiscal 2018 has been adjusted due to our adoption of new guidance related to the presentation of restricted cash and cash equivalents in the statement of cash flows. Refer to Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

We believe that our cash flow from operations with existing cash and cash equivalents will be sufficient to meet our anticipated cash needs for the foreseeable future. Our future capital requirements will depend on many factors including our growth rate, the timing and extent of spending to support development efforts, the expansion of sales and marketing activities, the introduction of new and enhanced products and subscription and support offerings, the costs to acquire or invest in complementary businesses and technologies, the costs to ensure access to adequate manufacturing capacity, the investments in our infrastructure to support the adoption of our cloud-based subscription offerings, the investments in our new corporate headquarters, and the continuing market acceptance of our products and subscription and support offerings. In addition, from time to time we may incur additional tax liability in connection with certain corporate structuring decisions.

We may also choose to seek additional equity or debt financing. In the event that additional financing is required from outside sources, we may not be able to raise it on terms acceptable to us or at all. If we are unable to raise additional capital when desired, our business, operating results, and financial condition may be adversely affected.

Operating Activities

Our operating activities have consisted of net losses adjusted for certain non-cash items and changes in assets and liabilities.

Cash provided by operating activities during the three months ended October 31, 2018 was \$252.3 million, a decrease of \$21.7 million compared to the three months ended October 31, 2017. The decrease was due to repayments of the 2019 Notes attributable to the debt discount of \$52.3 million during the three months ended October 31, 2018, and the receipt of an upfront cash reimbursement of \$38.2 million related to certain of our lease agreements during the three months ended October 31, 2017. This was

partially offset by an increase due to growth of our business, as reflected by an increase in billings during the three months ended October 31, 2018.

Investing Activities

Our investing activities have consisted of capital expenditures, net investment purchases, sales, and maturities, and business acquisitions. We expect to continue such activities as our business grows.

Cash used in investing activities during the three months ended October 31, 2018 was \$713.1 million, an increase of \$660.7 million compared to the three months ended October 31, 2017, due to higher net purchases of investments and cash paid for our acquisition of RedLock during the three months ended October 31, 2018.

Financing Activities

Our financing activities have consisted of net proceeds from the issuance of the Notes and related transactions, proceeds from sales of shares through employee equity incentive plans, cash used to repurchase shares of our common stock, and payments for tax withholding obligations of certain employees related to the net share settlement of equity awards.

Cash used in financing activities during the three months ended October 31, 2018 was \$261.8 million, an increase of \$138.4 million compared to the three months ended October 31, 2017, primarily due to repayments of our 2019 Notes, partially offset by a decrease in repurchases of our common stock during the three months ended October 31, 2018.

Contractual Obligations and Commitments

The following summarizes our contractual obligations and commitments as of October 31, 2018:

	Payments Due by Period				
	Total	Less Than 1 Year	1-3 Years	3-5 Years	More Than 5 Years
	(in millions)				
0.0% Convertible Senior Notes due 2019 ⁽¹⁾	\$ 247.7	\$ 247.7	\$ —	\$ —	\$ —
0.75% Convertible Senior Notes due 2023	1,693.0	—	—	1,693.0	—
Operating lease obligations ⁽²⁾	525.8	67.8	130.5	114.5	213.0
Purchase obligations ⁽³⁾	163.6	155.6	8.0	—	—
Total⁽⁴⁾	\$ 2,630.1	\$ 471.1	\$ 138.5	\$ 1,807.5	\$ 213.0

- As of October 31, 2018, holders may convert their 2019 Notes at any time during the fiscal quarter ending January 31, 2019. Refer to Note 9. Debt in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.
- Consists of contractual obligations from our non-cancelable operating leases. Excludes contractual sublease proceeds of \$12.8 million, which consists of \$5.0 million to be received in less than one year, and \$7.8 million to be received in one to three years. Refer to Note 10. Commitments and Contingencies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information on our operating leases.
- Consists of minimum purchase commitments of products and components with our manufacturing partners and component suppliers, as well as minimum purchase commitments for our use of certain cloud services with a third-party provider. Obligations under contracts that we can cancel without a significant penalty are not included in the table above.
- No amounts related to income taxes are included. As of October 31, 2018, we had approximately \$81.7 million of tax liabilities recorded related to uncertainty in income tax positions.

Off-Balance Sheet Arrangements

As of October 31, 2018, we did not have any relationships with unconsolidated organizations or financial partnerships, such as structured finance or special purpose entities that would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Critical Accounting Estimates

Our condensed consolidated financial statements have been prepared in accordance with U.S. GAAP. The preparation of these condensed consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets,

liabilities, revenue, expenses, and related disclosures. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances. We evaluate our estimates and assumptions on an ongoing basis. Actual results may differ from these estimates. To the extent that there are material differences between these estimates and our actual results, our future financial statements will be affected.

We believe the critical accounting estimates discussed under Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our Annual Report on Form 10-K for the fiscal year ended July 31, 2018, reflect our more significant judgments and estimates used in the preparation of our condensed consolidated financial statements. There have been no significant changes to our critical accounting estimates as filed in such report, except for revenue recognition and deferred contract costs, due to our adoption of new accounting guidance, as described below. Refer to “Recently Adopted Accounting Pronouncements” in Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information on our adoption of the new accounting guidance.

Revenue Recognition

The majority of our contracts with our customers include various combinations of our products and subscriptions and support which are distinct and accounted for as separate performance obligations. We account for multiple agreements with a single customer as a single contract if the contractual terms and/or substance of those agreements indicate that they may be so closely related that they are, in effect, parts of a single contract. The amount we are due in exchange for delivering on the contract is allocated to each performance obligation based on its relative standalone selling price.

We establish standalone selling price using the prices charged for a deliverable when sold separately. If not observable through past transactions, we estimate the standalone selling price based on our pricing model and our go-to-market strategy, which include factors such as type of sales channel (reseller, distributor, or end-customer), the geographies in which our offerings were sold (domestic or international) and offering type (products, subscriptions, or support). As our business offerings evolve over time, we may be required to modify our estimated standalone selling prices, and as a result the timing and classification of our revenue could be affected.

Deferred Contract Costs

We defer contract costs that are recoverable and incremental to obtaining customer sales contracts. Contract costs, which primarily consist of sales commissions, are amortized on a systematic basis that is consistent with the transfer to the customer of the goods or services to which the asset relates. Sales commissions for initial contracts that are not commensurate with renewal commissions are amortized over a benefit period of five years, consistent with the revenue recognition pattern of the performance obligations in the related contracts including expected renewals. The benefit period is determined by taking into consideration of contract length, technology life, and other quantitative and qualitative factors. The expected renewals are estimated based on historical renewal trends. Sales commissions for initial contracts that are commensurate and sales commissions for renewal contracts are amortized over the related contractual period in proportion to the revenue recognized.

Recent Accounting Pronouncements

Refer to “Recently Issued Accounting Pronouncements” in Note 1. Description of Business and Summary of Significant Accounting Policies in Part I, Item 1 of this Quarterly Report on Form 10-Q.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Our assessment of our exposures to market risk have not changed materially since the presentation set forth in Part II, Item 7A of our Annual Report on Form 10-K for the fiscal year ended July 31, 2018.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures pursuant to Rule 13a-15 under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), as of the end of the period covered by this report. Based on our evaluation, our chief executive officer and chief financial officer concluded that, as of October 31, 2018, our disclosure controls and procedures are designed at a reasonable assurance level and are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the fiscal quarter ended October 31, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. We implemented internal controls in connection with our adoption of the new accounting standard related to revenue recognition effective August 1, 2018; however, these did not constitute significant changes to our internal control over financial reporting.

Limitations on Controls

In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs. Further, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within the Company have been detected.

PART II

ITEM 1. LEGAL PROCEEDINGS

The information set forth under the “Litigation” subheading in Note 10. Commitments and Contingencies in Part I, Item 1 of this Quarterly Report on Form 10-Q is incorporated herein by reference.

ITEM 1A. RISK FACTORS

Our operations and financial results are subject to various risks and uncertainties including those described below. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, also may become important factors that affect us. If any of the following risks or others not specified below materialize, our business, financial condition, and operating results could be materially adversely affected and the market price of our common stock could decline.

Risks Related to Our Business and Our Industry

Our business and operations have experienced rapid growth in recent periods, and if we do not effectively manage any future growth or are unable to improve our systems, processes, and controls, our operating results could be adversely affected.

We have experienced rapid growth and increased demand for our products and subscriptions over the last few years. As a result, our employee headcount has increased significantly, and we expect it to continue to grow over the next year. For example, from the end of fiscal 2018 to the end of the first quarter of fiscal 2019, our headcount increased from 5,348 to 5,645 employees. In addition, as we have grown, our number of end-customers has also increased significantly, and we have increasingly managed more complex deployments of our products and subscriptions with larger end-customers. The growth and expansion of our business and product, subscription, and support offerings places a significant strain on our management, operational, and financial resources. To manage any future growth effectively, we must continue to improve and expand our information technology and financial infrastructure, our operating and administrative systems and controls, and our ability to manage headcount, capital, and processes in an efficient manner.

We may not be able to successfully implement or scale improvements to our systems, processes, and controls in an efficient or timely manner. In addition, our existing systems, processes, and controls may not prevent or detect all errors, omissions, or fraud. We may also experience difficulties in managing improvements to our systems, processes, and controls or in connection with third-party software licensed to help us with such improvements. Any future growth would add complexity to our organization and require effective coordination throughout our organization. Failure to manage any future growth effectively could result in increased costs, disrupt our existing end-customer relationships, reduce demand for or limit us to smaller deployments of our platform, or harm our business performance and operating results.

Our operating results may vary significantly from period to period and be unpredictable, which could cause the market price of our common stock to decline.

Our operating results, in particular, our revenues, gross margins, operating margins, and operating expenses, have historically varied from period to period, and even though we have experienced growth, we expect variation to continue as a result of a number of factors, many of which are outside of our control and may be difficult to predict, including:

- our ability to attract and retain new end-customers or sell additional products and subscriptions to our existing end-customers;
- the budgeting cycles, seasonal buying patterns, and purchasing practices of our end-customers;
- changes in end-customer, distributor or reseller requirements, or market needs;
- price competition;
- the timing and success of new product and service introductions by us or our competitors or any other change in the competitive landscape of our industry, including consolidation among our competitors or end-customers and strategic partnerships entered into by and between our competitors;
- changes in the mix of our products, subscriptions, and support, including changes in multi-year subscriptions and support;
- our ability to successfully and continuously expand our business domestically and internationally;
- changes in the growth rate of the enterprise security market;
- deferral of orders from end-customers in anticipation of new products or product enhancements announced by us or our competitors;

- the timing and costs related to the development or acquisition of technologies or businesses or strategic partnerships;
- lack of synergy or the inability to realize expected synergies, resulting from acquisitions or strategic partnerships;
- our inability to execute, complete or integrate efficiently any acquisitions that we may undertake;
- increased expenses, unforeseen liabilities, or write-downs and any impact on our operating results from any acquisitions we consummate;
- our ability to increase the size and productivity of our distribution channel;
- decisions by potential end-customers to purchase security solutions from larger, more established security vendors or from their primary network equipment vendors;
- changes in end-customer penetration or attach and renewal rates for our subscriptions;
- timing of revenue recognition and revenue deferrals;
- our ability to manage production and manufacturing related costs, global customer service organization costs, inventory excess and obsolescence costs, and warranty costs;
- insolvency or credit difficulties confronting our end-customers, which could adversely affect their ability to purchase or pay for our products and subscription and support offerings, or confronting our key suppliers, including our sole source suppliers, which could disrupt our supply chain;
- any disruption in our channel or termination of our relationships with important channel partners, including as a result of consolidation among distributors and resellers of security solutions;
- our inability to fulfill our end-customers' orders due to supply chain delays or events that impact our manufacturers or their suppliers;
- the cost and potential outcomes of litigation, which could have a material adverse effect on our business;
- seasonality or cyclical fluctuations in our markets;
- future accounting pronouncements or changes in our accounting policies, including the impact of the adoption and implementation of the Financial Accounting Standards Board's new standard regarding revenue recognition;
- increases or decreases in our expenses caused by fluctuations in foreign currency exchange rates, as an increasing amount of our expenses is incurred and paid in currencies other than the U.S. dollar;
- political, economic and social instability caused by the referendum in June 2016, in which voters in the United Kingdom (the "U.K.") approved an exit from the European Union (the "E.U.") and the U.K. government subsequently notified the E.U. of its withdrawal, which is commonly referred to as "Brexit," continued hostilities in the Middle East, terrorist activities, and any disruption these events may cause to the broader global industrial economy; and
- general macroeconomic conditions, both domestically and in our foreign markets that could impact some or all regions where we operate.

Any one of the factors above, or the cumulative effect of some of the factors referred to above, may result in significant fluctuations in our financial and other operating results. This variability and unpredictability could result in our failure to meet our revenue, margin, or other operating result expectations or those of securities analysts or investors for a particular period. If we fail to meet or exceed such expectations for these or any other reasons, the market price of our common stock could fall substantially, and we could face costly lawsuits, including securities class action suits.

Uncertain or weakened global economic conditions could have an adverse effect on our business and operating results.

We operate globally and as a result our business and revenues are impacted by global macroeconomic conditions. The global macroeconomic environment has been and may continue to be inconsistent and challenging due to instability in the global credit markets, the current economic challenges in China, falling demand for oil and other commodities, uncertainties regarding the effects of "Brexit," uncertainties related to elections and changes in public policies such as domestic and international regulations, taxes, or international trade agreements, geopolitical turmoil and other disruptions to global and regional economies and markets. As a result, any continued or further uncertainty, weakness or deterioration in global macroeconomic and market conditions may cause our end-customers to modify spending priorities or delay purchasing decisions, and result in lengthened sales cycles, any of which could harm our business and operating results.

Our revenue growth rate in recent periods may not be indicative of our future performance.

We have experienced revenue growth rates of 30.7% and 26.0% in the first quarter of fiscal 2019 and fiscal 2018, respectively. Our revenue for any prior quarterly or annual period should not be relied upon as an indication of our future revenue or revenue growth for any future period. If we are unable to maintain consistent or increasing revenue or revenue growth, the market price of our common stock could be volatile, and it may be difficult for us to achieve and maintain profitability or maintain or increase cash flow on a consistent basis.

We have a history of losses, anticipate increasing our operating expenses in the future, and may not be able to achieve or maintain profitability or maintain or increase cash flow on a consistent basis, which could cause our business, financial condition, and operating results to suffer.

Other than fiscal 2012, we have incurred losses in all fiscal years since our inception. As a result, we had an accumulated deficit of \$857.3 million as of October 31, 2018. We anticipate that our operating expenses will continue to increase in the foreseeable future as we continue to grow our business. Our growth efforts may prove more expensive than we currently anticipate, and we may not succeed in increasing our revenues sufficiently, or at all, to offset increasing expenses. Revenue growth may slow or revenue may decline for a number of possible reasons, including slowing demand for our products or subscriptions, increasing competition, a decrease in the growth of our overall market, or a failure to capitalize on growth opportunities. Any failure to increase our revenue as we grow our business could prevent us from achieving or maintaining profitability or maintaining or increasing cash flow on a consistent basis. In addition, we may have difficulty achieving profitability under U.S. GAAP due to share-based compensation expense and other non-cash charges. If we are unable to navigate these challenges as we encounter them, our business, financial condition, and operating results may suffer.

If we are unable to sell additional product, subscription, and support offerings to our end-customers, our future revenue and operating results will be harmed.

Our future success depends, in part, on our ability to expand the deployment of our platform with existing end-customers. This may require increasingly sophisticated and costly sales efforts that may not result in additional sales. The rate at which our end-customers purchase additional products, subscriptions, and support depends on a number of factors, including the perceived need for additional security products, including subscription and support offerings, as well as general economic conditions. Further, existing end-customers have no contractual obligation to and may not renew their subscription and support contracts after the completion of their initial contract period. Our end-customers' renewal rates may decline or fluctuate as a result of a number of factors, including their level of satisfaction with our subscriptions and our support offerings, the frequency and severity of subscription outages, our product uptime or latency, and the pricing of our, or competing, subscriptions. Additionally, our end-customers may renew their subscription and support agreements for shorter contract lengths or on other terms that are less economically beneficial to us. We also cannot be certain that our end-customers will renew their subscription and support agreements. If our efforts to sell additional products and subscriptions to our end-customers are not successful or our end-customers do not renew their subscription and support agreements or renew them on less favorable terms, our revenues may grow more slowly than expected or decline.

We face intense competition in our market, especially from larger, well-established companies, and we may lack sufficient financial or other resources to maintain or improve our competitive position.

The market for enterprise security products is intensely competitive, and we expect competition to increase in the future from established competitors and new market entrants. Our main competitors fall into three categories:

- large companies that incorporate security features in their products, such as Cisco Systems, Inc. ("Cisco") and Juniper Networks, Inc. ("Juniper"), or those that have acquired, or may acquire, large network and endpoint security vendors and have the technical and financial resources to bring competitive solutions to the market;
- independent security vendors, such as Symantec Corporation, Check Point Software Technologies Ltd. ("Check Point"), Fortinet, Inc., and FireEye, Inc., that offer a mix of network and endpoint security products; and
- small and large companies that offer point solutions and/or cloud security services that compete with some of the features present in our platform.

Many of our existing competitors have, and some of our potential competitors could have, substantial competitive advantages such as:

- greater name recognition and longer operating histories;
- larger sales and marketing budgets and resources;
- broader distribution and established relationships with distribution partners and end-customers;
- greater customer support resources;

- greater resources to make strategic acquisitions or enter into strategic partnerships;
- lower labor and development costs;
- larger and more mature intellectual property portfolios; and
- substantially greater financial, technical, and other resources.

In addition, some of our larger competitors have substantially broader and more diverse product and services offerings, which may make them less susceptible to downturns in a particular market and allow them to leverage their relationships based on other products or incorporate functionality into existing products to gain business in a manner that discourages users from purchasing our products and subscriptions, including through selling at zero or negative margins, offering concessions, product bundling, or closed technology platforms. Many of our smaller competitors that specialize in providing protection from a single type of security threat are often able to deliver these specialized security products to the market more quickly than we can.

Organizations that use legacy products and services may believe that these products and services are sufficient to meet their security needs or that our platform only serves the needs of a portion of the enterprise security market. Accordingly, these organizations may continue allocating their information technology budgets for legacy products and services and may not adopt our security platform. Further, many organizations have invested substantial personnel and financial resources to design and operate their networks and have established deep relationships with other providers of networking and security products. As a result, these organizations may prefer to purchase from their existing suppliers rather than add or switch to a new supplier such as us regardless of product performance, features, or greater services offerings or may be more willing to incrementally add solutions to their existing security infrastructure from existing suppliers than to replace it wholesale with our solutions.

Conditions in our market could change rapidly and significantly as a result of technological advancements, partnering or acquisitions by our competitors, or continuing market consolidation. New start-up companies that innovate and large competitors that are making significant investments in research and development may invent similar or superior products and technologies that compete with our products and subscriptions. Some of our competitors have made or could make acquisitions of businesses that may allow them to offer more directly competitive and comprehensive solutions than they had previously offered and adapt more quickly to new technologies and end-customer needs. Our current and potential competitors may also establish cooperative relationships among themselves or with third parties that may further enhance their resources.

These competitive pressures in our market or our failure to compete effectively may result in price reductions, fewer orders, reduced revenue and gross margins, and loss of market share. Any failure to meet and address these factors could seriously harm our business and operating results.

A network or data security incident may allow unauthorized access to our network or data, harm our reputation, create additional liability and adversely impact our financial results.

Increasingly, companies are subject to a wide variety of attacks on their networks on an ongoing basis. In addition to traditional computer “hackers,” malicious code (such as viruses and worms), phishing attempts, employee theft or misuse, and denial of service attacks, sophisticated nation-state and nation-state supported actors engage in intrusions and attacks (including advanced persistent threat intrusions) and add to the risks to our internal networks, cloud deployed enterprise and customer facing environments and the information they store and process. Despite significant efforts to create security barriers to such threats, it is virtually impossible for us to entirely mitigate these risks. We and our third-party service providers may face security threats and attacks from a variety of sources. Our data, corporate systems, third-party systems and security measures may be breached due to the actions of outside parties, employee error, malfeasance, a combination of these, or otherwise, and, as a result, an unauthorized party may obtain access to our data. Furthermore, as a well-known provider of security solutions, we may be a more attractive target for such attacks. A breach in our data security or an attack against our service availability, or that of our third-party service providers, could impact our networks or networks secured by our products and subscriptions, creating system disruptions or slowdowns and exploiting security vulnerabilities of our products, and the information stored on our networks or those of our third-party service providers could be accessed, publicly disclosed, altered, lost, or stolen, which could subject us to liability and cause us financial harm. Although we have not yet experienced significant damages from unauthorized access by a third party of our internal network, any actual or perceived breach of network security in our systems or networks, or any other actual or perceived data security incident we or our third-party service providers suffer, could result in damage to our reputation, negative publicity, loss of channel partners, end-customers and sales, loss of competitive advantages over our competitors, increased costs to remedy any problems and otherwise respond to any incident, regulatory investigations and enforcement actions, costly litigation, and other liability. In addition, we may incur significant costs and operational consequences of investigating, remediating, eliminating and putting in place additional tools and devices designed to prevent actual or perceived security incidents, as well as the costs to comply with any notification obligations resulting from any security incidents. While we maintain cybersecurity insurance, our insurance may be insufficient to cover all liabilities incurred by these incidents, and any incidents may result in loss of, or increased costs of, our cybersecurity insurance. Any of these negative outcomes could adversely impact the market perception of our products and subscriptions and end-customer and investor confidence in our company and could seriously harm our business or operating results.

Reliance on shipments at the end of the quarter could cause our revenue for the applicable period to fall below expected levels.

As a result of end-customer buying patterns and the efforts of our sales force and channel partners to meet or exceed their sales objectives, we have historically received a substantial portion of sales orders and generated a substantial portion of revenue during the last few weeks of each fiscal quarter. If expected revenue at the end of any fiscal quarter is delayed for any reason, including the failure of anticipated purchase orders to materialize (particularly for large enterprise end-customers with lengthy sales cycles), our logistics partners' inability to ship products prior to fiscal quarter-end to fulfill purchase orders received near the end of the fiscal quarter, our failure to manage inventory to meet demand, any failure of our systems related to order review and processing, or any delays in shipments based on trade compliance requirements (including new compliance requirements imposed by new or renegotiated trade agreements), revenue could fall below our expectations and the estimates of analysts for that quarter, which could adversely impact our business and operating results and cause a decline in the market price of our common stock.

Seasonality may cause fluctuations in our revenue.

We believe there are significant seasonal factors that may cause our second and fourth fiscal quarters to record greater revenue sequentially than our first and third fiscal quarters. We believe that this seasonality results from a number of factors, including:

- end-customers with a December 31 fiscal year-end choosing to spend remaining unused portions of their discretionary budgets before their fiscal year-end, which potentially results in a positive impact on our revenue in our second fiscal quarter;
- our sales compensation plans, which are typically structured around annual quotas and commission rate accelerators, which potentially results in a positive impact on our revenue in our fourth fiscal quarter;
- seasonal reductions in business activity during August in the United States, Europe and certain other regions, which potentially results in a negative impact on our first fiscal quarter revenue; and
- the timing of end-customer budget planning at the beginning of the calendar year, which can result in a delay in spending at the beginning of the calendar year potentially resulting in a negative impact on our revenue in our third fiscal quarter.

As we continue to grow, seasonal or cyclical variations in our operations may become more pronounced, and our business, operating results and financial position may be adversely affected.

If we are unable to hire, integrate, train, retain, and motivate qualified personnel and senior management, our business could suffer.

Our future success depends, in part, on our ability to continue to hire, integrate, train, and retain qualified and highly skilled personnel. We are substantially dependent on the continued service of our existing engineering personnel because of the complexity of our platform. Additionally, any failure to hire, integrate, train, and adequately incentivize our sales personnel or the inability of our recently hired sales personnel to effectively ramp to target productivity levels could negatively impact our growth and operating margins. Competition for highly skilled personnel, particularly in engineering, is often intense, especially in the San Francisco Bay Area, where we have a substantial presence and need for such personnel. Additionally, potential changes in U.S. immigration and work authorization laws and regulations may make it difficult to renew or obtain visas for any highly skilled personnel that we have hired or are actively recruiting.

In addition, the industry in which we operate generally experiences high employee attrition. Although we have entered into employment offer letters with our key personnel, these agreements have no specific duration and constitute at-will employment. We do not maintain key person life insurance policies on any of our employees. The loss of one or more of our key employees, and any failure to have in place and execute an effective succession plan for key executives, could seriously harm our business. If we are unable to hire, integrate, train, or retain the qualified and highly skilled personnel required to fulfill our current or future needs, our business, financial condition, and operating results could be harmed.

Our future performance also depends on the continued services and continuing contributions of our senior management to execute on our business plan and to identify and pursue new opportunities and product innovations. The loss of services of senior management or the ineffective management of any leadership transitions, especially within our sales organization, could significantly delay or prevent the achievement of our development and strategic objectives, which could adversely affect our business, financial condition, and operating results.

Further, we believe that a critical contributor to our success and our ability to retain highly skilled personnel has been our corporate culture, which we believe fosters innovation, teamwork, passion for end-customers, focus on execution, and the facilitation of critical knowledge transfer and knowledge sharing. As we grow and change, we may find it difficult to maintain these important aspects of our corporate culture. Any failure to preserve our culture as we grow could limit our ability to innovate and could negatively affect our ability to retain and recruit personnel, continue to perform at current levels or execute on our business strategy.

If we are not successful in executing our strategy to increase sales of our products and subscriptions to new and existing medium and large enterprise end-customers, our operating results may suffer.

Our growth strategy is dependent, in part, upon increasing sales of our products to new and existing medium and large enterprise end-customers. Sales to these end-customers involve risks that may not be present, or that are present to a lesser extent, with sales to smaller entities. These risks include:

- competition from larger competitors, such as Cisco, Check Point, and Juniper, that traditionally target larger enterprises, service providers, and government entities and that may have pre-existing relationships or purchase commitments from those end-customers;
- increased purchasing power and leverage held by large end-customers in negotiating contractual arrangements with us;
- more stringent requirements in our worldwide support contracts, including stricter support response times and penalties for any failure to meet support requirements; and
- longer sales cycles, in some cases over 12 months, and the associated risk that substantial time and resources may be spent on a potential end-customer that elects not to purchase our products and subscriptions.

In addition, product purchases by large enterprises are frequently subject to budget constraints, multiple approvals, and unplanned administrative, processing, and other delays. Finally, large enterprises typically have longer implementation cycles, require greater product functionality and scalability and a broader range of services, demand that vendors take on a larger share of risks, sometimes require acceptance provisions that can lead to a delay in revenue recognition, and expect greater payment flexibility from vendors. All of these factors can add further risk to business conducted with these end-customers. If we fail to realize an expected sale from a large end-customer in a particular quarter or at all, our business, operating results, and financial condition could be materially and adversely affected.

We rely on revenue from subscription and support offerings, and because we recognize revenue from subscription and support over the term of the relevant service period, downturns or upturns in sales of these subscription and support offerings are not immediately reflected in full in our operating results.

Subscription and support revenue accounts for a significant portion of our revenue, comprising 63.3% of total revenue in the first quarter of fiscal 2019 and 63.2% of total revenue in the first quarter of fiscal 2018. Sales of new or renewal subscription and support contracts may decline and fluctuate as a result of a number of factors, including end-customers' level of satisfaction with our products and subscriptions (including newly integrated products and services), the prices of our products and subscriptions, the prices of products and services offered by our competitors, and reductions in our end-customers' spending levels. If our sales of new or renewal subscription and support contracts decline, our total revenue and revenue growth rate may decline and our business will suffer. In addition, we recognize subscription and support revenue monthly over the term of the relevant service period, which is typically one to five years. As a result, much of the subscription and support revenue we report each fiscal quarter is the recognition of deferred revenue from subscription and support contracts entered into during previous fiscal quarters. Consequently, a decline in new or renewed subscription or support contracts in any one fiscal quarter will not be fully or immediately reflected in revenue in that fiscal quarter but will negatively affect our revenue in future fiscal quarters. Also, it is difficult for us to rapidly increase our subscription and support revenue through additional subscription and support sales in any period, as revenue from new and renewal subscription and support contracts must be recognized over the applicable service period.

Defects, errors, or vulnerabilities in our products, subscriptions, or support offerings, the failure of our products or subscriptions to block a virus or prevent a security breach, misuse of our products, or risks of product liability claims could harm our reputation and adversely impact our operating results.

Because our products and subscriptions are complex, they have contained and may contain design or manufacturing defects or errors that are not detected until after their commercial release and deployment by our end-customers. For example, from time to time, certain of our end-customers have reported defects in our products related to performance, scalability, and compatibility. Additionally, defects may cause our products or subscriptions to be vulnerable to security attacks, cause them to fail to help secure networks, or temporarily interrupt end-customers' networking traffic. Because the techniques used by computer hackers to access or sabotage networks change frequently and generally are not recognized until launched against a target, we may be unable to anticipate these techniques and provide a solution in time to protect our end-customers' networks. Furthermore, as a well-known provider of security solutions, our networks, products, including cloud-based technology, and subscriptions could be targeted by attacks specifically designed to disrupt our business and harm our reputation. In addition, defects or errors in our subscription updates or our products could result in a failure of our subscriptions to effectively update end-customers' hardware and cloud-based products. Our data centers and networks may experience technical failures and downtime, may fail to distribute appropriate updates, or may fail to meet the increased requirements of a growing installed end-customer base, any of which could temporarily or permanently expose our end-customers' networks, leaving their networks unprotected against the latest security threats. Moreover, our products must interoperate with our end-customers' existing infrastructure, which often have different specifications, utilize multiple protocol standards, deploy

products from multiple vendors, and contain multiple generations of products that have been added over time. As a result, when problems occur in a network, it may be difficult to identify the sources of these problems.

The occurrence of any such problem in our products and subscriptions, whether real or perceived, could result in:

- expenditure of significant financial and product development resources in efforts to analyze, correct, eliminate, or work-around errors or defects or to address and eliminate vulnerabilities;
- loss of existing or potential end-customers or channel partners;
- delayed or lost revenue;
- delay or failure to attain market acceptance;
- an increase in warranty claims compared with our historical experience, or an increased cost of servicing warranty claims, either of which would adversely affect our gross margins; and
- litigation, regulatory inquiries, or investigations, each of which may be costly and harm our reputation.

Further, our products and subscriptions may be misused by end-customers or third parties that obtain access to our products and subscriptions. For example, our products and subscriptions could be used to censor private access to certain information on the Internet. Such use of our products and subscriptions for censorship could result in negative press coverage and negatively affect our reputation.

The limitation of liability provisions in our standard terms and conditions of sale may not fully or effectively protect us from claims as a result of federal, state, or local laws or ordinances, or unfavorable judicial decisions in the United States or other countries. The sale and support of our products and subscriptions also entails the risk of product liability claims. Although we may be indemnified by our third-party manufacturers for product liability claims arising out of manufacturing defects, because we control the design of our products and subscriptions, we may not be indemnified for product liability claims arising out of design defects. We maintain insurance to protect against certain claims associated with the use of our products and subscriptions, but our insurance coverage may not adequately cover any claim asserted against us. In addition, even claims that ultimately are unsuccessful could result in our expenditure of funds in litigation, divert management's time and other resources, and harm our reputation.

False detection of applications, viruses, spyware, vulnerability exploits, data patterns, or URL categories could adversely affect our business.

Our classifications of application type, virus, spyware, vulnerability exploits, data, or uniform resource locator ("URL") categories may falsely detect, report and act on applications, content, or threats that do not actually exist. This risk is heightened by the inclusion of a "heuristics" feature in our products and subscriptions, which attempts to identify applications and other threats not based on any known signatures but based on characteristics or anomalies which indicate that a particular item may be a threat. These false positives may impair the perceived reliability of our products and subscriptions and may therefore adversely impact market acceptance of our products and subscriptions. If our products and subscriptions restrict important files or applications based on falsely identifying them as malware or some other item that should be restricted, this could adversely affect end-customers' systems and cause material system failures. Any such false identification of important files or applications could result in damage to our reputation, negative publicity, loss of channel partners, end-customers and sales, increased costs to remedy any problem, and costly litigation.

We rely on our channel partners to sell substantially all of our products, including subscriptions and support, and if these channel partners fail to perform, our ability to sell and distribute our products and subscriptions will be limited, and our operating results will be harmed.

Substantially all of our revenue is generated by sales through our channel partners, including distributors and resellers. We provide our channel partners with specific training and programs to assist them in selling our products, including subscriptions and support offerings, but there can be no assurance that these steps will be utilized or effective. In addition, our channel partners may be unsuccessful in marketing, selling, and supporting our products and subscriptions. We may not be able to incentivize these channel partners to sell our products and subscriptions to end-customers and, in particular, to large enterprises. These channel partners may also have incentives to promote our competitors' products and may devote more resources to the marketing, sales, and support of competitive products. Our agreements with our channel partners may generally be terminated for any reason by either party with advance notice prior to each annual renewal date. We cannot be certain that we will retain these channel partners or that we will be able to secure additional or replacement channel partners. In addition, any new channel partner requires extensive training and may take several months or more to achieve productivity. Our channel partner sales structure could subject us to lawsuits, potential liability, and reputational harm if, for example, any of our channel partners misrepresent the functionality of our products or subscriptions to end-customers or violate laws or our corporate policies. If we fail to effectively manage our sales channels or channel partners, our ability to sell our products and subscriptions and operating results will be harmed.

If we do not accurately predict, prepare for, and respond promptly to rapidly evolving technological and market developments and successfully manage product and subscription introductions and transitions to meet changing end-customer needs in the enterprise security market, our competitive position and prospects will be harmed.

The enterprise security market has grown quickly and is expected to continue to evolve rapidly. Moreover, many of our end-customers operate in markets characterized by rapidly changing technologies and business plans, which require them to add numerous network access points and adapt increasingly complex enterprise networks, incorporating a variety of hardware, software applications, operating systems, and networking protocols. If we fail to accurately predict end-customers' changing needs and emerging technological trends in the enterprise security industry, including in the areas of mobility, virtualization, cloud computing, and software defined networks ("SDN"), our business could be harmed. The technology in our platform is especially complex because it needs to effectively identify and respond to new and increasingly sophisticated methods of attack, while minimizing the impact on network performance. Additionally, some of our new platform features and related platform enhancements may require us to develop new hardware architectures that involve complex, expensive, and time-consuming research and development processes. The development of our platform is difficult and the timetable for commercial release and availability is uncertain as there can be long time periods between releases and availability of new platform features. If we experience unanticipated delays in the availability of new products, platform features, and subscriptions, and fail to meet customer expectations for such availability, our competitive position and business prospects will be harmed.

Additionally, we must commit significant resources to developing new platform features before knowing whether our investments will result in products, subscriptions, and platform features the market will accept. The success of new platform features depends on several factors, including appropriate new product definition, differentiation of new products, subscriptions, and platform features from those of our competitors, and market acceptance of these products, services and platform features. Moreover, successful new product introduction and transition depends on a number of factors including, our ability to manage the risks associated with new product production ramp-up issues, the availability of application software for new products, the effective management of purchase commitments and inventory, the availability of products in appropriate quantities and costs to meet anticipated demand, and the risk that new products may have quality or other defects or deficiencies, especially in the early stages of introduction. There can be no assurance that we will successfully identify opportunities for new products and subscriptions, develop and bring new products and subscriptions to market in a timely manner, or achieve market acceptance of our products and subscriptions, or that products, subscriptions, and technologies developed by others will not render our products, subscriptions, or technologies obsolete or noncompetitive.

Our current research and development efforts may not produce successful products, subscriptions, or platform features that result in significant revenue, cost savings or other benefits in the near future, if at all.

Developing our products, subscriptions, platform features, and related enhancements is expensive. Our investments in research and development may not result in significant design improvements, marketable products, subscriptions, or platform features, or may result in products, subscriptions, or platform features that are more expensive than anticipated. Additionally, we may not achieve the cost savings or the anticipated performance improvements we expect, and we may take longer to generate revenue, or generate less revenue, than we anticipate. Our future plans include significant investments in research and development and related product and subscription opportunities. We believe that we must continue to dedicate a significant amount of resources to our research and development efforts to maintain our competitive position. However, we may not receive significant revenue from these investments in the near future, if at all, or these investments may not yield the expected benefits, either of which could adversely affect our business and operating results.

Because we depend on manufacturing partners to build and ship our products, we are susceptible to manufacturing and logistics delays and pricing fluctuations that could prevent us from shipping customer orders on time, if at all, or on a cost-effective basis, which may result in the loss of sales and end-customers.

We depend on manufacturing partners, primarily Flextronics International, Ltd. ("Flex"), our electronics manufacturing service provider ("EMS provider"), as sole source manufacturers for our product lines. Our reliance on these manufacturing partners reduces our control over the manufacturing process and exposes us to risks, including reduced control over quality assurance, product costs, product supply, timing and transportation risk. Our products are manufactured by our manufacturing partners at facilities located in the United States. Some of the components in our products are sourced either through Flex or directly by us from component suppliers outside the United States. The portion of our products that are sourced outside the United States may subject us to additional logistical risks or risks associated with complying with local rules and regulations in foreign countries. Significant changes to existing international trade agreements could lead to sourcing or logistics disruption resulting from import delays or the imposition of increased tariffs on our sourcing partners. For example, the United States and Chinese governments have each enacted, and discussed potential, import tariffs. These tariffs, depending on their ultimate scope and how they are implemented, could negatively impact our business by increasing our costs. Each of these factors could severely impair our ability to fulfill orders.

In addition, we are subject to requirements under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the "Dodd-Frank Act") to diligence, disclose, and report whether or not our products contain minerals originating from the Democratic

Republic of the Congo and adjoining countries, or conflict minerals. Although the SEC has provided guidance with respect to a portion of the conflict minerals filing requirements that may somewhat reduce our reporting practices, we have incurred and expect to incur additional costs to comply with these disclosure requirements, including costs related to determining the source of any of the relevant minerals and metals used in our products. These requirements could adversely affect the sourcing, availability, and pricing of minerals used in the manufacture of semiconductor devices or other components used in our products. We may also encounter end-customers who require that all of the components of our products be certified as conflict free. If we are not able to meet this requirement, such end-customers may choose not to purchase our products.

Our manufacturing partners typically fulfill our supply requirements on the basis of individual purchase orders. We do not have long-term contracts with these manufacturers that guarantee capacity, the continuation of particular pricing terms, or the extension of credit limits. Accordingly, they are not obligated to continue to fulfill our supply requirements and the prices we pay for manufacturing services could be increased on short notice. Our contract with Flex permits them to terminate the agreement for their convenience, subject to prior notice requirements. If we are required to change manufacturing partners, our ability to meet our scheduled product deliveries to our end-customers could be adversely affected, which could cause the loss of sales to existing or potential end-customers, delayed revenue or an increase in our costs which could adversely affect our gross margins. Any production interruptions for any reason, such as a natural disaster, epidemic, capacity shortages, or quality problems, at one of our manufacturing partners would negatively affect sales of our product lines manufactured by that manufacturing partner and adversely affect our business and operating results.

Managing the supply of our products and product components is complex. Insufficient supply and inventory may result in lost sales opportunities or delayed revenue, while excess inventory may harm our gross margins.

Our manufacturing partners procure components and build our products based on our forecasts, and we generally do not hold inventory for a prolonged period of time. These forecasts are based on estimates of future demand for our products, which are in turn based on historical trends and analyses from our sales and product management organizations, adjusted for overall market conditions. In order to reduce manufacturing lead times and plan for adequate component supply, from time to time we may issue forecasts for components and products that are non-cancelable and non-returnable.

Our inventory management systems and related supply chain visibility tools may be inadequate to enable us to forecast accurately and effectively manage supply of our products and product components. If we ultimately determine that we have excess supply, we may have to reduce our prices and write-down inventory, which in turn could result in lower gross margins. If our actual component usage and product demand are lower than the forecast we provide to our manufacturing partners, we accrue for losses on manufacturing commitments in excess of forecasted demand. Alternatively, insufficient supply levels may lead to shortages that result in delayed product revenue or loss of sales opportunities altogether as potential end-customers turn to competitors' products that are readily available. If we are unable to effectively manage our supply and inventory, our operating results could be adversely affected.

Because some of the key components in our products come from limited sources of supply, we are susceptible to supply shortages or supply changes, which could disrupt or delay our scheduled product deliveries to our end-customers and may result in the loss of sales and end-customers.

Our products rely on key components, including integrated circuit components, which our manufacturing partners purchase on our behalf from a limited number of component suppliers, including sole source providers. The manufacturing operations of some of our component suppliers are geographically concentrated in Asia and elsewhere, which makes our supply chain vulnerable to regional disruptions, such as natural disasters, fire, political instability, civil unrest, a power outage, or a localized health risk, and as a result could impair the volume of components that we are able to obtain.

Further, we do not have volume purchase contracts with any of our component suppliers, and they could cease selling to us at any time. If we are unable to obtain a sufficient quantity of these components in a timely manner for any reason, sales of our products could be delayed or halted or we could be forced to expedite shipment of such components or our products at dramatically increased costs. Our component suppliers also change their selling prices frequently in response to market trends, including industry-wide increases in demand, and because we do not have volume purchase contracts with these component suppliers, we are susceptible to price fluctuations related to raw materials and components and may not be able to adjust our prices accordingly. Additionally, poor quality in any of the sole-sourced components in our products could result in lost sales or sales opportunities.

If we are unable to obtain a sufficient volume of the necessary components for our products on commercially reasonable terms or the quality of the components do not meet our requirements, we could also be forced to redesign our products and qualify new components from alternate component suppliers. The resulting stoppage or delay in selling our products and the expense of redesigning our products could result in lost sales opportunities and damage to customer relationships, which would adversely affect our business and operating results.

The sales prices of our products and subscriptions may decrease, which may reduce our gross profits and adversely impact our financial results.

The sales prices for our products and subscriptions may decline for a variety of reasons, including competitive pricing pressures, discounts, a change in our mix of products and subscriptions, anticipation of the introduction of new products or subscriptions, or promotional programs. Competition continues to increase in the market segments in which we participate, and we expect competition to further increase in the future, thereby leading to increased pricing pressures. Larger competitors with more diverse product and service offerings may reduce the price of products or subscriptions that compete with ours or may bundle them with other products and subscriptions. Additionally, although we price our products and subscriptions worldwide in U.S. dollars, currency fluctuations in certain countries and regions may negatively impact actual prices that channel partners and end-customers are willing to pay in those countries and regions. Furthermore, we anticipate that the sales prices and gross profits for our products will decrease over product life cycles. We cannot guarantee that we will be successful in developing and introducing new offerings with enhanced functionality on a timely basis, or that our product and subscription offerings, if introduced, will enable us to maintain our prices and gross profits at levels that will allow us to achieve and maintain profitability.

We generate a significant amount of revenue from sales to distributors, resellers, and end-customers outside of the United States, and we are therefore subject to a number of risks associated with international sales and operations.

We have a limited history of marketing, selling, and supporting our products and subscriptions internationally. We may experience difficulties in recruiting, training, managing, and retaining an international staff, and specifically staff related to sales management and sales personnel. We also may not be able to maintain successful strategic distributor relationships internationally or recruit additional companies to enter into strategic distributor relationships. Business practices in the international markets that we serve may differ from those in the United States and may require us in the future to include terms other than our standard terms related to payment, warranties, or performance obligations in end-customer contracts.

Additionally, our international sales and operations are subject to a number of risks, including the following:

- political, economic and social uncertainty around the world, macroeconomic challenges in Europe, terrorist activities, and continued hostilities in the Middle East;
- greater difficulty in enforcing contracts and accounts receivable collection and longer collection periods;
- the uncertainty of protection for intellectual property rights in some countries;
- greater risk of unexpected changes in foreign and domestic regulatory practices, tariffs, and tax laws and treaties, including regulatory and trade policy changes adopted by the current administration or foreign countries in response to regulatory changes adopted by the current administration;
- risks associated with trade restrictions and foreign legal requirements, including the importation, certification, and localization of our products required in foreign countries;
- greater risk of a failure of foreign employees, channel partners, distributors, and resellers to comply with both U.S. and foreign laws, including antitrust regulations, the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act, U.S. or foreign sanctions regimes and export or import control laws, and any trade regulations ensuring fair trade practices, which non-compliance could include increased costs;
- heightened risk of unfair or corrupt business practices in certain geographies and of improper or fraudulent sales arrangements;
- increased expenses incurred in establishing and maintaining office space and equipment for our international operations;
- management communication and integration problems resulting from cultural and geographic dispersion; and
- fluctuations in exchange rates between the U.S. dollar and foreign currencies in markets where we do business and related impact on sales cycles.

These and other factors could harm our future international revenues and, consequently, materially impact our business, operating results, and financial condition. The expansion of our existing international operations and entry into additional international markets will require significant management attention and financial resources. Our failure to successfully manage our international operations and the associated risks effectively could limit the future growth of our business.

Further, we are subject to risks associated with changes in economic and political conditions in countries in which we operate or sell our products and subscriptions. For instance, the U.K.'s notification of its intention to leave the E.U. creates an uncertain political and economic environment in the U.K. and potentially across other E.U. member states for the foreseeable future, including during any period while the terms of any U.K. exit from the E.U. are being negotiated and/or during any transitional period connected to the U.K.'s eventual withdrawal from the E.U. Any agreements arising out of negotiations which the U.K. government makes to retain access to E.U. markets either during a transitional period or more permanently may lead to greater restrictions on the free movement

of goods, services, people and capital between the U.K. and the remaining E.U. member states. Our financial condition and operating results in the U.K. and the E.U. may be impacted by such uncertainty with potential disruptions to our relationships with existing and future customers, suppliers and employees all possibly having a material adverse impact on our business, prospects, financial condition and/or operating results.

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

Our sales contracts are primarily denominated in U.S. dollars, and therefore, substantially all of our revenue is not subject to foreign currency risk. However, including as a result of concerns regarding the impact of Brexit, there has been, and may continue to be, significant volatility in global stock markets and foreign currency exchange rates that result in the strengthening of the U.S. dollar against foreign currencies in which we conduct business. The strengthening of the U.S. dollar increases the real cost of our platform to our end-customers outside of the United States and may lead to delays in the purchase of our products, subscriptions, and support, and the lengthening of our sales cycle. If the U.S. dollar continues to strengthen, this could adversely affect our financial condition and operating results. In addition, increased international sales in the future, including through our channel partners and other partnerships, may result in greater foreign currency denominated sales, increasing our foreign currency risk.

Our operating expenses incurred outside the United States and denominated in foreign currencies are increasing and are subject to fluctuations due to changes in foreign currency exchange rates. If we are not able to successfully hedge against the risks associated with foreign currency fluctuations, our financial condition and operating results could be adversely affected. We have entered into forward contracts in an effort to reduce our foreign currency exchange exposure related to our foreign currency denominated expenditures. As of October 31, 2018, the total notional amount of our outstanding foreign currency forward contracts was \$238.0 million. For more information on our hedging transactions, refer to Note 5. Derivative Instruments in Part I, Item 1 of this Quarterly Report on Form 10-Q. The effectiveness of our existing hedging transactions and the availability and effectiveness of any hedging transactions we may decide to enter into in the future may be limited and we may not be able to successfully hedge our exposure, which could adversely affect our financial condition and operating results.

A small number of channel partners represent a large percentage of our revenue and gross accounts receivable. We are exposed to the credit and liquidity risk of some of our channel partners and to credit exposure in weakened markets, which could result in material losses.

For the first quarter of fiscal 2019, three distributors represented 65.4% of our total revenue, and as of October 31, 2018, three distributors represented 65.9% of our gross accounts receivable. Most of our sales to our channel partners are made on an open credit basis. Although we have programs in place that are designed to monitor and mitigate these risks, we cannot guarantee these programs will be effective in reducing our credit risks, especially as we expand our business internationally. If we are unable to adequately control these risks, our business, operating results, and financial condition could be harmed.

A portion of our revenue is generated by sales to government entities, which are subject to a number of challenges and risks.

Sales to government entities are subject to a number of risks. Selling to government entities can be highly competitive, expensive, and time-consuming, often requiring significant upfront time and expense without any assurance that these efforts will generate a sale. The substantial majority of our sales to date to government entities have been made indirectly through our channel partners. Government certification requirements for products and subscriptions like ours may change, thereby restricting our ability to sell into the federal government sector until we have attained the revised certification. If our products and subscriptions are late in achieving or fail to achieve compliance with these certifications and standards, or our competitors achieve compliance with these certifications and standards, we may be disqualified from selling our products and subscriptions to such governmental entity, or be at a competitive disadvantage, which would harm our business, operating results, and financial condition. Government demand and payment for our products and subscriptions may be impacted by government shutdowns, public sector budgetary cycles, contracting requirements, and funding authorizations, with funding reductions or delays adversely affecting public sector demand for our products and subscriptions. Government entities may have statutory, contractual, or other legal rights to terminate contracts with our distributors and resellers for convenience or due to a default, and any such termination may adversely impact our future operating results. Governments routinely investigate and audit government contractors' administrative processes, and any unfavorable audit could result in the government refusing to continue buying our products and subscriptions, a reduction of revenue, or fines or civil or criminal liability if the audit uncovers improper or illegal activities, which could adversely impact our operating results in a material way. Additionally, the U.S. government may require certain of the products that it purchases to be manufactured in the United States and other relatively high cost manufacturing locations, and we may not manufacture all products in locations that meet such requirements, affecting our ability to sell these products and subscriptions to the U.S. government.

Our ability to sell our products and subscriptions is dependent on the quality of our technical support services and those of our channel partners, and the failure to offer high-quality technical support services could have a material adverse effect on our end-customers' satisfaction with our products and subscriptions, our sales, and our operating results.

After our products and subscriptions are deployed within our end-customers' networks, our end-customers depend on our technical support services, as well as the support of our channel partners, to resolve any issues relating to our products. Our channel partners often provide similar technical support for third parties' products and may therefore have fewer resources to dedicate to the support of our products and subscriptions. If we or our channel partners do not effectively assist our end-customers in deploying our products and subscriptions, succeed in helping our end-customers quickly resolve post-deployment issues, or provide effective ongoing support, our ability to sell additional products and subscriptions to existing end-customers would be adversely affected and our reputation with potential end-customers could be damaged. Many larger enterprise, service provider, and government entity end-customers have more complex networks and require higher levels of support than smaller end-customers. If we or our channel partners fail to meet the requirements of these larger end-customers, it may be more difficult to execute on our strategy to increase our coverage with larger end-customers. Additionally, if our channel partners do not effectively provide support to the satisfaction of our end-customers, we may be required to provide direct support to such end-customers, which would require us to hire additional personnel and to invest in additional resources. It can take several months to recruit, hire, and train qualified technical support employees. We may not be able to hire such resources fast enough to keep up with unexpected demand, particularly if the sales of our products exceed our internal forecasts. As a result, our ability, and the ability of our channel partners to provide adequate and timely support to our end-customers will be negatively impacted, and our end-customers' satisfaction with our products and subscriptions will be adversely affected. Additionally, to the extent that we may need to rely on our sales engineers to provide post-sales support while we are ramping our support resources, our sales productivity will be negatively impacted, which would harm our revenues. Our failure or our channel partners' failure to provide and maintain high-quality support services could have a material adverse effect on our business, financial condition, and operating results.

We may acquire other businesses, which could require significant management attention, disrupt our business, dilute stockholder value, and adversely affect our operating results.

As part of our business strategy, we may acquire or make investments in complementary companies, products, or technologies. For example, in April 2014, we acquired Cyvera Ltd. ("Cyvera"), in May 2015, we acquired CirroSecure, Inc., in February 2017, we acquired LightCyber Ltd. ("LightCyber"), in March 2018, we acquired Evident.io, in April 2018, we acquired Secdo, and in October 2018 we acquired RedLock Inc. The identification of suitable acquisition candidates is difficult, and we may not be able to complete such acquisitions on favorable terms, if at all. If we do complete future acquisitions, we may not ultimately strengthen our competitive position or achieve our goals and business strategy; we may be subject to claims or liabilities assumed from an acquired company, product, or technology; acquisitions we complete could be viewed negatively by our end-customers, investors, and securities analysts; and we may incur costs and expenses necessary to address an acquired company's failure to comply with laws and governmental rules and regulations. Additionally, we may be subject to litigation or other claims in connection with the acquired company, including claims from terminated employees, customers, former stockholders or other third parties, which may differ from or be more significant than the risks our business faces. If we are unsuccessful at integrating past or future acquisitions in a timely manner, or the technologies and operations associated with such acquisitions, into our company, the revenue and operating results of the combined company could be adversely affected. Any integration process may require significant time and resources, which may disrupt our ongoing business and divert management's attention, and we may not be able to manage the integration process successfully or in a timely manner. We may not successfully evaluate or utilize the acquired technology or personnel, realize anticipated synergies from the acquisition, or accurately forecast the financial impact of an acquisition transaction and integration of such acquisition, including accounting charges and any potential impairment of goodwill and intangible assets recognized in connection with such acquisitions. We may have to pay cash, incur debt, or issue equity or equity-linked securities to pay for any future acquisitions, each of which could adversely affect our financial condition or the market price of our common stock. Furthermore, the sale of equity or issuance of equity-linked debt to finance any future acquisitions could result in dilution to our stockholders. See the risk factors entitled "Our failure to raise additional capital or generate the significant capital necessary to expand our operations and invest in new products and subscriptions could reduce our ability to compete and could harm our business" and "The issuance of additional stock in connection with financings, acquisitions, investments, our stock incentive plans, the conversion of our Notes or exercise of the related Warrants, or otherwise will dilute all other stockholders." The occurrence of any of these risks could harm our business, operating results, and financial condition.

Claims by others that we infringe their proprietary technology or other rights could harm our business.

Companies in the enterprise security industry own large numbers of patents, copyrights, trademarks, domain names, and trade secrets and frequently enter into litigation based on allegations of infringement, misappropriation, or other violations of intellectual property or other rights. Third parties have asserted and may in the future assert claims of infringement of intellectual property rights against us. For example, in December 2011, Juniper, one of our competitors, filed a lawsuit against us alleging patent infringement. In September 2013, we filed a lawsuit against Juniper alleging patent infringement. In May 2014, we entered into a Settlement, Release

and Cross-License Agreement with Juniper to resolve all pending disputes between Juniper and us, including dismissal of all pending litigation.

Third parties may also assert such claims against our end-customers or channel partners, whom our standard license and other agreements obligate us to indemnify against claims that our products and subscriptions infringe the intellectual property rights of third parties. In addition, to the extent we hire personnel from competitors, we may be subject to allegations that they have been improperly solicited, that they have divulged proprietary or other confidential information, or that their former employers own their inventions or other work product. Furthermore, we may be unaware of the intellectual property rights of others that may cover some or all of our technology or products and subscriptions. As the number of products and competitors in our market increases and overlaps occur, infringement claims may increase. While we intend to increase the size of our patent portfolio, our competitors and others may now and in the future have significantly larger and more mature patent portfolios than we have. In addition, litigation may involve patent holding companies or other adverse patent owners who have no relevant product revenue and against whom our own patents may therefore provide little or no deterrence or protection. In addition, we have not registered our trademarks in all of our geographic markets and failure to secure those registrations could adversely affect our ability to enforce and defend our trademark rights. Any claim of infringement by a third party, even those without merit, could cause us to incur substantial costs defending against the claim, could distract our management from our business, and could require us to cease use of such intellectual property. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. A successful claimant could secure a judgment or we may agree to a settlement that prevents us from distributing certain products or performing certain services or that requires us to pay substantial damages, royalties, or other fees. Any of these events could seriously harm our business, financial condition, and operating results.

Our proprietary rights may be difficult to enforce or protect, which could enable others to copy or use aspects of our products or subscriptions without compensating us.

We rely and expect to continue to rely on a combination of confidentiality and license agreements with our employees, consultants, and third parties with whom we have relationships, as well as trademark, copyright, patent, and trade secret protection laws, to protect our proprietary rights. We have filed various applications for certain aspects of our intellectual property. Valid patents may not issue from our pending applications, and the claims eventually allowed on any patents may not be sufficiently broad to protect our technology or products and subscriptions. We cannot be certain that we were the first to make the inventions claimed in our pending patent applications or that we were the first to file for patent protection, which could prevent our patent applications from issuing as patents or invalidate our patents following issuance. Additionally, the process of obtaining patent protection is expensive and time-consuming, and we may not be able to prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. Any issued patents may be challenged, invalidated or circumvented, and any rights granted under these patents may not actually provide adequate defensive protection or competitive advantages to us. Additional uncertainty may result from changes to patent-related laws and court rulings in the United States and other jurisdictions. As a result, we may not be able to obtain adequate patent protection or effectively enforce any issued patents.

Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our products or subscriptions or obtain and use information that we regard as proprietary. We generally enter into confidentiality or license agreements with our employees, consultants, vendors, and end-customers, and generally limit access to and distribution of our proprietary information. However, we cannot be certain 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. Because we may be an attractive target for computer hackers, we may have a greater risk of unauthorized access to, and misappropriation of, our proprietary information. In addition, the laws of some foreign countries do not protect our proprietary rights to as great an extent as the laws of the United States, and many foreign countries do not enforce these laws as diligently as government agencies and private parties in the United States. From time to time, we may need to take legal action to enforce our patents and other intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others or to defend against claims of infringement or invalidity. Such litigation could result in substantial costs and diversion of resources and could negatively affect our business, operating results, and financial condition. Attempts to enforce our rights against third parties could also provoke these third parties to assert their own intellectual property or other rights against us, or result in a holding that invalidates or narrows the scope of our rights, in whole or in part. If we are unable to protect our proprietary rights (including aspects of our software and products protected other than by patent rights), we may find ourselves at a competitive disadvantage to others who need not incur the additional expense, time, and effort required to create the innovative products that have enabled us to be successful to date. Any of these events would have a material adverse effect on our business, financial condition, and operating results.

Our use of open source software in our products and subscriptions could negatively affect our ability to sell our products and subscriptions and subject us to possible litigation.

Our products and subscriptions contain software modules licensed to us by third-party authors under “open source” licenses. Some open source licenses contain requirements that we make available applicable source code for modifications or derivative works

we create based upon the type of open source software we use. If we combine our proprietary software with open source software in a certain manner, we could, under certain open source licenses, be required to release the source code of our proprietary software to the public. This would allow our competitors to create similar products or subscriptions with lower development effort and time and ultimately could result in a loss of product sales for us.

Although we monitor our use of open source software to avoid subjecting our products and subscriptions to conditions we do not intend, the terms of many open source licenses have not been interpreted by United States courts, and there is a risk that these licenses could be construed in a way that could impose unanticipated conditions or restrictions on our ability to commercialize our products and subscriptions. From time to time, there have been claims against companies that distribute or use open source software in their products and subscriptions, asserting that open source software infringes the claimants' intellectual property rights. We could be subject to suits by parties claiming infringement of intellectual property rights in what we believe to be licensed open source software. If we are held to have breached the terms of an open source software license, we could be required to seek licenses from third parties to continue offering our products and subscriptions on terms that are not economically feasible, to reengineer our products and subscriptions, to discontinue the sale of our products and subscriptions if reengineering could not be accomplished on a timely basis, or to make generally available, in source code form, our proprietary code, any of which could adversely affect our business, operating results, and financial condition.

In addition to risks related to license requirements, usage of open source software can lead to greater risks than use of third-party commercial software, as open source licensors generally do not provide warranties or assurance of title or controls on origin of the software. In addition, many of the risks associated with usage of open source software, such as the lack of warranties or assurances of title, cannot be eliminated, and could, if not properly addressed, negatively affect our business. We have established processes to help alleviate these risks, including a review process for screening requests from our development organizations for the use of open source software, but we cannot be sure that our processes for controlling our use of open source software in our products and subscriptions will be effective.

We license technology from third parties, and our inability to maintain those licenses could harm our business.

We incorporate technology that we license from third parties, including software, into our products and subscriptions. 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 and subscriptions. In addition, some licenses may be non-exclusive, and therefore our competitors may have access to the same technology licensed to us. Some of our agreements with our licensors may be terminated for convenience by them. We may also be subject to additional fees or be required to obtain new licenses if any of our licensors allege that we have not properly paid for such licenses or that we have improperly used the technologies under such licenses, and such licenses may not be available on terms acceptable to us or at all. If we are unable to continue to license any of this technology because of intellectual property infringement claims brought by third parties against our licensors or against us, or claims against us by our licensors, or if we are unable to continue our license agreements or enter into new licenses on commercially reasonable terms, our ability to develop and sell products and subscriptions containing such technology would be severely limited, and our business could be harmed. Additionally, if we are unable to license necessary technology from third parties, we may be forced to acquire or develop alternative technology, which we may be unable to do in a commercially feasible manner or at all, and we may be required to use alternative technology of lower quality or performance standards. This would limit and delay our ability to offer new or competitive products and subscriptions and increase our costs of production. As a result, our margins, market share, and operating results could be significantly harmed.

We face risks associated with having operations and employees located in Israel.

As a result of our acquisitions of Cyvera, LightCyber, and Secdo, we have an office and employees located in Israel. Accordingly, political, economic, and military conditions in Israel directly affect our operations. The future of peace efforts between Israel and its Arab neighbors remains uncertain. There has been a significant increase in hostilities and political unrest between Hamas and Israel in the past few years. The effects of these hostilities and violence on the Israeli economy and our operations in Israel are unclear, and we cannot predict the effect on us of further increases in these hostilities or future armed conflict, political instability or violence in the region. Current or future tensions and conflicts in the Middle East could adversely affect our business, operating results, financial condition and cash flows.

In addition, many of our employees in Israel are obligated to perform annual reserve duty in the Israeli military and are subject to being called for active duty under emergency circumstances. We cannot predict the full impact of these conditions on us in the future, particularly if emergency circumstances or an escalation in the political situation occurs. If many of our employees in Israel are called for active duty for a significant period of time, our operations and our business could be disrupted and may not be able to function at full capacity. Any disruption in our operations in Israel could adversely affect our business.

Our failure to adequately protect personal information could have a material adverse effect on our business.

A wide variety of provincial, state, national, and international laws and regulations apply to the collection, use, retention, protection, disclosure, transfer, and other processing of personal data. These data protection and privacy-related laws and regulations

are evolving and being tested in courts and may result in ever-increasing regulatory and public scrutiny as well as escalating levels of enforcement and sanctions. Further, the interpretation and application of foreign laws and regulations in many cases is uncertain, and our legal and regulatory obligations in foreign jurisdictions are subject to frequent and unexpected changes, including the potential for various regulatory or other governmental bodies to enact new or additional laws or regulations, to issue rulings that invalidate prior laws or regulations, or to increase penalties significantly.

For example, the E.U. General Data Protection Regulation (“GDPR”), which became effective in May 2018, imposes more stringent data protection requirements, and provides for greater penalties for noncompliance, than E.U. laws that previously applied. In the U.K., a Data Protection Bill that substantially implements the GDPR also became law in May 2018. Additionally, California recently enacted legislation, the California Consumer Privacy Act (“CCPA”), that will, among other things, require covered companies to provide new disclosures to California consumers, and afford such consumers new abilities to opt-out of certain sales of personal information, when it goes into effect on January 1, 2020. Legislators have stated that they intend to propose amendments to the CCPA before it goes into effect, and it remains unclear what, if any, modifications will be made to this legislation or how it will be interpreted. The effects of the CCPA potentially are significant, however, 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 from time to time be subject to, or face assertions that we are subject to, additional obligations relating to personal data by contract or due to assertions that self-regulatory obligations or industry standards apply to our practices.

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 acquisition, use or other processing, could result in consequences such as enforcement actions and regulatory investigations against us, fines, public censure, claims for damages by end-customers and other affected individuals, damage to our reputation and loss of goodwill (both in relation to existing end-customers and prospective end-customers), any of which could have a material adverse effect on our operations, financial performance, and business. Evolving and changing definitions of personal data and personal information, within the E.U., the United States, and elsewhere, especially relating to classification of Internet Protocol (“IP”) addresses, machine identification, location data, and other information, may limit or inhibit our ability to operate or expand our business, including limiting strategic partnerships that may involve the sharing or uses of data, and may require significant expenditures and efforts in order to comply. Even the perception of privacy, data protection or information security concerns, whether or not valid, may harm our reputation and inhibit adoption of our products and subscriptions by current and future end-customers.

We are subject to governmental export and import controls that could subject us to liability or impair our ability to compete in international markets.

Because we incorporate encryption technology into our products, certain of our products are subject to U.S. export controls and may be exported outside the United States only with the required export license or through an export license exception. If we were to fail to comply with U.S. export licensing requirements, U.S. customs regulations, U.S. economic sanctions, or other laws, we could be subject to substantial civil and criminal penalties, including fines, incarceration for responsible employees and managers, and the possible loss of export or import privileges. Obtaining the necessary export license for a particular sale may be time-consuming and may result in the delay or loss of sales opportunities. Furthermore, U.S. export control laws and economic sanctions prohibit the shipment of certain products to U.S. embargoed or sanctioned countries, governments, and persons. Even though we take precautions to ensure that our channel partners comply with all relevant regulations, any failure by our channel partners to comply with such regulations could have negative consequences for us, including reputational harm, government investigations, and penalties.

In addition, various countries regulate the import of certain encryption technology, including through import permit and license requirements, and have enacted laws that could limit our ability to distribute our products or could limit our end-customers’ ability to implement our products in those countries. Changes in our products or changes in export and import regulations may create delays in the introduction of our products into international markets, prevent our end-customers with international operations from deploying our products globally or, in some cases, prevent or delay the export or import of our products to certain countries, governments, or persons altogether. Any change in export or import regulations, economic sanctions or related legislation, shift in the enforcement or scope of existing regulations, or change in the countries, governments, persons, or technologies targeted by such regulations, could result in decreased use of our products by, or in our decreased ability to export or sell our products to, existing or potential end-customers with international operations. Any decreased use of our products or limitation on our ability to export to or sell our products in international markets would likely adversely affect our business, financial condition, and operating results.

Our failure to raise additional capital or generate the significant capital necessary to expand our operations and invest in new products and subscriptions could reduce our ability to compete and could harm our business.

We intend to continue to make investments to support our business growth and may require additional funds to respond to business challenges, including the need to develop new features to enhance our platform, improve our operating infrastructure, or acquire complementary businesses and technologies. Accordingly, we may need to engage in equity or debt financings to secure additional funds. If we raise additional equity or equity-linked financing, our stockholders may experience significant dilution of their ownership interests and the market price of our common stock could decline. For example, in June 2014, we issued 0.0% Convertible

Senior Notes due 2019 (the “2019 Notes”) and in July 2018, we issued 0.75% Convertible Senior Notes due 2023 (the “2023 Notes” and, together with the 2019 Notes, the “Notes”); any conversion of some or all of either series of Notes into common stock will dilute the ownership interests of existing stockholders to the extent we deliver shares upon conversion of such Notes. See the risk factor entitled “The issuance of additional stock in connection with financings, acquisitions, investments, our stock incentive plans, the conversion of our Notes, or otherwise will dilute all other stockholders.” The holders of the Notes have priority over holders of our common stock, and if we engage in future debt financings, the holders of such additional debt would also have priority over the holders of our common stock. Current and future indebtedness may also contain terms that, among other things, restrict our ability to incur additional indebtedness. We may also be required to take other actions that would otherwise be in the interests of the debt holders and would require us to maintain specified liquidity or other ratios, any of which could harm our business, operating results, and financial condition. We may not be able to obtain additional financing on terms favorable to us, if at all. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, our ability to continue to support our business growth and to respond to business challenges could be significantly impaired, and our business may be adversely affected.

We have a corporate structure aligned with the international nature of our business activities, and if we do not achieve increased tax benefits as a result of our corporate structure, our financial condition and operating results could be adversely affected.

We have reorganized our corporate structure and intercompany relationships to more closely align with the international nature of our business activities. This corporate structure may allow us to reduce our overall effective tax rate through changes in how we use our intellectual property, international procurement, and sales operations. This corporate structure may also allow us to obtain financial and operational efficiencies. These efforts require us to incur expenses in the near term for which we may not realize related benefits. If the structure is not accepted by the applicable tax authorities, if there are any changes in domestic and international tax laws that negatively impact the structure, including, but not limited to, the TCJA and guidance regarding base erosion and profit shifting (“BEPS”) provided by the Organisation for Economic Co-operation and Development, or if we do not operate our business consistent with the structure and applicable tax provisions, we may fail to achieve the reduction in our overall effective tax rate and the other financial and operational efficiencies that we anticipate as a result of the structure and our future financial condition and operating results may be negatively impacted. In addition, we continue to evaluate our corporate structure in light of current and pending tax legislation, and any changes to our corporate structure may require us to incur additional expenses and may impact our overall effective tax rate.

We may have exposure to greater than anticipated tax liabilities.

Our income tax obligations are based in part on our corporate structure and intercompany arrangements, including the manner in which we develop, value, and use our intellectual property and the valuations of our intercompany transactions. The tax laws applicable to our business, including the laws of the United States and other jurisdictions, are subject to interpretation and certain jurisdictions may aggressively interpret their laws in an effort to raise additional tax revenue. The tax authorities of the jurisdictions in which we operate may challenge our methodologies for valuing developed technology or intercompany arrangements, which could increase our worldwide effective tax rate and harm our financial position and operating results. 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. Further, 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 condensed consolidated financial statements and may materially affect our financial results in the period or periods for which such determination is made.

In addition, our future income tax obligations could be adversely affected by changes in tax laws in the United States or in other jurisdictions in which we operate. In the United States, the TCJA contains many significant changes to the U.S. federal income tax laws, the consequences of which, to us, have not yet been fully determined and which could have material impact on the value of our deferred tax assets and could increase our future U.S. income tax expense. Furthermore, changes to the taxation of undistributed foreign earnings, if any, could change our future intentions regarding reinvestment of such earnings. The foregoing items could have a material adverse effect on our business, cash flows, operating results, or financial condition.

If our estimates or judgments relating to our critical accounting policies are based on assumptions that change or prove to be incorrect, our operating results could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in our condensed consolidated financial statements and accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity, revenue, and expenses that are not readily apparent from other sources. For more information, refer to the section entitled “Critical Accounting Estimates” in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in Part I, Item 2 of this Quarterly Report on Form 10-Q. Additionally, as we have worked toward adopting and implementing the new revenue accounting standard, management has made

judgments and assumptions based on our interpretation of the new standard. The new revenue standard is principle based and interpretation of those principles may vary from company to company based on their unique circumstances. In general, if our estimates, judgments or assumptions relating to our critical accounting policies change or if actual circumstances differ from our estimates, judgments or assumptions, our operating results may be adversely affected and could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock.

Failure to comply with governmental laws and regulations could harm our business.

Our business is subject to regulation by various federal, state, local, and foreign governmental agencies, including agencies responsible for monitoring and enforcing employment and labor laws, workplace safety, product safety, environmental laws, consumer protection laws, anti-bribery laws (including the U.S. Foreign Corrupt Practices Act and the U.K. Anti-Bribery Act), import/export controls, federal securities laws, and tax laws and regulations. In certain jurisdictions, these regulatory requirements may be more stringent than those in the United States. Noncompliance with applicable regulations or requirements could subject us to investigations, sanctions, mandatory product recalls, enforcement actions, disgorgement of profits, fines, damages, civil and criminal penalties, or injunctions. If any governmental sanctions are imposed, or if we do not prevail in any possible civil or criminal litigation resulting from any alleged noncompliance, our business, operating results, and financial condition could be materially adversely affected. In addition, responding to any action will likely result in a significant diversion of management's attention and resources and an increase in professional fees. Enforcement actions, litigation, and sanctions could harm our business, operating results, and financial condition.

If we fail to comply with environmental requirements, our business, financial condition, operating results, and reputation could be adversely affected.

We are subject to various environmental laws and regulations including laws governing the hazardous material content of our products and laws relating to the collection of and recycling of electrical and electronic equipment. Examples of these laws and regulations include the E.U. Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Directive ("RoHS") and the E.U. Waste Electrical and Electronic Equipment Directive ("WEEE Directive"), as well as the implementing legislation of the E.U. member states. Similar laws and regulations have been passed or are pending in China, South Korea, Norway, and Japan and may be enacted in other regions, including in the United States, and we are, or may in the future be, subject to these laws and regulations.

The E.U. RoHS and the similar laws of other jurisdictions limit the content of certain hazardous materials such as lead, mercury, and cadmium in the manufacture of electrical equipment, including our products. Our current products comply with the E.U. RoHS requirements. However, if there are changes to this or other laws (or their interpretation) or if new similar laws are passed in other jurisdictions, we may be required to reengineer our products to use components compatible with these regulations. This reengineering and component substitution could result in additional costs to us or disrupt our operations or logistics.

The WEEE Directive requires electronic goods producers to be responsible for the collection, recycling, and treatment of such products. Changes in interpretation of the directive may cause us to incur costs or have additional regulatory requirements to meet in the future in order to comply with this directive, or with any similar laws adopted in other jurisdictions.

We are also subject to environmental laws and regulations governing the management of hazardous materials, which we use in small quantities in our engineering labs. Our failure to comply with past, present, and future similar laws could result in reduced sales of our products, substantial product inventory write-offs, reputational damage, penalties, and other sanctions, any of which could harm our business and financial condition. We also expect that our products will be affected by new environmental laws and regulations on an ongoing basis. To date, our expenditures for environmental compliance have not had a material impact on our operating results or cash flows, and although we cannot predict the future impact of such laws or regulations, they will likely result in additional costs and may increase penalties associated with violations or require us to change the content of our products or how they are manufactured, which could have a material adverse effect on our business, operating results, and financial condition.

Our business is subject to the risks of earthquakes, fire, power outages, floods, and other catastrophic events, and to interruption by man-made problems such as terrorism.

Both our corporate headquarters and the location where our products are manufactured are located in the San Francisco Bay Area, a region known for seismic activity. In addition, other natural disasters, such as fire or floods, a significant power outage, telecommunications failure, terrorism, an armed conflict, cyberattacks, or other geo-political unrest could affect our supply chain, manufacturers, logistics providers, channel partners, or end-customers or the economy as a whole and such disruption could impact our shipments and sales. These risks may be further increased if the disaster recovery plans for us and our suppliers prove to be inadequate. To the extent that any of the above should result in delays or cancellations of customer orders, the loss of customers, or the delay in the manufacture, deployment, or shipment of our products, our business, financial condition, and operating results would be adversely affected.

Risks Related to Our Notes

We may not have the ability to raise the funds necessary to settle conversions of the Notes, repurchase the Notes upon a fundamental change or repay the Notes in cash at their maturity, and our future debt may contain limitations on our ability to pay cash upon conversion or repurchase of the Notes.

Holders of the Notes of either series will have the right under the applicable indenture governing the Notes to require us to repurchase all or a portion of their Notes of such series upon the occurrence of a fundamental change before the applicable maturity date at a repurchase price equal to 100% of the principal amount of such Notes to be repurchased, plus accrued and unpaid interest, if any, to, but excluding, the applicable fundamental change repurchase date. In addition, upon conversion of the Notes of either series, we will be required to make cash payments for each \$1,000 in principal amount of such Notes converted of at least the lesser of \$1,000 and the sum of the daily conversion values for such series of Notes. Moreover, we will be required to repay the Notes in cash at their respective maturity, unless earlier converted or repurchased. However, we may not have enough available cash or be able to obtain financing at the time we are required to make repurchases of such Notes surrendered or pay cash with respect to such Notes being converted.

In addition, our ability to repurchase or to pay cash upon conversion of either series of Notes may be limited by law, regulatory authority or agreements governing our future indebtedness. Our failure to repurchase the Notes at a time when the repurchase is required by the relevant indenture governing such Notes or to pay cash upon conversion of such Notes as required by the relevant indenture would constitute a default under such indenture. A default under the relevant indenture or the fundamental change itself could also lead to a default under agreements governing our future indebtedness. If the payment of the related indebtedness were to be accelerated after any applicable notice or grace periods, we may not have sufficient funds to repay the indebtedness and repurchase the Notes or to pay cash upon conversion of the Notes.

We may still incur substantially more debt or take other actions that would diminish our ability to make payments on the Notes when due.

We and our subsidiaries may be able to incur substantial additional debt in the future, subject to the restrictions contained in our debt instruments, some of which may be secured debt. We are not restricted under the terms of the applicable indenture governing such series of Notes from incurring additional debt, securing existing or future debt, recapitalizing our debt or taking a number of other actions that are not limited by the terms of such indenture governing such Notes that could have the effect of diminishing our ability to make payments on such Notes when due. While the terms of any future indebtedness we may incur could restrict our ability to incur additional indebtedness, any such restrictions will indirectly benefit holders of the applicable series of Notes only to the extent any such indebtedness or credit facility is not repaid or does not mature while such Notes are outstanding.

Risks Related to Our Common Stock

Our actual operating results may differ significantly from our guidance.

From time to time, we have released, and may continue to release, guidance in our quarterly earnings releases, quarterly earnings conference calls, or otherwise, regarding our future performance that represents our management's estimates as of the date of release. This guidance, which includes forward-looking statements, has been and will be based on projections prepared by our management. These projections are not prepared with a view toward compliance with published guidelines of the American Institute of Certified Public Accountants, and neither our registered public accountants nor any other independent expert or outside party compiles or examines the projections. Accordingly, no such person expresses any opinion or any other form of assurance with respect to the projections.

Projections are based upon a number of assumptions and estimates that, while presented with numerical specificity, are inherently subject to significant business, economic and competitive uncertainties and contingencies, many of which are beyond our control and are based upon specific assumptions with respect to future business decisions, some of which will change. The rapidly evolving market in which we operate may make it difficult to evaluate our current business and our future prospects, including our ability to plan for and model future growth. We intend to state possible outcomes as high and low ranges which are intended to provide a sensitivity analysis as variables are changed. However, actual results will vary from our guidance and the variations may be material. The principal reason that we release guidance is to provide a basis for our management to discuss our business outlook as of the date of release with analysts and investors. We do not accept any responsibility for any projections or reports published by any such persons. Investors are urged not to rely upon our guidance in making an investment decision regarding our common stock.

Any failure to successfully implement our operating strategy or the occurrence of any of the events or circumstances set forth in this "Risk Factors" section in this Quarterly Report on Form 10-Q could result in our actual operating results being different from our guidance, and the differences may be adverse and material.

The market price of our common stock historically has been volatile and the value of your investment could decline.

The market price of our common stock has been volatile since our initial public offering (“IPO”) in July 2012. The reported high and low sales prices of our common stock during the last 12 months have ranged from \$239.50 to \$140.12, as measured through November 20, 2018. The market price of our common stock may fluctuate widely in response to various factors, some of which are beyond our control. These factors include:

- announcements of new products, subscriptions or technologies, commercial relationships, strategic partnerships, acquisitions or other events by us or our competitors;
- price and volume fluctuations in the overall stock market from time to time;
- news announcements that affect investor perception of our industry, including reports related to the discovery of significant cyberattacks;
- significant volatility in the market price and trading volume of technology companies in general and of companies in our industry;
- fluctuations in the trading volume of our shares or the size of our public float;
- actual or anticipated changes in our operating results or fluctuations in our operating results;
- whether our operating results meet the expectations of securities analysts or investors;
- actual or anticipated changes in the expectations of securities analysts or investors, whether as a result of our forward- looking statements, our failure to meet such expectations or otherwise;
- inaccurate or unfavorable research reports about our business and industry published by securities analysts or reduced coverage of our company by securities analysts;
- litigation involving us, our industry, or both;
- actions instituted by activist shareholders or others;
- regulatory developments in the United States, foreign countries or both;
- major catastrophic events;
- sales or repurchases of large blocks of our common stock or substantial future sales by our directors, executive officers, employees and significant stockholders;
- sales of our common stock by investors who view the Notes as a more attractive means of equity participation in us;
- hedging or arbitrage trading activity involving our common stock as a result of the existence of the Notes;
- departures of key personnel; or
- economic uncertainty around the world, in particular, macroeconomic challenges in Europe.

The market price of our common stock could decline for reasons unrelated to our business, operating results, or financial condition and as a result of events that do not directly affect us. In the past, following periods of volatility in the market price of a company’s securities, securities class action litigation has often been brought against that company. Securities litigation could result in substantial costs and divert our management’s attention and resources from our business. This could have a material adverse effect on our business, operating results, and financial condition.

The convertible note hedge and warrant transactions may affect the value of our common stock.

In connection with the sale of each series of Notes, we entered into convertible note hedge transactions (the “Note Hedges”) with certain counterparties. In connection with each such sale of the Notes, we also entered into warrant transactions with the counterparties pursuant to which we sold warrants (the “Warrants”) for the purchase of our common stock. The Note Hedges are expected generally to reduce the potential dilution to our common stock upon any conversion of either series of Notes and/or offset any cash payments we are required to make in excess of the principal amount of any such converted Notes of the applicable series. The Warrants could separately have a dilutive effect to the extent that the market price per share of our common stock exceeds the applicable strike price of the Warrants unless, subject to certain conditions, we elect to cash settle such Warrants.

The applicable counterparties or their respective affiliates may modify their hedge positions by entering into or unwinding various derivatives with respect to our common stock and/or purchasing or selling our common stock or other securities of ours in secondary market transactions prior to the maturity of the applicable series of Notes (and are likely to do so during any applicable observation period related to a conversion of such Notes). This activity could also cause or avoid an increase or a decrease in the market price of our common stock or the Notes of a series, which could affect a Note holder’s ability to convert its Notes of such

series and, to the extent the activity occurs during any observation period related to a conversion of such Notes, it could affect the amount and value of the consideration that such Note holder will receive upon conversion of such Notes of such series.

We do not make any representation or prediction as to the direction or magnitude of any potential effect that the transactions described above may have on the price of either series of Notes or our common stock. In addition, we do not make any representation that the counterparties or their respective affiliates will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

The issuance of additional stock in connection with financings, acquisitions, investments, our stock incentive plans, the conversion of our Notes or exercise of the related Warrants, or otherwise will dilute all other stockholders.

Our amended and restated certificate of incorporation authorizes us to issue up to 1.0 billion shares of common stock and up to 100.0 million shares of preferred stock with such rights and preferences as may be determined by our board of directors. Subject to compliance with applicable rules and regulations, we may issue shares of common stock or securities convertible into shares of our common stock from time to time in connection with a financing, acquisition, investment, our stock incentive plans, the conversion of our Notes, the settlement of our Warrants, or otherwise. Any such issuance could result in substantial dilution to our existing stockholders and cause the market price of our common stock to decline.

We are subject to risks associated with our strategic investments. Impairments in the value of our investments could negatively impact our financial results.

In June 2017, we announced our plans to form the \$20.0 million Palo Alto Networks Venture Fund. The fund is aimed at seed-, early-, and growth-stage security companies with a cloud-based application approach. We may not realize a return on our capital investments. Many such private companies generate net losses and the market for their products, services or technologies may be slow to develop, and, therefore, are dependent on the availability of later rounds of financing from banks or investors on favorable terms to continue their operations. The financial success of our investment in any company is typically dependent on a liquidity event, such as a public offering, acquisition or other favorable market event reflecting appreciation to the cost of our initial investment. The capital markets for public offerings and acquisitions are dynamic and the likelihood of liquidity events for the companies we have and intend to invest in could significantly change. Further, valuations of privately-held companies are inherently complex due to the lack of readily available market data and as such, the basis for these valuations is subject to the timing and accuracy of the data received from these companies. If we determine that any of our investments in such companies have experienced a decline in value, we may be required to record an impairment, which could be material and negatively impact our financial results. All of our investments are subject to a risk of a partial or total loss of investment capital.

We do not intend to pay dividends for the foreseeable future.

We have never declared or paid any dividends on our common stock. We intend to retain any earnings to finance the operation and expansion of our business, and we do not anticipate paying any cash dividends in the future. As a result, you may only receive a return on your investment in our common stock if the market price of our common stock increases.

The requirements of being a public company may strain our resources, divert management's attention, and affect our ability to attract and retain qualified board members.

As a public company, we are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act, the Dodd-Frank Act, the listing requirements of the New York Stock Exchange ("NYSE"), and other applicable securities rules and regulations. Compliance with these rules and regulations have increased our legal and financial compliance costs, made some activities more difficult, time-consuming or costly, and increased demand on our systems and resources. Among other things, the Exchange Act requires that we file annual, quarterly, and current reports with respect to our business and operating results. In addition, the Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. In order to meet the requirements of this standard, significant resources and management oversight may be required. As a result, management's attention may be diverted from other business concerns, which could harm our business and operating results. Although we have already hired additional employees to comply with these requirements, we may need to hire even more employees in the future, which will increase our costs and expenses.

In addition, changing laws, regulations, and standards related to corporate governance and public disclosure are creating uncertainty for public companies, increasing legal and financial compliance costs, and making some activities more time-consuming. These laws, regulations, and standards are subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. We intend to invest resources to comply with evolving laws, regulations, and standards, and this investment may result in increased general and administrative expense and a diversion of management's time and attention from revenue-generating activities to compliance activities. If our efforts to comply with new laws, regulations, and standards differ from the activities intended by regulatory or governing bodies, regulatory authorities may initiate legal proceedings against us and our business may be harmed.

We are obligated to maintain proper and effective internal control over financial reporting. We may not complete our analysis of our internal control over financial reporting in a timely manner, or this internal control may not be determined to be effective, which may adversely affect investor confidence in our company and, as a result, the value of our common stock.

While we were able to determine in our management's report for fiscal 2018 that our internal control over financial reporting is effective, as well as provide an unqualified attestation report from our independent registered public accounting firm to that effect, we may not be able to complete our evaluation, testing, and any required remediation in a timely fashion, may be unable to assert that our internal controls are effective, or our independent registered public accounting firm may not be able to formally attest to the effectiveness of our internal control over financial reporting in the future. In the event that our chief executive officer, chief financial officer, or independent registered public accounting firm determines in the future that our internal control over financial reporting is not effective as defined under Section 404, we could be subject to one or more investigations or enforcement actions by state or federal regulatory agencies, stockholder lawsuits or other adverse actions requiring us to incur defense costs, pay fines, settlements or judgments and causing investor perceptions to be adversely affected and potentially resulting in a decline in the market price of our stock.

Our charter documents and Delaware law, as well as certain provisions contained in the indentures governing the Notes, could discourage takeover attempts and lead to management entrenchment, which could also reduce the market price of our common stock.

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws may have the effect of delaying or preventing a change in control of our company or changes in our management. Our amended and restated certificate of incorporation and amended and restated bylaws include provisions that:

- establish that our board of directors is divided into three classes, Class I, Class II and Class III, with three-year staggered terms;
- authorize our board of directors to issue shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval;
- provide our board of directors with the exclusive right to elect a director to fill a vacancy created by the expansion of our board of directors or the resignation, death or removal of a director;
- prohibit our stockholders from taking action by written consent;
- specify that special meetings of our stockholders may be called only by the chairman of our board of directors, our president, our secretary, or a majority vote of our board of directors;
- require the affirmative vote of holders of at least 66 2/3% of the voting power of all of the then outstanding shares of the voting stock, voting together as a single class, to amend the provisions of our amended and restated certificate of incorporation relating to the issuance of preferred stock and management of our business or our amended and restated bylaws;
- authorize our board of directors to amend our bylaws by majority vote; and
- establish advance notice procedures with which our stockholders must comply to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting.

These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for our stockholders to replace members of our board of directors, which is responsible for appointing the members of management. In addition, as a Delaware corporation, we are subject to Section 203 of the Delaware General Corporation Law. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a certain period of time. Additionally, certain provisions contained in the applicable indenture governing each series of Notes could make it more difficult or more expensive for a third party to acquire us. The application of Section 203 or certain provisions contained in the applicable indenture governing each series of Notes also could have the effect of delaying or preventing a change in control of us. Any of these provisions could, under certain circumstances, depress the market price of our common stock.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Unregistered Sales of Equity Securities

During the three months ended October 31, 2018, holders converted \$327.3 million in aggregate principal amount of the 2019 Notes, which we repaid in cash. We also issued 1.4 million shares of our unregistered common stock to the holders for the conversion value in excess of the principal amount. These shares of our common stock were issued in reliance on the exemption from registration provided by Section 3(a)(9) of the Securities Act of 1933, as amended.

Additionally, during the three months ended October 31, 2018, we issued a total of 19,700 shares of our unregistered common stock in connection with the acquisition of RedLock (“RedLock Transaction”).

The RedLock Transaction did not involve any underwriters, any underwriting discounts or commissions, or any public offering. We believe the offers, sales, and issuances of the securities pursuant to the RedLock Transaction were exempt from registration under the Securities Act of 1933, as amended (the “Act”) by virtue of Section 4(a)(2) of the Act and Rule 506 of Regulation D promulgated thereunder, because the issuance of securities to the recipients did not involve a public offering. The recipients of the securities in the RedLock Transaction represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed upon the stock certificates issued in these transactions. All recipients had adequate access, through their relationships with us or otherwise, to information about us. The issuances of these securities were made without any general solicitation or advertising.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

There were no shares repurchased under our share repurchase program during the three months ended October 31, 2018. Between August 1, 2018 and August 31, 2018 and between October 1, 2018 and October 31, 2018, shares of restricted common stock were delivered by certain employees upon vesting of equity awards to satisfy tax withholding requirements. The average value of shares delivered to satisfy tax withholding requirements during these periods were \$212.62 and \$193.51, respectively. The number of shares delivered to satisfy tax withholding requirements during these periods were not significant.

ITEM 6. EXHIBITS

Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
3.1	Amended and Restated Bylaws of the Registrant.	8-K	001-35594	3.1	September 14, 2018
10.1	Credit Agreement, dated as of September 4, 2018, by and among the Registrant, the lenders from time to time party thereto and Citibank, N.A., as administrative agent.	8-K	001-35594	10.1	September 6, 2018
10.2*	RedLock Inc. 2015 Stock Plan, as amended, and related form agreements under RedLock Inc. 2015 Stock Plan, as amended.	S-8	333-227901	99.1	October 19, 2018
10.3*	Offer Letter between the Registrant and Amit K. Singh, dated October 11, 2018.	8-K	001-35594	10.1	October 15, 2018
10.4*	Confirmatory Employment Letter between the Registrant and Lee Klarich, dated December 19, 2011.				
10.5*	Transition Agreement and Release between the Registrant and Mark F. Anderson, dated October 31, 2018.				
31.1	Certification of the Chief Executive Officer pursuant to Section 302(a) of the Sarbanes-Oxley Act of 2002.				
31.2	Certification of the Chief Financial Officer pursuant to Section 302(a) of the Sarbanes-Oxley Act of 2002.				
32.1†	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
32.2†	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
101.INS	XBRL Instance Document.				
101.SCH	XBRL Taxonomy Schema Linkbase Document.				
101.CAL	XBRL Taxonomy Calculation Linkbase Document.				
101.DEF	XBRL Taxonomy Definition Linkbase Document.				

Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
101.LAB	XBRL Taxonomy Labels Linkbase Document.				
101.PRE	XBRL Taxonomy Presentation Linkbase Document.				
*	Indicates a management contract or compensatory plan or arrangement.				
†	The certifications attached as Exhibit 32.1 and 32.2 that accompany this Quarterly Report on Form 10-Q are not deemed filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of Palo Alto Networks, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Quarterly Report on Form 10-Q, irrespective of any general incorporation language contained in such filing.				

SIGNATURES

Pursuant to the requirements 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.

Date: November 30, 2018

PALO ALTO NETWORKS, INC.

By: /s/ KATHLEEN BONANNO
Kathleen Bonanno
Chief Financial Officer
(Duly Authorized Officer and Principal Financial Officer)

Date: November 30, 2018

PALO ALTO NETWORKS, INC.

By: /s/ JEAN COMPEAU
Jean Compeau
Chief Accounting Officer
(Duly Authorized Officer and Principal Accounting Officer)

December 19, 2011

Lee Klarich
c/o Palo Alto Networks, Inc.
3300 Olcott Street
Santa Clara, CA 95054

Re: Confirmatory Employment Letter with Updated Change in Control Protection

Dear Lee:

This letter agreement (the “**Agreement**”) is entered into between Palo Alto Networks, Inc. (“**Company**” or “**we**”) and Lee Klarich (“**Executive**” or “**you**”). This Agreement is effective as of December 16, 2011 (“**Effective Date**”). The purpose of this Agreement is to confirm the current terms and conditions of your employment and to specify your treatment upon certain terminations of employment.

1. Position. You will continue to serve as Vice President, Product Management of the Company. You will continue to report to the Chief Executive Officer and shall perform the duties and responsibilities customary for such position and such other related duties as are assigned by the Chief Executive Officer. This is a full-time position. While you render services to the Company, you will not engage in any other employment, consulting or other business activity (whether full-time or part-time) that would create a conflict of interest with the Company. You may engage in civic and not-for-profit activities as long as such activities do not interfere with the performance of your duties hereunder. By signing this Agreement, you confirm to the Company that you have no contractual commitments or other legal obligations that would prohibit you from performing your duties for the Company.

2. Cash Compensation.

(a) Base Salary. As of the Effective Date, your salary will be at an annualized rate of \$230,000 per year, payable in accordance with the Company’s standard payroll schedule. Your salary, as well as any other cash amounts payable under this Agreement, will be subject to applicable tax withholdings. Your salary may be adjusted from time to time by our Board of Directors (the “**Board**”) or the Compensation Committee of our Board of Directors (the “**Compensation Committee**”) in their sole discretion.

(b) Annual Bonus. Commencing August 1, 2011 (the start of the Company's fiscal year), you will have the opportunity to earn a target annual cash bonus of \$69,000 for each fiscal year based on the achievement of certain objectives, which will be established by our Board and/or the Compensation Committee. For fiscal 2012, this bonus will be paid in equal installments on a quarterly basis. Each bonus payment is subject to your continued employment through and until the date of payment. The bonus will be paid no later than March 15 of the year following the year in which such bonus was earned. Your target annual cash bonus opportunity and the terms and conditions thereof may be adjusted from time to time by our Board or the Compensation Committee in their sole discretion.

3. At Will Employment. While we look forward to continue a productive relationship, your employment with the Company, however, is for an unspecified period of time and this Agreement creates an at-will employment relationship that may be terminated (subject to the terms of this Agreement) by you or the Company at any time for any reason and with or without cause or prior notice. Upon termination of your employment for any reason, you shall be entitled to receive any compensation earned and reimbursements due through the effective date of termination.

4. Termination Benefits.

(a) Following a Change in Control. In the event that there is a Change in Control of the Company and the Company or its successor terminates your employment other than for Cause, or you terminate your employment for Good Reason, in either case upon or within twelve (12) months following the Change in Control, then you will be entitled to receive: (i) a lump-sum payment equal to your then-current annual base salary, 100% of your target bonus for that fiscal year, and reimbursement of twelve (12) months of your COBRA premiums in a lump sum; and (ii) acceleration of the vesting of the greater of (A) twelve (12) months vesting of your then-outstanding unvested time-based equity awards, or (B) fifty percent (50%) of your then-outstanding unvested time-based equity awards (for the avoidance of doubt, the greater of under this sub-section (ii) will be determined on an award by award basis) (collectively, the "**Change in Control Severance Benefits**"). Your entitlement to the Change in Control Severance Benefits is subject to your compliance with subsection (b) below.

(b) Form and Timing of Payment. This Section 4 will not apply unless you (i) have returned all Company property in your possession, (ii) have resigned as a member of the Board of the Company and all of its subsidiaries, to the extent applicable, and (iii) have executed a general release of all claims that you may have against the Company or persons affiliated with the Company. The release must be in the form prescribed by the Company. You must execute and return the release on or before the date specified by the Company in the prescribed form (the "**Release Deadline**"). The Release Deadline will in no event be later than 50 days after your separation. If you fail to return the release on or before the Release Deadline, or if you revoke

the release, then you will not be entitled to the benefits described in this Section 4. The severance payments will be paid in lump sum following the effectiveness of the release within 60 days after your separation. Notwithstanding the foregoing, if the 60-day period described in the preceding sentence spans two calendar years and/or if your severance payments are Deferred Payments (as defined below), then the payments will be paid in lump sum on the 60th day following your termination of employment, subject to Section 6.

(c) Definitions.

(i) For purposes of this Agreement, “**Cause**” shall mean: (i) conviction of any felony or any crime involving moral turpitude or dishonesty; (ii) participation in intentional fraud or an act of willful dishonesty against the Company; (iii) willful breach of the Company’s policies which materially harms the Company; (iv) intentional damage of a substantial amount of the Company’s property; (v) willful and material breach of this agreement or Employee Invention Assignment and Confidentiality Agreement; or (vi) a willful failure or refusal in a material respect by you to follow the lawful, reasonable policies or directions of the Company as specified by the Board or the Chief Executive Officer after being provided with notice of such failure, such notice specifying in reasonable detail the tasks which must be accomplished and a timeline for the accomplishment to avoid termination for Cause, and an opportunity to cure within thirty (30) days of receipt of such notice.

(ii) For purposes of this Agreement, “**Good Reason**” shall mean: (i) a material reduction in your authority, status, obligations or responsibilities, provided that following a Change in Control a change in title alone (not accompanied by a change in authority, status, obligations or responsibilities) shall not constitute a material reduction; (ii) a reduction of your total annual compensation of more than 10% unless such reduction is no greater (in percentage terms) than compensation reductions imposed on substantially all of the Company’s employees pursuant to a directive of the Board; (iii) any failure by the Company to pay your base salary; or (iv) the relocation of the principal place of the Company’s business to a location that is more than thirty-five (35) miles further from your home than before the relocation. Your resignation must occur within 12 months after one of the foregoing conditions has come into existence without your consent. A resignation for Good Reason will not be deemed to have occurred unless you give the Company written notice of the condition within 90 days after the condition comes into existence and the Company fails to remedy the condition within 30 days after receiving your written notice.

(iii) For purposes of this Agreement, “**Change in Control**” shall mean: (i) the sale or other disposition of all or substantially all of the assets of the Company; (ii) any sale or exchange of the capital stock of the Company by the stockholders of the Company in one transaction or series of related transactions where more than fifty percent (50%) of the outstanding voting power of the Company is acquired by a person or entity or group of related

persons or entities; (iii) any reorganization, consolidation or merger of the Company where the outstanding voting securities of the Company immediately before the transaction represent or are converted into less than fifty percent (50%) of the outstanding voting power of the surviving entity (or its parent corporation) immediately after the transaction; or (iv) the consummation of the acquisition of fifty-one percent (51%) or more of the outstanding stock of the Company pursuant to a tender offer validly made under any federal or state law (other than a tender offer by the Company). Notwithstanding the foregoing, a transaction will not be deemed a Change in Control unless the transaction qualifies as a change in control event within the meaning of Section 409A.

5. Section 280G. If any payments and other benefits provided for in this Agreement or otherwise constitute “parachute payments” within the meaning of Section 280G of the Code and, but for this Section 5, would be subject to the excise tax imposed by Section 4999 of the Code, then payments and other benefits will be payable to you either in full or in such lesser amounts as would result, after taking into account the applicable federal, state and local income taxes and the excise tax imposed by Section 4999, on your receipt on an after-tax basis of the greatest amount of payments and other benefits, by reducing payments in the following order: (i) cancellation of accelerated vesting of stock options that are out-of-the-money; (ii) reduction in cash payments; (iii) cancellation of accelerated vesting of all equity awards that are not out-of-the-money stock options; and (iv) other employee benefits. In the event that acceleration of vesting of equity award compensation is to be reduced, such acceleration of vesting shall be cancelled in the reverse order of the date of grant.

6. Section 409A. For purposes of this Agreement, a termination of employment will be determined consistent with the rules relating to a “separation from service” as defined in Section 409A of the Code and the regulations thereunder (“**Section 409A**”). Notwithstanding anything else provided herein, to the extent any payments provided under this Agreement in connection with your termination of employment constitute deferred compensation subject to Section 409A (“**Deferred Payments**”), and you are deemed at the time of such termination of employment to be a “specified employee” under Section 409A, then such payment shall not be made or commence until the earlier of (i) the expiration of the six (6)-month period measured from your separation from service from the Company or (ii) the date of your death following such a separation from service; provided, however, that such deferral shall only be effected to the extent required to avoid adverse tax treatment to you including, without limitation, the additional tax for which you would otherwise be liable under Section 409A(a)(1)(B) in the absence of such a deferral. The first payment thereof will include a catch-up payment covering the amount that would have otherwise been paid during the period between your termination of employment and the first payment date but for the application of this provision, and the balance of the installments (if any) will be payable in accordance with their original schedule. To the extent that any provision of this Agreement is ambiguous as to its compliance with Section 409A, the provision

will be read in such a manner so that all payments hereunder comply with Section 409A. To the extent any payment under this Agreement may be classified as a "short-term deferral" within the meaning of Section 409A, such payment shall be deemed a short-term deferral, even if it may also qualify for an exemption from Section 409A under another provision of Section 409A. Payments pursuant to this Agreement are intended to constitute separate payments for purposes of Section 1.409A-2(b)(2) of the Treasury Regulations.

7. Benefits. You will continue accrue paid time off (**PTO**) in accordance with the Company's policies applicable to executive officers. You will continue to be eligible to participate in benefit plans established by the Company for its employees from time to time. Upon your termination of employment with the Company for any reason, you will be paid your salary through your date of termination and for the value of all unused paid time off earned through that date.

8. Confidentiality; Compliance with Policies. As an employee of the Company, you will have access to certain confidential information of the Company and you may, during the course of your employment, develop certain information or inventions that will be the property of the Company. To protect the interests of the Company, as a condition of your employment you were required to sign the Company's "Employee Invention Assignment and Confidentiality Agreement" on or prior to your start date. We wish to impress upon you that we do not want you to, and we hereby direct you not to, bring with you any confidential or proprietary material of any former employer or to violate any other obligations you may have to any former employer. You represent that your signing of this Agreement and the Company's Employee Invention Assignment and Confidentiality Agreement, and your continued employment with the Company, will not violate any agreement currently in place between yourself and current or past employers. You agree to continue to be bound by the policies and procedures of the Company now or hereafter in effect relating to the conduct of employees.

9. Authorization to Work. Please note that because of employer regulations adopted in the Immigration Reform and Control Act of 1986, within three (3) business days of commencing employment with the Company you were required to present documentation demonstrating that you have authorization to work in the United States. By your signature to this Agreement, you represent that you have presented the Company such documentation.

10. Governing Law; Arbitration. This Agreement shall be construed and enforced in accordance with the internal laws of the State of California (without regard to its laws relating to choice-of-law or conflict-of-laws). You and the Company shall submit to mandatory and exclusive binding confidential arbitration of any controversy or claim arising out of, or relating to, this Agreement or any breach hereof or otherwise arising out of, or relating to, your employment with the Company or the termination thereof, provided, however, that the parties retain their right to, and shall not be prohibited, limited or in any other way restricted from,

seeking or obtaining injunctive relief from a court having jurisdiction over the parties related to the improper use, disclosure or misappropriation of a party's proprietary, confidential or trade secret information. Such arbitration shall be conducted through JAMS in the State of California, Santa Clara County, before a single neutral arbitrator, in accordance with the JAMS' then-current rules for the resolution of employment disputes. The arbitrator shall issue a written decision that contains the essential findings and conclusions on which the decision is based. You shall bear only those costs of arbitration you would otherwise bear had you brought a covered claim in court. Judgment upon the determination or award rendered by the arbitrator may be entered in any court having jurisdiction thereof. This agreement to arbitrate does not restrict your right to file administrative claims you may bring before any government agency where, as a matter of law, the parties may not restrict the employee's ability to file such claims (including, but not limited to, the National Labor Relations Board, the Equal Employment Opportunity Commission and the Department of Labor). However, the parties agree that, to the fullest extent permitted by law, arbitration shall be the exclusive remedy for the subject matter of such administrative claims.

11. Miscellaneous.

(a) Successors. This Agreement shall inure to the benefit of and be binding upon (a) the Company and any of its successors, and (b) you and your heirs, executors and representatives in the event of your death. Any successor to the Company shall be deemed substituted for the Company under the terms of this agreement for all purposes. In the event of a Change in Control, the Company agrees to obtain assumption of this Agreement by its successor.

(b) Modification. This Agreement, including, but not limited to the at will provision above, may not be amended or modified other than by a written agreement designated as an amendment and executed by you and a representative of the Board, although the Company reserves the right to unilaterally modify your compensation, benefits, job title and duties (subject to any express limitations set forth above).

(c) Severability. If any provision of this Agreement or the application thereof is held invalid, the invalidity shall not affect other provisions or applications of this Agreement that can be given effect without the invalid provisions or applications and to this end the provisions of this Agreement are declared to be severable.

(d) Complete Agreement. This Agreement (together with the Employee Invention Assignment and Confidentiality Agreement, the D&O Indemnification Agreement (if any) and the Company's 2005 Equity Incentive Plan, any successor equity incentive plan and any equity award agreement issued thereunder) represents the entire agreement between you and the Company with respect to the material terms and conditions of your employment, and supersedes

and replaces all prior discussions, negotiations and agreements, including, but not limited to your original offer letter agreement with the Company dated April 25, 2006, as amended May 1, 2006.

(e) Counterparts. This Agreement may be executed (i) in counterparts, each of which shall be an original, with same effect as if the signatures hereto were on the same instrument; and (ii) by facsimile or pdf. The parties agree that such facsimile or pdf signatures shall be deemed original signatures for all purposes.

[remainder of page left black]

[signature page to follow]

Lee Klarich
December 19, 2011
Page 8

We are extremely excited about your continued employment with Palo Alto Networks.

Please indicate your acceptance of this Agreement, and confirmation that it contains our complete agreement regarding the terms and conditions of your employment, by signing the bottom portion of this letter and returning a copy to me.

For and on behalf of Palo Alto Networks.

/s/ MARK MCLAUGHLIN

Mark McLaughlin, Chief Executive Officer

Agreed to and accepted:

/s/ LEE KLARICH

Lee Klarich

Dated: 12/23/2011

TRANSITION AGREEMENT AND RELEASE

This Separation Agreement and Release (“Agreement”) is made by and between Mark F. Anderson (“Employee”) and Palo Alto Networks, Inc. (the “Company”) (collectively referred to as the “Parties” or individually referred to as a “Party”).

RECITALS

WHEREAS, Employee was employed at-will by the Company;

WHEREAS, Employee signed an Employee Invention Assignment and Confidentiality Agreement with the Company (the “Confidentiality Agreement”) and a Directors and Officers Indemnification Agreement (“D&O Indemnification Agreement”);

WHEREAS, the Company and Employee have entered into various restricted stock and restricted stock unit award agreements (collectively the “Stock Agreements”) covering Employee equity awards (the “Equity Awards”);

WHEREAS, Employee resigned from employment with the Company effective October 31, 2018 and will seamlessly and without interruption continue as an advisor under an Advisor Agreement with the Company, attached hereto as Exhibit A (the “Advisor Agreement”) until May 1, 2019, or such earlier date the Advisor Agreement is terminated as set forth therein (the “Separation Date”); and

WHEREAS, pursuant to the Advisor Agreement, Employee is entitled to receive certain cash compensation and continued vesting of Equity Awards under the Stock Agreements;

WHEREAS, the Parties wish to resolve any and all disputes, claims, complaints, grievances, charges, actions, petitions, and demands that the Employee may have against the Company and any of the Releasees as defined below, including, but not limited to, any and all claims arising out of or in any way related to Employee’s employment with or separation from the Company.

NOW, THEREFORE, in consideration of the mutual promises made herein, the Company and Employee hereby agree as follows:

COVENANTS

1. Employee Transition & Consideration.
 - a. October 31, 2018 will be the last day of employment with the Company (the “Employment End Date”). Effective immediately following the Employment End Date, Employee will seamlessly and without interruption continue with the Company in the role of Advisor. The Advisor Agreement sets forth the terms of the advisory service.
 - b. Subject to his execution and non-revocation of this Agreement, and to his compliance with the terms and conditions of the Advisor Agreement and this Agreement, the Company will provide Employee with the compensation set forth in the Advisor Agreement. Employee acknowledges that without this

Agreement, he is otherwise not entitled to continue services and receive the Equity Vesting as set forth in the Advisor Agreement.

- c. Employee's participation in the Company's benefit plans will cease as of the Employment End Date, provided Employee may election continuation coverage under COBRA.
- d. Upon the Separation Date, Employee agrees to sign the Supplemental Release Agreement, attached hereto as Exhibit B.

2. Payment of Salary and Receipt of All Benefits. Employee acknowledges and represents that, other than the consideration set forth in this Agreement, the Company has paid or provided all salary, wages, bonuses, accrued vacation/paid time off, leave, housing allowances, relocation costs, interest, severance, outplacement costs, fees, reimbursable expenses, commissions, stock, stock options, vesting, and any and all other benefits and compensation due to Employee. Employee further acknowledges and represents that he has received any leave to which he was entitled or which he requested, if any, under the California Family Rights Act and/or the Family Medical Leave Act, or any other applicable law or requirement, and that he did not sustain any workplace injury, during his employment with the Company.

3. Release of Claims. Employee agrees that the foregoing consideration represents settlement in full of all outstanding obligations owed to Employee by the Company and its current and former officers, directors, employees, agents, investors, attorneys, shareholders, administrators, affiliates, benefit plans, plan administrators, professional employer organization or co-employer, insurers, trustees, divisions, subsidiaries, and predecessor and successor corporations and assigns (collectively, the "Releasees") arising out of or in any way connected with Employee's employment relationship with, or the termination of Employee's employment with the Company. Employee, on his own behalf and on behalf of his respective heirs, family members, executors, agents, and assigns, hereby and forever releases the Releasees from, and agrees not to sue concerning, or in any manner to institute, prosecute, or pursue, any claim, complaint, charge, duty, obligation, demand, or cause of action relating to any matters of any kind, whether presently known or unknown, suspected or unsuspected, that Employee may possess against any of the Releasees arising from any omissions, acts, facts, or damages that have occurred up until and including the Effective Date of this Agreement, including, without limitation:

- a. any and all claims relating to or arising from Employee's employment relationship with the Company and the termination of that relationship;
- b. any and all claims relating to, or arising from, Employee's right to purchase (except Employee's right to purchase or acquire Equity Awards as provided in this Agreement and the Advisor Agreement), or actual purchase of shares of stock of the Company, including, without limitation, any claims for fraud, misrepresentation, breach of fiduciary duty, breach of duty under applicable state corporate law, and securities fraud under any state or federal law;
- c. any and all claims for wrongful discharge of employment; termination in violation of public policy; discrimination; harassment; retaliation; breach of contract, both express and implied; breach of covenant of good faith and fair dealing, both express and implied; promissory estoppel; negligent or intentional infliction of emotional distress; fraud; negligent or intentional

misrepresentation; negligent or intentional interference with contract or prospective economic advantage; unfair business practices; defamation; libel; slander; negligence; personal injury; assault; battery; invasion of privacy; false imprisonment; conversion; and disability benefits;

d. any and all claims for violation of any federal, state, or municipal statute, including, but not limited to, Title VII of the Civil Rights Act of 1964; the Civil Rights Act of 1991; the Rehabilitation Act of 1973; the Americans with Disabilities Act of 1990; the Equal Pay Act; the Fair Labor Standards Act, except as prohibited by law; the Fair Credit Reporting Act; the Age Discrimination in Employment Act of 1967; the Older Workers Benefit Protection Act; the Employee Retirement Income Security Act of 1974; the Worker Adjustment and Retraining Notification Act; the Family and Medical Leave Act, except as prohibited by law; the Immigration Reform and Control Act, the National Labor Relations Act, the Sarbanes-Oxley Act of 2002; the Uniformed Services Employment and Reemployment Rights Act; the California Family Rights Act; the California Labor Code, except as prohibited by law; the California Workers' Compensation Act, except as prohibited by law; and the California Fair Employment and Housing Act;

e. any and all claims for violation of the federal or any state constitution;

f. any and all claims arising out of any other laws and regulations relating to employment or employment discrimination;

g. any claim for any loss, cost, damage, or expense arising out of any dispute over the non-withholding or other tax treatment of any of the proceeds received by Employee as a result of this Agreement; and

h. any and all claims for attorneys' fees and costs.

Employee agrees that the release set forth in this section shall be and remain in effect in all respects as a complete general release as to the matters released. This release does not extend to any obligations incurred under this Agreement, nor any rights to indemnification set forth in the Company's Certificate of Incorporation, Bylaws, the D&O Indemnification Agreement or the Delaware General Corporation Law. This release does not release claims that cannot be released as a matter of law, including, but not limited to, any Protected Activity (as defined below). This release of claims does not apply to any indemnification rights owed to Employee by the Company pursuant to any contract or statute (including, without limitation, California Labor Code Section 2802), or under any common law.

4. Acknowledgment of Waiver of Claims under ADEA. Employee understands and acknowledges that he is waiving and releasing any rights he may have under the Age Discrimination in Employment Act of 1967 ("ADEA"), and that this waiver and release is knowing and voluntary. Employee understands and agrees that this waiver and release does not apply to any rights or claims that may arise under the ADEA after the Effective Date of this Agreement. Employee understands and acknowledges that the consideration given for this waiver and release is in addition to anything of value to which Employee was already entitled. Employee further understands and acknowledges that he has been advised by this writing that: (a) he should consult with an attorney prior to executing this Agreement; (b) he has twenty-one (21) days within which to consider this Agreement; (c) he has seven (7) days following his execution of this Agreement to revoke this Agreement; (d) this Agreement shall not be effective until after the revocation period has expired; and (e) nothing in this Agreement prevents or precludes Employee from challenging or seeking a determination in good faith of the

validity of this waiver under the ADEA, nor does it impose any condition precedent, penalties, or costs for doing so, unless specifically authorized by federal law. In the event Employee signs this Agreement and returns it to the Company in less than the 21-day period identified above, Employee hereby acknowledges that he has freely and voluntarily chosen to waive the time period allotted for considering this Agreement. Employee acknowledges and understands that revocation must be accomplished by a written notification to the person executing this Agreement on the Company's behalf that is received prior to the Effective Date. The Parties agree that changes, whether material or immaterial, do not restart the running of the 21-day period.

5. California Civil Code Section 1542. Employee acknowledges that he has been advised to consult with legal counsel and is familiar with the provisions of California Civil Code Section 1542, a statute that otherwise prohibits the release of unknown claims, which provides as follows:

A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM OR HER MUST HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR.

Employee, being aware of said code section, agrees to expressly waive any rights he may have thereunder, as well as under any other statute or common law principles of similar effect.

6. No Pending or Future Lawsuits. Employee represents that he has no lawsuits, claims, or actions pending in his name, or on behalf of any other person or entity, against the Company or any of the other Releasees. Employee also represents that he does not intend to bring any claims on his own behalf or on behalf of any other person or entity against the Company or any of the other Releasees.

7. Application for Employment. Employee understands and agrees that, as a condition of this Agreement, Employee shall not be entitled to any employment with the Company, and Employee hereby waives any right, or alleged right, of employment or re-employment with the Company. Employee further agrees not to apply for employment with the Company.

8. Trade Secrets and Confidential Information/Company Property. Employee reaffirms and agrees to observe and abide by the terms of the Confidentiality Agreement, specifically including the provisions therein regarding nondisclosure of the Company's trade secrets and confidential and proprietary information, and non-solicitation of Company employees. Employee's signature below constitutes his certification under penalty of perjury that he has returned all documents and other items provided to Employee by the Company (with the exception of a copy of any applicable Employee Handbook and personnel documents specifically relating to Employee), developed or obtained by Employee in connection with his employment with the Company, or otherwise belonging to the Company.

9. No Cooperation. Subject to Section 27 governing Protected Activity, Employee agrees that he will not knowingly encourage, counsel, or assist any attorneys or their clients in the presentation or prosecution of any disputes, differences, grievances, claims, charges, or complaints by any third party against any of the Releasees, unless under a subpoena or other court order to do so or as related directly to the ADEA waiver in this Agreement. Employee agrees both to immediately notify the Company upon receipt of any such subpoena or court order, and to furnish, within three (3) business

days of its receipt, a copy of such subpoena or other court order. If approached by anyone for counsel or assistance in the presentation or prosecution of any disputes, differences, grievances, claims, charges, or complaints against any of the Releasees, Employee shall state no more than that he cannot provide counsel or assistance.

10. Non-Disparagement. Employee agrees to refrain from any disparagement, defamation, libel, or slander of any of the Releasees, and agrees to refrain from any tortious interference with the contracts and relationships of any of the Releasees. Employee shall direct any inquiries by potential future employers to the Company's human resources department, which shall use its best efforts to provide only the Employee's last position and dates of employment. The Company agrees that it will refrain from any disparagement, defamation, libel, or slander of Employee, Employee understands and acknowledges that the Company's obligations under this Section 10 apply only to its current officers and directors (as of the date hereof) and only for so long as they serve in such capacity at the Company.

11. Breach. In addition to the Attorneys' Fees Section below, Employee acknowledges and agrees that any material breach of this Agreement, unless such breach constitutes a legal action by Employee challenging or seeking a determination in good faith of the validity of the waiver herein under the ADEA, or of any provision of the Confidentiality Agreement shall entitle the Company immediately to recover and/or cease providing the consideration provided to Employee under this Agreement, except as provided by law. Except as provided by law, Employee shall also be responsible to the Company for all costs, attorneys' fees, and any and all damages incurred by the Company in (a) enforcing Employee's obligations under this Agreement or the Confidentiality Agreement, including the bringing of any action to recover the consideration, and (b) defending against a claim or suit brought or pursued by Employee in violation of the terms of this Agreement.

12. No Admission of Liability. Employee understands and acknowledges that this Agreement constitutes a compromise and settlement of any and all actual or potential disputed claims by Employee. No action taken by the Company hereto, either previously or in connection with this Agreement, shall be deemed or construed to be (a) an admission of the truth or falsity of any actual or potential claims or (b) an acknowledgment or admission by the Company of any fault or liability whatsoever to Employee or to any third party.

13. Non-Solicitation. Employee agrees that through December 31, 2019, Employee shall not directly or indirectly solicit any of the Company's employees to leave their employment at the Company.

14. Costs. The Parties shall each bear their own costs, attorneys' fees, and other fees incurred in connection with the preparation of this Agreement.

15. ARBITRATION. EXCEPT AS PROHIBITED BY LAW, THE PARTIES AGREE THAT ANY AND ALL DISPUTES ARISING OUT OF THE TERMS OF THIS AGREEMENT, THEIR INTERPRETATION, EMPLOYEE'S EMPLOYMENT WITH THE COMPANY OR THE TERMS THEREOF, OR ANY OF THE MATTERS HEREIN RELEASED, SHALL BE SUBJECT TO BINDING ARBITRATION UNDER THE FEDERAL ARBITRATION ACT (THE "FAA"). THE FAA'S SUBSTANTIVE AND PROCEDURAL RULES SHALL GOVERN AND APPLY TO THIS ARBITRATION AGREEMENT WITH FULL FORCE AND EFFECT, AND ANY STATE COURT OF COMPETENT JURISDICTION MAY STAY PROCEEDINGS PENDING ARBITRATION OR

COMPEL ARBITRATION IN THE SAME MANNER AS A FEDERAL COURT UNDER THE FAA. EMPLOYEE AGREES THAT, TO THE FULLEST EXTENT PERMITTED BY LAW, EMPLOYEE MAY BRING ANY SUCH ARBITRATION PROCEEDING ONLY IN EMPLOYEE'S INDIVIDUAL CAPACITY. ANY ARBITRATION WILL OCCUR IN SANTA CLARA COUNTY, CALIFORNIA, BEFORE JAMS, PURSUANT TO ITS EMPLOYMENT ARBITRATION RULES & PROCEDURES ("JAMS RULES"), EXCEPT AS EXPRESSLY PROVIDED IN THIS SECTION. THE PARTIES AGREE THAT THE ARBITRATOR SHALL HAVE THE POWER TO DECIDE ANY MOTIONS BROUGHT BY ANY PARTY TO THE ARBITRATION, INCLUDING MOTIONS FOR SUMMARY JUDGMENT AND/OR ADJUDICATION, AND MOTIONS TO DISMISS AND DEMURRERS, APPLYING THE STANDARDS SET FORTH UNDER THE CALIFORNIA CODE OF CIVIL PROCEDURE. THE PARTIES AGREE THAT THE ARBITRATOR SHALL ISSUE A WRITTEN DECISION ON THE MERITS. THE PARTIES ALSO AGREE THAT THE ARBITRATOR SHALL HAVE THE POWER TO AWARD ANY REMEDIES AVAILABLE UNDER APPLICABLE LAW, AND THAT THE ARBITRATOR MAY AWARD ATTORNEYS' FEES AND COSTS TO THE PREVAILING PARTY, WHERE PERMITTED BY APPLICABLE LAW. THE ARBITRATOR MAY GRANT INJUNCTIONS AND OTHER RELIEF IN SUCH DISPUTES. THE DECISION OF THE ARBITRATOR SHALL BE FINAL, CONCLUSIVE, AND BINDING ON THE PARTIES TO THE ARBITRATION. THE PARTIES AGREE THAT THE PREVAILING PARTY IN ANY ARBITRATION SHALL BE ENTITLED TO INJUNCTIVE RELIEF IN ANY COURT OF COMPETENT JURISDICTION TO ENFORCE THE ARBITRATION AWARD. EMPLOYEE UNDERSTANDS THAT THE PARTIES TO THE ARBITRATION SHALL EACH PAY AN EQUAL SHARE OF THE COSTS AND EXPENSES OF SUCH ARBITRATION, AND EACH PARTY SHALL SEPARATELY PAY FOR ITS RESPECTIVE COUNSEL FEES AND EXPENSES; PROVIDED, HOWEVER, THAT THE ARBITRATOR MAY AWARD ATTORNEYS' FEES AND COSTS TO THE PREVAILING PARTY, EXCEPT AS PROHIBITED BY LAW. THE PARTIES HEREBY AGREE TO WAIVE THEIR RIGHT TO HAVE ANY DISPUTE BETWEEN THEM RESOLVED IN A COURT OF LAW BY A JUDGE OR JURY. NOTWITHSTANDING THE FOREGOING, THIS SECTION WILL NOT PREVENT EITHER PARTY FROM SEEKING INJUNCTIVE RELIEF (OR ANY OTHER PROVISIONAL REMEDY) FROM ANY COURT HAVING JURISDICTION OVER THE PARTIES AND THE SUBJECT MATTER OF THEIR DISPUTE RELATING TO THIS AGREEMENT AND THE AGREEMENTS INCORPORATED HEREIN BY REFERENCE. SHOULD ANY PART OF THE ARBITRATION AGREEMENT CONTAINED IN THIS SECTION CONFLICT WITH ANY OTHER ARBITRATION AGREEMENT BETWEEN THE PARTIES, INCLUDING, BUT NOT LIMITED TO THE ARBITRATION SECTION OF THE CONFIDENTIALITY AGREEMENT, THE PARTIES AGREE THAT THIS ARBITRATION AGREEMENT IN THIS SECTION SHALL GOVERN.

16. Tax Consequences. The Company makes no representations or warranties with respect to the tax consequences of the payments and any other consideration provided to Employee or made on his behalf under the terms of this Agreement. Employee agrees and understands that he is responsible for payment, if any, of local, state, and/or federal taxes on the payments and any other consideration provided hereunder by the Company and any penalties or assessments thereon. Employee further agrees to indemnify and hold the Company harmless from any claims, demands, deficiencies, penalties, interest, assessments, executions, judgments, or recoveries by any government agency against the Company for any amounts claimed due on account of (a) Employee's failure to pay, or Employee's delayed payment of, federal or state taxes, or (b) damages sustained by the Company by reason of any such claims, including attorneys' fees and costs. The Parties agree and acknowledge that the payments

made pursuant to Section 1 of this Agreement are not related to sexual harassment or sexual abuse and not intended to fall within the scope of 26 U.S.C. Section 162(q).

17. Section 409A. The Company intends that all payments under the Agreement are exempt from, or comply with, the requirements of Section 409A of the Internal Revenue Code of 1986 as amended and the final Treasury Regulations and official IRS guidance thereunder (collectively, "Section 409A"). To the extent it is necessary to avoid subjecting Employee to an additional tax under Section 409A, payment of all or a portion of the severance-related amounts described in this Agreement and any other separation payments or separation benefits, that in each case, when considered together are considered deferred compensation for purposes of Section 409A (collectively, "Deferred Payments") will be delayed until the date that is six months and one day following Employee's separation from service; provided, however, that in the event of Employee's death following Employee's separation from service but before the six month anniversary of Employee's separation from service, then any payments delayed in accordance with this sentence will be payable in a lump sum as soon as administratively practicable after the date of Employee's death, and any other payments or benefits due will be payable in accordance with the payment schedule applicable to them. Employee and the Company agree to work together in good faith to consider amendments to this Agreement and to take such reasonable actions which are necessary, appropriate or desirable to avoid imposition of any additional tax or income recognition prior to actual payment to Employee under Section 409A. However, the Company does not guarantee that any payments or benefits under this Agreement or otherwise comply with Section 409A and Employee is solely responsible for the payment of all taxes owed on account of all such payments and benefits.

18. Authority. The Company represents and warrants that the undersigned has the authority to act on behalf of the Company and to bind the Company and all who may claim through it to the terms and conditions of this Agreement. Employee represents and warrants that he has the capacity to act on his own behalf and on behalf of all who might claim through his to bind them to the terms and conditions of this Agreement. Each Party warrants and represents that there are no liens or claims of lien or assignments in law or equity or otherwise of or against any of the claims or causes of action released herein.

19. No Representations. Employee represents that he has had an opportunity to consult with an attorney, and has carefully read and understands the scope and effect of the provisions of this Agreement. Employee has not relied upon any representations or statements made by the Company that are not specifically set forth in this Agreement.

20. Severability. In the event that any provision or any portion of any provision hereof or any surviving agreement made a part hereof becomes or is declared by a court of competent jurisdiction or arbitrator to be illegal, unenforceable, or void, this Agreement shall continue in full force and effect without said provision or portion of provision.

21. Attorneys' Fees. Except with regard to a legal action challenging or seeking a determination in good faith of the validity of the waiver herein under the ADEA, in the event that either Party brings an action to enforce or effect its rights under this Agreement, the prevailing Party shall be entitled to recover its costs and expenses, including the costs of mediation, arbitration, litigation, court fees, and reasonable attorneys' fees incurred in connection with such an action.

22. Entire Agreement. This Agreement, along with the Advisor Agreement, represent the entire agreement and understanding between the Company and Employee concerning the subject matter of this Agreement and Employee's employment with and separation from the Company and the events leading thereto and associated therewith, and supersede and replace any and all prior agreements and understandings concerning the subject matter of this Agreement and Employee's relationship with the Company, with the exception of the Confidentiality Agreement, the D&O Indemnification Agreement and the Stock Agreements.

23. No Oral Modification. This Agreement may only be amended in a writing signed by Employee and the Company's Chief Executive Officer.

24. Governing Law. With the exception of the arbitration requirements set forth above, this Agreement shall be governed by the laws of the State of California, without regard for choice-of-law provisions. To the extent that any lawsuit is permitted under this Agreement, Employee hereby expressly consents to personal and exclusive jurisdiction and venue of the state and federal courts in the State of California.

25. Effective Date. Employee understands that this Agreement shall be null and void if not executed by Employee within twenty-one (21) days, as set forth above. Employee shall not sign this Agreement until after the Employment End Date. Each Party has seven (7) days after that Party signs this Agreement to revoke it. This Agreement will become effective on the eighth (8th) day after Employee signed this Agreement, so long as it has been signed by the Parties and has not been revoked by either Party before that date (the "Effective Date").

26. Counterparts. This Agreement may be executed in counterparts, and each counterpart shall be deemed an original and all of which counterparts taken together shall have the same force and effect as an original and shall constitute an effective, binding agreement on the part of each of the undersigned. The counterparts of this Agreement may be executed and delivered by facsimile, photo, email, PDF, or other electronic transmission or signature.

27. Protected Activity Not Prohibited. Employee understands that nothing in this Agreement shall in any way limit or prohibit Employee from engaging in any Protected Activity, including filing a charge, complaint, or report with, or otherwise communicating, cooperating, or participating in any investigation or proceeding that may be conducted by, any federal, state or local government agency or commission, including the Securities and Exchange Commission, the Equal Employment Opportunity Commission, the Occupational Safety and Health Administration, and the National Labor Relations Board ("Government Agencies"). Employee understands that in connection with such Protected Activity, Employee is permitted to disclose documents or other information as permitted by law, without giving notice to, or receiving authorization from, the Company. Notwithstanding the foregoing, Employee agrees to take all reasonable precautions to prevent any unauthorized use or disclosure of any information that may constitute Company confidential information under the Confidentiality Agreement to any parties other than the Government Agencies. Employee further understands that "Protected Activity" does not include the disclosure of any Company attorney-client privileged communications or attorney work product. Any language in the Confidentiality Agreement regarding Employee's right to engage in Protected Activity that conflicts with, or is contrary to, this section is superseded by this Agreement. In addition, pursuant to the Defend Trade Secrets Act of 2016, Employee is notified that an individual will not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that (a) is made in

confidence to a federal, state, or local government official (directly or indirectly) or to an attorney solely for the purpose of reporting or investigating a suspected violation of law, or (b) is made in a complaint or other document filed in a lawsuit or other proceeding, if (and only if) such filing is made under seal. In addition, an individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the individual's attorney and use the trade secret information in the court proceeding, if the individual files any document containing the trade secret under seal and does not disclose the trade secret, except pursuant to court order.

28. Voluntary Execution of Agreement. Employee understands and agrees that he executed this Agreement voluntarily, without any duress or undue influence on the part or behalf of the Company or any third party, with the full intent of releasing all of his claims against the Company and any of the other Releasees. Employee acknowledges that Employee:

- (a) has read this Agreement;
- (b) has been represented in the preparation, negotiation, and execution of this Agreement by legal counsel of Employee's own choice or has elected not to retain legal counsel;
- (c) understands the terms and consequences of this Agreement and of the releases it contains; and
- (d) is fully aware of the legal and binding effect of this Agreement.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the respective dates set forth below.

MARK F. ANDERSON, an individual

Dated: 10/31/18

/s/ MARK F. ANDERSON
Mark F. Anderson

PALO ALTO NETWORKS, INC.

Dated: 11/12/18

By: /s/ NIKESH ARORA
Nikesh Arora
Chief Executive Officer

EXHIBIT A

ADVISOR AGREEMENT

EXHIBIT B

SUPPLEMENTAL RELEASE AGREEMENT

This Supplemental Release Agreement is made by and between Mark F. Anderson (“Advisor”) and Palo Alto Networks, Inc. (the “Company”) (collectively referred to as the “Parties” or individually referred to as a “Party”).

1. Consideration. In consideration for the Equity Vesting (as defined in the Advisor Agreement), Advisor hereby extends Advisor’s release and waiver of claims to any claims that may have arisen between the Effective Date (as defined in Advisor’s Transition Agreement and Release (the “Transition Agreement”)) and the Supplemental Release Effective Date (as defined below).

2. Incorporation of Terms of Transition Agreement. The undersigned Parties further acknowledge that the terms of the Transition Agreement, including Sections 2 (Payment of Salary and Receipt of All Benefits), 3 (Release of Claims), 8 (Trade Secrets and Confidential Information/Company Property), 9 (No Cooperation), 10 (Nondisparagement), 11 (Breach), 13 (Non-Solicitation), Section 22 (Entire Agreement), and Section 27 (Protected Activity) shall apply to this Supplemental Release Agreement.

3. Supplemental Release Effective Date. Advisor understands that this Supplemental Release Agreement shall be null and void if not executed by Advisor, and returned to the Company, within 21 days after the Separation Date (as defined in the Transition Agreement). Each Party 7 days after that Party signs this Supplemental Release Agreement to revoke it. This Supplemental Release Agreement will become effective on the 8th day after Advisor signed this Supplemental Release Agreement, so long as it has been signed by the Parties and has not been revoked by either Party before that date (the “Supplemental Release Effective Date”).

4. Voluntary Execution of Agreement. Advisor understands and agrees that Advisor executed this Supplemental Release Agreement voluntarily, without any duress or undue influence on the part or behalf of the Company or any third party, with the full intent of releasing all of Advisor’s claims against the Company and any of the other Releasees (as defined in the Transition Agreement). Advisor acknowledges that:

- (a) Advisor has read this Supplemental Release Agreement;
- (b) Advisor cannot sign the Supplemental Release Agreement before the Separation Date;
- (c) Advisor has been represented in the preparation, negotiation, and execution of this Supplemental Release Agreement by legal counsel of Advisor’s own choice or has elected not to retain legal counsel;
- (d) Advisor understands the terms and consequences of this Supplemental Release Agreement and of the releases it contains; and
- (e) Advisor is fully aware of the legal and binding effect of this Supplemental Release Agreement.

IN WITNESS WHEREOF, the Parties have executed this Supplemental Release Agreement on the respective dates set forth below.

MARK F. ANDERSON, an individual

Dated: 11/6/18

/s/ MARK F. ANDERSON

Mark F. Anderson

PALO ALTO NETWORKS, INC.

Dated: 11/12/18

By: /s/ NIKESH ARORA

Nikesh Arora

CEO

PALO ALTO NETWORKS, INC.
ADVISOR AGREEMENT

This Advisor Agreement (the “Advisor Agreement”) is entered into by and between Palo Alto Networks, Inc. (the “Company”) and Mark F. Anderson (the “Advisor”), effective as of immediately following the end of Advisor’s employment with the Company (the “Effective Date”), subject to the following sentence. As a condition to the effectiveness of this Advisor Agreement, Advisor agrees that the Transition Agreement and Release (the “Transition Agreement”), which is incorporated herein by reference, must be effective and irrevocable within 10 days following Advisor’s termination of employment (the “Deadline”). If the Transition Agreement is not effective and irrevocable by the Deadline, then this Advisor Agreement automatically terminates. Any capitalized term not otherwise defined in this Advisor Agreement shall have the meaning set forth in the Transition Agreement.

1. Advisory Relationship. During the term of this Advisor Agreement, Advisor will serve as an advisor to the Company and provide services (the “Services”) to the Company as described on Appendix A attached to this Advisor Agreement.

2. Term. Advisor shall provide Services under this Advisor Agreement from the Effective Date through May 1, 2019 (the “Term”). Advisor may terminate the Advisor Agreement for convenience prior to the expiration of the Term upon thirty days’ notice. The Company may terminate this Advisor Agreement if Advisor has breached this Advisor Agreement and Advisor has not cured such breach within 10 business days after being notified in writing of the breach by the Company. Notwithstanding the foregoing, if Advisor accepts full-term employment prior to the Term date, then this Advisor Agreement automatically terminates.

3. Compensation. In exchange for the Services to be rendered to Company hereunder, Company shall provide Advisor, as full and complete compensation for the Services rendered hereunder, the compensation set forth in Appendix A.

4. Expenses. The Company shall pay for Advisor’s reasonable travel-related expenses for such travel that Advisor incurs at the Company’s specific request. The Company shall have no obligation to reimburse Advisor for local travel. Except for such costs and expenses specifically incurred by Advisor at the Company’s request or with the Company’s prior written approval, the Company shall not be responsible for any other costs and expenses incurred by Advisor in performing the Services for the Company.

5. Independent Contractor. Advisor’s relationship with the Company during the Term will be that of an independent contractor and not that of an employee. Advisor will not be eligible for any employee benefits. Notwithstanding the foregoing, as a result of the compensation being in lieu of severance and thus incident to Advisor’s employment, the Company will report all compensation paid to Advisor as “wages” within the meaning of Section 3401(a) of the Internal Revenue Code of 1986, as amended (the “Code”), and accordingly such wages will be subject to regular withholdings by the Company. Advisor will have no authority to enter into contracts that bind the Company or create obligations on the part of the Company.

6. Consulting or other Services for Competitors. Advisor agrees that, during the Term of this Advisor Agreement, he will not perform consulting or other services for any company, person or entity whose business or proposed business in any way involves products or services which could reasonably be determined to be competitive with the products or services or proposed products or services of the Company.

7. Conflicts with this Agreement. Advisor represents and warrants that Advisor is not under any pre-existing obligation in conflict, or in any way inconsistent, with the provisions of this Advisor Agreement, and that Advisor's performance of this Advisor Agreement and the Services will not breach any invention assignment, proprietary information, confidentiality or other agreement with any other party, including any entity that employs or employed Advisor prior to the Effective Date or for which Advisor performed services prior to the Effective Date. Advisor represents that he will not bring to the Company or use in the performance of the Services any documents, materials, or intangibles of a former employer or third party that are not generally available to the public. Advisor will not knowingly infringe upon any copyright, patent, trade secret or other proprietary right of any former client, employer or third party in the performance of the services required by this Advisor Agreement.

8. Miscellaneous.

(a) Amendments and Waivers. Any term of this Advisor Agreement may be amended or waived only with the written consent of the parties.

(b) Sole Agreement. This Advisor Agreement, including Appendix A hereto, the Indemnification Agreement, the Stock Agreements, and the Transition Agreement constitute the sole agreement of the parties and supersedes all oral negotiations and prior writings with respect to the subject matter hereof, including, but not limited to, Advisor's employment letter with the Company dated May 23, 2012. For clarity, Advisor will be covered under the Indemnification Agreement through end of the Term of this Agreement, and the tail of the Indemnification Agreement shall continue as if the end of the Term of this Agreement was the date Advisor ceased to be an officer of the Company.

(c) Notices. Any notice required or permitted by this Advisor Agreement shall be in writing and delivered personally, by confirmed facsimile transmission, by courier or by an internationally-recognized delivery service, and in each instance will be deemed given upon receipt. All notices will be addressed to the party to be notified at such party's address as set forth below or as subsequently modified by written notice.

(d) Choice of Law. The validity, interpretation, construction and performance of this Advisor Agreement shall be governed by the laws of California, without giving effect to the principles of conflict of laws.

(e) Severability. If one or more provisions of this Advisor Agreement are held to be unenforceable under applicable law, the parties agree to renegotiate such provision in good faith. In the event that the parties cannot reach a mutually agreeable and enforceable replacement for such provision, then (i) such provision shall be excluded from this Advisor Agreement, (ii) the balance

of the Agreement shall be interpreted as if such provision were so excluded and (iii) the balance of the Agreement shall be enforceable in accordance with its terms.

(f) Counterparts. This Advisor Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together will constitute one and the same instrument.

(g) Resolution of Disputes; Jurisdiction. Sections 15 and 24 of the Transition Agreement are incorporated herein by reference.

[remainder of page blank]

[signature page to follow]

The parties have executed this Advisor Agreement as of the date set forth above.

Palo Alto Networks, Inc.

By: /s/ NIKESH ARORA
Name: Nikesh Arora
Title: CEO
Address: 3000 Tannery Way
Santa Clara, CA 95054

Advisor

By: /s/ MARK F. ANDERSON
(Signature)

Mark F. Anderson
(Print Name)

Address: 15600 Glen Una Dr.
Los Gatos, CA 95030

[signature page of Advisor Agreement]

APPENDIX A
DESCRIPTION OF SERVICES

Services:

Advisor will perform such reasonable transition advisory services reasonably requested by the Company's Chief Executive Officer.

The Services shall in all cases be at a level equal to 20% or less of Advisor's services as an employee during the 36-month period prior to the Effective Date. Accordingly, a "separation from service" within the meaning of Section 409A occurred as of the Employment End Date.

Compensation:

Upon the Effective Date of the Transition Agreement, Advisor will be paid a lump sum payment equal to \$[_____]¹, less withholdings.

During the Term, Advisor will continue to be paid his current base salary (which is \$775,000) annually. This compensation will be paid through the Company's payroll and will be reduced by regular withholdings.

Further, the vesting of all equity awards under the Stock Agreements shall continue to vest during the Term (the "Equity Vesting"), subject to Advisor's execution and non-revocation of the Supplemental Release Agreement (as attached as Exhibit B to the Transition Agreement). If the Supplemental Release Agreement is not effective and irrevocable within 30 days following the Separation Date, then all rights to the Equity Vesting shall be forfeited and the Company can claw-back any Equity Vesting that occurred after the Employment End Date. The Company may require any shares settled after the Employment End Date to be held in an account with a captive broker with no-sale instructions until the Supplemental Release Effective Date to enforce this paragraph.

Notwithstanding anything herein to the contrary, for the avoidance of doubt, if Advisor accepts full-time employment with another employer during the Term, this Advisor Agreement terminates automatically and all the compensation herein shall cease.

ADVISOR

By: /s/ MARK F. ANDERSON
(Signature)

PALO ALTO NETWORKS, INC.

By: /s/ NIKESH ARORA
(Signature)

¹This is the amount to cover 6 months of COBRA.

Name: Mark F. Anderson
Date: 10/15/18

Name/Title: Nikesh Arora, CEO
Date: 10/15/18

**CERTIFICATION PURSUANT TO SECTION 302(a)
OF THE SARBANES-OXLEY ACT OF 2002**

I, Nikesh Arora, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Palo Alto Networks, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ NIKESH ARORA

Nikesh Arora

Chief Executive Officer and Director

Date: November 30, 2018

**CERTIFICATION PURSUANT TO SECTION 302(a)
OF THE SARBANES-OXLEY ACT OF 2002**

I, Kathleen Bonanno, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Palo Alto Networks, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ KATHLEEN BONANNO

Kathleen Bonanno
Chief Financial Officer

Date: November 30, 2018

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

I, Nikesh Arora, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report on Form 10-Q of Palo Alto Networks, Inc. for the quarterly period ended October 31, 2018, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that information contained in such Quarterly Report on Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Palo Alto Networks, Inc.

/s/ NIKESH ARORA

Nikesh Arora

Chief Executive Officer and Director

Date: November 30, 2018

**CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

I, Kathleen Bonanno, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report on Form 10-Q of Palo Alto Networks, Inc. for the quarterly period ended October 31, 2018, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that information contained in such Quarterly Report on Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Palo Alto Networks, Inc.

/s/ KATHLEEN BONANNO

Kathleen Bonanno

Chief Financial Officer

Date: November 30, 2018