Palo Alto Networks Inc
Form 10-K
September 13, 2018
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

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FORM 10-K

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(Mark One)
x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended July 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	20-2530195
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
3000 Tannery Way Santa Clara, California	95054
(Address of principal executive offices, including zip code)	
(408) 753-4000	
(Registrant's telephone number, including area code)	

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

Title of each class	Name of each exchange on which registered
Common Stock, par value $0.0001 per share	New York Stock Exchange LLC

Securities registered pursuant to Section 12(g) of the Act:
None
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes x No ¨
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ¨ No x
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 x No ¨
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No ¨
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. x

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 x	Accelerated filer ¨
Non-accelerated filer ¨ (Do not check if a smaller reporting company)	Smaller reporting company ¨
	Emerging growth company ¨

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

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

The aggregate market value of voting stock held by non-affiliates of the registrant was $14,002,012,218 as of January 31, 2018, the last business day of the registrant's most recently completed second fiscal quarter (based on the closing sales price for the common stock on the New York Stock Exchange on such date). Shares of common stock held by each executive officer, director, and holder of 5% or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

On August 30, 2018, 93,822,985 shares of the registrant's common stock, $0.0001 par value, were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the information called for by Part III of this Annual Report on Form 10-K is hereby incorporated by reference from the definitive proxy statement for the registrant's annual meeting of stockholders, which will be filed with the Securities and Exchange Commission not later than 120 days after the registrant's fiscal year ended July 31, 2018.

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PART I

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, including the sections entitled “Business,” “Risk Factors,” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. The words “believe,” “may,” “will,” “potentially,” “estimate,” “continue,” “anticipate,” “intend,” “could,” “would,” “pro “expect,” and similar expressions that convey uncertainty of future events or outcomes are intended to identify forward-looking statements.

These forward-looking statements include, but are not limited to, statements concerning the following:

- 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;
- trends in and expectations regarding billings, revenue (including our revenue mix), costs of revenue, gross margin, cash flows, interest expense, operating expenses (including future share-based compensation expense), income taxes (including our ongoing assessment of the impact of the Tax Cuts and Jobs Act and any future adjustments), investment plans and liquidity;
- our ability to and expectation that we will continue to grow our installed end-customer base;
- expected recurring revenues resulting from expected growth in our installed base and increased adoption of our products and cloud-based subscription services;
- our expectations regarding future investments in research and development, customer support, and in our sales force, including expectations regarding growth in our sales headcount;
- our ability to develop or acquire new product, subscription, and support offerings, improve our existing product, subscription, and support offerings, and increase the value of our product, subscription, and support offerings, including through deployment of new capabilities via security applications developed by third parties;
- our expectation that we will continue to expand internationally;
- our expectation that we will continue to renew existing contracts and increase sales to our existing customer base;
- seasonal trends in our results of operations;
- expected impact of the adoption of certain recent accounting pronouncements and the anticipated timing of adopting such standards;
- our expectation that we will expand our facilities or add new facilities as we add employees and enter new geographic markets and expectations related to charges incurred in connection with exiting our former headquarter facilities;
- our plans to use the upfront cash reimbursement received from our landlords against future rental payments;
- the sufficiency of our cash flow from operations with existing cash and cash equivalents to meet our cash needs for the foreseeable future;
- future investments in product development, subscriptions, or technologies, and any related delays in the development or release of new product and subscription offerings;
- our ability to successfully acquire and integrate companies and assets;
- expectations and intentions with respect to the products and technologies that we acquire and introduce;
- the timing and amount of capital expenditures and share repurchases; and
- other statements regarding our future operations, financial condition and prospects, and business strategies.

These forward-looking statements are subject to a number of risks, uncertainties, and assumptions, including those described in “Risk Factors” included in Part I, Item 1A and elsewhere in this Annual Report on Form 10-K. Moreover, we operate in a very competitive and rapidly changing environment, and new risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties, and assumptions, the forward-looking events and circumstances discussed in this Annual Report on Form 10-K may not occur, and actual results could differ materially and adversely from those anticipated or implied in the forward-looking

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statements. 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.

ITEM 1. BUSINESS

General

We were incorporated in 2005 as Palo Alto Networks, Inc., a Delaware corporation. Our corporate headquarters are located in Santa Clara, California.

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 software as a service (“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.

Product, Subscription, and Support Offerings

Our Security Operating Platform is available in the form of the product, subscription, and support offerings described below.

Firewall Appliances and Software. All of our firewall appliances and software incorporate our PAN-OS operating system and come with the same rich set of features ensuring consistent operation across our entire product line. These features include: App-ID, User-ID, site-to-site virtual private network (“VPN”), remote access Secure Sockets Layer (“SSL”) VPN, and Quality-of-Service (“QoS”). Our appliances and software are designed for different performance requirements throughout an organization and are classified based on throughput, ranging from our PA-200, which is designed for enterprise remote offices, to our top-of-the-line PA-7080, which is designed for large scale data centers and service provider use. Our firewall appliances come in a physical form factor as well as in a virtual form factor, called VM-Series, that is available for virtualization and cloud environments from companies such as VMware, Inc. (“VMware”), Microsoft Corporation (“Microsoft”), Amazon.com, Inc. (“Amazon”), and Google, Inc. (“Google”), and in Kernel-based Virtual Machine (“KVM”)/OpenStack environments.

Panorama. Panorama is our centralized security management solution for global control of all of our firewall appliances and software deployed on an end-customer’s network as well as in their instances in public cloud environments as a virtual appliance or a physical appliance. Panorama is used for centralized policy management, device management, software licensing and updates, centralized logging and reporting, and log storage. Panorama controls the security, network address translation (“NAT”), QoS, policy-based forwarding, decryption, application override, captive portal, and distributed denial of service/denial of service (“DDoS/DoS”) protection aspects of the

appliances, software, and virtual systems under management. Panorama centrally manages device software and associated updates, including SSL-VPN clients, GlobalProtect clients, dynamic content updates, and software licenses. Panorama offers the ability to view logs and run reports from all managed appliances and software without the need to forward the logs and to report on aggregate user activity for all users, including mobile users. Panorama reliably expands the log storage for long-term event investigation and analysis through high-availability features for central management.

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Virtual System Upgrades. Virtual System Upgrades are available as extensions to the Virtual System capacity that ships with our physical appliances. Virtual Systems provide a mechanism to support multiple distinct security policies and administrative access for tenants on the same hardware device, which is applicable to our large enterprise and service provider end-customers.

Subscription Offerings. We offer a number of subscriptions as part of our platform. Of these subscription offerings, Threat Prevention Subscription, URL Filtering Subscription, WildFire Subscription, and GlobalProtect Subscription are sold as options to our firewall appliances and software, whereas VM-Series, Traps, AutoFocus, Aperture, GlobalProtect cloud service, Logging Service, Evident, and Magnifier are sold on a per-user, per-endpoint, or capacity-based basis. Our subscription offerings include:

- Threat Prevention Subscription. This subscription provides the intrusion detection and prevention capabilities of our platform. Our threat prevention engine blocks vulnerability exploits, viruses, spyware, buffer overflows, denial-of-service attacks, and port scans from compromising and damaging enterprise information resources. It includes mechanisms such as protocol decoder-based analysis, protocol anomaly-based protection, stateful pattern matching, statistical anomaly detection, heuristic-based analysis, custom vulnerability, and spyware "phone home" signatures.
- URL Filtering Subscription. This subscription provides the uniform resource locator ("URL") filtering capabilities of our platform. The URL filtering database consists of millions of URLs across many categories and is designed to monitor and control employee web surfing activities. The on-appliance URL database can be augmented to suit the traffic patterns of the local user community with a custom URL database. URLs that are not categorized by the local URL database can be pulled into a separate, cache-based URL database from a very extensive, cloud-based URL database.
- WildFire Subscription. This cloud-based or appliance-based subscription provides protection against targeted malware and advanced persistent threats, and provides a near real-time analysis engine for detecting previously unseen malware. The core component of this subscription is a sandbox environment that can operate on an end-customers' private cloud or our public cloud where files can be run and monitored for more than 100 behavioral characteristics that identify the file as malware. Once identified, preventive measures are automatically generated and delivered to all subscribed devices. By providing this as a cloud-based subscription, all of our end-customers benefit from malware found on any network.
- GlobalProtect Subscription. This appliance-based subscription provides protection for mobile users of both traditional laptop devices and mobile devices. It expands the boundaries of the physical network, effectively establishing a logical perimeter that encompasses remote laptop and mobile device users irrespective of their location. When a remote user logs into the device, GlobalProtect automatically determines the closest gateway available to the roaming device and establishes a secure connection. Windows and Apple laptops as well as mobile devices, such as Android phones and tablets and Apple iPhones and iPads, will stay connected to the corporate network whenever they are on a network of any kind. As a result, they are protected as if they never left the corporate campus. GlobalProtect ensures that the same secure application enablement policies that protect users at the corporate site are enforced for all users, independent of their location.
- VM-Series Subscription. VM-Series, the software form factor of our Next-Generation Firewall, is offered as both a perpetual license as well as a term-based subscription. The VM-Series provides all of the same security capabilities of our hardware appliances, but is delivered as a software package that can be deployed on VMware's NSX and ESXi, Microsoft's Hyper-V, and Red Hat KVM hypervisors, as well as natively in Amazon Web Services ("AWS") cloud, Microsoft Azure cloud ("Azure"), and Google Cloud Platform ("GCP").
- Traps Endpoint Protection Subscription. This subscription provides protection for endpoints against cyberattacks that aim to run malicious code or exploit software vulnerabilities. It prevents known and previously unknown attacks through its unique capability of stopping the underlying exploit techniques and can prevent cyberattacks without relying on prior knowledge of the attack. Through its integration with WildFire, it is also capable of preventing cyberattacks that rely on malware.
- AutoFocus Subscription. This cloud-based subscription provides threat intelligence capabilities to our end-customers' security operations teams. Indicators of compromise and anomalies that occur on an end-customer's network can be

correlated with similar data that has been centrally collected from among all our participating end-customers. This offers our end-customers priority alerts, deep attack context, and high-fidelity threat intelligence across millions of malware samples and tens of billions of file artifacts.

- Aperture Subscription. This cloud-based subscription provides content control for IT-sanctioned SaaS applications that are used to store and share end-customer's data. It offers end-customers the capability to safely use these SaaS applications and avert risks associated with improper sharing of confidential data and risks associated with sharing of malicious content.

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- GlobalProtect Cloud Service Subscription. This cloud-based subscription enables our end-customers to utilize the preventive capabilities of our Security Operating Platform to secure remote offices and mobile users, providing consistent protection across globally distributed network and cloud environments without the need for firewall appliances or software in the remote locations. With this offering, our end-customers can quickly and easily add or remove remote locations and users, and establish and adjust security policies as needed, using a multi-tenant, cloud-based security infrastructure that we operate on their behalf.
- Logging Service Subscription. This cloud-based subscription allows our end-customers to collect large amounts of context-rich enhanced network logs generated by our security offerings, including those of our firewalls and GlobalProtect cloud service subscription, without needing to plan for local processing power and storage.
- Evident Subscription. This cloud-based subscription allows our end-customers to continuously secure public cloud infrastructure services, such as cloud storage. Evident enables our end-customers to continuously audit and generate reports to ensure that they can deploy applications in the public cloud knowing the cloud is configured to meet their organization's security and compliance requirements.
- Magnifier Subscription. This cloud-based subscription enables organizations to identify and prevent behavior-based threats by applying machine learning to rich network, endpoint, and cloud data.

Support. We offer Standard Support, Premium Support, and four-hour Premium Support to our end-customers and channel partners. Our channel partners that operate a Palo Alto Networks Authorized Support Center ("ASC") typically deliver level-one and level-two support. We provide level-three support 24 hours a day, seven days a week through regional support centers that are located worldwide. We also offer an annual subscription-based Technical Account Management ("TAM") service that provides dedicated support for end-customers with unique or complex support requirements. We offer our end-customers ongoing support for both hardware and software in order to receive ongoing security updates, PAN-OS upgrades, bug fixes, and repair. End-customers typically purchase these services for a one-year or longer term at the time of the initial product sale and typically renew for successive one-year or longer periods. Additionally, we provide expedited replacement for any defective hardware. We use a third-party logistics provider to manage our worldwide deployment of spare appliances and other accessories.

Professional Services. Professional services are primarily delivered through our authorized channel partners and include on-location, hands-on experts who plan, design, and deploy effective security solutions tailored to our end-customers' specific requirements. These services include application traffic management, solution design and planning, configuration, and firewall migration. Our education services provide online and classroom-style training and are also primarily delivered through our authorized partners.

Technology

We combine our proprietary hardware and software architecture to provide a comprehensive security platform. Our Next-Generation Firewall integrates application visibility and control and is comprised of three identification technologies: App-ID, User-ID, and Content-ID. These technologies allow organizations to enable the secure use of applications while managing the inherent risks of doing so. These fine-grained policy management and enforcement capabilities are delivered at low latency, multi-gigabit performance through our innovative single-pass, parallel processing ("SP3") architecture.

App-ID. App-ID is our application classification engine that uses multiple identification techniques to determine the exact identity of applications traversing the network. App-ID is the foundational classification engine that provides the core traffic classification to all other functions in our platform. The App-ID classification is used to invoke other security functions.

App-ID uses a series of classification techniques to accurately identify an application. When traffic first enters the network, App-ID applies an initial policy check based on Internet Protocol ("IP") and port. Signatures are then applied to the traffic to identify the application based on application properties and related transaction characteristics. If the traffic is encrypted and a decryption policy is in place, the application is first decrypted, then application signatures are applied. Additional context-based signature analysis is then performed to identify known protocols that may be hiding other applications. Encrypted traffic that was decrypted is then re-encrypted before being sent back into the network. For evasive applications that cannot be identified through advanced signature and protocol analysis, heuristics or behavioral analysis are used to determine the identity of the application. When an application is

accurately identified during this series of successive techniques, the policy check determines how to treat the application and associated functions. The policy check can block the application, allow it and scan for threats, inspect it for unauthorized file transfer and data patterns, or shape its use of network resources by applying a quality-of-service policy.

App-ID consistently classifies all network traffic, including business applications, consumer applications, and network protocols, across all ports. Consequently, there is no need to perform a series of signature checks to look for an application that is thought to be on the network. App-ID continually monitors the state of the application to determine if the application changes. Our platform allows only those applications within the policy to enter the network, while all other applications are blocked.

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Internally developed or custom applications can be managed using either an application override or custom App-IDs. End-customers can use either of these mechanisms to apply the same level of control over their internal or custom applications that they apply to common applications. Because the application landscape is constantly changing, our research teams are constantly updating our App-ID classification engine. We deliver updated App-IDs automatically to our end-customers through our weekly update service.

User-ID. User-ID integrates our platform with a wide range of enterprise user directories and technologies, including Active Directory, eDirectory, Open LDAP, Citrix Terminal Server, Microsoft Exchange, Microsoft Terminal Server, and ZENworks. A network-based, User-ID agent communicates with the domain controllers, directories, or supported enterprise applications, mapping information such as user, role, and current IP address to the firewall, making the policy integration transparent. In cases where user repository information does not include the current IP address of the user, a transparent, captive portal authentication or challenge/response mechanism can be used to tie users into the security policy. In cases where a user repository or application is in place that already has knowledge of users and their current IP address, a standards-based application programming interface ("API") can be used to tie the repository to our platform.

Content-ID. Content-ID is a collection of technologies that enables many of our subscription offerings. Content-ID combines a real-time threat prevention engine, a cloud-based analysis service, and a comprehensive URL categorization database to limit unauthorized data and file transfers, detect and block a wide range of threats, and control non-work related web surfing.

The threat prevention engine blocks several common types of attacks, including vulnerability exploits, buffer overflows, and port scans from compromising and damaging enterprise information resources. It includes mechanisms such as protocol decoder-based analysis, protocol anomaly-based protection, stateful pattern matching, statistical anomaly detection, heuristic-based analysis, custom vulnerability, and spyware "phone home" signatures.

Our cloud-based threat analysis service, WildFire, provides a near real-time analysis engine for detecting previously unseen targeted malware. The core component of WildFire is a sandbox environment that can be deployed in a customer's private cloud or on our cloud where files can be run and monitored for more than 100 behavioral characteristics that identify the file as malware. Once identified, signatures are automatically generated and delivered to all end-customers that subscribe to the WildFire service. By providing WildFire as a cloud-based service, all of our end-customers benefit from malware found on any network or endpoint. Refer to the "WildFire" section below for a more detailed discussion of our WildFire technology.

Our URL filtering database consists of millions of URLs across many categories and is designed to monitor and control employee web surfing activities. The on-appliance URL database can be augmented to suit the traffic patterns of the local user community with a custom URL database. URLs that are not categorized by the local URL database can be pulled into an on-appliance data cache from a very extensive, cloud-based URL database. The data filtering features in our platform enable policies that reduce the risks associated with the transfer of unauthorized files and data. This can be achieved by blocking files by type, by controlling sensitive data, such as credit card and social security numbers in application content or attachments, and by controlling file transfers within applications.

SP3. SP3 is our proprietary software and hardware architecture that is comprised of two elements: single-pass software and parallel processing hardware.

Our single-pass software accomplishes two key functions in our platform. First, it performs operations once per packet. As a packet is processed, the networking functions, the policy lookup, the application identification and decoding, and the signature matching for any and all threats and content are all performed simultaneously. This significantly reduces the amount of processing required to perform multiple functions in one security device. Second, the content scanning step is stream-based and uses uniform signature matching to detect and block threats. Instead of using multiple scanning passes and file proxies, which require download prior to scanning, our single-pass software scans content once in a stream-based fashion to minimize latency. This results in very high throughput and low latency, even with all security functions active. It also offers a single, fully integrated policy, thus enabling easier management of security.

Our parallel processing hardware is designed to optimize single-pass software performance through the use of separate data and control planes, which means that heavy utilization of one does not negatively impact the performance of the

other. Our hardware also uses discrete, specialized processing groups to perform critical functions. On the data plane, this includes functions such as networking, policy enforcement, encryption and decryption, decompression, and content scanning. On the control plane, this includes configuration management, logging, and reporting.

We believe that the combination of single-pass software and parallel processing hardware is unique in the enterprise security industry and allows our platform to safely enable applications and prevent cyberthreats at very high levels of performance and throughput.

PAN-OS Operating System. Our PAN-OS operating system provides the foundation for our security platform and contains App-ID, User-ID, and Content-ID. PAN-OS performs the core functions of our platform while also providing the networking,

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security, and management functions needed for implementation. The PAN-OS networking functions include dynamic routing, switching, high availability, and VPN support, which enables deployment into a broad range of networking environments.

We have the ability to enable a series of virtual firewall instances or virtual systems. Each virtual system is an independent (virtual) firewall within the device that is managed separately and cannot be accessed or viewed by any other administrator of any other virtual system. This capability allows enterprises and service providers to separate firewall instances in departmental and multi-tenant managed services scenarios.

The security functions in PAN-OS are implemented in a single security policy and include application, application function, user, group, port, and service-based elements. Policy responses can range from open (allow but monitor for activity), to moderate (enabling certain applications or functions), to closed (deny). The tight integration of application control, users, and groups, and the ability to scan the allowed traffic for a wide range of threats minimizes the number of policies.

PAN-OS also includes attack protection capabilities, such as blocking invalid or malformed packets, IP defragmentation, Transmission Control Protocol ("TCP") reassembly, and network traffic normalization. PAN-OS eliminates invalid and malformed packets, while TCP reassembly and IP defragmentation is performed to ensure the utmost accuracy and protection despite any attack evasion techniques.

WildFire. WildFire is our cloud-based malware analysis environment that offers a completely new approach to cybersecurity. Through native integration with our Next-Generation Firewall, the service brings advanced threat detection and prevention to every system deployed throughout the network, automatically sharing protections with all WildFire subscribers globally.

The service offers a unified, hybrid cloud architecture deployed via either a Palo Alto Networks run cloud, a private cloud appliance that maintains all data on the local network, or a combination of the two. This allows us to perform dynamic analysis of suspicious content in a cloud-based virtual environment to discover unknown threats, automatic creation and enforcement of best-in-class, content-based malware protections, and link detection in email, proactively blocking access to malicious websites.

Advanced attacks are not point-in-time events. Adversaries deliver attacks persistently, often using non-standard ports, protocols or encryption for subsequent attack stages. Like our Next-Generation Firewall, WildFire provides complete visibility into unknown threats within all traffic across thousands of applications, including Web traffic, email protocols (SMTP, IMAP, POP), and FTP, regardless of ports or encryption (SSL).

Once WildFire discovers a new threat, the service automatically generates protections across the attack lifecycle, blocking malicious files and command-and-control traffic. Uniquely, many of these protections are content-based, not relying on easily changed attributes such as hash, filename or URL, allowing the service to block the initial malware and future variants without any additional action or analysis. WildFire informs the protection of our other security services, blocking threats in-line through Threat Prevention (anti-malware, DNS, command-and-control), Web Security (malicious URLs in PAN-DB), and GlobalProtect (anti-malware for mobile devices).

Traps. Traps is our Advanced Endpoint Protection product that prevents advanced attacks originating from either exploits or malicious executables before any malicious activity can successfully run, regardless of software patches in place. If an attack attempt is made, Traps will immediately block the technique or techniques, terminate the process, and notify both the user and the administrator that an attack was thwarted. Whenever a block does occur, Traps will collect detailed forensics, including the offending process, the memory state when it was prevented, and many other details that are reported to the Endpoint Security Manager ("ESM").

The Traps agent injects itself into each process as it is started. When an attacker attempts to exploit a software vulnerability, the Traps protection modules cause the exploit attempt to fail because Traps has already made the process impervious to those techniques. When the attempt is prevented, the Traps agent kills the process and reports all of the details to the ESM.

Traps policy is configured to protect over 100 processes - each one with dozens of proprietary exploit prevention modules ("EPMs"). However, unlike other products, Traps is not limited to protecting only those processes or applications. Our end-customers use Traps to protect all manner of processes and applications by simply adding them to the policy configuration. Processes that have been run on the endpoint automatically show up in the ESM console,

making it easy to protect those processes with the click of a button. This is especially useful for those end-customers running industry-specific applications. In addition to protecting workstations, laptops, and servers, Traps can protect point-of-sale (“POS”) systems, automated teller machines (“ATMs”), supervisory control and data acquisition (“SCADA”), and any other applications from exploitation.

Certifications. Many of our products have been awarded Federal Information Processing Standard (“FIPS”) 140-2 Level 2, Common Criteria/National Information Assurance Partnership (“NIAP”) Evaluation Assurance Level (“EAL”) 2, Common Criteria/NIAP EAL4+, Network Equipment-Building System (“NEBS”), and ICSA Firewall certifications.

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Research and Development

Our research and development effort is focused on developing new hardware and software and on enhancing and improving our existing product and subscription offerings. We believe that hardware and software are both critical to expanding our leadership in the enterprise security market. Our engineering team has deep networking, endpoint, and security expertise and works closely with end-customers to identify their current and future needs. In addition to our focus on hardware and software, our research and development team is focused on research into applications and threats, which allows us to respond to the rapidly changing application and threat landscape. We supplement our own research and development effort with technologies and products that we license from third parties. We test our products thoroughly to certify and ensure interoperability with third-party hardware and software products. Our research and development expenses were $400.7 million, $347.4 million, and $284.2 million in fiscal 2018, 2017, and 2016, respectively.

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. During fiscal 2018, we introduced several new offerings, including: our GlobalProtect cloud service, Logging Service, and Magnifier subscriptions; PAN-OS 8.1, with over 60 new features; several new models of appliances, including the PA-3200 series, which increase SSL decryption throughput, bring higher performance and capacity for securing large data centers, and provide additional capabilities for managing large firewall deployments; and Traps 5.0, which included a cloud-delivered management service and integration with our Logging Service to allow for the collection of detailed endpoint event data. We also expanded the capabilities of our platform with extended protections to the GCP and enhanced capabilities for AWS and Azure environments to enable customers to easily integrate with their cloud infrastructure and workloads in multi-cloud environments. Additionally, we acquired Evident.io, Inc. (“Evident.io”), which has expanded our API-based security capabilities for the public cloud with the addition of Evident.io’s cloud services infrastructure protection technology, and Cyber Secdo Ltd. (“Secdo”), which expands the functionality of Traps, as well as other capabilities of our platform, by adding endpoint detection and response capabilities, including unique data collection and visualization.

We plan to continue to significantly invest in our research and development effort as we evolve and extend the capabilities of our platform, including our Application Framework. Application Framework is cloud-based and extends the capabilities of our Security Operating Platform by offering a SaaS consumption model that allows our end-customers to evaluate and deploy new capabilities via security applications developed by our engineering team, as well as those built by third-party developers and other security industry vendors. Under this consumption model, our end-customers will be able to rapidly implement cloud-based security applications without having to deploy or manage additional appliances or software agents. We continue to make progress in the development of Application Framework and made it generally available for third-party applications in August 2018, with the first third-party applications expected in the future.

Intellectual Property

Our industry is characterized by the existence of a large number of patents and frequent claims and related litigation regarding patent and other intellectual property rights. In particular, leading companies in the enterprise security industry have extensive patent portfolios and are regularly involved in both offensive and defensive litigation. We continue to grow our patent portfolio and own intellectual property and related intellectual property rights around the world that relate to our products, services, research and development, and other activities, and our success depends in part upon our ability to protect our core technology and intellectual property. We file patent applications to protect our intellectual property and believe that the duration of our issued patents is sufficient when considering the expected lives of our products.

We actively seek to protect our global intellectual property rights and to deter unauthorized use of our intellectual property by controlling access to and use of our proprietary software and other confidential information through the use of internal and external controls, including contractual protections with employees, contractors, end-customers and partners, and our software is protected by U.S. and international copyright laws. Despite our efforts to protect our intellectual property rights, our rights may not be successfully asserted in the future or may be invalidated, circumvented or challenged. In addition, the laws of various foreign countries where our offerings are distributed may not protect our intellectual property rights to the same extent as laws in the United States. See “Risk Factors-Claims by

others that we infringe their proprietary technology or other rights could harm our business," "Risk Factors-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," and "Legal Proceedings" below for additional information.

Competition

We operate in the intensely competitive enterprise security market that is characterized by constant change and innovation. Changes in the application, threat, and technology landscape result in evolving customer requirements for the protection from threats and the safe enablement of applications. Our main competitors fall into three categories:

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- 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 ("Symantec"), Check Point Software Technologies Ltd. ("Check Point"), Fortinet, Inc. ("Fortinet"), and FireEye, Inc. ("FireEye") 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.

As our market grows, it will attract more highly specialized vendors as well as larger vendors that may continue to acquire or bundle their products more effectively.

The principal competitive factors in our market include:

- product features, reliability, performance, and effectiveness;
- product line breadth, diversity, and applicability;
- product extensibility and ability to integrate with other technology infrastructures;
- price and total cost of ownership;
- adherence to industry standards and certifications;
- strength of sales and marketing efforts; and
- brand awareness and reputation.

We believe we generally compete favorably with our competitors on the basis of these factors as a result of the features and performance of our platform, the ease of integration of our products with technological infrastructures, and the relatively low total cost of ownership of our products. However, many of our competitors have substantially greater financial, technical, and other resources, greater name recognition, larger sales and marketing budgets, broader distribution, more diversified product lines, and larger and more mature intellectual property portfolios.

Sales, Customer Support and Marketing

Customers. Our end-customers are predominantly medium to large enterprises, service providers, and government entities. Our end-customers operate in a variety of industries, including education, energy, financial services, government entities, healthcare, Internet and media, manufacturing, public sector, and telecommunications. Our end-customers deploy our platform for a variety of security functions across a variety of deployment scenarios. Typical deployment scenarios include the enterprise perimeter, the enterprise data center, and the distributed enterprise perimeter. Our end-customer deployments typically involve at least one pair of our products along with one or more of our subscriptions, depending on size, security needs and requirements, and network complexity. As of July 31, 2018, we had more than 54,000 end-customers worldwide. No single end-customer accounted for more than 10% of our total revenue in fiscal 2018, 2017, or 2016.

Distribution. We primarily sell our products and subscription and support offerings to end-customers through our channel partners utilizing a two-tier, indirect fulfillment model whereby we sell our products and subscription and support offerings to our distributors, which, in turn, sell to our resellers, which then sell to our end-customers. Sales are generally subject to our standard, non-exclusive distributor agreement, which provides for an initial term of one year, one-year renewal terms, termination by us with 30-90 days written notice prior to the renewal date, and payment to us from the channel partner within 30-45 calendar days of the date we issue an invoice for such sales. For fiscal 2018, 67.1% of our total revenue was derived from sales to three distributors.

We also sell our VM-Series virtual firewalls directly to end-customers through Amazon's AWS Marketplace, Microsoft's Azure Marketplace, and Google's Cloud Platform Marketplace under a usage-based licensing model.

Sales. Our sales organization is responsible for large-account acquisition and overall market development, which includes the management of the relationships with our channel partners, working with our channel partners in winning and supporting end-customers through a direct-touch approach, and acting as the liaison between our end-customers and our marketing and product development organizations. We expect to continue to grow our sales headcount in all of our principal markets and expand our presence into countries where we currently do not have a direct sales presence.

Our sales organization is supported by sales engineers with responsibility for pre-sales technical support, solutions engineering for our end-customers, and technical training for our channel partners.

Channel Program. Our NextWave Channel Partner program is focused on building in-depth relationships with solutions-oriented distributors and resellers that have strong security expertise. The program rewards these partners based on a number of

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attainment goals, as well as provides them access to marketing funds, technical and sales training, and support. To ensure optimal productivity, we operate a formal accreditation program for our channel partners' sales and technical professionals. As of July 31, 2018, we had more than 4,900 channel partners.

Customer Support. Our customer support organization is responsible for delivering support, professional, and educational services directly to our channel partners and to end-customers. We leverage the capabilities of our channel partners and train them in the delivery of support, professional, and educational services to ensure these services are locally delivered. We believe that a broad range of support services is essential to the successful customer deployment and ongoing support of our products, and we have hired support engineers with proven experience to provide those services.

Marketing. Our marketing is focused on building our brand reputation and the market awareness of our platform and driving pipeline and end-customer demand. Our marketing team consists primarily of product marketing, programs marketing, field marketing, channel marketing, and public relations functions. Marketing activities include pipeline development through demand generation, social media and advertising programs, managing the corporate web site and partner portal, trade shows and conferences, press, analyst, and customer relations, and customer awareness. Every year we organize our end-customer conference "Ignite." We also publish major market research papers such as the "Application Usage and Threat Report," which are based on the application and cyberthreat landscape of our end-customers. These activities and tools benefit both our direct and indirect channels and are available at no cost to our channel partners.

Backlog. Orders for subscription and support offerings for multiple years are generally billed upfront shortly after fulfillment of an order and are included in deferred revenue. Timing of revenue recognition for subscription and support offerings may vary depending on the contractual period or when the subscription and support offerings are rendered. Products are shipped and billed shortly after receipt of an order. The majority of our product revenue comes from orders that are received and shipped in the same quarter. As such, we do not believe that our product backlog at any particular time is meaningful and it is not necessarily indicative of our future operating results.

Seasonality. Our business is affected by seasonal fluctuations in customer spending patterns. We have begun to see seasonal patterns in our business, which we expect to become more pronounced as we continue to grow, with our strongest sequential revenue growth occurring in our fiscal second and fourth quarters.

Manufacturing

We outsource the manufacturing of our security products to various manufacturing partners, which include our electronics manufacturing services provider ("EMS provider") and original design manufacturers. This approach allows us to reduce our costs as it reduces our manufacturing overhead and inventory and also allows us to adjust more quickly to changing end-customer demand. Our EMS provider is Flextronics International, Ltd. ("Flex"), who assembles our products using design specifications, quality assurance programs, and standards that we establish, and procures components and assembles our products based on our demand forecasts. These forecasts represent our estimates of future demand for our products based upon historical trends and analysis from our sales and product management functions as adjusted for overall market conditions.

The component parts within our products are either sourced by our manufacturing partners or by various component suppliers. We do not have any long-term manufacturing contracts that guarantee us any fixed capacity or pricing, which could increase our exposure to supply shortages or price fluctuations related to raw materials.

Employees

As of July 31, 2018, we had 5,348 employees. Competition for qualified personnel in our industry is intense, and we believe that our future success depends in part on our continued ability to hire, motivate, and retain such personnel.

Segment and Geographic Information

We are organized and operate in a single reportable segment, with 68.6% of our total revenue in fiscal 2018 from the Americas, 19.3% from Europe, the Middle East, and Africa ("EMEA"), and 12.1% from Asia Pacific and Japan ("APAC"). Refer to Note 16. Segment Information in Part II, Item 8 of this Annual Report on Form 10-K for more information about segments and revenue and assets by geographic region.

Available Information

Our website is located at www.paloaltonetworks.com, and our investor relations website is located at investors.paloaltonetworks.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to reports filed or furnished pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), are available free of charge on the Investors portion of our web site as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission ("SEC"). We

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also provide a link to the section of the SEC's website at www.sec.gov that has all of our public filings, including Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, all amendments to those reports, our Proxy Statements, and other ownership related filings. Further, a copy of this Annual Report on Form 10-K is located at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. Information on the operation of the Public Reference Room can be obtained by calling the SEC at 1-800-SEC-0330.

We also use our investor relations website as a channel of distribution for important company information. For example, webcasts of our earnings calls and certain events we participate in or host with members of the investment community are on our investor relations website. Additionally, we announce investor information, including news and commentary about our business and financial performance, SEC filings, notices of investor events, and our press and earnings releases, on our investor relations website. Investors and others can receive notifications of new information posted on our investor relations website in real time by signing up for email alerts and RSS feeds. Further corporate governance information, including our corporate governance guidelines, board committee charters, and code of conduct, is also available on our investor relations website under the heading "Governance." The contents of our websites are not incorporated by reference into this Annual Report on Form 10-K or in any other report or document we file with the SEC, and any references to our websites are intended to be inactive textual references only.

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 and number of end-customers have increased significantly, and we expect both to continue to grow over the next year. For example, from the end of fiscal 2017 to the end of fiscal 2018, our headcount increased from 4,562 to 5,348 employees, and our number of end-customers increased from more than 42,500 to more than 54,000. In addition, as we have grown, 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;

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- 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 potential 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.

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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 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 29.0% and 27.8% in fiscal 2018 and fiscal 2017, 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 $984.6 million as of July 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. generally accepted accounting principles ("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 and 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, Check Point, Fortinet, and FireEye, that offer a mix of network and endpoint security products; and

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- 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

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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.

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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 61.7% of total revenue in fiscal 2018, 59.7% of total revenue in fiscal 2017, and 51.3% of total revenue in fiscal 2016. 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, 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,

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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 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

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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.

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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 Flex, our 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

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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;
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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;

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- 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 July 31, 2018, the total notional amount of our outstanding foreign currency forward contracts was $288.5 million. For more information on our hedging transactions, refer to Note 4. Derivative Instruments in Part II, Item 8 of this Annual Report on Form 10-K. 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 fiscal 2018, three distributors represented 67.1% of our total revenue, and as of July 31, 2018, four distributors represented 71.9% 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

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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, and in April 2018, we acquired Secdo. Our ability as an organization to acquire and integrate other companies, products, or technologies in a successful and timely manner is still relatively unproven. 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, and any acquisitions we complete could be viewed negatively by our end-customers, investors, and securities analysts. 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, 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. 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

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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

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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

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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 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

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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. 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 U.S. tax reform legislation enacted into law on December 22, 2017, and commonly referred to as the Tax Cuts and Jobs Act ("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 consolidated financial statements and may materially affect our financial results in the period or periods for which such determination is made.

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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 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 II, Item 7 of this Annual Report on Form 10-K. Additionally, as we work toward adopting and implementing the new revenue accounting standard, management will make 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. It is possible that interpretation, industry practice, and guidance may evolve as we work toward implementing the new standard. If our assumptions change or if actual circumstances differ from our 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

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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

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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 Annual Report on Form 10-K 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”). Since shares of our common stock were sold in our IPO in July 2012 at a price of $42.00 per share, the reported high and low sales prices of our common stock has ranged from $232.31 to $39.08, through August 30, 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

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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. Other-than-temporary 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 other-than-temporary 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.

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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

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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 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 2. PROPERTIES

Our corporate headquarters is located in Santa Clara, California where we lease approximately 941,000 square feet of space under three lease agreements that expire in July 2028, with options to extend the lease terms through July 2046. We also lease a total of approximately 422,000 square feet of space at two other locations in Santa Clara, which collectively served as our previous corporate headquarters through August 2017, when we relocated to our current campus. Approximately 122,000 square feet of our previous corporate headquarters space is being sublet, and the remaining 300,000 square feet of space is being actively marketed for sublease. The leases for our previous corporate headquarters expire in April 2021 and July 2023. We also lease space for personnel in locations throughout the United States and various international locations, including Israel, the Netherlands, Singapore, Japan, France, and Australia. In addition, we provide our cloud-based subscription offerings through data centers operated under co-location arrangements in the United States, Europe, and Asia. Refer to Note 9. Commitments and Contingencies in Part II, Item 8 of this Annual Report on Form 10-K for more information on our operating leases.

We believe that our current facilities are adequate to meet our current needs. We intend to expand our facilities or add new facilities as we add employees and enter new geographic markets, and we believe that suitable additional or alternative space will be available as needed to accommodate ongoing operations and any such growth. However, we expect to incur additional expenses in connection with such new or expanded facilities.

ITEM 3. LEGAL PROCEEDINGS

The information set forth under the "Litigation" subheading in Note 9. Commitments and Contingencies of Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K is incorporated herein by reference.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Our common stock, $0.0001 par value per share, began trading on the NYSE on July 20, 2012, where its prices are quoted under the symbol "PANW."

Holders of Record

As of August 30, 2018, there were 78 holders of record of our common stock. Because many of our shares of common stock are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of stockholders represented by these record holders.

Price Range of Our Common Stock

The following table sets forth the reported high and low sales prices of our common stock for the periods indicated, as regularly quoted on the NYSE:

	High	Low
Year Ended July 31, 2017		
First Quarter	$163.01	$124.74
Second Quarter	$165.69	$123.57
Third Quarter	$157.65	$107.31
Fourth Quarter	$143.90	$108.15
Year Ended July 31, 2018		
First Quarter	$153.35	$126.56
Second Quarter	$160.83	$135.85
Third Quarter	$197.20	$148.41
Fourth Quarter	$219.38	$189.84

Dividend Policy

We have never declared or paid, and do not anticipate declaring or paying in the foreseeable future, any cash dividends on our capital stock. Any future determination as to the declaration and payment of dividends, if any, will be at the discretion of our board of directors, subject to applicable laws and will depend on then existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects, and other factors our board of directors may deem relevant.

Securities Authorized for Issuance under Equity Compensation Plans

See Part III, Item 12 "Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters" of this Annual Report on Form 10-K for more information regarding securities authorized for issuance.

Recent Sale of Unregistered Securities

There were no sales of unregistered securities during fiscal 2018 other than those transactions previously reported to the SEC on our Current Reports on Form 8-K.

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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 July 31, 2018. Between May 1, 2018 and May 31, 2018 and between July 1, 2018 and July 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 was $201.75 and $214.06, respectively. The number of shares delivered to satisfy tax withholding requirements in these periods was not significant.

Stock Price Performance Graph

This performance graph shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or incorporated by reference into any filing of Palo Alto Networks, Inc. under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

This performance graph compares the cumulative total return on our common stock with that of the NYSE Composite Index and the NYSE Arca Tech 100 Index for the five years ended July 31, 2018. This performance graph assumes $100 was invested on July 31, 2013, in each of the common stock of Palo Alto Networks, Inc., the NYSE Composite Index, and the NYSE Arca Tech 100 Index, and assumes the reinvestment of any dividends. The stock price performance on this performance graph is not necessarily indicative of future stock price performance.

Company/Index	7/31/2013	7/31/2014	7/31/2015	7/31/2016	7/31/2017	7/31/2018
Palo Alto Networks, Inc.	$ 100.00	$ 165.22	$ 379.71	$ 267.45	$ 269.27	$ 405.11
NYSE Composite Index	$ 100.00	$ 112.21	$ 113.85	$ 112.83	$ 125.20	$ 135.62
NYSE Arca Tech 100 Index	$ 100.00	$ 121.52	$ 134.84	$ 136.19	$ 167.97	$ 209.74

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ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated statement of operations data for fiscal 2018, 2017, and 2016 and consolidated balance sheet data as of July 31, 2018 and 2017 are derived from our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K. The selected consolidated statement of operations data for fiscal 2015 and 2014 and consolidated balance sheet data as of July 31, 2016, 2015, and 2014 are derived from audited financial statements not included in this Annual Report on Form 10-K. Our historical results are not necessarily indicative of the results that may be expected in the future. The selected consolidated financial data below should be read in conjunction with the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in Part II, Item 7 of this Annual Report on Form 10-K and our consolidated financial statements and related notes included in Part II, Item 8 of this Annual Report on Form 10-K.

	Year Ended July 31,				
	2018	2017	2016	2015	2014
	(in millions)				
Selected Consolidated Statements of Operations Data:					
Total revenue	$2,273.1	$1,761.6	$1,378.5	$928.1	$598.2
Total gross profit	1,627.8	1,285.0	1,008.5	676.6	438.6
Operating loss	(129.1)	(179.8)	(157.3)	(99.8)	(196.2)
Net loss	$(147.9)	$(216.6)	$(192.7)	$(131.3)	$(207.4)
Net loss per share, basic and diluted	$(1.61)	$(2.39)	$(2.21)	$(1.61)	$(2.79)
Weighted-average shares used to compute net loss per share, basic and diluted	91.7	90.6	87.1	81.6	74.3

	July 31,				
	2018	2017	2016	2015	2014
	(in millions)				
Selected Consolidated Balance Sheet Data:					
Cash and cash equivalents	$2,506.9	$744.3	$734.4	$375.8	$653.8
Investments	1,444.0	1,420.0	1,204.0	952.0	320.6
Working capital[(1)]	1,992.6	775.0	927.2	79.3	630.9
Total assets	5,823.0	3,438.3	2,858.2	2,026.1	1,502.6
Total deferred revenue	2,364.9	1,773.5	1,240.8	713.7	422.6
Convertible senior notes, net[(1)]	1,920.1	524.7	500.2	476.8	454.6
Common stock and additional paid-in capital	1,967.4	1,599.7	1,515.5	988.7	804.4
Total stockholders' equity	$966.4	$759.6	$894.9	$559.7	$506.7

The net carrying amount of the 2019 Notes was classified as a current liability in our consolidated balance sheets as of July 31, 2018 and July 31, 2015, and was classified as a long-term liability for all other periods presented.

(1) The net carrying amount of the 2023 Notes was classified as a long-term liability as of July 31, 2018. Refer to Note 8. Convertible Senior Notes in Part II, Item 8 of this Annual Report on Form 10-K for more information on the Notes.

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ITEM 7. 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 consolidated financial statements and related notes appearing elsewhere in this Annual Report on Form 10-K. The following discussion and analysis contains forward-looking statements 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 Annual Report on Form 10-K, and in particular, the risks discussed under the caption "Risk Factors" in Part I, Item 1A of this report.

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 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 fiscal 2018 to 2017 and fiscal 2017 to 2016.
- 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 July 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 fiscal 2018, 2017, and 2016, total revenue was $2.3 billion, $1.8 billion, and $1.4 billion, respectively, representing year-over-year growth of 29.0% for fiscal 2018 and 27.8% for fiscal 2017. 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 July 31, 2018, we had more than 54,000 end-customers in

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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 $871.5 million or 38.3% of total revenue for fiscal 2018, representing year-over-year growth of 22.9%. 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 $1.4 billion or 61.7% of total revenue for fiscal 2018, representing year-over-year growth of 33.2%. 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. We introduced several new offerings during fiscal 2018, including:

- our GlobalProtect cloud service subscription, which provides our Security Operating Platform as a cloud-based service for remote offices and mobile users;
- our Logging Service subscription, which functions as the central cloud-based repository for application data and logs generated by our security offerings, including those of our firewalls and GlobalProtect cloud service subscription, and allows end-customers to collect data without needing to plan for local processing power and storage;
- Magnifier, a cloud-based subscription that enables organizations to identify and prevent behavior-based threats by applying machine learning to rich network, endpoint, and cloud data;
- PAN-OS 8.1, with over 60 new features, and several new models of appliances, including the PA-3200 series, which increase SSL decryption throughput, bring higher performance and capacity for securing large data centers, and provide additional capabilities for managing large firewall deployments; and
- Traps 5.0, which included a cloud-delivered management service and integration with our Logging Service to allow for the collection of detailed endpoint event data.

We also expanded the capabilities of our platform with extended protections to the GCP and enhanced capabilities for AWS and Azure environments to enable customers to easily integrate with their cloud infrastructure and workloads in multi-cloud environments. Further, in March 2018, we acquired Evident.io, which has expanded our API-based security capabilities for the public cloud with the addition of Evident.io’s cloud services infrastructure protection technology, and, in April 2018, we acquired Secdo, which expands the functionality of Traps, as well as other capabilities of our platform, by adding endpoint detection and response capabilities, including unique data collection and visualization.

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 I, Item 1A of this Annual Report on Form 10-K.

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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."

	Year Ended July 31,		
	2018	2017	2016
	(dollars in millions)		
Total revenue	$2,273.1	$1,761.6	$1,378.5
Total revenue year-over-year percentage increase	29.0 %	27.8 %	48.5 %
Gross margin	71.6 %	72.9 %	73.2 %
Operating loss	$(129.1)	$(179.8)	$(157.3)
Operating margin	(5.7)%	(10.2)%	(11.4)%
Billings	$2,860.2	$2,293.4	$1,905.6
Billings year-over-year percentage increase	24.7 %	20.4 %	56.3 %
Cash flow provided by operating activities	$1,037.0	$868.5	$658.6
Free cash flow (non-GAAP)	$925.0	$705.1	$586.1

	July 31,	
	2018	2017
	(in millions)	
Total deferred revenue	$2,364.9	$1,773.5
Cash, cash equivalents, and investments	$3,950.9	$2,164.3

- 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 measure 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 revenue recognition criteria 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:

	Year Ended July 31,		
	2018	2017	2016
	(in millions)		
Billings:			
Total revenue	$2,273.1	$1,761.6	$1,378.5
Add: change in total deferred revenue, net of acquired deferred revenue	587.1	531.8	527.1
Billings	$2,860.2	$2,293.4	$1,905.6

- 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

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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:

	Year Ended July 31,		
	2018	2017	2016
	(in millions)		
Free cash flow (non-GAAP):			
Net cash provided by operating activities	$1,037.0	$868.5	$658.6
Less: purchases of property, equipment, and other assets	112.0	163.4	72.5
Free cash flow (non-GAAP)	$925.0	$705.1	$586.1
Net cash used in investing activities	$(520.0)	$(472.6)	$(338.9)
Net cash provided by (used in) financing activities	$1,245.6	$(386.0)	$38.9

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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 consolidated statements of operations data. The period to period comparison of results is not necessarily indicative of results for future periods.

	Year Ended July 31,					
	2018		2017		2016	
	Amount	% of Revenue	Amount	% of Revenue	Amount	% of Revenue
	(dollars in millions)					
Revenue:						
Product	$871.5	38.3 %	$709.1	40.3 %	$670.8	48.7 %
Subscription and support	1,401.6	61.7 %	1,052.5	59.7 %	707.7	51.3 %
Total revenue	2,273.1	100.0 %	1,761.6	100.0 %	1,378.5	100.0 %
Cost of revenue:						
Product	272.4	12.0 %	201.4	11.4 %	175.4	12.7 %
Subscription and support	372.9	16.4 %	275.2	15.7 %	194.6	14.1 %
Total cost of revenue[(1)]	645.3	28.4 %	476.6	27.1 %	370.0	26.8 %
Total gross profit	1,627.8	71.6 %	1,285.0	72.9 %	1,008.5	73.2 %
Operating expenses:						
Research and development	400.7	17.6 %	347.4	19.7 %	284.2	20.6 %
Sales and marketing	1,098.4	48.4 %	919.1	52.2 %	743.2	53.9 %
General and administrative	257.8	11.3 %	198.3	11.2 %	138.4	10.1 %
Total operating expenses[(1)]	1,756.9	77.3 %	1,464.8	83.1 %	1,165.8	84.6 %
Operating loss	(129.1)	(5.7)%	(179.8)	(10.2)%	(157.3)	(11.4)%
Interest expense	(29.6)	(1.3)%	(24.5)	(1.4)%	(23.4)	(1.7)%
Other income, net	28.5	1.3 %	10.2	0.6 %	8.4	0.6 %
Loss before income taxes	(130.2)	(5.7)%	(194.1)	(11.0)%	(172.3)	(12.5)%
Provision for income taxes	17.7	0.8 %	22.5	1.3 %	20.4	1.5 %
Net loss	$(147.9)	(6.5)%	$(216.6)	(12.3)%	$(192.7)	(14.0)%

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(1) Includes share-based compensation as follows:

	Year Ended July 31,		
	2018	2017	2016
	(in millions)		
Cost of product revenue	$7.0	$7.3	$6.2
Cost of subscription and support revenue	66.7	56.2	40.9
Research and development	145.2	152.6	132.9
Sales and marketing	208.0	186.5	152.4
General and administrative	77.0	73.1	60.5
Total share-based compensation	$503.9	$475.7	$392.9

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Revenue

Our revenue consists of product revenue and subscription and support revenue. Revenue is recognized when persuasive evidence of an arrangement exists, delivery has occurred, the fee is fixed or determinable, and collectability is reasonably assured. 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 shipment, provided that all other revenue recognition criteria have been met.

	Year Ended July 31,				Year Ended July 31,			
	2018 Amount	2017 Amount	Change Amount	%	2017 Amount	2016 Amount	Change Amount	%
	(dollars in millions)							
Product	$871.5	$709.1	$162.4	22.9%	$709.1	$670.8	$38.3	5.7%

Product revenue increased year-over-year for both fiscal 2018 and fiscal 2017 due to increased demand for our newly introduced appliances. The change in product revenue due to pricing was not significant for either period.

Subscription and Support Revenue

Subscription and support revenue is derived primarily from sales of our subscription and support offerings. Our contractual subscription and support terms are typically one to five years. We recognize revenue from subscriptions and support over the contractual service period. 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. Prior to fiscal 2017, subscription and support revenue was referred to as services revenue. The composition of subscription and support revenue has not been modified.

	Year Ended July 31,				Year Ended July 31,			
	2018 Amount	2017 Amount	Change Amount	%	2017 Amount	2016 Amount	Change Amount	%
	(dollars in millions)							
Subscription	$759.6	$550.8	$208.8	37.9%	$550.8	$357.0	$193.8	54.3%
Support	642.0	501.7	140.3	28.0%	501.7	350.7	151.0	43.1%
Total subscription and support	$1,401.6	$1,052.5	$349.1	33.2%	$1,052.5	$707.7	$344.8	48.7%

Subscription and support revenue increased year-over-year for both fiscal 2018 and fiscal 2017. The increase in both periods 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.

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Revenue by Geographic Theater

	Year Ended July 31,				Year Ended July 31,			
	2018 Amount	2017 Amount	Change Amount	%	2017 Amount	2016 Amount	Change Amount	%
	(dollars in millions)							
Americas	$1,558.7	$1,237.4	$321.3	26.0%	$1,237.4	$973.2	$264.2	27.1%
EMEA	439.3	320.1	119.2	37.2%	320.1	247.1	73.0	29.5%
APAC	275.1	204.1	71.0	34.8%	204.1	158.2	45.9	29.0%
Total revenue	$2,273.1	$1,761.6	$511.5	29.0%	$1,761.6	$1,378.5	$383.1	27.8%

With respect to geographic theaters, the Americas contributed the largest portion of the year-over-year increases in revenue for both fiscal 2018 and fiscal 2017 due to its larger and more established sales force compared to our other theaters. Revenue from both EMEA and APAC increased year-over-year for both fiscal 2018 and fiscal 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.

	Year Ended July 31,				Year Ended July 31,			
	2018 Amount	2017 Amount	Change Amount	%	2017 Amount	2016 Amount	Change Amount	%
	(dollars in millions)							
Cost of product revenue	$272.4	$201.4	$71.0	35.3%	$201.4	$175.4	$26.0	14.8%
Number of employees at period end	97	96	1	1.0%	96	91	5	5.5%

Cost of product revenue increased year-over-year for both fiscal 2018 and fiscal 2017 primarily due to higher product costs related to our newly introduced appliances.

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. Prior to fiscal 2017, cost of subscription and support revenue was referred to as cost of services revenue. The composition of cost of subscription and support revenue has not been modified.

	Year Ended July 31,				Year Ended July 31,			
	2018 Amount	2017 Amount	Change Amount	%	2017 Amount	2016 Amount	Change Amount	%
	(dollars in millions)							
Cost of subscription and support revenue	$372.9	$275.2	$97.7	35.5%	$275.2	$194.6	$80.6	41.4%
Number of employees at period end	932	725	207	28.6%	725	539	186	34.5%

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Cost of subscription and support revenue increased for fiscal 2018 compared to fiscal 2017 primarily due to an increase in personnel costs for our global customer support and technical operations organizations, which grew $53.5 million to $208.9 million, 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 allocated costs. The increase in allocated costs was primarily due to our expansion of facilities to support the growth of our business.

Cost of subscription and support revenue increased for fiscal 2017 compared to fiscal 2016 primarily due to an increase in personnel costs, which grew $45.3 million to $155.4 million, largely due to headcount growth. The remaining increase was primarily driven by costs to expand our customer service capabilities and infrastructure, customer support and repair costs, and allocated costs. The increase in allocated costs was primarily due to our expansion of facilities to support the growth of our business.

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.

	Year Ended July 31,					
	2018		2017		2016	
	Amount	Gross Margin	Amount	Gross Margin	Amount	Gross Margin
	(dollars in millions)					
Product	$599.1	68.7 %	$507.7	71.6 %	$495.4	73.9 %
Subscription and support	1,028.7	73.4 %	777.3	73.9 %	513.1	72.5 %
Total gross profit	$1,627.8	71.6 %	$1,285.0	72.9 %	$1,008.5	73.2 %

Product gross margin decreased year-over-year for both fiscal 2018 and fiscal 2017, driven by higher product costs related to our newly introduced appliances, which have lower product margins.

Subscription and support gross margin decreased slightly for fiscal 2018 compared to fiscal 2017, primarily due to higher data center and cloud hosting costs to support the adoption of our cloud-based subscription offerings and costs to expand our customer service capabilities, partially offset by a decrease in customer support and repair costs.

Subscription and support gross margin increased for fiscal 2017 compared to fiscal 2016 due to contributions from our higher margin subscription offerings.

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 July 31, 2018, we expect to recognize approximately $1.1 billion of share-based compensation expense over a weighted-average period of approximately 3.0 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.

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	Year Ended July 31,				Year Ended July 31,			
	2018	2017	Change		2017	2016	Change	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
	(dollars in millions)							
Research and development	$400.7	$347.4	$53.3	15.3%	$347.4	$284.2	$63.2	22.2%
Number of employees at period end	947	766	181	23.6%	766	637	129	20.3%

Research and development expense increased year-over-year for both fiscal 2018 and fiscal 2017. The increase in both periods was primarily due to an increase in personnel costs, which grew $36.8 million to $330.9 million for fiscal 2018 compared to fiscal 2017 and grew $46.4 million to $286.0 million for fiscal 2017 compared to fiscal 2016. The increases in personnel costs in both periods were primarily due to headcount growth. The remaining increase for fiscal 2018 was primarily driven by an increase in allocated costs due to our expansion of facilities to support the growth of our business. The remaining increase for fiscal 2017 was primarily driven by an increase in allocated costs, due to our expansion of facilities to support the growth of our business, and development costs related to investments in our new and future offerings.

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.

	Year Ended July 31,				Year Ended July 31,			
	2018	2017	Change		2017	2016	Change	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
	(dollars in millions)							
Sales and marketing	$1,098.4	$919.1	$179.3	19.5%	$919.1	$743.2	$175.9	23.7%
Number of employees at period end	2,704	2,418	286	11.8%	2,418	2,092	326	15.6%

Sales and marketing expense increased year-over-year for both fiscal 2018 and fiscal 2017. The increase in both periods was primarily due to an increase in personnel costs, which grew $137.7 million to $853.8 million for fiscal 2018 compared to fiscal 2017 and grew $145.0 million to $716.1 million for fiscal 2017 compared to fiscal 2016. The increases in personnel costs in both periods were primarily due to headcount growth. The remaining increase for fiscal 2018 was primarily driven by an increase in allocated costs due to our expansion of facilities to support the growth of our business. The remaining increase for fiscal 2017 was primarily driven by an increase in allocated costs, due to our expansion of facilities to support the growth of our business, and an increase in demand generation activities and sales related events to support our revenue growth.

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.

	Year Ended July 31,			Year Ended July 31,		
	2018	2017	Change	2017	2016	Change

	Amount	Amount	Amount	%	Amount	Amount	Amount	%
	(dollars in millions)							
General and administrative	$257.8	$198.3	$59.5	30.0%	$198.3	$138.4	$59.9	43.3%
Number of employees at period end	668	557	111	19.9%	557	436	121	27.8%

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General and administrative expense increased for fiscal 2018 compared to fiscal 2017 primarily due to a cease-use loss of $39.2 million recognized on the lease of our previous headquarter facilities during fiscal 2018. Refer to Note 9. Commitments and Contingencies in Part II, Item 8 of this Annual Report on Form 10-K for more information. The remaining increase was primarily driven by costs related to business acquisitions completed during fiscal 2018, an increase in personnel costs, and increase in allocated costs due to our expansion of facilities to support the growth of our business. Personnel costs grew $10.2 million to $138.7 million for fiscal 2018 compared to fiscal 2017, largely due to headcount growth. These increases were partially offset by a decrease in impairment losses due to the $20.9 million loss recognized in fiscal 2017 on property and equipment related to the relocation of our corporate headquarters.

General and administrative expense increased for fiscal 2017 compared to fiscal 2016 primarily due to an increase in personnel costs, which grew $29.3 million to $128.1 million, largely due to headcount growth, and a fiscal 2017 impairment loss of $20.9 million on property and equipment related to the relocation of our corporate headquarters. The remaining increase for fiscal 2017 was primarily driven by an increase in allocated costs due to our expansion of facilities to support the growth of our business.

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.

	Year Ended July 31,				Year Ended July 31,			
	2018 Amount	2017 Amount	Change Amount	%	2017 Amount	2016 Amount	Change Amount	%
	(dollars in millions)							
Interest expense	$29.6	$ 24.5	$5.1	20.8%	$24.5	$ 23.4	$1.1	4.7%

Interest expense increased for fiscal 2018 compared to fiscal 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. Interest expense recognized in fiscal 2017 and fiscal 2016 was primarily related to the 2019 Notes. Refer to Note 8. Convertible Senior Notes in Part II, Item 8 of this Annual Report on Form 10-K 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.

	Year Ended July 31,				Year Ended July 31,			
	2018 Amount	2017 Amount	Change Amount	%	2017 Amount	2016 Amount	Change Amount	%
	(dollars in millions)							
Other income, net	$28.5	$ 10.2	$18.3	179.4%	$10.2	$ 8.4	$1.8	21.4%

Other income, net increased for fiscal 2018 compared to fiscal 2017 primarily driven by a $12.4 million increase in interest income, largely due to higher cash, cash equivalents, and investments balances and higher yields on these balances during fiscal 2018, and an increase in foreign currency remeasurement gains. Other income, net increased for fiscal 2017 compared to fiscal 2016 due to an increase in interest income, partially offset by increased foreign currency remeasurement losses.

Provision for Income Taxes

Provision for income taxes consists primarily of income taxes in foreign jurisdictions in which we conduct business, withholding taxes, U.S. state income taxes, and amortization of our deferred tax charges. 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.

On December 22, 2017, the Tax Cuts and Jobs Act ("TCJA") was enacted into law. The TCJA provides for significant tax law changes and modifications including, but not limited to, the reduction of the U.S. federal corporate statutory tax rate from 35% to 21%

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as of January 1, 2018, the requirement for companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred, and the creation of new taxes on certain foreign-sourced earnings. As a fiscal year-end taxpayer, certain provisions of the TCJA began to impact us during the three months ended January 31, 2018, while other provisions will impact us beginning in our fiscal year ending July 31, 2019.

	Year Ended July 31,				Year Ended July 31,			
	2018	2017	Change		2017	2016	Change	
	Amount	Amount	Amount	%	Amount	Amount	Amount	%
	(dollars in millions)							
Provision for income taxes	$17.7	$22.5	$(4.8)	(21.3)%	$22.5	$20.4	$2.1	10.3%
Effective tax rate	(13.6)%	(11.6)%			(11.6)%	(11.8)%		

We recorded an income tax provision for fiscal 2018 due to foreign income taxes, withholding taxes, and amortization of our deferred tax charges. The provision for income taxes decreased for fiscal 2018 compared to fiscal 2017 primarily due to changes in valuation allowance related to the acquisition of Evident.io and future benefits from alternative minimum tax credits under the TCJA.

During the year ended July 31, 2018, we recognized provisional amounts for the tax effects of the TCJA which were included as components of income tax expense and reflected in the effective tax rates above. We will continue to assess the impact of the TCJA on our business and our consolidated financial statements, however, the final impact of the TCJA may differ from the provisional amounts due to a number of uncertainties and factors, including the need for further guidance and clarification of the new law by U.S. federal and state tax authorities, and the need for further guidance on the related income tax accounting. Refer to Note 12. Income Taxes in Part II, Item 8 of this Annual Report on Form 10-K for more information on the TCJA and its expected impact.

We recorded an income tax provision for fiscal 2017 due to foreign income taxes, withholding taxes, and amortization of our deferred tax charges. The provision for income taxes increased for fiscal 2017 compared to fiscal 2016 primarily due to increases in foreign withholding taxes and U.S. income taxes related to intercompany transactions, offset by tax benefits from our adoption of new share-based payment accounting guidance in fiscal 2017.

Liquidity and Capital Resources

	July 31,	
	2018	2017
	(in millions)	
Working capital[(1)]	$1,992.6	$775.0
Cash, cash equivalents, and investments:		
Cash and cash equivalents	$2,506.9	744.3
Investments	1,444.0	1,420.0
Total cash, cash equivalents, and investments	$3,950.9	$2,164.3

(1) The net carrying amount of the 2019 Notes was classified in current liabilities in our consolidated balance sheets as of July 31, 2018. Refer to Note 8. Convertible Senior Notes in Part II, Item 8 of this Annual Report on Form 10-K for information on the Notes.

As of July 31, 2018, our total cash, cash equivalents, and investments of $4.0 billion were held for general corporate purposes, of which approximately $271.4 million was held outside of the United States. As of July 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 July 31, 2018.

In June 2014, we issued the 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 July 31, 2018, all of the outstanding aggregate principal amount of the Notes of each series 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. Refer to Note 8.

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Convertible Senior Notes in Part II, Item 8 of this Annual Report on Form 10-K for more information on the Notes. Subsequent to July 31, 2018, through the filing date of this Annual Report on Form 10-K, $327.3 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 October 31, 2018.

On September 4, 2018, we entered into a credit agreement (the "Credit Agreement") that provides for a $400.0 million unsecured revolving credit facility, with an option to increase the amount of the credit facility up to an additional $350.0 million, subject to certain conditions. Refer to Note 18. Subsequent Event in Part II, Item 8 of this Annual Report on Form 10-K for more information on the Credit Agreement.

In August 2016, our board of directors authorized a $500.0 million share repurchase 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 July 31, 2018, $330.0 million was available for future share repurchases under the repurchase authorization. Refer to Note 10. Stockholders' Equity in Part II, Item 8 of this Annual Report on Form 10-K for information on the repurchase authorization.

The following table summarizes our cash flows for the years ended July 31, 2018, 2017, and 2016:

	Year Ended July 31,		
	2018	2017	2016
	(in millions)		
Net cash provided by operating activities	$1,037.0	$868.5	$658.6
Net cash used in investing activities	(520.0)	(472.6)	(338.9)
Net cash provided by (used in) financing activities	1,245.6	(386.0)	38.9
Net increase in cash and cash equivalents	$1,762.6	$9.9	$358.6

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 in fiscal 2018 was $1,037.0 million, an increase of $168.5 million compared to fiscal 2017. The increase was due to growth of our business, as reflected by an increase in billings during fiscal 2018.

Cash provided by operating activities in fiscal 2017 was $868.5 million, an increase of $209.9 million compared to fiscal 2016. The increase was due to growth of our business, as reflected by an increase in billings, and an increase in collections on accounts receivable during fiscal 2017.

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 fiscal 2018 was $520.0 million, an increase of $47.4 million compared to fiscal 2017, due to an increase in net cash payments for acquisitions, partially offset by lower net purchases of available-for-sale investments and capital expenditures.

Cash used in investing activities during fiscal 2017 was $472.6 million, an increase of $133.7 million compared to fiscal 2016, due to increased investment in facilities to support the growth of our business and a net cash payment of $90.7 million for our acquisition of LightCyber, partially offset by lower net purchases of available-for-sale investments during fiscal 2017.

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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 provided by financing activities during fiscal 2018 was $1,245.6 million, an increase of $1,631.6 million compared to fiscal 2017. The increase was mainly due to net proceeds of $1,495.8 million from the issuance of the 2023 Notes, issuance of warrants, and purchase of note hedges, partially offset by an increase in payments for tax withholding obligations of certain employees related to the net share settlement of equity awards during fiscal 2018.

Cash used in financing activities during fiscal 2017 was $386.0 million, a change of $424.9 million compared to fiscal 2016, due to the repurchase of $411.0 million of our common stock and payments for tax withholding obligations of certain employees related to the net share settlement of equity awards of $21.4 million during fiscal 2017.

Contractual Obligations and Commitments

The following summarizes our contractual obligations and commitments as of July 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]	$575.0	$575.0	$ —	$—	$ —
0.75% Convertible Senior Notes due 2023	1,693.0	—	—	1,693.0	—
Operating lease obligations[2]	540.6	66.3	132.2	118.3	223.8
Purchase obligations[3]	146.3	138.3	8.0	—	—
Total[4]	$2,954.9	$779.6	$ 140.2	$1,811.3	$ 223.8

(1) As of July 31, 2018, holders may convert their 2019 Notes at any time during the fiscal quarter ending October 31, 2018. Refer to Note 8. Convertible Senior Notes in Part II, Item 8 of this Annual Report on Form 10-K for more information.

(2) Consists of contractual obligations from our non-cancelable operating leases. Excludes contractual sublease proceeds of $14.0 million, which consists of $5.0 million to be received in less than one year, and $9.0 million to be received in one to three years. Refer to Note 9. Commitments and Contingencies in Part II, Item 8 of this Annual Report on Form 10-K for more information on our operating leases.

(3) 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.

(4) No amounts related to income taxes are included. As of July 31, 2018, we had approximately $78.9 million of tax liabilities recorded related to uncertainty in income tax positions.

Off-Balance Sheet Arrangements

As of July 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 consolidated financial statements have been prepared in accordance with GAAP. The preparation of these 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.

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We believe that of our significant accounting policies described in Note 1. Description of Business and Summary of Significant Accounting Policies in Part II, Item 8 of this Annual Report on Form 10-K, the critical accounting policies requiring estimates, assumptions, and judgments that have the most significant impact on our consolidated financial statements are described below.

Revenue Recognition

We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred, the fee is fixed or determinable, and collectability is reasonably assured. Most of our arrangements, other than renewals of subscriptions and support contracts, are multiple-element arrangements with a combination of hardware, software, subscriptions, support, and other services. For multiple-element arrangements, we allocate revenue to each unit of accounting based on an estimated selling price at the arrangement inception. The estimated selling price for each element is based upon the following hierarchy:

- Vendor-specific objective evidence ("VSOE") of selling price, if available,
- Third-party evidence ("TPE") of selling price, if VSOE of selling price is not available, or
- Best estimate of selling price ("BESP"), if neither VSOE of selling price nor TPE of selling price are available.

We establish VSOE of selling price using the prices charged for a deliverable when sold separately. We establish TPE of selling price by evaluating similar and interchangeable competitor products or services in standalone arrangements with similarly situated partners. We establish BESP primarily based on historical transaction pricing, whereby historical transactions are segregated 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 products and services were sold (domestic or international), and offering type (products or services). To further support BESP as determined by the historical transaction pricing or when such information is unavailable, such as when there are limited sales of a new product or service, we consider the same factors we have established through our pricing model and go-to-market strategy. The determination of BESP is made through consultation with and approval by our management. In determining BESP, we rely on certain assumptions and apply significant judgment. As our business offerings evolve over time, we may be required to modify our estimated selling prices in subsequent periods, and the timing of our revenue recognition could be affected.

Income Taxes

We account for income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in our financial statements or tax returns. In addition, deferred tax assets are recorded for the future benefit of utilizing net operating losses and research and development credit carryforwards. Valuation allowances are provided when necessary to reduce deferred tax assets to the amount expected to be realized.

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

We apply the authoritative accounting guidance prescribing a threshold and measurement attribute for the financial recognition and measurement of a tax position taken or expected to be taken in a tax return. We recognize liabilities for uncertain tax positions based on a two-step process. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step requires us to estimate and measure the tax benefit as the largest amount that is more likely than not to be realized upon ultimate settlement.

Significant judgment is also required in evaluating our uncertain tax positions and determining our provision for income taxes. Although we believe our reserves are reasonable, no assurance can be given that the final tax outcome of these matters will not be different from that which is reflected in our historical income tax provisions and accruals. We adjust these reserves in light of changing facts and circumstances, such as the closing of a tax audit or the refinement of an estimate. To the extent that the final tax outcome of these matters is different than the amounts

recorded, such differences may impact the provision for income taxes in the period in which such determination is made.

Accounting standards require companies to recognize the effect of tax law changes in the period of enactment. However, the SEC staff and FASB 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. In accordance with this guidance, we have determined the amounts recorded and positions taken, as discussed, are provisional as of July 31, 2018. We continue to assess the impacts of the TCJA, and the final impact of the TCJA recorded by us may differ from the provisional amounts due to a number of uncertainties and factors, including the need for further guidance and clarification of the new law by U.S. federal and state tax authorities, and the need for further guidance on the related income tax accounting.

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Manufacturing Partner and Supplier Liabilities

We outsource most of our manufacturing, repair, and supply chain management operations to our EMS provider, which procures components and assembles our products based on our demand forecasts. These forecasts of future demand are based upon historical trends and analysis from our sales and product management functions as adjusted for overall market conditions. We accrue for costs for manufacturing purchase commitments in excess of our forecasted demand, including costs for excess components or for carrying costs incurred by our manufacturing partners and component suppliers. Actual component usage and product demand may be materially different from our forecast, and could be caused by factors outside of our control, which could have an adverse impact on our results of operations. To date, we have not accrued significant costs associated with this exposure.

Loss Contingencies

We are subject to the possibility of various loss contingencies arising in the ordinary course of business. We accrue for loss contingencies when it is probable that an asset has been impaired or a liability has been incurred and the amount of loss can be reasonably estimated. If we determine that a loss is possible and the range of the loss can be reasonably determined, then we disclose the range of the possible loss. We regularly evaluate current information available to us to determine whether an accrual is required, an accrual should be adjusted or a range of possible loss should be disclosed.

From time to time, we are involved in disputes, litigation, and other legal actions. However, there are many uncertainties associated with any litigation, and these actions or other third-party claims against us may cause us to incur substantial settlement charges, which are inherently difficult to estimate and could adversely affect our results of operations. The actual liability in any such matters may be materially different from our estimates, which could result in the need to adjust our liability and record additional expenses.

Goodwill, Intangibles, and Other Long-Lived Assets

We make significant estimates, assumptions, and judgments when valuing goodwill and other purchased intangible assets in connection with the initial purchase price allocation of an acquired entity, as well as when evaluating impairment of goodwill and other purchased intangible assets on an ongoing basis. These estimates are based upon a number of factors, including historical experience, market conditions, and information obtained from the management of the acquired company. Critical estimates in valuing certain intangible assets include, but are not limited to, cash flows that an asset is expected to generate in the future, discount rates, the time and expense that would be necessary to recreate the assets, and the profit margin a market participant would receive. The amounts and useful lives assigned to identified intangible assets impacts the amount and timing of future amortization expense.

We evaluate goodwill for impairment on an annual basis in our fourth fiscal quarter or more frequently if we believe impairment indicators exist. We have elected to first assess qualitative factors to determine whether it is more likely than not that the fair value of our reporting unit is less than its carrying amount, including goodwill. The qualitative assessment includes our evaluation of relevant events and circumstances affecting our single reporting unit, including macroeconomic, industry, and market conditions, our overall financial performance, and trends in the market price of our common stock. If qualitative factors indicate that it is more likely than not that our reporting unit’s fair value is less than its carrying amount, then we will perform the quantitative impairment test by comparing our reporting unit’s carrying amount, including goodwill, to its fair value. If the carrying amount of our reporting unit exceeds its fair value, an impairment loss will be recognized in an amount equal to that excess. To date, the results of our qualitative assessment have indicated that the quantitative goodwill impairment test is not necessary.

We evaluate long-lived assets, such as property, equipment, and purchased intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. Such events or changes in circumstances include, but are not limited to, a significant decrease in the fair value of the underlying asset or asset group, a significant decrease in the benefits realized from the acquired assets, difficulty and delays in integrating the business, or a significant change in the operations of the acquired assets or use of an asset or asset group. A long-lived asset is considered impaired if its carrying amount exceeds the estimated future undiscounted cash flows the asset or asset group is expected to generate. Critical estimates in determining whether a long-lived asset is considered impaired include the amount and timing of future cash flows that the asset or asset group is expected to generate. If a long-lived asset is considered to be impaired, the impairment to be recognized is the

amount by which the carrying amount of the asset exceeds the fair value of the asset or asset group, which is estimated using a present value technique. Critical estimates in determining the fair value of an asset or asset group and the amount of impairment to recognize include, but are not limited to, the amount and timing of future cash flows that the asset or asset group is expected to generate and the discount rate. Determining the fair value of an asset or asset group is highly judgmental in nature and involves the use of significant estimates and assumptions for market participants. We base our fair value estimates on assumptions we believe to be reasonable but that are unpredictable and inherently uncertain. Actual future results may differ from those estimates.

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Cease-use Loss

Upon exiting a leased property before the lease term expires, we assess the fair value of our remaining obligation under the lease and record a cease-use loss, if needed. The cease-use loss is calculated as the present value of the amount by which the remaining lease obligation, adjusted for the effects of any deferred items recognized under the lease and related costs, exceeds the estimated sublease rentals that could be reasonably obtained. The key assumptions used in our discounted cash flow model include the amount and timing of estimated sublease rental receipts and the discount rate. The cease-use loss recorded or to be recorded may change significantly as a result of the remeasurement of the cease-use liability, if the timing or amount of estimated cash flows change.

Recent Accounting Pronouncements

Refer to "Recently Issued Accounting Pronouncements" in Note 1. Description of Business and Summary of Significant Accounting Policies in Part II, Item 8 of this Annual Report on Form 10-K for a description of recent accounting pronouncements and our expectation of their impact, if any, on our results of operations and financial condition.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Foreign Currency Exchange Risk

Our sales contracts are primarily denominated in U.S. dollars. A portion of our operating expenses are incurred outside of the United States and are denominated in foreign currencies and are subject to fluctuations due to changes in foreign currency exchange rates, particularly changes in the euro, British pound, Singapore dollar, Israeli shekel, and Japanese yen. Additionally, fluctuations in foreign currency exchange rates may cause us to recognize transaction gains and losses in our statement of operations. The effect of an immediate 10% adverse change in foreign exchange rates on monetary assets and liabilities at July 31, 2018 would not be material to our financial condition or results of operations. As of July 31, 2018, foreign currency transaction gains and losses and exchange rate fluctuations have not been material to our financial statements. We enter into foreign currency derivative contracts with maturities of 14 months or less which we designate as cash flow hedges to manage the foreign currency exchange rate risk associated with our foreign currency denominated expenditures. 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. Refer to Note 4. Derivative Instruments in Part II, Item 8 of this Annual Report on Form 10-K for more information.

As our international operations grow, our risks associated with fluctuation in currency rates will become greater, and we will continue to reassess our approach to managing this risk. In addition, a weakening U.S. dollar can increase the costs of our international expansion and a strengthening U.S. dollar can increase the real cost of our products to our end-customers outside of the United States, leading to delays in the purchase of our products and services. For additional information, see the risk factor entitled "We are exposed to fluctuations in currency exchange rates, which could negatively affect our financial condition and operating results" in Part 1, Item 1A of this Annual Report on Form 10-K.

Interest Rate Risk

The primary objectives of our investment activities are to preserve principal, provide liquidity, and maximize income without significantly increasing risk. Some of the securities we invest in are subject to interest risk. To minimize this risk, we maintain our portfolio of cash, cash equivalents, and short-term investments in a variety of securities, including commercial paper, money market funds, U.S. government and agency securities, and corporate debt securities. Due to the short duration and conservative nature of our investment portfolio, a movement of 10% in market interest rates would not have a material impact on our operating results and the total value of the portfolio. The effect of an immediate 10% change in interest rates at July 31, 2018 would not have been material to our operating results and the total value of the portfolio assuming consistent investment levels.

Market Risk and Market Interest Risk

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"). We carry these instruments at face value less unamortized discount and unamortized issuance costs on our consolidated balance sheets. As these instruments have a

fixed annual interest rate, we have no financial and economic interest exposure associated with changes in interest rates. However, the fair value of fixed rate instruments fluctuates when interest rates change, and additionally, in the case of either series of Notes, when the market price of our common stock fluctuates.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Palo Alto Networks, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Palo Alto Networks, Inc. (the Company) as of July 31, 2018 and 2017, the related consolidated statements of operations, comprehensive loss, stockholders' equity and cash flows for each of the three years in the period ended July 31, 2018, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at July 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended July 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of July 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated September 13, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

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

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

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2009.

San Jose, California

September 13, 2018

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Palo Alto Networks, Inc.

Opinion on Internal Control over Financial Reporting

We have audited Palo Alto Networks, Inc.'s internal control over financial reporting as of July 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Palo Alto Networks, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of July 31, 2018, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of July 31, 2018 and 2017, the related consolidated statements of operations, comprehensive loss, stockholders' equity and cash flows for each of the three years in the period ended July 31, 2018, and the related notes and our report dated September 13, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

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

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ Ernst & Young LLP
San Jose, California
September 13, 2018

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MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Management's Report on Internal Control Over Financial Reporting

The management of Palo Alto Networks, Inc. (the "Company") is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934 for the Company. The Company's internal control over financial reporting is a process designed under the supervision of the Company's principal executive and principal financial officers to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the Company's financial statements for external purposes in accordance with U.S. generally accepted accounting principles.

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

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

Management assessed the effectiveness of the Company's internal control over financial reporting as of July 31, 2018, based on the framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control - Integrated Framework (2013 framework). Based on that assessment, management concluded that, as of July 31, 2018, the Company's internal control over financial reporting was effective.

The effectiveness of the Company's internal control over financial reporting as of July 31, 2018, has been audited by Ernst & Young LLP, the independent registered public accounting firm that audits the Company's Consolidated Financial Statements, as stated in their report preceding this report, which expresses an unqualified opinion on the effectiveness of the Company's internal control over financial reporting as of July 31, 2018.

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PALO ALTO NETWORKS, INC.

CONSOLIDATED BALANCE SHEETS
(In millions, except per share data)

	July 31, 2018	2017
Assets		
Current assets:		
Cash and cash equivalents	$2,506.9	$744.3
Short-term investments	896.5	630.7
Accounts receivable, net of allowance for doubtful accounts of $1.2 and $0.7 at July 31, 2018 and July 31, 2017, respectively	467.3	432.1
Prepaid expenses and other current assets	261.3	169.2
Total current assets	4,132.0	1,976.3
Property and equipment, net	273.1	211.1
Long-term investments	547.5	789.3
Goodwill	522.8	238.8
Intangible assets, net	140.8	53.7
Other assets	206.8	169.1
Total assets	$5,823.0	$3,438.3
Liabilities, temporary equity, and stockholders' equity		
Current liabilities:		
Accounts payable	$49.4	$35.5
Accrued compensation	163.7	117.5
Accrued and other liabilities	107.0	79.9
Deferred revenue	1,268.9	968.4
Convertible senior notes, net	550.4	—
Total current liabilities	2,139.4	1,201.3
Convertible senior notes, net	1,369.7	524.7
Long-term deferred revenue	1,096.0	805.1
Other long-term liabilities	229.6	147.6
Commitments and contingencies (Note 9)		
Temporary equity	21.9	—
Stockholders' equity:		
Preferred stock; $0.0001 par value; 100.0 shares authorized; none issued and outstanding at July 31, 2018 and July 31, 2017	—	—
Common stock and additional paid-in capital; $0.0001 par value; 1,000.0 shares authorized; 93.6 and 91.5 shares issued and outstanding at July 31, 2018 and July 31, 2017, respectively	1,967.4	1,599.7
Accumulated other comprehensive loss	(16.4)	(3.4)
Accumulated deficit	(984.6)	(836.7)
Total stockholders' equity	966.4	759.6
Total liabilities, temporary equity, and stockholders' equity	$5,823.0	$3,438.3

See notes to consolidated financial statements.

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PALO ALTO NETWORKS, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS
(In millions, except per share data)

	Year Ended July 31,		
	2018	2017	2016
Revenue:			
Product	$871.5	$709.1	$670.8
Subscription and support	1,401.6	1,052.5	707.7
Total revenue	2,273.1	1,761.6	1,378.5
Cost of revenue:			
Product	272.4	201.4	175.4
Subscription and support	372.9	275.2	194.6
Total cost of revenue	645.3	476.6	370.0
Total gross profit	1,627.8	1,285.0	1,008.5
Operating expenses:			
Research and development	400.7	347.4	284.2
Sales and marketing	1,098.4	919.1	743.2
General and administrative	257.8	198.3	138.4
Total operating expenses	1,756.9	1,464.8	1,165.8
Operating loss	(129.1)	(179.8)	(157.3)
Interest expense	(29.6)	(24.5)	(23.4)
Other income, net	28.5	10.2	8.4
Loss before income taxes	(130.2)	(194.1)	(172.3)
Provision for income taxes	17.7	22.5	20.4
Net loss	$(147.9)	$(216.6)	$(192.7)
Net loss per share, basic and diluted	$(1.61)	$(2.39)	$(2.21)
Weighted-average shares used to compute net loss per share, basic and diluted	91.7	90.6	87.1

See notes to consolidated financial statements.

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PALO ALTO NETWORKS, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(In millions)

	Year Ended July 31,		
	2018	2017	2016
Net loss	$(147.9)	$(216.6)	$(192.7)
Other comprehensive income (loss), net of tax:			
Change in unrealized gains (losses) on investments	(7.5)	(4.3)	1.1
Change in unrealized gains (losses) on cash flow hedges	(5.5)	(0.1)	—
Other comprehensive income (loss)	(13.0)	(4.4)	1.1
Comprehensive loss	$(160.9)	$(221.0)	$(191.6)

See notes to consolidated financial statements.

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PALO ALTO NETWORKS, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In millions)

	Common Stock and Additional Paid-In Capital		Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount			
Balance as of July 31, 2015	84.8	$988.7	$ (0.1)	$ (428.9)	$ 559.7
Net loss	—	—	—	(192.7)	(192.7)
Other comprehensive income	—	—	1.1	—	1.1
Issuance of common stock in connection with employee equity incentive plans and related excess tax benefit	5.7	45.8	—	—	45.8
Share-based compensation for equity based awards	—	393.1	—	—	393.1
Temporary equity reclassification	—	87.9	—	—	87.9
Balance as of July 31, 2016	90.5	1,515.5	1.0	(621.6)	894.9
Cumulative-effect adjustment from adoption of new accounting pronouncement	—	2.0	—	1.5	3.5
Net loss	—	—	—	(216.6)	(216.6)
Other comprehensive loss	—	—	(4.4)	—	(4.4)
Issuance of common stock in connection with employee equity incentive plans	4.3	46.3	—	—	46.3
Repurchase and retirement of common stock	(3.3)	(420.1)	—	—	(420.1)
Taxes paid related to net share settlement of equity awards	—	(21.4)	—	—	(21.4)
Share-based compensation for equity based awards	—	477.4	—	—	477.4
Balance as of July 31, 2017	91.5	1,599.7	(3.4)	(836.7)	759.6
Net loss	—	—	—	(147.9)	(147.9)
Other comprehensive loss	—	—	(13.0)	—	(13.0)
Issuance of common stock in connection with employee equity incentive plans	3.8	55.0	—	—	55.0
Repurchase and retirement of common stock	(1.7)	(250.0)	—	—	(250.0)
Taxes paid related to net share settlement of equity awards	—	(43.7)	—	—	(43.7)
Share-based compensation for equity based awards	—	502.5	—	—	502.5
Temporary equity reclassification	—	(21.9)	—	—	(21.9)
Equity component of convertible senior notes, net	—	312.4	—	—	312.4
Issuance of warrants	—	145.4	—	—	145.4
Purchase of note hedges	—	(332.0)	—	—	(332.0)
Balance as of July 31, 2018	93.6	$1,967.4	$ (16.4)	$ (984.6)	$ 966.4

See notes to consolidated financial statements.

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PALO ALTO NETWORKS, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Year Ended July 31,		
	2018	2017	2016
Cash flows from operating activities			
Net loss	$(147.9)	$(216.6)	$(192.7)
Adjustments to reconcile net loss to net cash provided by operating activities:			
Share-based compensation for equity based awards	496.7	474.5	392.8
Depreciation and amortization	96.4	59.8	42.8
Cease-use loss and asset impairment related to facility exit	41.1	20.9	—
Amortization of debt discount and debt issuance costs	28.8	24.5	23.4
Amortization of investment premiums, net of accretion of purchase discounts	0.5	2.7	3.0
Changes in operating assets and liabilities, net of effects of acquisitions:			
Accounts receivable, net	(33.0)	(82.9)	(136.4)
Prepaid expenses and other assets	(125.5)	(48.1)	(31.2)
Accounts payable	3.7	5.9	15.1
Accrued compensation	44.2	42.8	(6.3)
Accrued and other liabilities	44.9	53.2	21.0
Deferred revenue	587.1	531.8	527.1
Net cash provided by operating activities	1,037.0	868.5	658.6
Cash flows from investing activities			
Purchases of investments	(725.7)	(995.9)	(1,037.0)
Proceeds from sales of investments	—	—	141.9
Proceeds from maturities of investments	691.8	777.4	628.7
Business acquisitions, net of cash acquired	(374.1)	(90.7)	—
Purchases of property, equipment, and other assets	(112.0)	(163.4)	(72.5)
Net cash used in investing activities	(520.0)	(472.6)	(338.9)
Cash flows from financing activities			
Proceeds from borrowings on convertible senior notes, net	1,682.4	—	—
Proceeds from issuance of warrants	145.4	—	—
Purchase of note hedges	(332.0)	—	—
Repurchases of common stock	(259.1)	(411.0)	—
Proceeds from sales of shares through employee equity incentive plans	52.6	46.4	45.3
Payments for taxes related to net share settlement of equity awards	(43.7)	(21.4)	—
Payment of deferred consideration related to prior year business acquisition	—	—	(6.4)
Net cash provided by (used in) financing activities	1,245.6	(386.0)	38.9
Net increase in cash and cash equivalents	1,762.6	9.9	358.6
Cash and cash equivalents—beginning of period	744.3	734.4	375.8
Cash and cash equivalents—end of period	$2,506.9	$744.3	$734.4
Non-cash investing and financing activities			
Property and equipment acquired through lease incentives	$37.8	$—	$11.5
Supplemental disclosures of cash flow information			
Cash paid for income taxes	$11.2	$9.0	$7.1

See notes to consolidated financial statements.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

The accompanying consolidated financial statements have been prepared in conformity with U.S. generally accepted accounting principles ("GAAP"). The consolidated financial statements include all adjustments necessary for a fair presentation of our annual results. All adjustments are of a normal recurring nature. Certain prior-period amounts have been reclassified to conform to current-period presentation.

Principles of Consolidation

The consolidated financial statements include our accounts and our wholly owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Such management estimates include, but are not limited to the best estimate of selling price for our products and services, share-based compensation, fair value of assets acquired and liabilities assumed in business combinations, the assessment of recoverability of our property and equipment, identified intangibles and goodwill, future taxable income, manufacturing partner and supplier liabilities, fair value of debt component of convertible notes, cease-use loss related to facility exit, and loss contingencies. We base our estimates on historical experience and also on assumptions that we believe are reasonable. Actual results could differ materially from those estimates.

Concentrations

Financial instruments that subject us to concentrations of credit risk consist primarily of cash and cash equivalents, investments, accounts receivable, and derivative contracts.

We invest only in high-quality credit instruments and maintain our cash and cash equivalents and available-for-sale investments in fixed income securities. Management believes that the financial institutions that hold our investments are financially sound and, accordingly, are subject to minimal credit risk. Deposits held with banks may exceed the amount of insurance provided on such deposits.

Our 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 accounts receivables are primarily derived from our distributors representing various geographical locations. We perform ongoing credit evaluations and generally do not require collateral on accounts receivable. We maintain an allowance for doubtful accounts for estimated potential credit losses. As of July 31, 2018, four distributors represented 27.9%, 21.5%, 11.5%, and 11.0% of our gross accounts receivable. For fiscal 2018, three distributors represented 33.4%, 23.0%, and 10.7% of our total revenue.

We rely on an electronics manufacturing services provider ("EMS provider") to assemble most of our products and sole source component suppliers for a certain number of our components.

Comprehensive Loss

Comprehensive loss is comprised of net loss and other comprehensive income (loss). Our other comprehensive income (loss) includes unrealized gains and losses on available-for-sale investments and unrealized gains and losses

on cash flow hedges.

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Foreign Currency Transactions

The functional currency of our foreign subsidiaries is the U.S. dollar. Monetary assets and liabilities denominated in foreign currencies have been remeasured into U.S. dollars using the exchange rates in effect at the balance sheet dates. Foreign currency denominated income and expenses have been remeasured using the average exchange rates in effect during each period. Foreign currency remeasurement gains and losses and foreign currency transaction gains and losses are not significant to the financial statements.

Fair Value

We define fair value as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities which are required to be recorded at fair value, we consider the principal or most advantageous market in which to transact and the market-based risk. We apply fair value accounting for all financial assets and liabilities that are recognized or disclosed at fair value in the financial statements on a recurring basis. Goodwill, intangible assets, and other long-lived assets are measured at fair value on a nonrecurring basis, only if impairment is indicated. The carrying amounts reported in the consolidated financial statements approximate the fair value for cash and cash equivalents, accounts receivable, accounts payable, and accrued liabilities, due to their short-term nature.

Cash, Cash Equivalents, and Investments

We classify our investments as available-for-sale at the time of purchase since it is our intent that these investments are available for current operations, and include these investments on our consolidated balance sheets as cash equivalents, short-term investments, or long-term investments depending on their maturity.

We consider all highly liquid investments with original maturities of three months or less at date of purchase to be cash equivalents. Investments not considered cash equivalents and with maturities one year or less from the consolidated balance sheet date are classified as short-term investments. Investments with maturities greater than one year from the consolidated balance sheet date are classified as long-term investments.

Investments are considered impaired when a decline in fair value is judged to be other-than-temporary. We consult with our investment managers and consider available quantitative and qualitative evidence in evaluating potential impairment of our investments on a quarterly basis. If the cost of an individual investment exceeds its fair value, we evaluate, among other factors, general market conditions, the duration and extent to which the fair value is less than cost, and our intent and ability to hold the investment. Once a decline in fair value is determined to be other-than-temporary, an impairment charge is recorded and a new cost basis in the investment is established.

Accounts Receivable

Trade accounts receivable are recorded at the invoiced amount, net of allowances for doubtful accounts. The allowance for doubtful accounts is based on our assessment of the collectability of accounts. Management regularly reviews the adequacy of the allowance for doubtful accounts by considering the age of each outstanding invoice, each channel partner’s expected ability to pay, and the collection history with each channel partner, when applicable, to determine whether a specific allowance is appropriate. Accounts receivable deemed uncollectible are charged against the allowance for doubtful accounts when identified. As of July 31, 2018 and 2017, the allowance for doubtful accounts activity was not significant.

Derivatives

Our derivative financial instruments are recorded at fair value, on a gross basis, as either assets or liabilities in our consolidated balance sheets. Gains or losses related to our cash flow hedges are recorded as a component of accumulated other comprehensive income (“AOCI”) in our consolidated balance sheets and are reclassified into the financial statement line item associated with the underlying hedged transaction in our 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 consolidated statements of operations. Gains or losses related to non-designated derivative instruments are recognized in other income (expense), net in our 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 consolidated statements of cash flows in the same manner as the underlying hedged transaction, primarily within cash flows from operating activities.

Property and Equipment

Property and equipment are stated at cost, less accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the assets, generally three to ten years. Leasehold improvements are depreciated over the shorter of the estimated useful lives of the improvements or the remaining lease term.

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Business Combinations

We include the results of operations of the businesses that we acquire as of the respective dates of acquisition. We allocate the fair value of the purchase price of our acquisitions to the tangible assets acquired, liabilities assumed, and intangible assets acquired, based on their estimated fair values. The excess of the purchase price over the fair values of these identifiable assets and liabilities is recorded as goodwill. Additional information 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.

Intangible Assets

Purchased intangible assets with finite lives are carried at cost, less accumulated amortization. Amortization is computed over the estimated useful lives of the respective assets. Acquisition-related in-process research and development represents the fair value of incomplete research and development projects that have not reached technological feasibility as of the date of acquisition. Initially, these assets are not subject to amortization. Assets related to projects that have been completed are transferred to developed technology, which are subject to amortization.

Impairment of Goodwill, Intangible Assets, and Other Long-Lived Assets

Goodwill is evaluated for impairment on an annual basis in the fourth quarter of our fiscal year, and whenever events or changes in circumstances indicate the carrying amount of goodwill may not be recoverable. We have elected to first assess qualitative factors to determine whether it is more likely than not that the fair value of our single reporting unit is less than its carrying amount, including goodwill. If we determine that it is more likely than not that the fair value of our single reporting unit is less than its carrying amount, then the quantitative impairment test will be performed. Under the quantitative impairment test, if the carrying amount of our single reporting unit exceeds its fair value, we will recognize an impairment loss in an amount equal to that excess, but limited to the total amount of goodwill.

We evaluate events and changes in circumstances that could indicate carrying amounts of purchased intangible assets and other long-lived assets may not be recoverable. When such events or changes in circumstances occur, we assess the recoverability of these assets by determining whether or not the carrying amount will be recovered through undiscounted expected future cash flows. If the total of the future undiscounted cash flows is less than the carrying amount of an asset, we record an impairment loss for the amount by which the carrying amount of the asset exceeds the fair value of the asset.

Through July 31, 2018, we have not recognized any impairment losses on our goodwill and intangible assets. During the year ended July 31, 2017, we recognized an impairment loss of $20.9 million on property and equipment related to the relocation of our corporate headquarters. We did not recognize any impairment losses on our other long-lived assets during the year ended July 31, 2018, or prior to fiscal 2017.

Manufacturing Partner and Supplier Liabilities

We outsource most of our manufacturing, repair, and supply chain management operations to our EMS provider and payments to it are a significant portion of our cost of product revenue. Although we could be contractually obligated to purchase manufactured products and components, we generally do not own the manufactured products and components. Product title transfers from our EMS provider to us and immediately to our channel partners upon shipment. Our EMS provider assembles our products using design specifications, quality assurance programs, and standards that we establish and it procures components and assembles our products based on our demand forecasts. These forecasts represent our estimates of future demand for our products based upon historical trends and analysis from our sales and product management functions as adjusted for overall market conditions. If the actual component usage and product demand are significantly lower than forecast, we record a liability for manufacturing purchase commitments in excess of our forecasted demand including costs for excess components or for carrying costs incurred by our manufacturing partners and component suppliers. Through July 31, 2018, we have not accrued any significant costs associated with this exposure.

Convertible Senior Notes

In accounting for the issuance of our convertible senior notes, we separate the notes into liability and equity components. The carrying amount of the liability component is calculated by measuring the fair value of a similar liability that does not have an associated convertible feature. The carrying amount of the equity component

representing the conversion option is determined by deducting the fair value of the liability component from the par value of the notes as a whole. This difference represents a debt discount that is amortized to interest expense using the effective interest method over the term of the notes. The equity component is not remeasured as long as it continues to meet the conditions for equity classification. In accounting for the transaction costs related to the issuance of the notes, we allocate the total amount incurred to the liability and equity components using the same proportions as the proceeds from the notes. Transaction costs attributable to the liability component are netted with the liability component and amortized to interest expense using the effective interest method over the term of the notes. Transaction costs attributable to the equity component are netted with the equity component of the notes in additional paid-in capital in the consolidated balance sheets. When the

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notes are convertible, the net carrying amount of the notes is classified as a current liability and a portion of the equity component representing the conversion option is reclassified to temporary equity in our consolidated balance sheets. The portion of the equity component classified as temporary equity is measured as the difference between the principal and net carrying amount of the notes, excluding debt issuance costs.

Revenue Recognition

We generate revenue from the sales of hardware and software products, subscriptions, support, and other services primarily through a direct sales force and indirect relationships with channel partners, and, to a lesser extent, directly to end-customers.

Revenue is recognized when all of the following criteria are met:

- Persuasive Evidence of an Arrangement Exists. We rely upon non-cancelable sales agreements and purchase orders to determine the existence of an arrangement.
- Delivery has Occurred. We use shipping documents or transmissions of product or subscription and support contract registration codes to determine delivery.
- The Fee is Fixed or Determinable. We assess whether the fee is fixed or determinable based on the payment terms associated with the transaction.
- Collectability is Reasonably Assured. We assess collectability based on credit analysis and payment history.

We recognize product revenue at the time of shipment provided that all other revenue recognition criteria have been met. Our channel partners generally receive an order from an end-customer prior to placing an order with us. In addition, payment from our channel partners is not contingent on the partner's success in sales to end-customers. Our channel partners generally do not stock appliances and only have limited stock rotation rights and no price protection rights. When necessary, we make certain estimates and maintain allowances for sales returns and other programs based on our historical experience. To date, these estimates have not been significant. We recognize subscription and support revenue ratably over the contractual service period, which is typically one to five years. Other services revenue is recognized as the services are rendered.

Most of our arrangements, other than renewals of subscriptions and support contracts, are multiple-element arrangements with a combination of hardware, software, subscriptions, support, and other services. Products, subscriptions, support, and other services generally qualify as separate units of accounting. Our hardware deliverables typically include proprietary operating system software, which together deliver the essential functionality of our products. For multiple-element arrangements, we allocate revenue to each unit of accounting based on an estimated selling price at the arrangement inception. The estimated selling price for each element is based upon the following hierarchy: vendor-specific objective evidence ("VSOE") of selling price, if available, third-party evidence ("TPE") of selling price, if VSOE of selling price is not available, or best estimate of selling price ("BESP"), if neither VSOE of selling price nor TPE of selling price are available. The total arrangement consideration is allocated to each separate unit of accounting using the relative estimated selling prices of each unit based on the aforementioned selling price hierarchy. We limit the amount of revenue recognized for delivered elements to an amount that is not contingent upon future delivery of additional products or services or meeting of any specified performance conditions.

In multiple-element arrangements where software deliverables are included, revenue is allocated to each separate unit of accounting for each of the non-software deliverables and to the software deliverables as a group using the relative estimated selling prices of each of the deliverables in the arrangement based on the aforementioned estimated selling price hierarchy. The arrangement consideration allocated to the software deliverables as a group is then allocated to each software deliverable using the residual method when VSOE of fair value of the undelivered items exists. Under the residual method, the amount of revenue allocated to delivered elements equals the total arrangement consideration less the aggregate fair value of any undelivered elements. In determining VSOE of fair value, we evaluate whether a substantial majority of the historical prices charged for a product or service sold on a standalone basis, as represented by a percentage of list price, fall within a reasonably narrow range. If VSOE of fair value of one or more undelivered items does not exist, revenue from the software portion of the arrangement is deferred and recognized at the earlier of: (i) delivery of those elements or (ii) when fair value can be established unless support is the only undelivered element, in which case, the entire software arrangement fee is recognized ratably over the contractual service period.

We account for multiple agreements with a single partner as one arrangement 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 arrangement. 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. After receipt of a partner order, any amounts billed in excess of revenue recognized are recorded as deferred revenue.

Deferred Commissions

Sales commissions that are incremental and directly related to non-cancelable customer sales contracts are deferred and amortized over the term of the related contract in proportion to the recognized revenue. Short-term deferred commissions are included

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in prepaid expenses and other current assets, while long-term deferred commissions are included in other assets in our consolidated balance sheets. The amortization of deferred commissions is included in sales and marketing expense in our consolidated statements of operations.

Advertising Costs

Advertising costs, which are expensed and included in sales and marketing expense when incurred, were $9.8 million, $13.7 million, and $6.6 million, during the years ended July 31, 2018, 2017, and 2016, respectively.

Software Development Costs

Internally developed software includes security software developed to meet our internal needs to provide cloud-based subscription offerings to our end-customers and business software that we customize to meet our specific operational needs. These capitalized costs consist of internal compensation related costs and external direct costs incurred during the application development stage and will be amortized over a useful life of three to five years.

The costs to develop software that is marketed externally have not been capitalized as we believe our current software development process is essentially completed concurrent with the establishment of technological feasibility. As such, all related software development costs are expensed as incurred and included in research and development expense in our consolidated statements of operations.

Share-Based Compensation

Compensation expense related to share-based transactions, including employee and non-employee director awards, is measured and recognized in the financial statements based on fair value on the grant date. We recognize share-based compensation expense for awards with only service conditions on a straight-line basis over the requisite service period of the related award. We recognize share-based compensation expense for awards with market conditions and awards with performance conditions on a straight-line basis over the requisite service period for each separately vesting portion of the award and, for awards with performance conditions, when it is probable that the performance condition will be achieved. We account for forfeitures of all share-based payment awards when they occur.

Leases

We rent our facilities under operating lease agreements and recognize related rent expense on a straight-line basis over the term of the lease. Some of our lease agreements contain rent holidays, scheduled rent increases, lease incentives, and renewal options. Rent holidays and scheduled rent increases are included in the determination of rent expense to be recorded over the lease term. Lease incentives are recognized as a reduction of rent expense on a straight-line basis over the term of the lease. Renewals are not assumed in the determination of the lease term unless they are deemed to be reasonably assured at the inception of the lease. We begin recognizing rent expense on the date that we obtain the legal right to use and control the leased space.

Upon exiting a leased property before the lease term expires, we assess the fair value of our remaining obligation under the lease and record a cease-use loss, if needed. The cease-use loss is calculated as the present value of the amount by which the remaining lease obligation, adjusted for the effects of any deferred items recognized under the lease and related costs, exceeds the estimated sublease rentals that could be reasonably obtained. The cease-use loss will be adjusted as a result of the remeasurement of the cease-use liability if the timing or amount of estimated cash flows change.

Income Taxes

We account for income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in our financial statements or tax returns. In addition, deferred tax assets are recorded for the future benefit of utilizing net operating losses and research and development credit carryforwards. Valuation allowances are provided when necessary to reduce deferred tax assets to the amount expected to be realized.

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

We apply the authoritative accounting guidance prescribing a threshold and measurement attribute for the financial recognition and measurement of a tax position taken or expected to be taken in a tax return. We recognize liabilities for uncertain tax positions based on a two-step process. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or

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litigation processes, if any. The second step requires us to estimate and measure the tax benefit as the largest amount that is more likely than not to be realized upon ultimate settlement.

We record deferred tax charges in prepaid expenses and other current assets and other assets on our consolidated balance sheets. These deferred tax charges are amortized on a straight-line basis over the life of the associated assets as a component of provision for income taxes in our consolidated statements of operations.

Loss Contingencies

We are subject to the possibility of various loss contingencies arising in the ordinary course of business. In determining loss contingencies, we consider the likelihood of loss or impairment of an asset, or the incurrence of a liability, as well as our ability to reasonably estimate the amount of loss. An estimated loss contingency is accrued when it is probable that an asset has been impaired or a liability has been incurred and the amount of loss can be reasonably estimated. If we determine that a loss is possible and the range of the loss can be reasonably determined, then we disclose the range of the possible loss. We regularly evaluate current information available to us to determine whether an accrual is required, an accrual should be adjusted or a range of possible loss should be disclosed.

Recently Adopted Accounting Pronouncements

Derivatives and Hedging

In August 2017, the Financial Accounting Standards Board (“FASB”) issued new authoritative guidance on derivatives and hedging to better align an entity’s risk management activities and financial reporting for hedging relationships through changes to both the designation and measurement guidance for qualifying hedging relationships, and the presentation of hedge results. We early adopted the standard in our second quarter of fiscal 2018 on a modified retrospective basis. The adoption of this standard did not have a material impact on our consolidated financial statements.

Recently Issued Accounting Pronouncements

Business Combinations - Definition of a Business

In January 2017, the 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. The standard is effective for us in our first quarter of fiscal 2019 and will be applied on a prospective basis. We do not expect the adoption of the standard will have a material impact on our 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. The standard is effective for us in our first quarter of fiscal 2019 and will be applied on a retrospective basis. We do not expect the adoption of the standard will have a material impact on our 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. The standard is effective for us in our first quarter of fiscal 2019 and will be applied on a modified retrospective basis through a cumulative-effect adjustment to accumulated deficit as of the date of adoption. We will adopt the standard in our first quarter of fiscal 2019 and anticipate an increase in accumulated deficit of approximately $28.4 million upon adoption related to 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. The standard is effective for us in our first quarter of fiscal 2019 and will be applied on a retrospective basis. We do not expect the adoption of the standard will have a material impact on our consolidated financial statements.

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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 whether this standard will have a material impact on our 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. We are currently evaluating whether this standard will have a material impact on our 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 for the transfer of promised goods or services to customers with the consideration to which the entity expects to be entitled 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. The standard is effective for us in our first quarter of fiscal 2019 using either of two methods: (i) retrospective to each prior reporting period presented with the option to elect certain practical expedients as defined within the guidance (“full retrospective method”); or (ii) retrospective with the cumulative effect of initially applying the guidance recognized at the date of initial application and providing certain additional disclosures as defined per the guidance (“modified retrospective method”). We will adopt the standard in our first quarter of fiscal 2019 using the full retrospective method.

In preparation for the new standard, we have updated our accounting policies, processes, internal controls over financial reporting, and system requirements. We have also finalized our assessment of the new standard, which will impact our accounting for revenue arrangements in the following areas:

- removal of the current limitation on contingent revenue may result in revenue being recognized earlier for certain contracts;
- term license revenue associated with our virtual firewalls will be recognized upfront;
- allocation of revenue related to software due to the removal of the residual method of revenue recognition; and
- amortization period for incremental costs to obtain customer contracts, which primarily consist of sales commissions.

These changes did not have a material impact on our 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 due to the longer period of amortization. Under the current accounting guidance, we defer and amortize these costs over the term of the related contract. Under the new standard, we will 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.

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The following tables present the expected impact of adoption of the new standard on our reported results for select consolidated statement of operations and consolidated balance sheet line items (in millions, except per share data):

	Year Ended July 31, 2018			Year Ended July 31, 2017		
	As Reported	Impact of Adoption	As Adjusted	As Previously Reported	Impact of Adoption	As Adjusted
Consolidated Statements of Operations						
Product revenue	$871.5	$ 8.3	$ 879.8	$709.1	$ (0.6)	$ 708.5
Subscription and support revenue	1,401.6	(7.8)	1,393.8	1,052.5	(5.9)	1,046.6
Total revenue	2,273.1	0.5	2,273.6	1,761.6	(6.5)	1,755.1
Total operating expenses	1,756.9	(24.2)	1,732.7	1,464.8	(20.3)	1,444.5
Operating loss	(129.1)	24.9	(104.2)	(179.8)	14.0	(165.8)
Net loss	(147.9)	25.7	(122.2)	(216.6)	13.6	(203.0)
Net loss per share, basic and diluted	$(1.61)	$ 0.28	$ (1.33)	$(2.39)	$ 0.15	$ (2.24)

	July 31, 2018		
	As Reported	Impact of Adoption	As Adjusted
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 will not impact net cash flows from operating, investing, or financing activities in our consolidated statements of cash flows. The exact impact of the new standard will be dependent on facts and circumstances at adoption and could vary from quarter to quarter.

2. Fair Value Measurements

We categorize assets and liabilities recorded or disclosed at fair value on our 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.

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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 July 31, 2018 and July 31, 2017 (in millions):

	July 31, 2018				July 31, 2017			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Cash equivalents:								
Money market funds	$1,512.3	$—	$ —	$1,512.3	$—	$—	$ —	$—
Commercial paper	—	52.0	—	52.0	—	—	—	—
U.S. government and agency securities	—	397.3	—	397.3	—	—	—	—
Total cash equivalents	1,512.3	449.3	—	1,961.6	—	—	—	—
Short-term 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	—	139.8	—	139.8	—	159.4	—	159.4
U.S. government and agency securities	—	709.0	—	709.0	—	471.3	—	471.3
Total short-term investments	—	896.5	—	896.5	—	630.7	—	630.7
Long-term investments:								
Certificates of deposit	—	—	—	—	—	5.4	—	5.4
Corporate debt securities	—	153.6	—	153.6	—	186.5	—	186.5
U.S. government and agency securities	—	393.9	—	393.9	—	597.4	—	597.4
Total long-term investments	—	547.5	—	547.5	—	789.3	—	789.3
Total assets measured at fair value	$1,512.3	$1,893.3	$ —	$3,405.6	$—	$1,420.0	$ —	$1,420.0
Accrued and other liabilities:								
Foreign currency forward contracts	$—	$6.9	$ —	$6.9	$—	$—	$ —	$—
Total accrued and other liabilities	—	6.9	—	6.9	—	—	—	—
Total liabilities measured at fair value	$—	$6.9	$ —	$6.9	$—	$—	$ —	$—

As of July 31, 2018, we did not have any assets or liabilities required to be measured at fair value on a nonrecurring basis. As of July 31, 2017, we determined that certain property and equipment related to our previous corporate headquarters were impaired. To support the growth of our business, in the fourth quarter of fiscal 2017, we committed to plans to relocate our corporate headquarters and sublet our previous headquarter facilities. In connection with our planned relocation, we assessed the recoverability of certain leasehold improvements and other long-lived assets associated with our previous headquarter facilities and determined that the carrying amount of these assets exceeded their fair value of $4.2 million. The resulting impairment loss of $20.9 million was recorded as general and administrative expense in our consolidated statements of operations during the year ended July 31, 2017. We calculated the fair value of the leasehold improvements and other long-lived assets based on estimated future discounted cash flows and classified the fair value as a Level 3 measurement due to the significance of unobservable inputs, which included the amount and timing of estimated sublease rental receipts that we could reasonably obtain over the remaining lease term and the discount rate. Refer to Note 9. Commitments and Contingencies for more information on the relocation of our corporate headquarters.

Refer to Note 8. Convertible Senior Notes for the carrying amount and estimated fair value of our convertible senior notes as of July 31, 2018 and July 31, 2017.

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3. Cash Equivalents and Investments

The following tables summarize the amortized cost, unrealized gains and losses, and fair value of our available-for-sale securities as of July 31, 2018 and July 31, 2017 (in millions):

	July 31, 2018			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Estimated Fair Value
Cash equivalents:				
Money market funds	$1,512.3	$ —	$ —	$1,512.3
Commercial paper	52.0	—	—	52.0
U.S. government and agency securities	397.3	—	—	397.3
Total cash equivalents	$1,961.6	$ —	$ —	$1,961.6
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 investments	$1,454.2	$ —	$ (10.2)	$1,444.0

	July 31, 2017			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Estimated Fair Value
Investments:				
Certificates of deposit	$5.4	$ —	$ —	$5.4
Corporate debt securities	346.1	0.3	(0.5)	345.9
U.S. government and agency securities	1,071.2	0.1	(2.6)	1,068.7
Total investments	$1,422.7	$ 0.4	$ (3.1)	$1,420.0

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 July 31, 2018 and 2017.

We received proceeds of $141.9 million from sales of investments during the year ended July 31, 2016. We did not sell any investments during the years ended July 31, 2018 and 2017. We use the specific identification method to determine the cost basis of investments sold.

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

	Amortized Cost	Fair Value
Due within one year	$2,861.3	$2,858.1
Due between one and three years	554.5	547.5
Total	$3,415.8	$3,405.6

4. 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 14 months or less, which we designate as cash flow hedges, to manage the foreign currency exchange rate risk associated with these expenditures.

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As of July 31, 2018, the total notional amount of our outstanding foreign currency forward contracts was $288.5 million. Refer to Note 2. Fair Value Measurements for the fair value of our derivative instruments as reported in our consolidated balance sheets as of July 31, 2018. We did not have any foreign currency forward contracts outstanding as of July 31, 2017.

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

5. Acquisitions

Fiscal 2018

Evident.io, Inc.

On March 26, 2018, we completed our acquisition of all outstanding shares of Evident.io, Inc. (“Evident.io”), a privately-held cloud security company. The acquisition expands our API-based security capabilities for the public cloud with the addition of Evident.io’s cloud services infrastructure protection technology. Total purchase consideration for the acquisition of Evident.io was $292.9 million in cash, of which $4.0 million was accrued and was paid over a period of five months from the acquisition date.

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	$209.8
Identified intangible assets	85.1
Net liabilities assumed	(2.0)
Total	$292.9

Goodwill generated from this business combination is primarily attributable to the assembled workforce and expected post-acquisition synergies from integrating Evident.io’s technology into our platform and sales opportunities of Evident.io’s software as a service (“SaaS”) offerings. 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	$68.4	6 years
Trade name and trademarks	8.5	8 years
Customer relationships	8.2	8 years
Total	$85.1	

In addition, we paid $6.6 million in cash to settle certain Evident.io stock options, for which vesting was accelerated in connection with the acquisition and the subsequent termination of the option holders’ services. This amount was recorded as post-acquisition share-based compensation included in general and administrative expenses in our consolidated statements of operations.

Cyber Secdo Ltd.

On April 24, 2018, we completed our acquisition of all outstanding shares of Cyber Secdo Ltd. (“Secdo”), a privately-held company specializing in endpoint detection and response (“EDR”). The acquisition expands the functionality of our platform by adding EDR capabilities. Total purchase consideration for the acquisition of Secdo was $82.7 million in cash.

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	$68.6
Identified intangible assets	17.3
Net liabilities assumed	(3.2)

Total	$ 82.7

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Goodwill generated from this business combination is primarily attributable to the assembled workforce and expected post-acquisition synergies from integrating Secdo's technology into our advanced endpoint protection offering and 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	$ 16.4	5 years
Customer relationships	0.9	2 years
Total	$ 17.3	

Fiscal 2017

LightCyber Ltd.

On February 27, 2017, we completed our acquisition of all outstanding shares of LightCyber Ltd. ("LightCyber"), a privately-held cybersecurity company, for total consideration of $103.1 million in cash. The acquisition expands the functionality of our platform with the addition of LightCyber's behavioral analytics technology.

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

	Amount
Cash	$ 12.4
Goodwill	75.3
Identified intangible assets	19.5
Net liabilities assumed	(4.1)
Total	$ 103.1

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

	Fair Value	Estimated Useful Life
Developed technology	$ 16.6	8 years
Customer relationships	2.9	8 years
Total	$ 19.5	

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

Additional Acquisition-Related Information

The operating results of the acquired companies are included in our consolidated statements of operations from the respective dates of acquisition. Pro forma results of operations have not been presented because the effects of these acquisitions, individually and in the aggregate, were not material to our consolidated statements of operations.

Additional information related to Evident.io and Secdo, 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 respective acquisition date, which may result in changes to the amounts and allocations recorded.

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6. Goodwill and Intangible Assets

Goodwill

The following table presents details of our goodwill during the year ended July 31, 2018 (in millions):

	Amount
Balance as of July 31, 2017	$ 238.8
Goodwill acquired	284.0
Balance as of July 31, 2018	$ 522.8

Through July 31, 2018, we have not recognized any impairment losses on our goodwill.

Purchased Intangible Assets

The following table presents details of our purchased intangible assets as of July 31, 2018 and July 31, 2017 (in millions):

	July 31, 2018			2017		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Intangible assets subject to amortization:						
Developed technology	$ 154.7	$ (38.2)	$ 116.5	$ 69.7	$ (23.8)	$ 45.9
Customer relationships	12.2	(1.2)	11.0	3.1	(0.4)	2.7
Acquired intellectual property	8.9	(4.5)	4.4	8.9	(3.8)	5.1
Trade name and trademarks	8.5	(0.4)	8.1	—	—	—
Other	2.2	(2.2)	—	2.2	(2.2)	—
Total intangible assets subject to amortization	186.5	(46.5)	140.0	83.9	(30.2)	53.7
Intangible assets not subject to amortization:						
In-process research and development	0.8	—	0.8	—	—	—
Total purchased intangible assets	$ 187.3	$ (46.5)	$ 140.8	$ 83.9	$ (30.2)	$ 53.7

We recognized amortization expense of $16.3 million, $9.8 million, and $9.4 million for the years ended July 31, 2018, 2017, and 2016, respectively.

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

	Amount
Years ending July 31:	
2019	$ 27.8
2020	27.7
2021	25.7
2022	21.2
2023	18.8
2024 and thereafter	18.8
Total future amortization expense	$ 140.0

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7. Property and Equipment

The following table presents details of our property and equipment, net as of July 31, 2018 and July 31, 2017 (in millions):

	July 31, 2018	2017
Computers, equipment, and software	$217.9	$156.6
Leasehold improvements	159.5	110.1
Demonstration units	33.0	26.3
Furniture and fixtures	24.6	20.4
Total property and equipment	435.0	313.4
Less: accumulated depreciation	(161.9)	(102.3)
Total property and equipment, net	$273.1	$211.1

We recognized depreciation expense of $74.7 million, $48.6 million, and $33.1 million related to property and equipment during the years ended July 31, 2018, 2017, and 2016, respectively. During the year ended July 31, 2017, we impaired certain property and equipment related to the relocation of our corporate headquarters and recognized a loss of $20.9 million in general and administrative expense on our consolidated statements of operations. Refer to Note 2. Fair Value Measurements for more information on our impairment assessment.

8. Convertible Senior Notes

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	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

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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 may convert their 2019 Notes at any time during the fiscal quarter ending October 31, 2018. Accordingly, the net carrying amount of the 2019 Notes was reclassified into current liabilities and the portion of the equity component representing the conversion option was reclassified into temporary equity in our consolidated balance sheets as of July 31, 2018. The sale price condition was not met for the 2023 Notes during the fiscal quarter ended 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 consolidated balance sheets as of July 31, 2018.

The sale price condition was not met for the 2019 Notes during the fiscal quarter ended July 31, 2017. Since the 2019 Notes were not convertible, the net carrying amount of the 2019 Notes was classified as a long-term liability and the equity component was included in additional paid-in capital in our consolidated balance sheets as of July 31, 2017.

As of July 31, 2018, all of the Notes remained outstanding. Subsequent to July 31, 2018, through the filing date of this Annual Report on Form 10-K, $327.3 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 October 31, 2018.

The following table sets forth the components of the Notes as of July 31, 2018 and July 31, 2017 (in millions):

	July 31, 2018			July 31, 2017		
	2019 Notes	2023 Notes	Total	2019 Notes	2023 Notes	Total
Liability component:						
Principal	$575.0	$1,693.0	$2,268.0	$575.0	$—	$575.0
Less: debt discount and debt issuance costs, net of amortization	24.6	323.3	347.9	50.3	—	50.3
Net carrying amount	$550.4	$1,369.7	$1,920.1	$524.7	$—	$524.7
Equity component (including amounts classified as temporary equity)	$109.8	$315.0	$424.8	$109.8	$—	$109.8

The total estimated fair value of the Notes was $2.7 billion and $747.5 million at July 31, 2018 and July 31, 2017, 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 July 31, 2018 and July 31, 2017 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 July 31, 2018, the if-converted value of the 2019 Notes exceeded its principal amount by $519.1 million. Based on the closing price of our common stock on July 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):

	Year Ended July 31, 2018			Year Ended July 31, 2017			Year Ended July 31, 2016		
	2019 Notes	2023 Notes	Total	2019 Notes	2023 Notes	Total	2019 Notes	2023 Notes	Total
Contractual interest expense	$—	$0.7	$0.7	$—	$ —	$—	$—	$ —	$—
Amortization of debt discount	22.9	3.0	25.9	22.0	—	22.0	21.1	—	21.1
Amortization of debt issuance costs	2.8	0.1	2.9	2.5	—	2.5	2.3	—	2.3

Total interest expense recognized	$25.7	$3.8	$29.5	$24.5	$ —	$24.5	$23.4	$ —	$23.4
Effective interest rate of the liability component	4.8 %	5.2 %		4.8 %	—%		4.8 %	—%	

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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):

	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.

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

	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.

9. 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 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.

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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 year ended July 31, 2018, we released $10.1 million of the cease-use liability through rental payments. As of July 31, 2018, the remaining balance of the cease-use liability was $29.1 million, which is expected to be paid through the end of the lease term in July 2023.

We recognized rent expense of $35.2 million, $35.9 million, and $20.2 million for the years ended July 31, 2018, 2017, and 2016, respectively. Rent expense is recognized on a straight-line basis over the term of the lease.

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

	Amount
Years ending July 31:	
2019	$ 66.3
2020	68.2
2021	64.0
2022	59.8
2023	58.5
2024 and thereafter	223.8
Committed gross lease payments	540.6
Less: proceeds from sublease rental	14.0
Net operating lease obligation	$ 526.6

Purchase Commitments

Manufacturing Purchase Commitments

Our 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 July 31, 2018, our purchase commitments under such orders were $134.6 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 July 31, 2018, our purchase commitment under the addendum was $11.7 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 July 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.

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Indemnification

Under the indemnification provisions of our standard sales related contracts, we agree to defend our end-customers against third-party claims asserting infringement of certain intellectual property rights, which may include patents, copyrights, trademarks, or trade secrets, and to pay judgments entered on such claims. Our exposure under these indemnification provisions is generally limited to payments made to us for the alleged infringing products over the preceding twelve months under the agreement. However, certain agreements include indemnification provisions that could potentially expose us to losses in excess of these payments. In addition, we indemnify our officers, directors, and certain key employees while they are serving in good faith in their company capacities. To date, we have not recorded any accruals for loss contingencies associated with indemnification claims or determined that an unfavorable outcome is probable or reasonably possible.

10. Stockholders' Equity

Share Repurchase

In August 2016, our board of directors authorized a $500.0 million share repurchase which is funded from available working capital. In February 2017, our board of directors authorized a $500.0 million increase to the 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. During the years ended July 31, 2018 and 2017, we repurchased and retired 1.7 million shares and 3.3 million shares, respectively, of our common stock under the authorization for an aggregate purchase price of $250.0 million and $420.1 million, respectively, including transaction costs. The total price of the shares repurchased and related transaction costs are reflected as a reduction to common stock and additional paid-in capital on our consolidated balance sheets. As of July 31, 2018, $330.0 million remained available for future share repurchases under the repurchase authorization.

11. Equity Award Plans

Share-Based Compensation Plans

2012 Equity Incentive Plan

Our 2012 Equity Incentive Plan (our "2012 Plan") was adopted by our board of directors and approved by the stockholders on June 5, 2012 and was effective one business day prior to the effectiveness of our registration statement for our initial public offering ("IPO"). Our 2012 Plan replaced our 2005 Equity Incentive Plan (our "2005 Plan"), which terminated upon the completion of our IPO, however, awards that were outstanding upon termination remained outstanding pursuant to their original terms. Our 2012 Plan provides for the granting of stock options, restricted stock awards ("RSAs"), restricted stock units ("RSUs"), stock appreciation rights, performance-based stock units ("PSUs"), performance shares ("PSAs"), and performance stock options ("PSOs") to our employees, directors, and consultants.

Awards granted under our 2012 Plan vest over the periods determined by the board of directors, generally three to four years from the date of grant, and our options expire no more than ten years after the date of grant. Since our IPO in 2012, awards granted under our 2012 Plan consist primarily of RSUs. Until vested, RSUs do not have the voting and dividend participation rights of common stock and the shares underlying the awards are not considered issued and outstanding.

We grant awards with performance conditions (PSAs and PSUs) to certain employees, which vest over a period of four years from the date of grant. The actual number of PSAs and PSUs earned and eligible to vest is determined based on level of achievement against a pre-established billings target for the fiscal year.

In June 2018, we granted 1.2 million PSOs with both a market condition and a service condition to our chief executive officer. The market condition requires the price of our common stock to exceed 150%, 200%, 250%, and 300% of the exercise price of the PSOs (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.

We net-share settle equity awards held by certain employees by withholding shares upon vesting to satisfy tax withholding obligations. The shares withheld to satisfy employee tax withholding obligations are returned to our 2012 Plan and will be available for future issuance. Payments for employees' tax obligations to the tax authorities are recognized as a reduction to additional paid-in capital and reflected as financing activities in our consolidated statements of cash flows.

A total of 17.7 million shares of our common stock are reserved for issuance pursuant to our 2012 Plan as of July 31, 2018. This includes shares that are (i) reserved but unissued under our 2005 Plan on the effective date of our 2012 Plan or (ii) returned to our

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2005 Plan as a result of expiration or termination of options. On the first day of each fiscal year, the number of shares in the reserve may be increased by the lesser of (i) 8,000,000 shares, (ii) 4.5% of the outstanding shares of common stock on the last day of our immediately preceding fiscal year, or (iii) such other amount as determined by our board of directors.

2012 Employee Stock Purchase Plan

Our 2012 Employee Stock Purchase Plan was adopted by our board of directors and approved by the stockholders on June 5, 2012, and was effective upon completion of our IPO. On August 29, 2017, we amended and restated our 2012 Employee Stock Purchase Plan (our "2012 ESPP") to extend the length of our offering periods from 6 to 24 months. Our 2012 ESPP permits eligible employees to acquire shares of our common stock at 85% of the lower of the fair market value of our common stock on the first trading day of each offering period or on the purchase date. If the fair market value of our common stock on the purchase date is lower than the first trading day of the offering period, the current offering period will be cancelled after purchase and a new 24-month offering period will begin. Under our 2012 ESPP, each 24-month offering period consists of four consecutive 6-month purchase periods, with purchase dates on the first trading day on or after February 28 and August 31 of each year. Participants may purchase shares of common stock through payroll deductions of up to 15% of their eligible compensation, subject to purchase limits of 625 shares per six-month purchase period and $25,000 worth of stock for each calendar year. During the year ended July 31, 2018, employees purchased 0.4 million shares of common stock under our 2012 ESPP at an average exercise price of $110.87 per share.

A total of 3.4 million shares of our common stock are available for sale under our 2012 ESPP as of July 31, 2018. On the first day of each fiscal year, the number of shares in the reserve may be increased by the lesser of (i) 2,000,000 shares, (ii) 1% of the outstanding shares of our common stock on the first day of the fiscal year, or (iii) such other amount as determined by our board of directors.

Stock Option Activities

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

	Options Outstanding			
	Number of Shares	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Balance—July 31, 2017	1.6	$ 13.11	4.2	$ 190.6
Options granted	1.2	$ 198.50		
Options forfeited	—	$ —		
Options exercised	(0.6)	$ 12.76		
Balance—July 31, 2018	2.2	$ 109.12	5.2	$ 199.8
Options exercisable—July 31, 2018	1.1	$ 13.28	3.2	$ 199.8

The weighted-average grant-date fair value of stock options granted during the year ended July 31, 2018 was $56.14 per share. No stock options were granted during the years ended July 31, 2017 and 2016. The grant-date fair value of options vested during the year ended July 31, 2016 was $8.1 million. No options vested during the years ended July 31, 2018 and 2017. The intrinsic value of options exercised during the years ended July 31, 2018, 2017, and 2016 was $85.0 million, $61.2 million, and $176.1 million, respectively.

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RSA, PSA, RSU, and 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, 2017	1.0	$ 163.55	6.5	$ 141.16	1.3	$ 854.1
Granted[1]	—	$ —	4.1	$ 170.44		
Vested	(0.5)	$ 168.62	(3.3)	$ 138.75		
Forfeited	(0.2)	$ 157.49	(0.6)	$ 144.33		
Balance—July 31, 2018	0.3	$ 160.85	6.7	$ 160.20	1.6	$ 1,335.2

(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.

The weighted-average grant-date fair value of RSAs and PSAs granted during the years ended July 31, 2017 and 2016 was$148.54 and $170.97 per share, respectively. No RSAs or PSAs were granted during the year ended July 31, 2018. The aggregate fair value, as of the respective vesting dates, of RSAs and PSAs vested during the year ended July 31, 2018 was $67.5 million, and RSAs vested during the year ended July 31, 2017 was $62.6 million. No PSAs vested during the year ended July 31, 2017, and no RSAs or PSAs vested during the year ended July 31, 2016.

The weighted-average grant-date fair value of RSUs and PSUs granted during the years ended July 31, 2018, 2017, and 2016 was $170.44, $141.35, and $160.60 per share, respectively. The aggregate fair value, as of the respective vesting dates, of RSUs vested during the years ended July 31, 2018, 2017, and 2016 was $546.3 million, $462.6 million, and $513.0 million, respectively. No PSUs vested during the three years ended July 31, 2018.

Shares Available for Grant

The following table presents the stock activity and the total number of shares available for grant under our stock plans as of July 31, 2018 (in millions):

	Number of shares
Balance—July 31, 2017	8.8
Authorized	4.1
Options, RSUs, and PSUs granted	(5.3)
RSAs, PSAs, and RSUs forfeited	0.8
Shares withheld for taxes	0.4
Balance—July 31, 2018	8.8

Share-Based Compensation

We record share-based compensation awards based on estimated fair value as of the grant date. The fair value of RSUs, PSUs, RSAs, and PSAs is based on the closing market price of our common stock on the date of grant. The fair value of PSOs is estimated on the grant date using a Monte Carlo simulation model and the following assumptions: expected volatility of 33.3%, 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 rate of 2.9%, 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 PSO.

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The fair value of shares issued under our 2012 ESPP are estimated on the grant date using the Black-Scholes option pricing model. The following table summarizes the assumptions used and the resulting grant-date fair values of our ESPP:

	Year Ended July 31,		
	2018	2017	2016
Volatility	26.8% - 43.6%	41.0% - 50.1%	33.4 % - 45.5%
Expected term (in years)	0.5 - 2.0	0.5	0.5
Dividend yield	— %	— %	— %
Risk-free interest rate	1.2% - 2.3%	0.5% - 0.9%	0.2% - 0.5%
Grant-date fair value per share	$34.94 - $65.04	$34.15 - $39.65	$43.07 - $44.62

The expected volatility is based on the historical volatility of our common stock. The expected term represents the term from the first day of the offering period to the purchase dates within each offering period. The dividend yield assumption is based on our expectations about our anticipated dividend policy. The risk-free interest rate is based on the implied yield available on U.S. Treasury zero-coupon issues with maturities that approximate the expected term.

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

	Year Ended July 31,		
	2018	2017	2016
Cost of product revenue	$7.0	$7.3	$6.2
Cost of subscription and support revenue	66.7	56.2	40.9
Research and development	145.2	152.6	132.9
Sales and marketing	208.0	186.5	152.4
General and administrative	77.0	73.1	60.5
Total share-based compensation	$503.9	$475.7	$392.9

As of July 31, 2018, total compensation cost related to unvested share-based awards not yet recognized was $1.1 billion. This cost is expected to be amortized over a weighted-average period of approximately 3.0 years. Future grants will increase the amount of compensation expense to be recorded in these periods.

12. Income Taxes

The following table presents the components of income (loss) before income taxes (in millions):

	Year Ended July 31,		
	2018	2017	2016
United States	$(192.1)	$(210.0)	$(195.3)
Foreign	61.9	15.9	23.0
Total	$(130.2)	$(194.1)	$(172.3)

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The following table summarizes our provision for income taxes (in millions):

	Year Ended July 31,		
	2018	2017	2016
Federal:			
Current	$(0.6)	$3.4	$1.9
Deferred	(3.3)	—	(0.6)
State:			
Current	1.6	0.9	1.1
Deferred	(1.3)	—	(0.1)
Foreign:			
Current	23.3	19.7	19.1
Deferred	(2.0)	(1.5)	(1.0)
Total	$17.7	$22.5	$20.4

For the year ended July 31, 2018, our provision for income taxes decreased compared to the year ended July 31, 2017, primarily due to changes in our valuation allowance related to our acquisition of Evident.io and future benefits from alternative minimum credits under the Tax Cuts and Jobs Act ("TCJA").

For the year ended July 31, 2017, our provision for income taxes increased compared to the year ended July 31, 2016, primarily due to increases in foreign withholding taxes and U.S. income taxes related to intercompany transactions, offset by tax benefits from our adoption of new share-based payment accounting guidance in fiscal 2017.

As a result of adopting the new share-based payment guidance, we have not reflected the impact of excess tax benefits in additional paid-in capital for the years ended July 31, 2018 and 2017. Prior to adopting this guidance, we recorded excess tax benefits of $0.5 million directly to additional paid-in capital for the year ended July 31, 2016.

On December 22, 2017, the TCJA was enacted into law. The TCJA provides for significant tax law changes and modifications including, but not limited to, the reduction of the U.S. federal corporate statutory tax rate from 35% to 21% as of January 1, 2018, the requirement for companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred, and the creation of new taxes on certain foreign-sourced earnings. As a fiscal year-end taxpayer, certain provisions of the TCJA began to impact us during the fiscal quarter ended January 31, 2018, while other provisions will impact us beginning in our fiscal year ending July 31, 2019.

As a result of the TCJA, we recorded a provisional benefit of $6.1 million during the year ended July 31, 2018, related to alternative minimum tax credits that will be refundable if not utilized. We adjusted our deferred tax assets as a result of changes in the federal tax rate. This change was offset by a corresponding adjustment to our valuation allowance. We have not recorded any amounts relating to the transition tax because we had no unremitted earnings as of the measurement date, based on our current estimate.

Accounting standards require companies to recognize the effect of tax law changes in the period of enactment. However, the SEC staff and FASB 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. In accordance with this guidance, we have determined the amounts recorded and positions taken, as discussed, are provisional as of July 31, 2018. We continue to assess the impacts of the TCJA, and the final impact of the TCJA recorded by us may differ from the provisional amounts due to a number of uncertainties and factors, including the need for further guidance and clarification of the new law by U.S. federal and state tax authorities, and the need for further guidance on the related income tax accounting.

In addition to the previously discussed impacts on our fiscal year ended July 31, 2018, the TCJA also establishes new tax laws that will be effective beginning with our fiscal year ending July 31, 2019, including a provision for low-taxed income of foreign subsidiaries. Due to its complexity, we are continuing to evaluate this provision of the TCJA. Based on recent FASB deliberations, we will be allowed to make an accounting policy election to either (i) treat taxes due on future U.S. inclusions in taxable income as a current-period expense when incurred or (ii) factor such amounts into our measurement of deferred taxes. Our selection of accounting policy will depend, in part, on analyzing our facts and circumstances to determine the expected impact under each method. As of July 31, 2018, we have not made a policy election. We expect to make a policy election in fiscal year 2019, and anticipate any changes to deferred taxes from

this election to be offset by a valuation allowance.

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The following table presents the items accounting for the difference between income taxes computed at the federal statutory income tax rate and our provision for income taxes:

	Year Ended July 31,		
	2018	2017	2016
Federal statutory rate	26.8 %	35.0 %	35.0 %
Effect of:			
State taxes, net of federal tax benefit	5.0	2.8	(1.7)
Foreign income at other than U.S. rates	12.6	(14.4)	(7.8)
Change in valuation allowance	29.0	(39.4)	(25.4)
Effect of U.S. tax law change	(104.6)	—	—
Share-based compensation	8.6	1.6	(15.9)
Amortization of deferred tax charges	(6.5)	(3.6)	(3.4)
Research credits	25.4	10.1	11.3
Non-deductible expenses	(4.9)	(3.0)	(1.3)
Other, net	(5.0)	(0.7)	(2.6)
Total	(13.6)%	(11.6)%	(11.8)%

As a result of the TCJA, our federal statutory tax rate for the fiscal year ended July 31, 2018 was 26.8% based on a blend of the statutory rates for 2017 and 2018. Further, we have reflected an adjustment to deferred taxes as a result of the TCJA, which is fully offset by changes in our valuation allowance.

During the year ended July 31, 2017, we adopted new share-based payment accounting guidance that requires us to recognize excess tax benefits or deficiencies as income tax expense or benefit in the period in which they occur, rather than additional paid-in capital. The effect of the change from this guidance is reflected in the share-based compensation line above.

During the year ended July 31, 2016, we accounted for the outcome of The Gillette Company et al. v. California Franchise Tax Board which disallowed the election to use an evenly weighted, three factor apportionment formula utilized by us on our tax return for the year ended July 31, 2014. The impact for the change in apportionment is reflected in state taxes, net of federal tax benefit above and is fully offset by changes in our valuation allowance.

The following table presents the components of our deferred tax assets and liabilities as of July 31, 2018 and July 31, 2017 (in millions):

	July 31,	
	2018	2017
Deferred tax assets:		
Accruals and reserves	$59.6	$30.0
Deferred revenue	132.9	133.5
Net operating loss carryforwards	189.5	245.3
Research and development and foreign tax credits	113.4	69.3
Share-based compensation	21.4	45.4
Gross deferred tax assets	516.8	523.5
Valuation allowance	(420.1)	(464.1)
Total deferred tax assets	96.7	59.4
Deferred tax liabilities:		
Fixed assets and intangible assets	(43.3)	(13.5)
Deferred commissions	(34.0)	(36.8)
Other deferred tax liabilities	(10.9)	(4.0)
Total deferred tax liabilities	(88.2)	(54.3)
Total	$8.5	$5.1

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As a result of the TCJA, we have reflected an adjustment to deferred taxes during the year ended July 31, 2018, which was fully offset by changes in our valuation allowance.

A valuation allowance is provided when it is more likely than not that the deferred tax asset will not be realized. Realization of deferred tax assets is dependent upon future taxable income, if any, the amount and timing of which are uncertain. At such time, if it is determined that it is more likely than not that the deferred tax assets are realizable, the valuation allowance will be adjusted. As of July 31, 2018, we have provided a valuation allowance for our federal, state, and certain foreign deferred tax assets that we believe will, more likely than not, be unrealizable. The net valuation allowance decreased by $44.0 million from the year ended July 31, 2017 to the year ended July 31, 2018, primarily due to a decrease in our U.S. federal tax rate as a result of the TCJA.

As of July 31, 2018, we had federal, state, and foreign NOL carryforwards of approximately $1.3 billion, $800.1 million, and $59.2 million, respectively, as reported on our tax returns, available to reduce future taxable income, if any. If not utilized, our federal and state NOL carryforwards will expire in various amounts at various dates beginning in the years ending July 31, 2027 and July 31, 2019, respectively. Our foreign NOL will carry forward indefinitely.

As of July 31, 2018, we had federal and state research and development tax credit carryforwards of approximately $80.7 million and $82.3 million, respectively as reported on our tax returns. If not utilized, the federal credit carryforwards will expire in various amounts at various dates beginning in the year ending July 31, 2026. The state credit will carry forward indefinitely.

As of July 31, 2018, we had foreign tax credit carryforwards of $3.6 million as reported on our tax returns. If not utilized, the foreign tax credit carryforwards will expire in various amounts at various dates beginning in the year ending July 31, 2021.

Utilization of the NOL carryforwards and credits may be subject to a substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code of 1986, as amended, and similar state provisions. The annual limitation may result in the expiration of NOLs and credits before utilization.

During the year ended July 31, 2017, we were awarded a tax incentive by a foreign jurisdiction. The incentive is effective through September 30, 2031, and is conditional upon meeting certain investment and employment thresholds. The impact of this incentive on our provision for income taxes was not material for the years ended July 31, 2018 and 2017.

As of July 31, 2018, we had $337.7 million of unrecognized tax benefits, $48.0 million of which would affect income tax expense if recognized, after consideration of our valuation allowance in the United States and other assets. As of July 31, 2017, we had $301.3 million of unrecognized tax benefits, $34.0 million of which would affect income tax expense if recognized, after consideration of our valuation allowance in the United States and other assets. As of July 31, 2018, our federal, state, and foreign returns for the tax years 2008 through the current period remain subject to adjustment due to examination. Fiscal years outside the normal statute of limitation remain open to audit by tax authorities due to tax attributes generated in earlier years, which have been carried forward and may be audited in subsequent years when utilized. We do not expect the amount of unrecognized tax benefits as of July 31, 2018 to change significantly over the next 12 months. We recognize both interest and penalties associated with uncertain tax positions as a component of income tax expense. During the years ended July 31, 2018, 2017, and 2016, we recognized income tax expense related to interest and penalties of $2.9 million, $2.1 million, and $1.6 million, respectively. We had accrued interest and penalties on our consolidated balance sheets related to unrecognized tax benefits of $8.3 million and $5.4 million as of July 31, 2018 and 2017, respectively. The ultimate amount and timing of any future cash settlements cannot be predicted with reasonable certainty.

The following table presents a reconciliation of the beginning and ending amount of our gross unrecognized tax benefits (in millions):

	Year Ended July 31,		
	2018	2017	2016
Unrecognized tax benefits at the beginning of the period	$301.3	$127.7	$67.2
Additions for tax positions taken in prior years	3.1	3.1	25.2
Reductions for tax positions taken in prior years	(6.3)	—	—
Additions for tax positions taken in the current year	39.6	170.5	35.3

Unrecognized tax benefits at the end of the period	$337.7	$301.3	$127.7

During the year ended July 31, 2018, our additions for tax positions taken in the current year were primarily attributable to uncertain tax positions related to federal and state research and development credits, withholding taxes, and intercompany transactions.

During the year ended July 31, 2017, our additions for tax positions taken in the current year were primarily attributable to uncertainties related to intercompany transactions.

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During the year ended July 31, 2016, our additions for tax positions taken in prior years and additions for tax positions taken in the current year were primarily attributable to uncertain tax positions relating to federal and state research and development credits, adjustments for California apportionment, and transfer pricing methodologies.

As of July 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 July 31, 2018.

13. 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):

	Year Ended July 31,		
	2018	2017	2016
Net loss	$(147.9)	$(216.6)	$(192.7)
Weighted-average shares used to compute net loss per share, basic and diluted	91.7	90.6	87.1
Net loss per share, basic and diluted	$(1.61)	$(2.39)	$(2.21)

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):

	Year Ended July 31,		
	2018	2017	2016
Convertible senior notes	11.6	5.2	5.2
Warrants related to the issuance of convertible senior notes	11.6	5.2	5.2
RSUs and PSUs	6.7	6.5	6.5
Options to purchase common stock	2.2	1.6	2.1
RSAs and PSAs	0.3	1.0	1.1
ESPP shares	0.2	0.2	0.1
Total	32.6	19.7	20.2

14. Other Income, Net

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

	Year Ended July 31,		
	2018	2017	2016
Interest income	$27.1	$14.7	$8.8
Foreign currency exchange gains (losses), net	1.7	(3.4)	—
Other	(0.3)	(1.1)	(0.4)
Total other income, net	$28.5	$10.2	$8.4

15. Employee Benefit Plan

We have established a 401(k) tax-deferred savings plan which permits participants to make contributions by salary deduction pursuant to Section 401(k) of the Internal Revenue Code. In fiscal 2016, we began to make matching contributions based upon the amount of employees' contributions, subject to certain limitations. Our matching contributions to the plan were immaterial for the years ended July 31, 2018, 2017, and 2016.

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16. Segment Information

We conduct business globally and are primarily managed on a geographic theater basis. Our chief operating decision maker reviews financial information presented on a consolidated basis accompanied by information about revenue by geographic region for purposes of allocating resources and evaluating financial performance. We have one business activity and there are no segment managers who are held accountable for operations, operating results, and plans for levels, components, or types of products or services below the consolidated unit level. Accordingly, we are considered to be in a single reportable segment and operating unit structure.

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

	Year Ended July 31,		
	2018	2017	2016
Revenue:			
Americas			
United States	$1,447.2	$1,155.3	$901.8
Other Americas	111.5	82.1	71.4
Total Americas	1,558.7	1,237.4	973.2
Europe, the Middle East, and Africa (“EMEA”)	439.3	320.1	247.1
Asia Pacific and Japan (“APAC”)	275.1	204.1	158.2
Total revenue	$2,273.1	$1,761.6	$1,378.5

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

	Year Ended July 31,		
	2018	2017	2016
Revenue:			
Product	$871.5	$709.1	$670.8
Subscription and support			
Subscription	759.6	550.8	357.0
Support	642.0	501.7	350.7
Total subscription and support	1,401.6	1,052.5	707.7
Total revenue	$2,273.1	$1,761.6	$1,378.5

The following table presents our property and equipment, net by geographic region (in millions):

	Year Ended July 31,	
	2018	2017
Property and equipment, net:		
United States	$228.4	$178.4
International	44.7	32.7
Total property and equipment, net	$273.1	$211.1

17. Selected Quarterly Financial Data (Unaudited)

The following tables set forth selected unaudited quarterly financial data for the years ended July 31, 2018 and 2017 (in millions, except per share amounts):

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	Three Months Ended			
	Oct. 31, 2017	Jan. 31, 2018	Apr. 30, 2018	Jul. 31, 2018
Revenue:				
Product	$186.5	$202.2	$215.2	$267.6
Subscription and support	319.0	340.2	351.9	390.5
Total revenue	505.5	542.4	567.1	658.1
Cost of revenue:				
Product	57.6	63.9	68.9	82.0
Subscription and support	83.8	95.4	91.0	102.7
Total cost of revenue	141.4	159.3	159.9	184.7
Total gross profit	364.1	383.1	407.2	473.4
Operating expenses:				
Research and development	94.2	96.6	99.6	110.3
Sales and marketing	258.5	265.0	277.1	297.8
General and administrative	65.7	53.3	82.1	56.7
Total operating expenses	418.4	414.9	458.8	464.8
Operating income (loss)	(54.3)	(31.8)	(51.6)	8.6
Interest expense	(6.3)	(6.4)	(6.5)	(10.4)
Other income, net	4.8	4.9	8.6	10.2
Income (loss) before income taxes	(55.8)	(33.3)	(49.5)	8.4
Provision for (benefit from) income taxes	8.2	1.6	(2.8)	10.7
Net loss	$(64.0)	$(34.9)	$(46.7)	$(2.3)
Net loss per share, basic and diluted	$(0.70)	$(0.38)	$(0.51)	$(0.02)

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	Three Months Ended			
	Oct. 31, 2016	Jan. 31, 2017	Apr. 30, 2017	Jul. 31, 2017
Revenue:				
Product	$163.8	$168.8	$164.2	$212.3
Subscription and support	234.3	253.8	267.6	296.8
Total revenue	398.1	422.6	431.8	509.1
Cost of revenue:				
Product	42.2	45.8	49.7	63.7
Subscription and support	59.0	67.4	74.0	74.8
Total cost of revenue	101.2	113.2	123.7	138.5
Total gross profit	296.9	309.4	308.1	370.6
Operating expenses:				
Research and development	84.2	89.9	86.0	87.3
Sales and marketing	220.1	226.7	226.9	245.4
General and administrative	41.6	47.2	44.3	65.2
Total operating expenses	345.9	363.8	357.2	397.9
Operating loss	(49.0)	(54.4)	(49.1)	(27.3)
Interest expense	(6.0)	(6.1)	(6.2)	(6.2)
Other income, net	2.5	2.7	2.1	2.9
Loss before income taxes	(52.5)	(57.8)	(53.2)	(30.6)
Provision for income taxes	4.4	2.8	7.7	7.6
Net loss	$(56.9)	$(60.6)	$(60.9)	$(38.2)
Net loss per share, basic and diluted	$(0.63)	$(0.67)	$(0.67)	$(0.42)

18. Subsequent Event

Credit Agreement

On September 4, 2018, we entered into a credit agreement with certain institutional lenders (the “Credit Agreement”) that provides for a $400.0 million unsecured revolving 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 including obtaining commitments from existing lenders under the Credit Agreement or new lenders who would become party to the Credit Agreement. Proceeds from borrowings under the Credit Agreement may be used for general corporate purposes, including the financing of working capital requirements.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

ITEM 9A. 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”). 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.

Based on our evaluation, our chief executive officer and chief financial officer concluded that, as of July 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,

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and reported within the time periods specified in Securities and Exchange Commission ("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.

Management's Annual Report on Internal Control over Financial Reporting

For "Management's Annual Report on Internal Control Over Financial Reporting" see the report under Part II, Item 8 of this Annual Report on Form 10-K, which report is incorporated herein by reference.

For the "Report of Independent Registered Public Accounting Firm," see the report under Part II, Item 8 of this Annual Report on Form 10-K, which report is incorporated herein by reference.

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 quarter ended July 31, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

Not applicable.

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PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Executive Officers and Directors

The information required by this item will be contained in our definitive proxy statement to be filed with the SEC in connection with our 2018 annual meeting of stockholders (the "Proxy Statement"), which is expected to be filed not later than 120 days after the end of our fiscal year ended July 31, 2018, and is incorporated in this report by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item will be set forth in the Proxy Statement and is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this item will be set forth in the Proxy Statement and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item will be set forth in the Proxy Statement and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item will be set forth in the Proxy Statement and is incorporated herein by reference.

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PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

Documents filed as part of this Annual Report on Form 10-K are as follows:

1. Consolidated Financial Statements

Our Consolidated Financial Statements are listed in the "Index to Consolidated Financial Statements" under Part II, Item 8 of this Annual Report on Form 10-K.

2. Financial Statement Schedules

Financial statement schedules have been omitted because they are not required, not applicable, not present in amounts sufficient to require submission of the schedule, or the required information is shown in the Consolidated Financial Statements or the notes thereto.

3. Exhibits

The following documents are incorporated by reference or are filed with this Annual Report on Form 10-K, in each case as indicated therein (numbered in accordance with Item 601 of Regulation S-K).

EXHIBIT INDEX

Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
3.1	Restated Certificate of Incorporation of the Registrant.	10-K	001-35594	3.1	October 4, 2012
3.2	Amended and Restated Bylaws of the Registrant.	10-K	001-35594	3.2	October 4, 2012
3.3	Certificate of Change of Location of Registered Agent and/or Registered Office.	8-K	001-35594	3.1	August 30, 2016
4.1	Warrant to Purchase Stock by Juniper Networks, Inc.	8-K	001-35594	4.1	June 4, 2014
4.2	Indenture between the Registrant and U.S. Bank National Association, dated as of June 30, 2014.	8-K	001-35594	4.1	July 1, 2014
4.3	Indenture between the Registrant and U.S. Bank National Association, dated as of July 12, 2018.	8-K	001-35594	4.1	July 13, 2018
4.4	Form of Global 0.75% Convertible Senior Note due 2023 (included in Exhibit 4.3).	8-K	001-35594	4.2	July 13, 2018
10.1*	Form of Indemnification Agreement between the Registrant and its directors and officers.	S-1/A	333-180620	10.1	July 9, 2012
10.2*	2005 Equity Incentive Plan and related form agreements under 2005 Equity Incentive Plan.	S-1/A	333-180620	10.2	July 9, 2012
10.3*	2012 Equity Incentive Plan and related form agreements under 2012 Equity Incentive Plan, as amended.	10-Q	001-35594	10.2	November 21, 2017
10.4*		10-K	001-35594	10.4	

	2012 Employee Stock Purchase Plan and related form agreements under 2012 Employee Stock Purchase Plan, as amended and restated.				September 7, 2017
10.5*	Employee Incentive Compensation Plan, as amended and restated.	10-Q	001-35594	10.2	November 25, 2014
10.6*	Clawback Policy, adopted as of August 29, 2017.	10-Q	001-35594	10.3	November 21, 2017
10.7*	Executive Incentive Plan effective December 8, 2017.	10-Q	001-35594	10.2	February 27, 2018
10.8*	Letter Agreement between the Registrant and Nir Zuk, dated December 19, 2011.	S-1	333-180620	10.8	April 6, 2012

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Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
10.9*	Letter Agreement between the Registrant and René Bonvanie, dated December 19, 2011.	S-1	333-180620	10.10	April 6, 2012
10.10*	Offer Letter between the Registrant and Stanley J. Meresman, dated September 8, 2014.	8-K	001-35594	10.1	September 22, 2014
10.11*	Offer Letter between the Registrant and Daniel J. Warmenhoven, dated February 14, 2012.	S-1	333-180620	10.13	April 6, 2012
10.12*	Offer Letter between the Registrant and Mark F. Anderson, dated May 23, 2012.	S-1/A	333-180620	10.16	July 9, 2012
10.13*	Offer Letter between the Registrant and John M. Donovan, dated September 14, 2012.	8-K	001-35594	10.1	September 20, 2012
10.14*	Offer Letter between the Registrant and Carl Eschenbach, dated May 9, 2013.	8-K	001-35594	10.1	May 30, 2013
10.15*	Offer Letter between the Registrant and Frank Calderoni, dated February 24, 2016.	8-K	001-35594	10.1	February 25, 2016
10.16*	Offer Letter between the Registrant and Mary Pat McCarthy, dated October 13, 2016.	8-K	001-35594	10.1	October 24, 2016
10.17*	Offer Letter between the Registrant and Sridhar Ramaswamy, dated August 29, 2017.	8-K	001-35594	10.1	August 31, 2017
10.18*	Offer Letter between the Registrant and Kathleen Bonanno, dated November 17, 2017.	8-K	001-35594	10.1	November 20, 2017
10.19*	Offer Letter between the Registrant and Jean Compeau, dated February 22, 2018.	8-K	001-35594	10.1	February 26, 2018
10.20*	New Offer Letter between the Registrant and Mark D. McLaughlin, dated May 31, 2018.	8-K	001-35594	10.1	June 4, 2018
10.21*	Offer Letter between the Registrant and Nikesh Arora, dated May 30, 2018.	8-K	001-35594	10.2	June 4, 2018
10.22	Lease between the Registrant and Santa Clara Office Partners LLC, dated October 20, 2010, as amended.	S-1	333-180620	10.14	April 6, 2012
10.23	Amendment No. 2 to Lease between the Registrant and Santa Clara Office Partners LLC, dated July 2, 2013.	10-K	001-35594	10.17	September 25, 2013
10.24	Lease between the Registrant and SI 34 LLC, dated September 17, 2012.	10-K	001-35594	10.16	October 4, 2012

10.25	Lease between the Registrant and SI 34 LLC, dated September 17, 2012.	10-K	001-35594	10.17	October 4, 2012
10.26**	Amended and Restated Flextronics Manufacturing Services Agreement, by and between the Registrant and Flextronics Telecom Systems Ltd., dated December 8, 2015.	8-K	001-35594	10.1	December 14, 2015
10.27	Settlement, Release and Cross-License Agreement, dated May 27, 2014, by and between the Registrant and Juniper Networks, Inc.	8-K	001-35594	10.1	May 28, 2014
10.28	Share Purchase Agreement between the Registrant, Cyvera Ltd., Palo Alto Networks Holding B.V., the shareholders of Cyvera Ltd. and Shareholder Representative Services LLC, dated March 22, 2014.	10-Q	001-35594	10.1	June 3, 2014
10.29	Amendment No. 1 to the Share Purchase Agreement between the Registrant, Cyvera Ltd., Palo Alto Networks Holding B.V., the shareholders of Cyvera Ltd. and Shareholder Representative Services LLC, dated April 9, 2014.	10-Q	001-35594	10.2	June 3, 2014

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Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
10.30	Purchase Agreement, dated June 24, 2014, by and among the Registrant and J.P. Morgan Securities LLC, RBC Capital Markets, LLC and Citigroup Global Markets Inc., as representatives of the initial purchasers named therein.	8-K	001-35594	10.1	June 26, 2014
10.31	Form of Convertible Note Hedge Confirmation.	8-K	001-35594	10.2	June 26, 2014
10.32	Form of Warrant Confirmation.	8-K	001-35594	10.3	June 26, 2014
10.33	Purchase Agreement, dated July 10, 2018, by and among the Registrant and Citigroup Global Markets Inc. and Wells Fargo Securities, LLC, as representatives of the several Initial Purchasers named therein.	8-K	001-35594	10.1	July 13, 2018
10.34	Form of Convertible Note Hedge Confirmation.	8-K	001-35594	10.2	July 13, 2018
10.35	Form of Warrant Confirmation.	8-K	001-35594	10.3	July 13, 2018
10.36	Lease between the Registrant and Santa Clara Campus Property Owner I LLC, dated May 28, 2015.	10-K	001-35594	10.29	September 17, 2015
10.37	Lease between the Registrant and Santa Clara Campus Property Owner I LLC, dated May 28, 2015.	10-K	001-35594	10.30	September 17, 2015
10.38	Lease between the Registrant and Santa Clara Campus Property Owner I LLC, dated May 28, 2015.	10-K	001-35594	10.31	September 17, 2015
10.39	Lease by and between the Registrant and Santa Clara Campus Property Owner I LLC, dated October 7, 2015.	8-K	001-35594	10.1	October 19, 2015
10.40	Amendment No. 1 to Lease by and between the Registrant and Santa Clara Phase I Property LLC, dated November 9, 2015.	10-Q	001-35594	10.2	November 24, 2015
10.41	Amendment No. 1 to Lease by and between the Registrant and Santa Clara Campus Property Owner I LLC, dated November 9, 2015.	10-Q	001-35594	10.3	November 24, 2015
10.42	Amendment No. 1 to Lease by and between the Registrant and Santa Clara Campus Property Owner I LLC, dated September 16, 2016.	10-Q	001-35594	10.1	November 22, 2016
10.43	Amendment No. 1 to Lease by and between the Registrant and Santa Clara Campus Property Owner I LLC, dated September 16,	10-Q	001-35594	10.2	November 22, 2016

	2016.				
10.44	Amendment No. 2 to Lease by and between the Registrant and Santa Clara Campus Property Owner I LLC, dated September 16, 2016.	10-Q	001-35594	10.3	November 22, 2016
10.45	Amendment No. 2 to Lease by and between the Registrant and Santa Clara Campus Property Owner I LLC, dated November 16, 2016.	10-Q	001-35594	10.1	March 1, 2017
10.46	Amendment No. 2 to Lease by and between the Registrant and Santa Clara Campus Property Owner I LLC, dated November 16, 2016.	10-Q	001-35594	10.2	March 1, 2017
10.47	Amendment No. 3 to Lease by and between the Registrant and Santa Clara Campus Property Owner I LLC, dated November 16, 2016.	10-Q	001-35594	10.3	March 1, 2017
10.48	Amendment No. 3 to Lease by and between the Registrant and Santa Clara EFH LLC, dated June 22, 2017.	10-K	001-35594	10.40	September 7, 2017

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Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
10.49	Amendment No. 3 to Lease by and between the Registrant and Santa Clara G LLC, dated June 22, 2017.	10-K	001-35594	10.41	September 7, 2017
10.50	Amendment No. 4 to Lease by and between the Registrant and Santa Clara EFH LLC, dated June 22, 2017.	10-K	001-35594	10.42	September 7, 2017
10.51	Amendment No. 4 to Lease by and between the Registrant and Santa Clara Phase III EFH LLC, dated September 29, 2017.	10-Q	001-35594	10.5	November 21, 2017
10.52	Amendment No. 4 to Lease by and between the Registrant and Santa Clara Phase III G LLC, dated September 29, 2017.	10-Q	001-35594	10.6	November 21, 2017
10.53	Amendment No. 5 to Lease by and between the Registrant and Santa Clara Phase III EFH LLC, dated September 29, 2017.	10-Q	001-35594	10.7	November 21, 2017
21.1	List of subsidiaries of the Registrant.				
23.1	Consent of Independent Registered Public Accounting Firm.				
24.1	Power of Attorney (contained in the signature page to this Annual Report on Form 10-K).				
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.				
101.LAB	XBRL Taxonomy Labels Linkbase Document.				
101.PRE	XBRL Taxonomy Presentation Linkbase Document.				

* Indicates a management contract or compensatory plan or arrangement.

** Registrant has omitted portions of the relevant exhibit and filed such exhibit separately with the Securities and Exchange Commission pursuant to a request for confidential treatment under Rule 406 under the Securities Act of 1933, as amended.

The certifications attached as Exhibit 32.1 and Exhibit 32.2 that accompany this Annual Report on Form 10-K, are not deemed filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of the Registrant 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 Annual Report on Form 10-K, irrespective of any general incorporation language contained in such filing.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on September 13, 2018.

PALO ALTO
NETWORKS, INC.
By: /s/ NIKESH ARORA
Nikesh Arora
Chief Executive Officer

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POWER OF ATTORNEY

KNOW ALL THESE PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Nikesh Arora, Kathleen Bonanno, and Jean Compeau, and each of them, as his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their, his or her substitutes, may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

Signature	Title	Date
/s/ NIKESH ARORA Nikesh Arora	Chief Executive Officer and Director (Principal Executive Officer)	September 13, 2018
/s/ KATHLEEN BONANNO Kathleen Bonanno	Chief Financial Officer (Principal Financial Officer)	September 13, 2018
/s/ JEAN COMPEAU Jean Compeau	Chief Accounting Officer (Principal Accounting Officer)	September 13, 2018
/s/ MARK D. MCLAUGHLIN Mark D. McLaughlin	Vice Chairman and Director	September 13, 2018
/s/ NIR ZUK Nir Zuk	Chief Technical Officer and Director	September 13, 2018
/s/ FRANK CALDERONI Frank Calderoni	Director	September 13, 2018
/s/ ASHEEM CHANDNA Asheem Chandna	Director	September 13, 2018
/s/ JOHN M. DONOVAN John M. Donovan	Director	September 13, 2018
/s/ CARL ESCHENBACH Carl Eschenbach	Director	September 13, 2018
/s/ JAMES J. GOETZ James J. Goetz	Director	September 13, 2018
/s/ MARY PAT MCCARTHY Mary Pat McCarthy	Director	September 13, 2018
/s/ STANLEY J. MERESMAN	Director	

Stanley J. Meresman		September 13, 2018
/s/ SRIDHAR RAMASWAMY Sridhar Ramaswamy	Director	September 13, 2018
/s/ DANIEL J. WARMENHOVEN Daniel J. Warmenhoven	Director	September 13, 2018